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ROTARY CABINE  Solition 150/4  Lesie 110  Lesie 120  Lesie 130  Lesie 145  Lesie 147  Lesie 150  Levie 150  Le	Price 1496 1240 1240 1240 1240 1240 1240 1240 1255 1290 1290 1290 1290 1290 1290 1290 1295	089 948 73 88 94 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 114 115 116 116 116 116 116 116 116 116 116	Ibanet 2871 Pro Quilfi 2397 Flying V 2495 ES 1750 Copy 2400 Twin Niest 2342 Brist Parair 2342 Brist Parair 2351 Les Parair Notice 2351 Les Parair Notice 2358 Brist Bass Copy 23688 Prick Bass Copy 17688 Prick Bass Copy 1778 Prick Nied 17868 Prick Bass Copy 17868 Pr	Price On 2249 50 50 5175 35 E157 32 5199 40 E108 22 5148 30 E135 27 E153 31 E171 35 E216 40 E199 40 Price C81 566 566 566	De Luse Clastic Bill Best Super Classic Hollwood Rock Duc Jassette Deva Family from Full Comercian from Sounday senture from Rock Kir from Powermans from In age Creater from 6 Enothers from MAXWIN Steps 706	1579   116	AMPLIFICATIK CARLSBRO  Majten MKII Save 1000 Siringhay Succe MKII Soft pa Amp Soft pa Combo 100 The Same 100 The Same Soft pa Combo MKII Soft pa Succe Combo MKII Soft pa Succe Combo Siringhay Combo Siringhay Combo Siringhay Combo Siringhay Combo 2 x 12 Cob 1900/Par 2 x 12 Lett 1020/Par 2 x 12 1 Henri (100/Par Horn Unis (Par) Horn Unis (Par) Horn Unis (Par)	Press Oep. (1690-30) 2-93-16 2-93-16 2-93-16 2-93-16 2-93-16 2-93-17 2-94 2-93-17 2-93	110 Regular 120 Super 130 Extra Super 130 D'Asgeria D'esire DARCO (MAF 500 Bronne Ex-Lone 510 Bronne Light 510 Bronne Light 540 Bronne 12 Surang Light D 30H Nylon MARTIN M140 Bronze Light	E1.49 E 7.00 E2.16 E10.15
ROTARY CABINE Soliton 150/4 Lesie 110 Lesie 130 Lesie 140 Lesie 137 Lesie 147 Lesie 122 Lesie 122 Lesie 122 Lesie 122 Lesie 170 Lesie 170 Lesie 170 Lesie 181 Lesie 181 Lesie 181 Lesie 185 Lesie 18	ETS Price 2499 2499 2365 2440 2470 2470 2595 2595 2595 2415 2400 2730 2730 2730 2730 2730 2730 2730 27	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfi 2397 Flying V 2495 ES 1750 Copy 2490 T win Niest 2341 List Peau's 2351 List Peau's 2351 List Peau's 2351 List Peau's 2351 Es Peau's 2351 Drit List 2351 List Peau's 2358B Arct Bast Copy 2358B Arct Bast Copy 2358B Niet Bast Copy M.XR Phast 100 Phast 90 Phase 90 Phase 95 Blue Bast Dyne Comp	Price Obs. 2249 50 5175 30 5175 30 5187 32 5148 30 5135 27 5150 31 5171 35 6216 44 5189 40 566	De Luse Classic 8 il 8 est 8 sper Classic Hollywood Rock Dub Jaszette  PEAR L Divis Family from Full Ormersion from Sources on the first Performance from Interest of the Interest of the Interest of the MAXWIN	1579 116	AMPLIFICATIK CARLSBRO  Majum MKII Sipa 1903 Si	Press October 10	110 Regular 120 Super 130 Entra Super 130 O' Assertio Clearle DARCO (MAP 5000 Brother Entught 5100 Brother Light 5100 Brother Light 5200 Brother Light 1300 Haylon MARTIN M140 Brother Light M150 Brother Medium. NASHVILLI	E1.49 E 7.00 E1.40 E1.01 E2.40 E1.01 E2.40 E1.01 E2.40 E1.22 E2.40 E1.22 E2.40 E1.22
ROTARY CABINE  Solition 150/4  Lesie 110  Lesie 120  Lesie 130  Lesie 145  Lesie 147  Lesie 150  Levie 150  Le	ETS Price £496 £365 £440 £365 £470 £565 £490 £565 £290 £415 £250 £250 £250 £250 £250 £250 £250 £25	089 948 73 88 94 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 113 98 114 115 116 116 116 116 116 116 116 116 116	Ibanez 2873 Pro Quilhi 2987 Flying V 2495 ES 1750 Copy 2490 T win hiese 2491 Les Paul White 2891 Les Paul White 2898 Arct Bass Copy 1798 Arct Bass	Price Ob	De Luse Classic Bill Bear Super Classic Hollwood Rock Dub Jaszerte  PEAR L  Dyna Family from Full Ormerson from Sounday entrue from Rock Kit from Powermans from I maje-Creaser from 8 & Protection MAXVIN  Supp 706 Stoge 706	10   10   10   10   10   10   10   10	AMPLIFICATIK CARLSBRO  Marten MKII Sirper 1903 Sirper	Press O4p. (169 30)  2 93 16 16 17 17 24 17 25 17 17 24 17 25 17 17 17 17 17 17 17 17 17 17 17 17 17	110 Require 120 Super 130 Survi Suber 130 Survi Suber 130 Survi Suber 130 Survi Suber 150 O'Agger's D'Estre 5100 Bronne Excludint 5100 Bronne Excludint 5100 Bronne Light 5100 Bronne Vetting MARTIN M140 Bronne Light N150 Bronne Medium NASHVILI 520 Superfuse 821 Rock for Politic 821 Superfuse 821 Rock for Politic	E1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 E1.49 E1.01 E1.49 E1.01 E1.49 E1.05 E1.40
ROTARY CABINE Solition 150/9 Lesise 110 Lesis 120 Lesis 165 Lesis 167 Lesis 168 Lesis 168 Lesis 168 Lesis 160 Lesis	ETS 1996 1996 1388 1388 1440 1565 1640 1555 1690 1555 1690 1565 1690 1695 1	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfi 2397 Flying V 2495 ES 1750 Copy 2490 T win Niest 2391 List Pour + 71 2391 Pro Pour + 71 2391 P	Price Opt 2249 535 E157 326 E175 326 E175 327 227 227 227 227 227 227 227 227 227	De Luse Classic Bilg Bear Super Classic Hollywood Rock Dub Jaszerte  PEAR L  Diving Family from Full Chamerstein from Soundarisenture from Powermane from In Section from 8 Brothers from MAXWIN  Stage 706 Strage 706 Strage 705	10   10   10   10   10   10   10   10	AMPLIFICATIK CARLSBRO  Marten MKII Sirper 1900 Sirper 1900 Sirper Studen MKII SOTOP Anno SOTOP Anno SOTOP Anno SOTOP Anno Sotop Sorop MKII Socialan Sirrigray Super Combo MKII Sast Combo Stan Sirrigray Combo MKII Sast Combo Stan Z x 12 Cab (190w) Par Z x 12 Lab (1120w) Par Z x 12 Lab (1120w) Par Soul Sorop MKII Soul Sorop Soul Sorop Soul MKII Soul Soul MKII Soul Sorop Soul MKII Soul Sorop Soul MKII Soul Soul MKI	Press Oup. 1000 30 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	ITO Requise 120 Super 130 Extra Super 130 Extra Super 130 O'Asgerio D'estric DARCO (MAF 5000 Bronne Excluding 5100 Bronne Excluding 5100 Bronne Medium 5400 Bronne 12 Strang Light D304 Ryton MARTIN 11130 Bronne Light N150 Bronne Medium NASHVILI 520 Superline	E1.49 E 7.00 c1.49 E 7.00 c2.16 E10.15 c2.17
ROTARY CABINE Soliton 150/4 Lesise 110 Lesise 110 Lesise 120 Lesise 120 Lesise 126 Lesise 127 Lesise 127 Lesise 127 Lesise 127 Lesise 170 Lesis	ETS 2496 2466 2466 2470 2565 2470 2565 2470 2565 2470 2565 2490 2415 2400 2565 2730 275 275 275 275 275 275 275 275	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfi 2397 Flying V 2495 ES 1750 Copy 2490 T win Niest 2391 List Pour + 71 2391 Pro Pour + 71 2391 P	Price Opt 2249 535 E157 326 E175 326 E175 327 227 227 227 227 227 227 227 227 227	De Luve Classic Bill Bear Super Classic Hollywood Rock Dub Jaszerts  PEAR L  Divis Family from Full Comercian from Soundativenury from Rock Kir from Powermane from In specificate from In specificate from Super Control Super Co	1579 116	AMPLIFICATIK CARLSBRO  Marten MKII Sirper 1903 Sirper	Pres O4p. C169 O4p. C169 O4p. C169 O4p. C199 O4p. C191 O	110 Require 120 Super 130 Dira Super 140 Dira Super 140 Dira Super 150 Dira Super	E1.49 E 7.00 E2.149 E 7.00 E2.149 E 7.00 E2.149 E 1.00 E2.149 E 1.00 E2.149 E 1.01 E3.149 E 1.01
ROTARY CABINE Soliton 150/4 Lesie 110 Lesie 122 Lesie 122 Lesie 122 Lesie 122 Lesie 120 Lesie 170 Lesie 170 Lesie 170 Lesie 180 Lesie 180 Lesie 190 Lesie 19	ETS Price (240 care (240 c	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfit   2387 Frying V   2455 ES 1750 Capy   2450 EV   2550 ES	Price Opt 2249 535 E157 326 E175 326 E175 327 227 227 227 227 227 227 227 227 227	De Luse Classic Bill Bear Super Classic Hollywood Rock Dub Jaszeris  PEAR L  Divis Family from Full Ownersten from Soundationerury from Rock Kir from Powermane from In specificate from In specificate from Super Dock Super 705 Super 705 Super 705 Sauge 706 Super 705 Sauger 707 Sauger 7	1579 116   1648 98   1667 114   1647 98   1647 1647 164   1647 1	AMPLIFICATIK CARLSBRO  Majten MKII Spen 1000 Singley Store MKII Singley Store Combo 100 Tep Amp ST Ten Combo 100 Tep Amp Storigey Store Combo MKII Storigey Store Combo MKII Storigey Store Combo MKII Storigey Combo MARSHALL  1959 Amp MARSHALL	Press Oup. 1000 30 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	ITO Require 120 Super 130 Surva Super 130 Surva Super 130 O'Asserva Classic DARCO (MAF 5008 Super Exclusive 5008 Super Light 5008 Super Measure 5008 Super 12 Surang Light Date Inylon MARTIN M140 Branza Light N150 Branza Major NASHVILI 520 Superline R21 Rock in Polit 122 Light	E1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 E1.49 E1.49 E1.40 E1.49 E1.40 E1.49 E1.40 E1.49 E1.40 E1.49 E1.40
ROTARY CABINE Scillon 150/4 Lester 150/4 Lester 150/6 Les	ETS Price 14940 (240 ) 2346 (240 ) 2346 (240 ) 2565 (240 ) 2565 (290 ) 2415 (240 ) 2565 (270 ) 2575 (2	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfu 2397 Ffyrmy V 2495 ES 1750 Copy 2400 Twin Niese 2342 Brist Page 17 2342 Brist Page 17 2342 Brist Page 17 2345 Brist Page 17 2351 Les Page 17 2351 Les Page 17 2351 Les Page 17 2351 Les Page 17 2358 Brist Bass Copy //H 2368 Brist Bass Copy Brist Bass Copy Phase 45 Brist Bass Copyne Comp Noisy Gate Distortion + COLORSOUNI Swell Lindbucker Single Pose	Price Ob Cardy 50 Car	De Luse Classic Bill Bear Super Classic Hollwood Holds Dub Jaszerts  PEAR L  Diving Family from Full Comercian from Sounday senture from Rock Kir from Powermans from In age Classic from 8 8 frothers from Super 706 Shape 706 Sh	1579   116	AMPLIFICATIK CARLSBRO  Majtini MiKII Siaye 1000 Singray Suder MiKII Singray Suder MiKII Singray Suder MiKII Singray Suder Singray Suder Singray Suder Combo MiKII Sociation Singray Combo MiKII Sati Carlo (1904) Par 2 x 12 Cat (1904) Par 2 x 12 Cat (1904) Par 2 x 12 1 Horn (1904) Par 3 x 12 1 Horn (1904) Par 5 x 12 1 Horn (1904) Par 6 x 12 x 12 I Horn (1904) Par 6 x 12 x 12 I Horn (1904) Par 6 x 12 x 12 I Horn (1904) Par 6 x 12 x 12 I Horn (1904) Par 6 x 12 x 12 I Horn (1904) Mini Sin I Horn 6 x 12 x 1	Pres Oct C193 30 18 C193 18 C1	ITO Require 120 Super 120 Super 130 Surva Excludit 5100 Bronze Excludit 5100 Bronze Light 5200 Bronze Medium 5400 Bronze 12 Surang Light 130 Bronze 12 Surang Light N150 Bronze Light	ELI-99 E 7.00 C14-99 E 7.00 C14-99 E 7.00 C14-99 E 7.00 ELI-99 E 7.00 EXTEN:  52.16 E 10.15 C2.16 E 10.15 C2.17 C2
ROTARY CABINE Soliton 150/4 Usate 110 Leste 130 Leste 130 Leste 137 Leste 137 Leste 122 Leste 120 Leste 170 Leste 170 Leste 170 Leste 181 Leste 183 Leste 185 Leste 18	FTS Frice	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanez 2873 Pro Quilhi 2387 Fryng V 2495 ES 1750 Copy 2400 T win hrest 2341 Les Paul White 2342 Brest Reauly 2341 Les Paul White 2350 V Les Paul White 2351 Les Paul W	Price Ob C249 50 6175 35 L157 22 C198 40 L157 22 C198 40 L157 22 C198 40 L158 51 C198	De Luse Classic Bill Bear Super Classic Hollywood Rock Dub Jaszeris  PEAR L  Divis Family from Full Ownersten from Soundationerury from Rock Kir from Powermane from In specificate from In specificate from Super Dock Super 705 Super 705 Super 705 Sauge 706 Super 705 Sauger 707 Sauger 7	1579 116   1648 98   1667 114   1647 98   1647 1647 164   1647 1	AMPLIFICATIK CARLSBRO  Majrien MKII Sipen 1003 Sipen 1003 Singiny MKII Singiny Map Sir Ten Camba 100 Teb Amp Sirrigany Sarpe Combo MKII Sata Camba 100m Singiny Camba MKII Sata Camba 100m Singiny Camba MKII Sata Camba 100m Singiny Camba Mini Singiny Singi	Pres Odp. C150 20 18 C150 20 18 C151 24 C213 43 C152 25 C156 2	110 Require 120 Super 120 Super 130 Surv Suber 130 Surv Suber 130 Surv Suber 130 Oneger Onesic DARCO (MAF 5000 Bronne Exclupit 5100 Bronne Exclupit 5100 Bronne Medium 5200 Bronne Medium 6100 Bronne 12 Strang Light 11100 Bronne 12 Surang Light 11100 Bronne 12 Surang Light 11100 Bronne 12 Surang Light 11100 Bronne 121 Rock in Roll 122 Ught 123 Super Ling 124 Rock in Roll 125 Ught 125 Ught 125 Ught 126 Ught 127 Ught 127 Ught 128 Ught 128 Ught 129 Ught	E1.49 E 7.00 C149 E 7.00 C216 E10.15 C216
ROTARY CABINE Soliton 150/4 Lesie 110 Lesie 130 Lesie 137 Lesie 137 Lesie 137 Lesie 137 Lesie 122 Lesie 122 Lesie 122 Lesie 122 Lesie 122 Lesie 137 Lesie 138 Lesie 130 Lesie 130 Lesie 130 Lesie 130 Lesie 130 Lesie 140 ACOUSTIC GUIT EKO  Él Dorado 12 El Paso 6 El Dorado 12 El Paso 6 El Salardo 5 Re Salardo 12	FTS Frice	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanez 2873 Pro Quilhi 2387 Ffyrng V 2495 ES 1750 Copy 2400 Twin heek 2404 Es 1750 Copy 2400 Twin heek 2331 Les Paul White 2851 Les Paul 2851 Le	Price Ob C249 50 6175 35 E157 22 6198 40 E158 22 6198 40 E158 22 6198 40 E158 22 6198 40 E159 40 E159 40 E159 40 E159 40 E159 40 E159 266 E159 266 E159 E159 E159 E159 E159 E159 E159 E159	De Luse Clastic Bill Best Super Classic Hothwood Hoth Duc Jesterie PEAR L Divina Family from Full Cimension from Soundarisenture from Powermans from Maxwin Steps 706 Steps 708 Steps	1579   116	AMPLIFICATIK CARLSBRO  Marten MKII Start 1903 Start 190	Pres Oct C193 30 18 C193 18 C1	ITO Requise 120 Super 120 Extra Super 130 Extra Extra Super 130 Extra Super 141 Extra Super 14	ELI-99 E 7.00 C14-99 E 7.00 C14-99 E 7.00 C14-99 E 7.00 ELI-99 E 7.00 EXTEN) EXTENS EX
ROTARY CABINE  Solition 150/4  Levie 110  Le	FTS Price (1996)	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfi   2387 Figure V     2387 Figure V     2465 ES 1750 Capy     2465 ES 1750 Capy     2460 Z Twin Niest     2341 List Poul * Z     2342 Brist Require     2341 List Poul Virile     2350 List Poul Virile     2350 List Poul Virile     2350 List Poul Virile     2350 List Poul Virile     2358 Brist Ess Capy Lim     2358 Brist Ess Capy Lim     2358 Brist Ess Capy Lim     2368 Divile     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2400 DX Twin Nied     2368 Brist Bast Capy Lim     2368 Bri	Price Out 2249 50 6175 35 £1877 22 £1878 40 £1878 22 £1199 40 £188 40 £189 40 £189 40 £189 40 £189 40 £189 40 £189 £189 40 £189 £189 £189 £189 £189 £189 £189 £189	De Luse Classic Bill Best Bill Best Borner Classic Hollywood Rock Dub Jassette  PEAR L  Divina Family from Full Comersion from Soundarisenture from Rock Kir from Provermane from Inspecticalist from Bill Borner from Sundarisenture from Rock Kir from Provermane from Inspecticalist from MAXWIN Steps 706 Step	1579 116	AMPLIFICATIK CARLSBRO  Martin MKII Spek 1900 Singkay Suber MKII Singyay Suber MKII Singyay Suber MKII Singyay Suber Combo MKII Singyay Suber Combo MKII Singyay Suber Combo MKII Singyay Suber Combo MKII Sax Combo Ham 2 x 12 Cab 112000 Fe - 2 x 12 1 Horn (1900 Per 2 x 12 1 Horn (1900 Per 2 x 12 1 Horn (1900 Per 3 x 12 Cab 112000 Fe MARSHALL 1958 Amp 1959 Amp 1959 Amp 2058 Amp	Price O4p. C169 30 6 C169 30 6 C169 30 6 C161 29 C169 30 6 C161 29 C16	ITO Requise 120 Super 120 Extra Super 1200 Bronze Extuple 1200 Bronze Light 1200 Bronze 12 Strang Light 1200 Bronze Light 1200 Bronz	E1.49 E 7.00 C149 E 7.00 C149 E 7.00 C149 E 7.00 C149 E 7.00 E1.49 E 10.15 E2.16 E10.15 E2.16 E10.15 E2.16 E10.15 E2.16 E10.15 E2.16 E10.15 E2.17 E2.27 E2.60 E1.22 E2.60 E1.22 E2.60 E1.22 E2.60 E1.22 E2.60 E1.22 E3.60 E1.22 E3.
ROTARY CABINE  Solition 150/4  Lesie 110  Lesie 122  Lesie 122  Lesie 122  Lesie 170  Le	TTS Proses (2440 (2470 2	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfu 2387 Figure V 2455 ES 1750 Copy 2402 Funn Neec 2402 Event Require 2341 Les Poul + 7 2341 Require 2350 V Les Poul Noures 2350 Pries Poul V Les Poul V Les 2350 Pries Poul V Les Poul V Les 2350 Pries Poul V Les Poul V Les Poul V Les 2350 Pries Poul V Les Poul V Les Poul V Les 2350 Pries Poul V Les Poul V Les Poul V Les 2350 Pries Poul V Les Pou	Price Out 2249 50 6175 35 £187 22 £199 40 £175 35 £187 22 £199 40 £175 21 £187 24 £187 25 £187	De Luve Classic Bill Bear Super Classic Hollywood Rock Dub Jaszerte  PEAR L  Divis Family from Full Comercian from Soundarisenture from Rock Kir from Provermane from In specificate from In specificate from Super 206 Studio 509  TAMA  Satturn 12 * 1 Saturn 12 * 7 Mars 9 Mars 9 Mars 6 Mars 7 Mars 6 Mars 7 Mars 6 Mars 7 Mars 7 Mars 7 Mars 7 Mars 7 Mars 8 Mars	1579 116	AMPLIFICATIK CARLSBRO  Marien MKII Spen 1000 Singlay Suce MKII Singray MKII Softop Amp SCTER Carried Storger MKII Singray MKII Softop Amp SCTER Carried Storger Combo MKII Storger Combo	Pres Ode C169 Ode C16	ITO Requise 120 Super 120 Extra Super 130 Extra Extra Super 130 Extra Super 141 Extra Super 14	E1.49 E 7.00 C149 E 7.00 C146 E10.15 C146 C 7.52 C146
ROTARY CABINE  Soliton 150/4  Lesie 110  Lesie 120  Lesie 157  Lesie 170  Les	ETS   Proce   Process   Pr	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanez 2873 Pro Quilfu 2393 Ffyring V 2455 ES 1750 Copy 2402 Twin Niese 2455 ES 1750 Copy 2402 Twin Niese 2324 Blast Result 2325 Les Faul Neitral 2331 Les Faul Neitral 2331 Les Faul D/L L'r 2388 Arc Bast Copy 23889 Rick Bast Copy 23889 Rick Bast Copy MXR Phase 100 Phase 90	Price Out 2249 50 6175 36 6175 36 6175 36 6175 37 6170 32 6199 40 6175 37 6175	De Luse Classic Bill Bear Super Classic Hollwood Hord Duc Jasser  De Aramily from Full Comercian from Sounday senture from Rock Kir from Powermans from In Section from Sunday senture from Rock Kir from Powermans from MAXWIN Steps 706 Studio 503 Studio 503 TAMA  Setum 12 * 1 Saturn 7 Murs 9 Murs 9 Murs 9 Murs 9 Murs 5 Murs 5 Murs 5 Murs 6 Murs 7 Murs 7 Murs 7 Murs 8 Murs 7 Murs 8 Murs 7 Murs 8 Murs 8 Murs 9 Murs	1579 116	AMPLIFICATIK CARLSBRO  Marten MKII Sirpet 1900 MARSHALL 1964 Amp 1964 Amp 1968 Amp	Pres Ode C190 30 18	ITO Require 120 Super 120 Super 130 Surt Super 130 Chart Super	E1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 C1.49 E 7.00 E1.49 E1.05 E1.40 E1.15 E1.40 E1.15 E1.40 E1.22 E2.40 E1.22 E1.40 E1.40 E1.79 E8.40 E1.70 E8.40 E1.70 E8.40 E1.70 E8.40 E1.70 E8.40 E1.70 E8.40 E1.7
ROTARY CABINE  Solition 150/4  Lesie 110  Lesie 122  Lesie 122  Lesie 122  Lesie 170  Le	TTS Proses (2440 (2470 2	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanet 2871 Pro Quilfu 2387 Ffyrng V 2465 ES 1750 Copy 2462 Twin Niest 2342 Bast Shap Copy 2462 Twin Niest 2341 List Paul + Pul 2341 List Paul 2341 List	Price Out 2249 50 6175 35 6187 72 6188 40 6188 6188 6188 6188 6188 6188 6188 618	De Luse Classic Bill Bear Super Classic Hollwood Holds Duc Jaszette De Aramily from Full Comercian from Sounday senture from Rock Kir from Powermane from It age: Classic from 8 Brothers from MAXWIN Stage 706 Stage 70	198   198	AMPLIFICATIK CARLSBRO  Majim Mkil Syne 1900 Singlay Super Mkil Singlay Super Mkil Singlay Super Mkil Singlay Super Mkil Singlay Super Combo MARSHALL ISS Amb 1957 Amp 2058 Amb 1958 Amb 2058 Amb	Pres Oct 15	ITO Require 120 Super 120 Super 130 Surva Surva Surva Surva 14140 Surva Surva Surva Surva 14140 Surva Surva Machine 14140 Surva Machine 14140 Surva	E1.49 E 7.00 c1.49 E 7.00 c1.49 E 7.00 c1.49 E 7.00 c1.49 E 7.00 c2.16 E1.01 c2.17 c
ROTARY CABINE  Solition 150/4  Lesie 110  Lesie 130  Lesie 137  Lesie 137  Lesie 137  Lesie 122  Lesie 122  Lesie 122  Lesie 122  Lesie 122  Lesie 137  Lesie 1370  Lesie 138  Lesie 130  Lesie 130  Lesie 130  Lesie 140  Robert 150  Lesie 140  ACOUSTIC GUII  EKO  Él Dorado 12  El Paso 6  El Durado 12  El Paso 6  C Gauchi o 3  Ro 813-5  Robert 130  Robert 130  El Dorado 12  El Paso 6  C Gauchi o 3  Robert 130  Rob	ETS Process Pr	Dep 99 48 73 88 113 94 113 58 80 113 145 65 65 65	Ibanez 2873 Pro Quilhi 2387 Fiyring V 2495 ES 1750 Cipy 2402 Fiyring V 2405 ES 1750 Cipy 2402 Fiyring V 2401 Fiyring N 2401 Les Poul Project 2341 Les Poul Project 2341 Les Poul Project 2350 V Les Poul Vinire 2451 Les Poul Vinire 2451 Les Poul Vinire 2451 Les Poul Vinire 2451 Les Poul Vinire 2452 Nes Poul Vinire 2462 Nor Tain Noch 23688/OX Shareo Alek Bets cosy MXR Phose 100 Phose 45 Blue Box Oyna Comp Noss Gomp N	Price Out 2249 50 6175 36 £1857 22 £1959 40 £1757 22 £1959 40 £1757 22 £1959 31 £2156 44 £195 25 £2156 44 £195 25 £215 44 £195 25 £215 £21	De Luse Clastic Bill Best Super Classic Hollwood Hold Duc Jesterie  Divina Family from Full Cimension from Soundarisenture from Soundarisenture from Foreman from Proverman from Proverman from Proverman from MAXWIN Steps 706 St	1579 116   1648 98   1667 114   1647 98   1647 164	AMPLIFICATIK CARLSBRO  Majrien MKII Sipen 1003 Singley Sider MKII Sider	Pres Odp. C150 318 c150 318 c150 318 c151 318 c1	ITO Require 120 Super 120 Super 130 Surva Suber 130 Super 130 Su	E1.49 E 7.00 C149 E 7.00 C149 E 7.00 C149 E 7.00 C149 E 7.00 C216 E1.01 C217 C216 E1.01 C217 C217 C217 C217 C217 C217 C217 C21
ROTARY CABINE  Soliton 150/4  Lesie 110  Lesie 110  Lesie 120  Lesie 120  Lesie 127  Lesie 122  Lesie 122  Lesie 122  Lesie 122  Lesie 122  Lesie 122  Lesie 120  Lesie 170  Lesie 170  Lesie 170  Lesie 170  Lesie 170  Lesie 170  Lesie 180  Lesie 180  Lesie 180  Lesie 180  Lesie 180  Lesie 180  ACOUSTIC GUIT  Range 1  Range 12	ETS Price (240 C240 C240 C240 C240 C240 C240 C240 C	Dep 99 948 738 943 198 198 198 198 198 198 198 198 198 198	Ibanes 2873 Pro Quilfu 2383 Flyring V 2465 ES 1750 Copy 2402 Flyring V 2402 Twin Niese 2342 Brast Pearus 2352 Brast Pearus 2352 Brast Pearus 2352 Les Paul Whine 2451 Les Paul Whine 2452 Les Paul Whine 2452 Brast Copy 2462 Bras	Price Out 224 95 00 6175 35 1157 22 6198 40 1175 22 6198 40 11	De Luse Clastic Bill Beat Super Classic Hollwood Hold Dup Jetterle Devia Family from Full Ownersien from Soundarisenture Youn Rock Kir from Powermans from MAXWIN Steps 706 Super 708 Studio 508 Studio 509 TAMA  Saturn 12 * 1 Super 7 Mars CS Mars C	1579 116	AMPLIFICATIK CARLSBRO  Majtim MKII Span 1903 Smylo Sister MKII Simpley	Pres O4p. C150 204p. C150 318 C1 203 318 C1 213 24 C213 42 C1 21 42 C213 42 C1 21 42 C2 C1 21 42 C2 C1 21 42 C2	ITO Require 120 Super 120 Super 130 Surva Suber 130 Surva Suber 130 Surva Suber 130 Surva Suber 130 Surva Exclusive 5100 Survar Exclusive 5100 Survar Exclusive 5100 Survar Medium MARTIN M140 Survars Medium MARTIN M140 Survars Medium NASHVILI 520 Super Inse 821 Rock (178 bit 122 Uight M23 Medium AUGUSTII Gode 5.P. Roc Luber 5.P. Survar Lubei 5.P. Survar	E1.49 E 7.00 c1.49 E 7.00 c1.40 E 7.50 c1.40
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The only control over successful rock musicians is the Musician's Union. It is fighting a rearguard action against the onslaught of the super rich record industry because, make no mistake, the record companies reduce 1,000 musicians to poverty whilst making one a millionaire,

Partners in this exploitation are the broadcasting authorities -- particularly the commercial stations. Every time a record is played, it is in place of a performance by musicians employed to broadcast.

The musicians on the record could become stars, the musicians who are not recording are done out of work: making music for broadcasting.

The record companies and the radio stations buy their right to record performances too cheaply. At the most, the performing rights fee for broadcasting a record is a few quid. You can work out how much it it would be if six musicians were employed to record or broadcast the same number live. The argument is that musicians in a radio studio can't create the quality of music made by artists in proper record- 42 Keyboard Check ing studios with unlimited budgets. This is true, but the process is strangling musicians.

In America, the AFM (American Federation of Musicians) is very powerful. It's like joining a club, and musicians go along to the Union house, get gigs and play with other players. In Britain, the Union is a little stiff necked and doesn't work hard enough to get rock musicians to be members.

But the MU is right, and you should be part of it. Music must stay live. Hold back the discos, the lowest common denominator of the exploitative process, get the radio stations to allow your band to broudcast-and pay you for do-ing so. But above all, join the Union and kick it up the arse!

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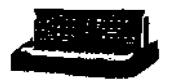


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Dear Sir:

After reading your Hayman guitar review last year, I bought a Hayman 3030H which I amplify with a Rangemaster treble booster and an HH IC 100\$. I am extremely happy with the sound but I get a lot of feedback. I know the treble-booster doesn't help but Fenders and Gibsons give me far more volume with the system than the Hayman. I read in your recent interview with John Birch that sealing the pick-ups in some kind of resins can help. How can this be done? I've also got a Telecaster and I'm thinking of putting a Strat pick-up in place of the rhythm pick-up. Is this easy to do, and is it a good idea. ?

John Steel Christchurch, Dorset

The Range master obviously causes most of the trouble but assuming you are determined to stick with it, sealing the pick-ups in the body could be a good idea. Set them in an epoxy or similar seal and you should get a drop in feedback. Lot's of Tele owners out a Strat pick-up on because of the greater tone variation offered. It's a fairly straightforward operation.

#### Dear Sir:

Thank you for an informative and Interesting magazine. I have always been enthusiastic about recording, the equipment and the various techniques involved. I am seriously considering trying to make this a career. However, 1 have no idea how to get into the recording industry, what qualifications are needed and who to contact. What kind of pay does someone starting in a studio might expect.

If it would help, I have two "A" levels and I'm currently in my second year at a college of further education.

#### Gary Cooke

### (no address supplied)

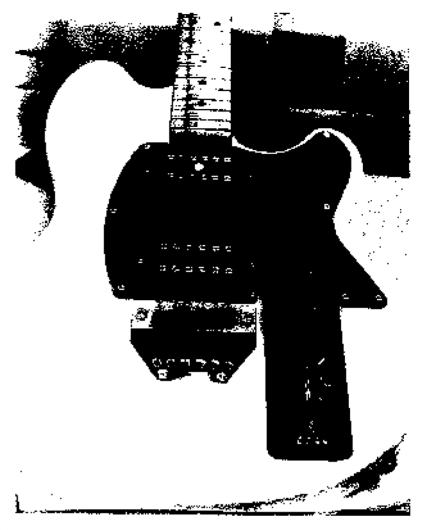
Time is not on your side. I'd guess from your letter you're at least 19 years old and if you get much older before getting a place, studios won't take you. Established studios take young, enthusiastic people and train them for quite a few years. Educational qualifications are of less importance than a real desire to work in a studio and the only way in is to compete with all the other hopefuls. Write to every studio whose address you can find - there are some addresses in the back of the magazine - and set out a clear case for yourself, stating all the relevant experience you have. Persistance may eventually land you a place, but you may have to write hundreds of letters before that happens. A trained engineer working for an established studio may earn between £2,500 and £4,000 a year and independent engineers can do considerably better.

#### Dear Sir:

My group and I have been wondering which union is the best to join, Equity or the Musicians Union, before attempting to appear on television. How do we contact these unions?

Mark Humbey, Isleworth, Middx.

We've got a feature on the MU in this issue, so you'll find your answer there.



Dear Sir:

My band is just about to invest in a second-hand transit van. We've been managing by hiring vans up to now but we're beginning to get enough good gigs to be able to pay HP on our own truck. The only problems we're not sure about are insurance, tax and so on. When we hire we haven't told the van hire people what we use the van for and I rang up a local insurance broker who told me it's almost impossible to get comprehensive Insurance on a group van. What do most bands do?

#### Rob Manswell.

#### Huntingdon

Most bands have similar problems, that's just one reason why hiring has become so popular. There are several ways of approaching the insurance problem. If you insure it for one member of the band and get the cover to allow him to use it in connexion with his business, provided his business is listed as musician, it might be easier than asking for a straightforward cover for group use. The key factor is to find a broker who specialises in insurance problems for musicians. Ads appear occasionally in these pages for brokers offering such services and it's a question of finding a company who doesn't take an instant dislike to musicions. Do insure the equipment separately: no ordinary vehicle insurance will cover your gear. You will need a goods vehicle road licence and that depends on the weight of the van you're buying.

#### Dear Sir:

I read with great interest your article on home recording and would like to ask you about a suitable mixer to go with my present equipment.

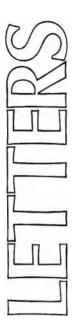
I have a Teac 3340 with suitable amp and speakers for monitoring and AKG mikes and I would like a good mixer and am prepared to spend about £300.

#### Billy Hygate

#### Redcar

Regarding the mixing, it would be hard to beat a Teac mixer in this set up. Apart from being perfectly mated to the machine, it has a really neat, efficient control layout. The Model 2 mixer is a six channel affair specially designed for multi-channel work with some tonecontrol filters. If you need sophisticated EQ, you might have to get a separate unit.

continued on page 8



Dear Sir: I would like to congratulate Mr. Stephen Delft for his excellent and informative series of articles currently appearing in International Musician on the restoring of original lacquer finishes and refinishing guitars in general.

Although I may appear to be jumping the gun (his series of articles is not yet concluded), I must confess that reading the series one gets the impression that restoring an original finish, or indeed, the entire refinishing of a guitar is something that can be done at home.

Probably this is not the intention of the author of this series but it is obvious that some amount of specialised knowledge is required even if one follows the very helpful information step by step.

Also, not every guitarist has a spare room, workshop, attic, or cellar to work in.

It would also seem that, should one decide to "have a go regardless", a second guitar would be an asset for use whilst the other guitar is being refinished or restored, this would obviate the necessity of constantly dismantling and re-assembling a guitar for a gig, It would also reduce the risk of spoiling any work which has already been started.

As to the use of amalgamator, this is probably an excellent product in the hands of Stephen Delft, but all too often we have had guitars in our repair department which have had to be completely resprayed due to someone being over zealous in their attempts at restoring an original finish.

I would also add that many of today's guitars (both Japanese and American) are finished in a catalysed material which does not always react favourably to an amalgamator type substance.

Another point to remember is that many guitars have a sunburst finish and should the colours be disturbed through over softening of the top layers of lacquer, any attempt at brushing would result in what can only be described as a nasty

If I appear to be anti-amalgamator, I can only reiterate my previous statement that such a product is first class in the hands of Stephen Delft but should not be looked upon as a magic cure-all for cracked or market lacquer.

However, should someone be determined to try it out I can only suggest that they heed Stephen Delft's very wise advice and make sure they use it in a well ventilated room.

As for Stephen Delft's articles, may we have more like them.

Yours faithfully, Eddie Smith, Manager Repair & Service Dept.

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Stephen Deift replies: I am grateful for Eddie Smith's comments on my refinishing articles. My short answer would be that I agree with all of them, with slight reservations.

More specifically, the processes described are those which I did in fact carry out at home, long before I had a proper workshop. I am particularly aware of the difficulty in striking a balance between overestimating our reader's ability and giving too much information in too long an article. However, I had many requests for articles on this subject, and did not feel I should put them off any longer.

My grandfather taught me that when I am no longer willing to learn from

others, I should retire at once, and I feel that an exchange of information would benefit all those Retail and Importer's staff who, from choice or necessity, are doing repair work. For the benefit of our readers, I feel I should add or further emphasise the following points in my Refinishing Articles.

(1) If you want to learn, learn first on rubbish, which professional repairers have rejected as not worthwhile.

(2) Don't use amalgamator on valuable sunburst finishes, and in any case test its action first on a concealed patch of lacquer.

(3) You can respray over some old finishes, and I.C.I. Belco may still supply a very useful data sheet dealing with refinishing cellulose on cars. (Please don't use opaque or coloured primer coats on good guitars - it makes subsequent "natural" refinishing jobs very difficult use clear basecoats and then the recommended undercoat if necessary). (4) If you use these articles as an excuse to repair/refinish other peoples guitars less than perfectly, I will nail you to the wall above my shop as a public example. Stick to your own guitars and even then take anything valuable to a competent and well known professional repairer. Most of these will be willing to tell you what you can safely do your-



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		.025	0.17	4003	3rd Plain	.015	0.20
1004	4th Wound	.032	0.19	4004	4th Wound	.028	0.55
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2001	1st Plaiก	.013	0.17	5001	1st Plain	.011	0.20
2002	2nd Plain	.016	0.17	5002	2nd Plain	.014	0.20
2003	3rd Plain	.026	0.36	5003	3rd Plain	.017	0.20
2004	4th Wound	.033	0.46	5004	4th Wound	.028	0.55
2005	5th Wound	.041	0.49	5005	5th Wound	.035	0.65
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3001	1st Plain	.0095	0.20	6002	2nd Plain	.015	0.20
3002	2nd Plain	.012	0.20	6003	3rd Wound	.023	0.40
3003	3rd Plain	.015	0.20	6004	4th Wound	.029	0.55
3004	4th Wound	.025	0.55	6005	5th Wound	.037	0.65
3005	5th Wound	.030	0.65	6006	6th Wound	.045	0.70
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3003SU	3rd Plain	.015	0.20	9004	4th Wound		0.30
3004SU	4th Wound	0.24	0.55	9005	5th Wound		0.36
3005SU	5th Wound	.030	0.65	9006	6th Wound		0.39
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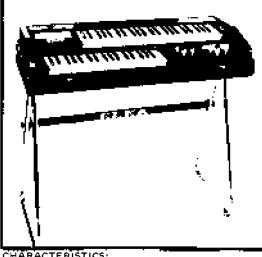
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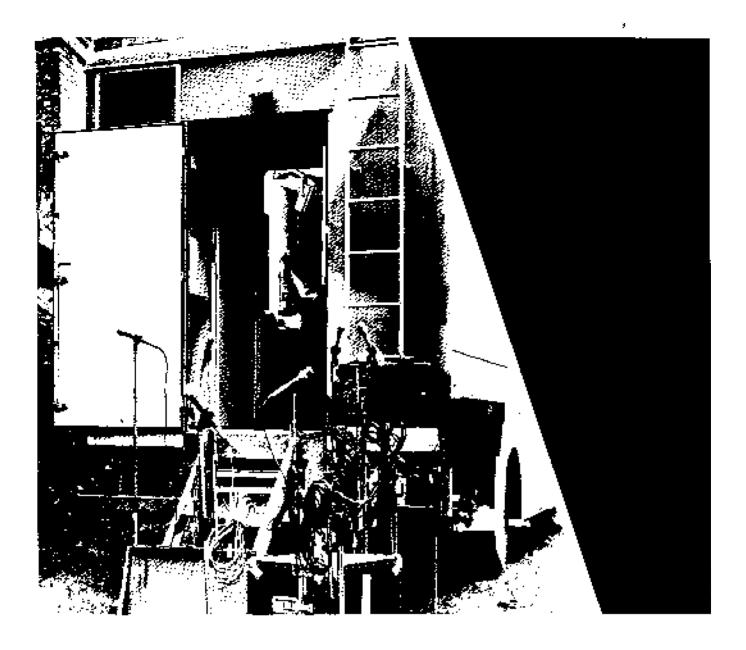
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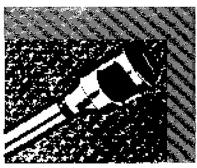
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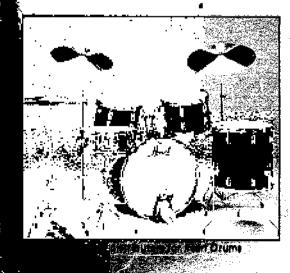




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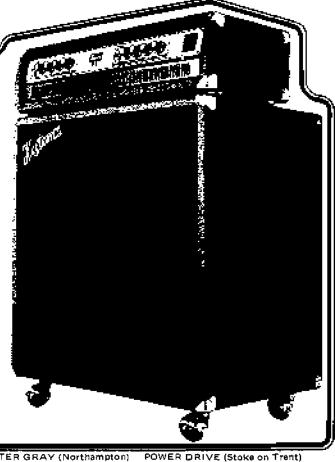
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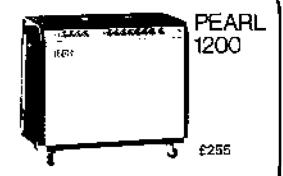


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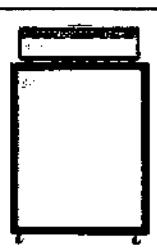
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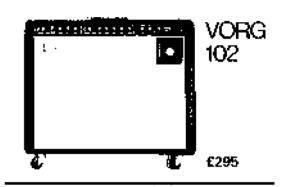
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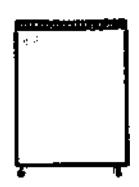


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# Should you be "Partof

# John Morton, General Secretary of the Musicians

The Musician's Union has been in existence since the 1920's. After a decline in membership during the '30's, it reached a peak with the influx of dance band players that sprung up after World War II and today outsiders see evidence of union activity only when the needletime problem is discussed or when broadcasting or recording musicians take industrial action.

If you want to broadcast, you need to be in the MU. It is the only body which represents musicians with the broadcasting and recording companies, and it suffers from two main problems. The first is that it lacks the political convictions usually found at grass roots levels in more conventional trade unions and it lacks the ability to negotiate with the vast majority of employers.

By the very nature of the music business, the promoter is often a little shady and nearly always anti-union. Musicians themselves see unionism as being an imposition on their artistic freedom and they do not seem prepared to operate the type of closed shop and demarcation procedures that have given the industrial unions their enormous strength.

But Equity manages to represent actors, and the circumstances are often parallel. If the union fails at the local promotion to get decent wages for its members it's partly the member's own fault. Does the union do enough for rock musicians? What are the real benefits of becoming a member? Editor Ray Hammond interviews the General Secretary John Morton. affiliation can contract out.

How much has a semi-provigot to find to join the union?

Well, the membership fee is a pound and they pay a quarter's subscription in advance. The subscriptions are geared to their earnings from music. There are four grades of subscription; the top one means that a member's paying around 60p a week and the bottom one means it's around 15p a week. It relies on a combination of honour and knowledge to work fairly.

Can you spell out the most obvious benefits of joining the union?

Well, the first overriding, umberella benefit is becoming part of the only friendly organisation. Acquiring access or advice and help and becoming part of machinery through which we can get a degree of perfection, help himself, get advice on contracts and so on. I always think that is the main thing that we should try to persuade people is the best reason for joining the union. We do also have services and they are quite tangible benefits but I don't think we offer ourselves to young musicians as solely a service organisation.

The services include free instrument insurance up to £150 — that's the limit we go up to — and the claims are interpreted, not carelessly, but with proper regard to the realities of a musician's life. As long as reasonable care has been taken there won't be any difficulty with claims. There is also a fairly small sick pay, there is legal advice on contracts and legal assistance in pursing claims. These services are usually available through local branches.

Are you happy that enough young members are coming along to union meetings?

This is a worry to me and indeed to the executive committee of the union as well. Of course, participation in the union is exclusively through unions, it may be through being the chap in the group who contacts the branch secretary and so on, but there's no doubt that union meetings do still have a place. There's no better method really of a person becoming aware of the whole local scene. A number of factors militate against union attendance, some of them very understandable. First of all, groups are very mobile. Secondly, they're completely absorbed with their music, thirdly, they're often not - because the youngsters of today are not - so orientated towards meetings, not only unions but generally. The media has altered the relationship of people to events, so there's that barrier.

It is sometimes argued that there is a resistance to becoming involved in institutional affairs anyway. Perhaps in some people's eyes, institutions are seen as anathema and as conflicting with creative expression in music. That's a problem that's overcome by some musicians. Chamber musicians, for example, manage to combine creativity with union awareness.

And of course, there's the institutional, bureaucratic problem, which it's foolish to ignore. But in order to operate the machinery, it's necessary to acquire experience and in order to acquire experience it's necessary to live a number of years, so the basic machinery of all voluntary organisations is always in the hands

of people who are the mature side of the age spectrum. Things are not all black, these factors simply have to be taken into account, we have got quite a lot of young chaps involved in union activities. On the executive committee, we've got two or three; we have some very young branches, it's not uniformly distributed. Doncaster branch is fairly typical - it nearly died out and was then resuscitated by a group of young musicians. They've got a young branch secretary and youngish chairman and that's a very flourishing, up and coming young branch. I think the situation in the union today is not much different from when the dance band musician took over from the theatre based musician after the war.

One of the problems must be that if you have a large number of young people who do not appear at meetings and don't sit on committees, they're not faithfully represented in decision makina?

We try to get over that problem in two ways. I think we're as democratic as any organisation, our rules have been described by unfriendly lawyers as quite model in the degree of democracy they afford. But having said that, in the practical world, the full time official does have considerable influence, and he should do. He spends his life acquiring expertise and studying the situation and his advice should be treated seriously.

That is one way in which the involvement is overcome because the full time official is motivated entirely towards making contact with the members. The work of full time officials is often geared towards a particular area. For example, we have Don Smith who is our session organiser who spends his entire time going around studios looking at recording, broadcasting and so on. Sometimes conflicts appear there which might be regarded as conflicts between union bureaucracy and the young player but which I believe on examination of almost all disputes is in fact a conflict between a particular individual's advantage and a number of musicians' advantage.

How do you deal with a rebel member who is a superstar and whose interests appear to conflict with the union's interests?

This is part of the problem in ensuring that the union is acting in a considered way that can be justified as being in the best interests of most members. Naturally, one always asserts that one acts in this way, but we have to be able to show this to be true. Sometimes it's not possible to prove this conclusively because many policies are based on what might happen if they didn't exist, you can't prove the negative. But with that qualification, I think most of our actions are based on careful analysis of the long and medium term interests of our members.

Another way in which we try to get through to the players... we had a group seminar two or three weeks ago. We invited top group members to attend and tell us some of their problems. Again the commercial and contractual position of the groups is very much more complicated than it used to be in the old dance band days. There you had usually the mass of musicians working for the employers who were the band leaders. You had a straight forward relationship to deal with.

Is there a minimum status a musician has to have before he's eligible for membership?

No. The position at the moment is that we have about 35,000 members and this makes us the second largest musician's organisation in the world. We organise down to the lowest professional participation. If anybody is following the profession of music in any of its forms, doing even one night a week he's eligible for membership. We've never accepted the idea of making judgements on musicianship, we're an economic organisation basically.

Does the MU have any sort of political ideology you can recognise or identify?

We have no ideology in our general operation. That's is to say we have the same proportion of political views as the rest of society. We are affliated to the TUC of course, but members who don't want to be part of that

# The Union?"

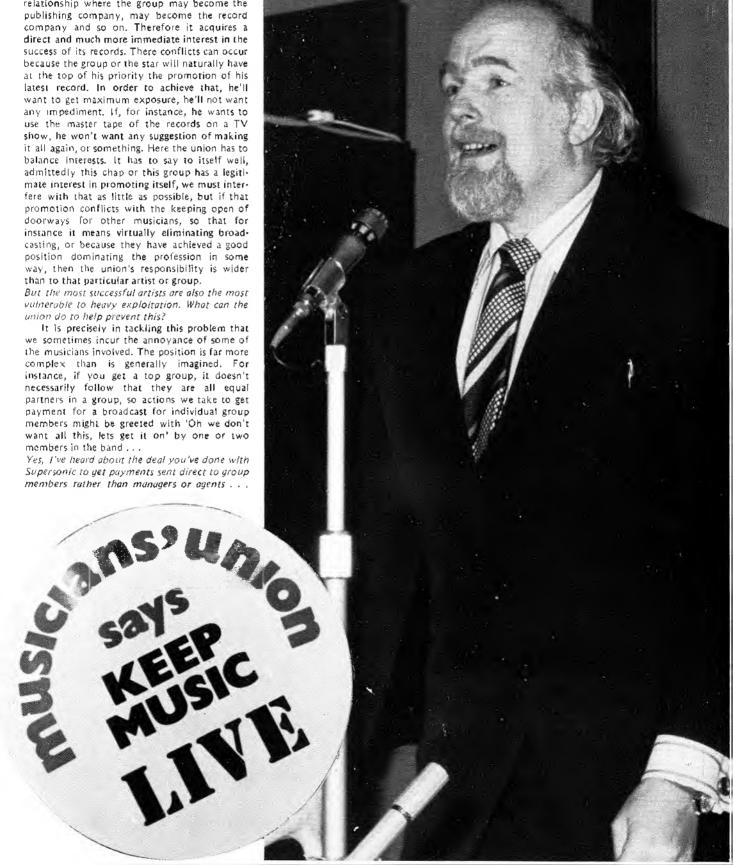
# Union puts the case for membership.

Now you have this whole network of relationship where the group may become the publishing company, may become the record company and so on. Therefore it acquires a direct and much more immediate interest in the success of its records. There conflicts can occur because the group or the star will naturally have at the top of his priority the promotion of his latest record. In order to achieve that, he'll want to get maximum exposure, he'll not want any impediment. If, for instance, he wants to use the master tape of the records on a TV show, he won't want any suggestion of making it all again, or something. Here the union has to balance interests. It has to say to itself well, admittedly this chap or this group has a legitimate interest in promoting itself, we must interfere with that as little as possible, but if that promotion conflicts with the keeping open of doorways for other musicians, so that for instance it means virtually eliminating broadcasting, or because they have achieved a good position dominating the profession in some way, then the union's responsibility is wider than to that particular artist or group.

But the most successful artists are also the most vulnerable to heavy exploitation. What can the union do to help prevent this?

It is precisely in tackling this problem that we sometimes incur the annoyance of some of the musicians involved. The position is far more complex than is generally imagined. For instance, if you get a top group, it doesn't necessarily follow that they are all equal partners in a group, so actions we take to get payment for a broadcast for individual group members might be greeted with 'Oh we don't want all this, lets get it on' by one or two members in the band . . .

Yes, I've heard about the deal you've done with Supersonic to get payments sent direct to group members rather than managers or agents . . .



# "...my fondest hope is that everybody benefits by being in the union."

## ~ John Morton

It's on the effects of that, that I'm now commenting really. We get the most pleased reaction from some of the musicians and it is a very welcome addition to the quite modest sums that members of very prominent groups earn on a £50 a week wage. This is part of the objective of the union, to set up a fair system to avoid the need to take up particular cases because you've prevented the arrangements from becoming absolutely unfair. enormous economic power of the industry, it's a multi-million pound industry. You've got guys going round picking up lads with pretty faces and signing them up for the next five years; admittedly there's been some amelioration because of the well known Schroeder case which has slowed a few of the Eagles down a bit because they can't be too exploitative in their contracts.

We know very well . . . we're sometimes caricature:d as being blinkered but I don't know what people think we spend our time doing. We listen to problems, we know all the difficulties about the enormous economic pressure, you've got to have the equipment to get into the game. Someone comes along and says I'll get you the equipment but he's not daft so there you are with a tight contract. We know all the problems with management and agency contracts.

Do young musicians turn to the MU for advice when they're offered contracts?

Not sufficiently, and again one has to recognise that even having given the advice it may be rejected because what we're talking about is the showbiz scramble. Its all very affuring and you come along and see some sober old chap with a beard, like me, and I say its a diabolical contract and then he goes away and thinks 'Oh well it might be OK. . . . '.

A lot of our time we spend sadly explaining to guys that its not as easy to get out of contracts as it is to get into them. We're always being asked 'How can I get out of this contract?' Unfortunately, for them, things don't work that way and contracts are far easier to get into than get out of.

Do you feel there is one section of musicians who benefit more from being in the MU than another. Session men for example?

I should find it difficult to generalise on that. In principal, my fondest hope is that everybody benefits by being in the union; one doesn't want to get too glib about it, but sometimes you should measure it by what they put into it as well as what they get out of it. They become part of a community and a lot of our work - this is a bit of an interpolation - for instance, in submissions we make to the committee on copyrights, in submissiosn we make to the Allen committee on broadcasting. in dealing with the government and the arts council on interpreting the arts law widely, and not being satisfied with the general view that pop and jazz can pay for itself, winning the basis for subsidies and widening the scope for employment, trying to make sure that legislation doesn't impinge unfairly on the selfemployed, trying to: make sure local changes are modified to suit the particular employment for musicians. A lot of this is particular service for particular members but it is to the benefit of all involved in music. So it's possible to speak to all types of musicians who will say they've never had anything indirectly out of it, just as you will meet people who say they've paid their National Insurance and never had a major operation.

I mentioned session men in particular as benefitting from union activity, because to an outsider it would seem that it is possible for the union to negotiate directly with the major employers such as recording companies and broadcasting authorities. But what about younger, less experienced musicians; isn't it difficult for the union to have any real power over the individual promoter or agent?

Well, of course the broadcasting and recording situation covers all types of musicians but it doesn't affect musicians at different success. levels. However, part of our activities was to see that the commercial radio stations offered some employment in the locality to young musicians. But broadcasting, recording; OK, what we do helps all types of musicians but only when they get to that stage. For the guys working in clubs, our activities have to be different. There's a multiplicity of employers: we tried, in the past to get some co-ordination of clubs by finding responsible central bodies say the Club and Institutes Union, whatever -I can't pretend we've done very well there. Those bodies have not been prepared to accept any responsibility for the particular arrangement in clubs, so in the past few years we've concentrated more on local solutions to those problems and we give advice from this office to branches on how to organise collective relations with clubs in there area. Many branches do this and there are agreements between the club and

We also work through the TUC and have had several resolutions passed in recent years calling on all trade unionists to ensure that the club committees recognise the union and so on and all this is to do with making conditions to see that they give proper notice and don't stop people halfway through the show and cancel out, and those kind of things. So we're working through the TUC, we work through the branches as far as local collective agreements are concerned.

But surely you're not able to use the ultimate sanction of a strike in a live music situation?

There's no contingency in which it would be valuable to stop everybody performing. One has to say where it is that the pressure has to be exerted. There, sometimes, we're in a very strong position. In theatres we're always having a few disputes. In a couple of clubs in London recently we had a big picket out and the guys from the Opera house came out and this was for a club band that had been sacked and replaced by records. We got a picket with about 80 musicians outside and eventually the dispute was settled after about three weeks. With other clubs, this is part of being a trade union, it may be that our organised strength wouldn't be quite sufficient to bring about a speedy result, we should then involve other unions, Equity being the nearest, but not them alone, the Transport and General Workers Union for example. We have been involved in disputes for their benefit and they would be involved for our benefit. So one uses whatever weapons are at hand to take action. I think we've got a pretty good armoury of weapons.

A young musician is conned in his local dance hall, it's the very nature of the business. His own ability to respond to the situation is very limited indeed. Is there anything you can do?

This is happening all the time, not at

national level but at branch level, We are doing something about these cases all the time. Not winning them all, but winning a higher proportion than most humans do with their problems. Somebody gets sacked, an organist for example, a group gets sacked or they're double booked, action is taken. Sometimes it's a matter of legal action, suing for damages or whatever. Sometimes it's a matter of putting a club on a black list. This is an ongoing thing, it's never important enough to make the nationals, but it's happening all the time. This is what I meant earlier when I talked about belonging to a friendly organisation.

Are you happy with the amount of five music there is in the broadcasting system?

Well, I think you've got to separate the two systems, commercial and non commercial. We're not happy at all with the commercial radio situation. We came to the arrangement that we did for this three per cent of advertising revenue and, what is more important, the secondary rental scheme.

Can you explain them for me?

Commercial radio was introduced by a Conservative government. We had talks about the basis on which we would acquiesce, not agree, to its introduction. Our bargaining lever was through the record industry and the licence to play records. The political background was that the government was determined to introduce it and we were under quite a lot of pressure and coercion because the government had the capacity to change the law and so on and so we were not in the best bargaining position by a long way. But out of it we got three per cent of advertising revenue to be spent on the employment of musicians and what was called secondary rental. This was an invention of mine and it said that when profitability rose beyond a certain point, - there's a formula for defining that - then part of the profits would be syphoned off as a levy, called the secondary rental, and the purpose of that money would be for improving the system, including the employment of musicians.

So, if the commercial radio system becomes extremely profitable, then the amount increases fairly rapidly. No radio station has yet triggered off the secondary rental. We reached that agreement under great pressure and we don't think that represents anything like the amount of employment there should be. What we say is that you can't look at broadcasting in isolation. As a medium it has a dominant nature, it's got certain responsibilities as well as capacities and one of those is to offer another channel to a mass audience other than the record companies so you haven't always got to get a recording contract before you've got an audience. The only way you can do that is by actually commissioning new performances. The word 'live' hardly comes into it and we're not saying they've got to be out at the dance, but it should be new and different opportunities to get before a mass audience.

So, we've tried to spell out our philosophy in principal and then to say 'How does commercial radio measure up against this?' and the answer is 'Not at all.' BBC Radio, because of its position, measures up much more closely to the type of obligations we're trying to spell out. The Director General's conception of the responsibility to the arts is more profound and it shows, because it's not a commercial operation, an awareness of having to seek some

other justification that mere profit. One of the reasons for our opposition to commercial radio was that we believe Greasham's law applies in broadcasting and bad broadcasting drives out good. One detects in BBC operations now the idea that you can abandon these obligations and still somehow preserve your purity. I think that's nonsense. I mean the most recent and dangerous manifestation of this was a speech by the new Managing Director of Radio, Howard Newby, where he talks about abandoning the house orchestras. It's not so much that the house orchestras are sacred cows as the reasons he gave for their abandonment. He said they represent an obligation beyond the needs of broadcasting. That's patently rubbish; the needs of broadcasting depends on what broadcasting is. Of course 12 house orchestras is beyond the needs of Capital Radio, but it's not beyond the needs of an organisation that is going to produce a good proportion of its own music. Really what he means is that they're going to be producing less music, and they're going to produce more music made by somebody else. Is there any way you can force the commercial stations to use more musicians?

We're having continuing discussion with the IBA, who are the responsible authority and with the Association of Independent Radio Contractors, but those discussions have been admittedly more about pay and conditions. But

the response of the IBA has so far been, 'Oh well, give it time to get off the ground,' and so forth. I could register with you what, perhaps, we haven't registered clearly elsewhere. We do intend to press for improved employment in commercial radio. We do not accept that the present employment situation is satisfactory. Direct Contact: Branch organisers, going along to local Programme Controllers and telling them they're going to have some unhappy MU members unless... Does that happen?

Not quite in that way. How we feel at the moment, these are tatics and therefore variable, we conduct the relationship centrally because there are minimum obligations on the IBA and BBC about pay and conditions. But we are putting out to branches the suggestion coat they ought to take up the challenge that the commercial radio operators actually flung down. When the commercial radio operators had their lobby, nobody ever said it was about making money; Lady Plowden has the vapours if you call it commercial radio - she calls it independent radio - what they said was that the idea was to coment the community together and to illustrate facets of community life. Their way of doing that has been singularly modest. It's been confined to a very stercotyped stream of programming from all the different stations; the only local connection is when they give local information or speak to people on the

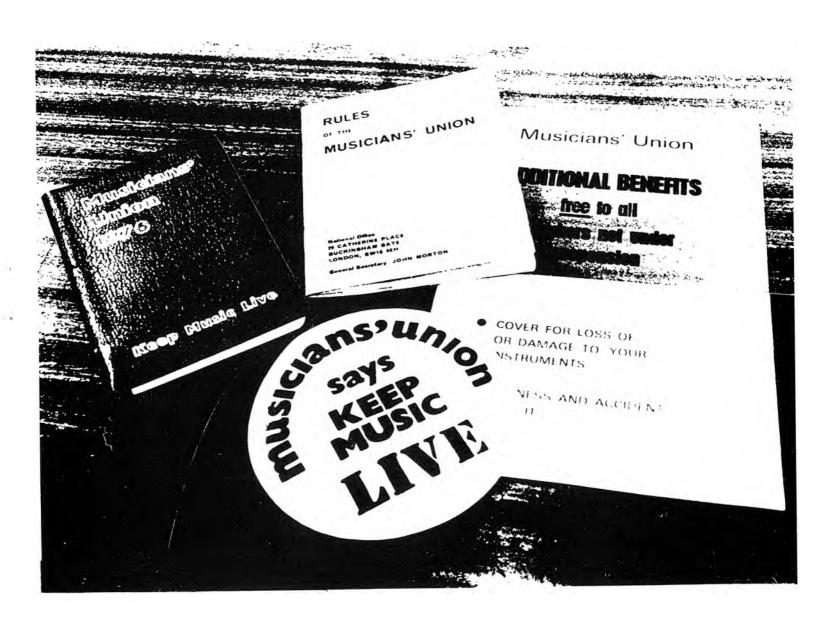
phone-ins, or whatever. This isn't really what it's all about So we are saying to their branches that they ought to take up with their stations any dissatisfaction they feel about the way in which the station is reflecting the local music scene. This is going to be one of the things we're going to be doing this year.

In the light against discotheques and similar, is there anything the M.U. can do?

Yes. There again this is a continuing activity which we believe benefits all musicians. We have in this office a chap whose full time job is dealing with the public use of gramophone records and when the use occurs, making sure that it is (a) licensed and (b) that the licenses that are issued by the PPE are accompanied by the employment of musicians. Many hundreds of jobs are being created in that way, by an enforced obligation on discos.

What's the percentage of time a disco has to give to live music?

We haven't got a fixed formula on this; naturally, on this we would want more than we are able to persuade the clubs to sue. It's on an ad hoc basis really, we always get some employment, it's a matter of getting the best deal we can and quite often its a matter of preventing employment disappearing in a hotel or similar establishment who have used a trio or quartet and now want to use records.





To find out what working musicians thought about the M.U., International Musician spoke to members of six bands who reflect a broad range of musical interests and professional experience.



Billy of Silk:

Lioined the union about five months ago because we started doing a lot of recording and TV work. About the best thing the union does for us is their insuring of equipment, which is very reasonable - we've had a few quitars stolen recently, so this is a very real. problem for us.

I could see the Union becoming involved with me, in as much as I play a string. machine on stage and I could see this becoming a point of conflict between myself and the Union,

I hope also that if i become a session player, I get treated in the same way as session players do now, which I think is largely due to the M.U.'s efforts.



Alan Powell of Hawkind.

I joined about seven years ago; I had to join to do this Blackpool Tower gig! Now. though, I've really grown indifferent to the Union. I don't think that Rock and Roll bands are paid enough attention - when you're out of work and on the dole the rates seem really high, too. I've never been to a meeting and the only way in which the Union helps me now is when I have to get visas to work in the States.

Tremember in Manchester in 1972, I helped to set up this thing called The Manchester Music Force, which was virtually a musicians Co-operative; they organised gigs at colleges and Liverpool Stadium and things like that this is the sort of thing the M.U. should be doing.



lan Carr of Nucleus:

Most of what I have to say about the Union appeared in a dialogue in Melody Maker in January of 1973, I was very angry about it at that time, and I was very vociferous about my complaints. I said at that time that the Union did a good job for classical musicians, because of a class thing, and also for session musicians, who are big husiness

The people who are suffering are the creative people, if you will, the musicians who are also composing as well as performing, because that's what creativity is. There's no problem getting broadcasting time for Previn, or for Boulez or any other baton waver, but there is for jazz players and for rock. This is not a problem in other countries; I have a compcomposition call "Labrynth" which runs for 45 minutes, and Radio 3 asked me to cut it to fit the news in! Radio Cologne played the whole piece and someone flew over here to do a 15 minute. interview with me.

The British and the BBC in particular tend to believe that they're the monitors of good taste and judgement of what the public want to hear judgement, which is a very parochial view.

Since that time, I think the Union is more aware of the problem, but I don't believe that they've done anything about it. I met the Comptrollers of the BBC with Brian Blain and John Morton, who's the General Secretary of the Musician's Union, and some other musicians in January of 1973, but not much seems to have come from it.



Bob Henrit, Argent's drummer, and International Musician's Percussion Consultant has been in the M.U. for 16 years. He thinks a young musician should join:

There's a general sense of belonging and a young musician can look at someone like Clem Cattini, for example, and think, 'I'm inthe same union as him, if 1 can get that good, I can do the same work." The M.U. is very unlike ordinary trade unions. I don't think it should be a closed shop, otherwise I'd never had got in and I wouldn't be commenting now. There have been several. disadvantages about belonging that have affected me personally.

When I was with the Roulettes, we wanted to tour South Africa and after we'd. arranged the whole thing we told the M.U. out of courtesy. They stopped us going because they said it was strict union policy that musicians shouldn't play to segregated audiences.

Lalso fell out with the Union over Top Of The Pops, I don't think a musician who spends 24 hours recording a track should have to re-record it all over again in three hours before it can be played on

I don't think the Union is doing enough at grass roots levels to get young musician. to join. They should make the fee 50p a year or something and guarantee young musicians a place to play and people to play with. It's not dance bands any more, it's rock musicians and I think the Union's realising that 10 years to late. Membership should offer more than fraternity; if you want that, you should join the Boy Scouts.



Henry Marsh of Sailor:

The first thing I thought was, Am I paid up! -- but I'm OK. I first joined the union back in 1965 in Bath when I was in a local band playing bad versions of Beatle numbers and getting told to turn down every five minutes. I suppose the main reason for joining then was because it gave you some air of grandeur --- you know, I'm in the M.U. so therefore I'm a musician. In a way, the M.U. proved to be a happy medium; the first management contract we signed we took to the West Country M.U. who were really helpful and said not to sign. Then we took it to a solicitor and he said well, you've just got to accept these things.

That was a long time ago though; nowadays in Sailor, I suppose the main reason I'm in the union is because you have to be, to do certain TV programmes (which shall remain nameless.) I think the musicians who need to be in the union are the 9-5 session musician to whom music really is a job, who is employed for his talent it's really essential that he/she is in the union. I mean, I've never attended a union meeting or anything like that: I get these agendas of meetings and suchlike sent along all the time, but nothing ever happens.

To sum up, I think the M.U. is really there to protect the less fortunate musician, and by fortunate I mean in terms of financial fortune.



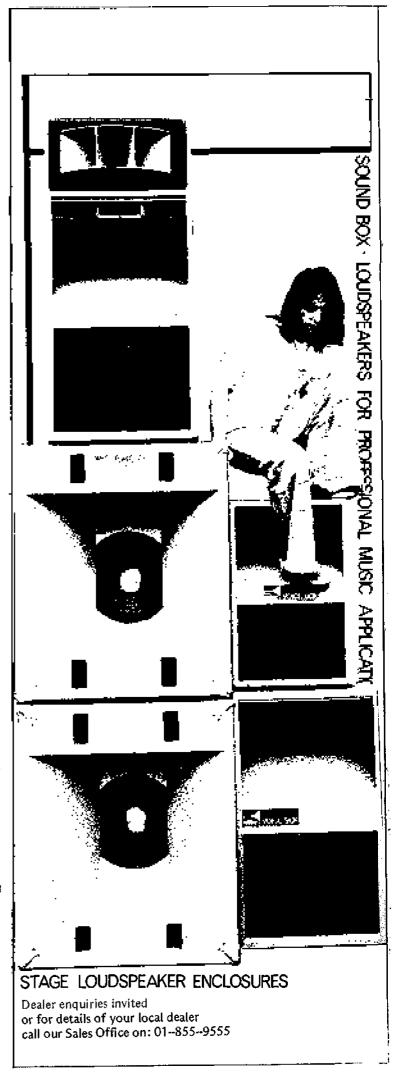
Pat Travers of the Pat Travers Band, is a Canadian who now belongs to the M.U. For most of his life, he has been a member of the American Federation of Musicians:

I don't have too many good words to say about the A.F.M. Most of the work in the States and Canada for young musicians is in clubs, and weekly High School and college gigs, and they're practically impossible to play unless you're in the union.

To book acts (in North America), you have to have a booker's license, and the union get's on to them. A friend of mine in Ottawa was in the union, and he was working in a non-union club during the summer, which is like the bad season, and his local found out. They fined him 200 dollars, and passed it on to the head office in New York, and they fined him another 300 dollars.

Also, if you change your local branch, like from Ottawa to Toronto:., you. can't work for three months. They don't offer equipment insurance or unemployment benefits - unless you pay extraion your dues. The fees are like 2% of scale, 2% of your contract.

As far as broadcasting, and sessions, it seems about the same as the M.U. The advantage is that you can make a pretty good living, where as here, the agencies aren't as well organised, and any 16 year old kid who has been jamming in his basement for six months can play in a pub for £5 and free beer how can musicians make decent bread that way?





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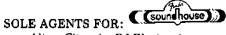


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# **Mobile Stones**

For rock musicians who can afford it, there are three recording choices open. One, major studios such as Advision, CBS, Abbey Road, Morgan and countless others. The advantage with this method is that these studios have good engineers and good equipment. However, atmosphere, while being intangible by definition, plays a very important part in the success or failure of a session.

The second choice is a "home studio". These can range from a basement with a Teac and a six-channel mixer to a large converted barn with a 24-track Studer and a Neve desk, depending on the size of the musician's bank account.

The third choice is using a mobile studio. The obvious advantage here is that, providing the "mobile" is well-equipped, satisfactory results can be obtained in any chosen location. Ronnie Lane's Mobile, The Manor Mobile, Island's Mobile, The Rolling Stone's Mobile — all are working regularly, emphasising the popularity of such a concept. We spoke to Mick McKenna, who is in charge of The Stones' mobile to see what mobile studios had to offer.

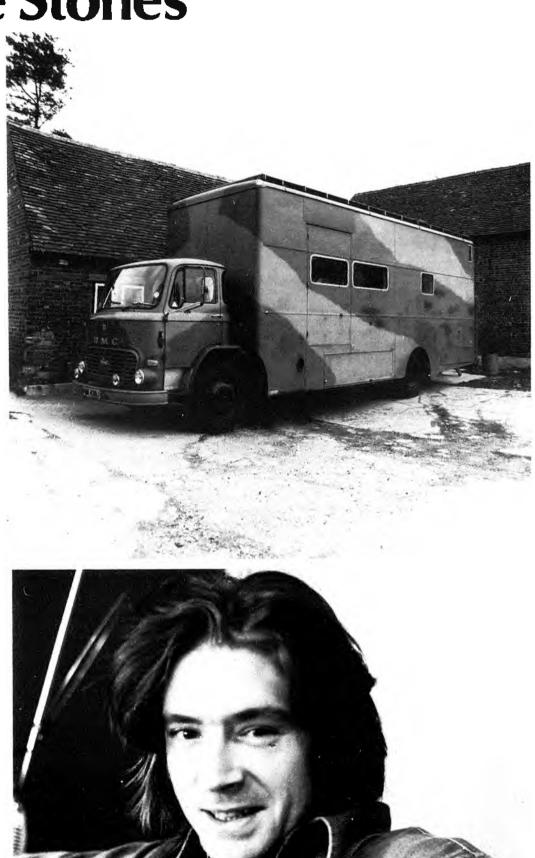
# What equipment are you using in the mobile?

The monitor speakers are Altec 6048G units in 620 cabinets, driven by Crown 300A power amps. Between the cabinets, there is a TV monitor, and underneath is a rack which houses the Dolbys, monitor amps and speaker EQ. The desk itself is a Helios which, during the course of its life, has been extensively modified. It is now a 32 in 24. out. In front of the operator are 25 straight channels blus all the monitoring, and to the right is a side frame containing "outboard" equipment, seven basic channels and the jackfield.

The machine complement is a 3M M56 16-track, M79 24-track, M79 24-track, M79 2-track, two Revox's and a cassette machine. The 24-track has a rather nice feature in that the spool spacing is such that it is able to carry 14" spools, meaning that one has an hour's playing time at 15 i.o.s. which is good for live gigs because one can cut down on the number of breaks. We accept that we have to spool the tabe from the 14" reels on to the 10%" reels so the tabes can be played in any studio.

#### What mikes do you use ?

Well, the truck is lucky enough to carry something in the excess of 80 mikes. These vary in manufacture — Neumann, AKG, Electrovoicé and Shure. We tend to use Shure mikes a great deal



Mick McKenna

# **Mobile Stones**





because we find that each mike seems suitable for different applications and thus, one can usually find the right mike for the right job. For instance, the SM58 is becoming a very standard vocal mike. The other advantage is that they are very reliable which, for live work, is a premium. On the '73 tour with the Stones, Jagger used an SM58 and at one point, he swung it on the lead, it smashed into the stage and he picked it up and it was still working. Reliability is a reason why we tend to try and steer clear of valve condensor mikes because, although they produce a really nice sound, they can be very upset if kicked around.

Do you work a lot with the Stones?

Yes, we do a fair amount. We did the '73 European tour with them and the first few tracks of the new "Black And Blue" album were laid down using the truck in Rotterdam. We'll also be doing the forthcoming tour with a view to making a live album.

What other work have you been doing recently?

We did the Animals album and the new Bad Company album. We also did an album with Alan Price at the Farmyard in Little Chalfont, which is a really pleasant place to work in. It has a nice atmosphere and is close enough to and far enough away from London to be an ideal location.

What are the main differences between recording in a mobile and a normal studio?

Well, the idea is to make the differences as few as possible. This can be helped by ensuring the truck has all the facilities of a normal studio, and choosing one's location in such a way that the sound will be good and the clients will be comfortable, and also to be sensible in parking the truck so one doesn't have to step through a three foot puddle to get into the control room. If one works reasonably hard with a mobile, one can usually complete

a project significantly cheaper than in a normal studio, which might be a particular 'plus' for small bands with a limited budget. The other difference is in the equipment. The fact that a mobile trundles round at about 50 m.p.h. makes it necessary to ensure everything is solidly built. Doesn't it feel strange having to monitor visually on a T.V. screen?

Well, we started out with a small Sony monitor on the left of the desk, and, in the process of changing speakers from four Lockwoods to the two Altecs, we obtained more space and were able to install a larger set in front of the operator. It depends what you're doing, really. Visual monitoring is something that you don't need to pay a lot of attention to unless, for instanced, you're recording a percussive band, where you have to watch for them changing mikes around. However, it would be psychologically a bit disturbing if you have no visual link at all with the artiste, particularly on album work:

Are you happy with the equipment as it stands now, or is there anything else you would like to see in the mobile?

The equipment we have for most of our work is quite sufficient. If, for the occasional gig, a particular piece of equipment, e.g. a flanger is required,

then it can be hired. The problem with installing-banks of "out-board" equipment is that it would probably only occasionally be used, but would continually take up space that could be used by people. However, we have a parametric equaliser and a digital delay line on order.

Do you direct inject anything on a live gig, or is it all straight

miked? We D. L. bass as a rule and keyboards where possible, It's not standard practice to D.I. quitars. However, with Keith Richard, we invariably use an amp offstage playing at a fairly low level, miking both that and the stage amp in order to have a reasonably clean feed because the stage amp is incredibly loud. On location work, it's not uncommon for guitarists or bass players to D.I. direct into the board, and actually play in the truck. Apart from the vocal and instrument mikes, do you use an overall mike for the band?

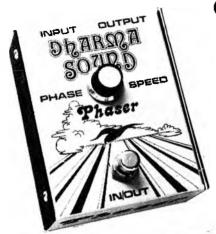
Not as a rule, it's something that was suggested the other day, actually, but it shouldn't really be necessary if the rest of your mikes are in good shape. We use at least two audience mikes — if possible four — and one tends to find a certain amount of band pick-up on these anyway, and that is usually quite suitable for any ambience that is required.

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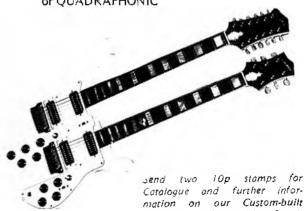
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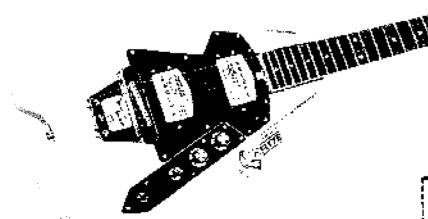






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#### Roy Wood: The Roy Wood Story. Harvest SHDW 408

Along with Pete Townsherd, Ray Davies and Paul McCartney, Roy Wood must rate as one of Britain's greatest songwriters. He is also a fine singer and instrumentalist, and so it's nice to see Harvest releasing this double album featuring some of his best work from The Move to his own solo work taking in ELO and Wizzard along the way. They have even included an old single he recorded with Mike Sheridan's Nightriders in pre-Move days. Apart from this track, the whole of the first side is given over to Move tracks - most of their singles from "Night Of Fear" 'California Man''. The first side of Record Two includes two ELO tracks -Wood was only with them for the first album - and four Wizzard singles. This, I'm afraid, is where Roy's credibility comes into doubt. I can't pretend to have liked anything Wizzard have yet recorded, but the inclusion of these tracks is valid if only from a catalogue point of view. Side Four, which features two tracks from his solo "Boulders" album, two singles and their "B" sides, is outstanding, "When Gran'ma Plays The Banjo" was, in fact, a single which never took off and I'm pleased to see it included here. An excellent tongue-incheek country number, it features Boy playing some nifty bluegrass banjo, N.B. Harvest: it might be a good idea to rerelease it now. The amazing "Forever" is also included here, on which Wood demonstrates his vocal agility by mimicking Neil Sedaka and The Beach Boys among others. A nicely packaged double-set, the inside cover of which features some historic Move photos. Various producers and Studios.

#### Barbara Dickson: Answer Me. RSO Super 2394 167

Barbara Dickson found immediate success with her single "Answer Me" and this album proves that success was no fluke. The songs on Answer Me are half Dickson's work and half a mixture of familiar numbers by Curtis Mayfield, Bill Withers and Mentor Williams. The combination is just about right to dem-

onstrate Dickson's talents and to display | the full range of her myriad vocal qualities, which offer reflections of Maddy Prior, Maria Muldaur, and Linda Lewis, while also bringing something fresh to the scene. I wouldn't call Barbara Dickson an astonishing new talent; as she points out in one of her own songs ("Boys From The Men"), "It takes so long to be wise"; that might equally be true about innovation. What Barbara Dickson really owes to other and earlier female vocalists is the opportunity they've given her to exercise her style. Innovation and uniqueness can and may come later. For now, it's enough that Dickson can establish her style. That she has done, with considerable grace and I can hardly wait for the next athum.

Recorded at Eden, Scorpio and Morgan Studios, mixed at Scorpio, engineered by Denis Weinrich, produced by Junior Camphell.

Carroll Moore

# Judas Priest: Sad Wings Of Destiny.

Priest are your archetypal "heavy" band. Hard riffs of fuzz guitar, straight 4/4 rhythm and solos which allow excesses. That catalogue isn't a criticism, although I do mean it to suggest limitations. My main feeling is that others have been there before and no matter how polished the band becomes, musical acclaim can never be theirs. By hard touring it may be that the lads can build up a strong following; rightly so, I am led to believe their live show is a storm, but in quiet analysis, away from the crowd, the music has much youth, much energy and only limited skill. The lead singer, Sobert Halford, has an excellent range, a bit like Arthur Brown's and drummer Alan Moore holds the band together with Swiss precision. Much development needed.

Recorded at Rockfield and Morgan, Produced by Priest and Jeff Calvert and Max

Ray Hammond

#### Man: The Welsh Connection, MCA 2753.

Man have none through a lot of changes to finally arrive at this line-up, (Mickey Jones, guitar, Deke Leonard, guitar; Terry Williams, drums; Phil Ryan, keyboards; John McKenzie, bass; plus all on vocals) and this one is still not as tight as it might be, though one would think that their recent tour will have changed that, The Sheiks of R & B have a brand new bass player in McKenzie who plays bass like no Man before him. For this reason the band is a lot more funky in places, while the rhythm section has lost some of its unique "Man sound", its nice to get a Man album that's song crientated rather than the more usual "we'vegot-this-great-riff-so-lets-see-how-longwe-can -play-it-for" type. That's not to say that the record's stunningly concise it's STILL overlong in places, for example, "Love Can Find A Way", easily the limpest track on the album, is a very weak song sung in a very ordinary way ( and dragged out to inordinate length. The best songs on the album seem to be the two Deke Leonard songs, which appear as the first two tracks on Side One. First track is standard Man stuff with Deke in fine voice and at his best. longing for the "Ride And The View" This is followed by "Qut Qf Your Mind", a bleak song which opens with a vaquely Eastern sounding quitar line over a tarring repeated fuzz-duitar chord, leading to a very nicely arranged multitracked chorus. Next best is a Rivan-Jones composition, the title track, "The Welsh Connection". It opens with a really nice tune, reminiscent of Zappa in his "Peaches en Regatia" or "King Kong" mood, over which a throaty phased quitar plays away, leading via the song to some well-constructed keyboard solos and superbiguitar effects. Side Two illustrates well the fact that the tracks are still overlong, there are only three tracks on this side, of which one, "Car could easily have been the best track, has it been tailored a bit. It starts as an up-tempo "good-time" sounding tune with the band really cooking. Then come a lot of time changes that completely ruin the feel created so far, and really do sound as if they've just been put in for the sake of it-they certainly

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IM 5/76

do nothing for the song, in fact they detract from it. The section does finally pay off when it moves into a slow, lilting riff stated by guitar and acoustic plano. This is then beautifully built up, with a second guitar added, the piano becoming more melodic, the quitars moving into unison, the bass becoming more melodic, the whole thing builds proving the band's arrangement skills. I was hoping for an album to eclipse Rhinos, but on balance The Welsh Connection still isn't THE Man album. The standouts are Leonard's song-writing and Ryan's keyboard work. I wish the band would make a whole album of three-minute singles. the next one, perhaps?

Recorded at Olympic Sound Studios, December 75 to February 76. Engineer, Doug Bennett. Produced by the Man Band.

Tony Bacon

Dory Previn: Children Of Coincidence. Warner Brothers K56213

Dory Previous one of the most original song writers to emerge this decade. Public recognition in the States has spurred critical acclaim in the U.K. but the general public have still to discover the ingenuity and honesty of her work. She writes as one stripped of pretence and coyness, speaks of fundamentals like sex and love and puts her poetry to melody lines that are tantilising by virtue of their unpredictability. As an academic study of writing technique, a listen to this album reveals a writer maturing in a style and putting the techniques of her art behind her as she brings music under total control and breaks down the barriers that unconfident music making can build. Musically, the album is impeccable, employing arrangements and performances as delightful as the weaving melody lines and the recording and production is so good as to be unnoticeable. This magazine is not the platform for an investigation into the content of Ms. Previn's subjects, only one forfulsome praise for superb writing and excellent recording.

Recorded at Regent Sound, N.Y., Robert Liftin engineering.

Ray Hammond

# Roy Buchanan: Roy Buchanan. Polydor Special 12482 275.

The latest in the very excellent Polydor Special series - Taste, Rory Gatlagher, Cream, Hendrix and a lot more have been featured in this series — "Roy Buchanan" is a compilation album, featuring some of the best of Buchanan's record work. There's no denying Roy's capabilities on the guitar - Beck dedicated a track to him on Blow By Blow and this set is a fair representation of his talent, a talent which covers a lot of different styles ranging from country picking on "Cajun" to fast blues on "Tribute to Elmore James" My favourite track is the opener "Sweet Dream" which was almost a hit for him three years ago. Well worth a re-release, it's an instrumental version of the old Don Gibson country standard, on which

Boy plays a standard Telecaster and sounds more like a pedal steel than a pedal steel does. And he does it without a second string bender! "After Hours" is a great slow blues with one of the best guitar sounds I've heard in a long time. This track really brings home Buchanan's gift for playing blues - he plays from the soul, never repeats himself and steers clear from hackneyed cliches. "The Messiah Will Come Again" is another standout cut. It's a slow tune on which Buchanan narrates a short story before bringing in the guitar which, by his clever use of the volume control. literally "cries" the melody and can't fail to move even the mighty.

Recording Studios unknown. Producers include Peter K. Siegel, Jay Reich Jnr. and Ed Freeman.

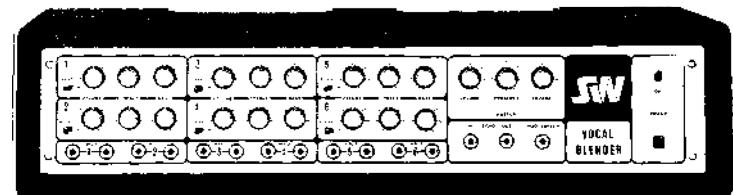
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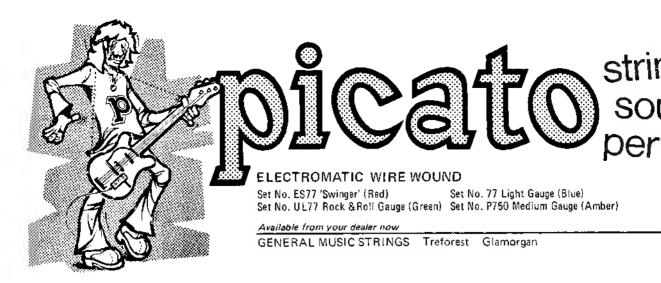


Roy Buchanan



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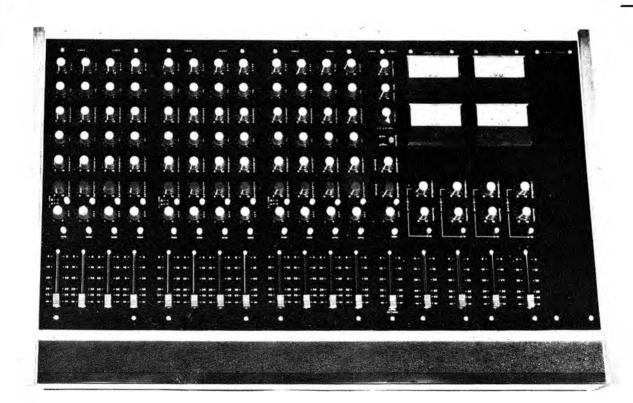
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struction contribute to utmost reliability.

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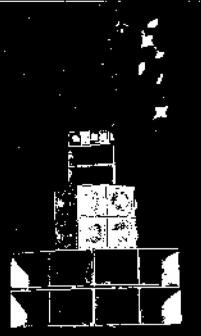


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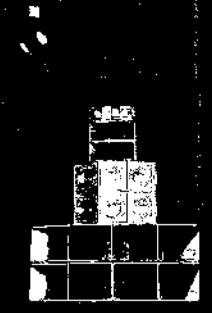
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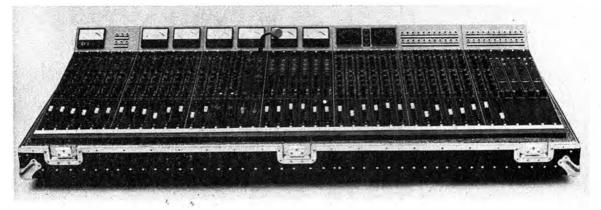


TEST ON: Missas Portable Modular Mixing System

DATE Approx £ 2,000 Ex Works

PRICE April 76

TEST BY Mark Sowicki M.Sc. (Eng.)



## INTRODUCTION

Midas Amplification manufacture Modular Mixing Systems ranging in use from portable models to those suitable for studio application. All are designed to achieve professional sound reinforcement at a moderate cost.

The construction of the portable modular system consists of the following high quality professional modules:

Input Module (type PR 001, 002, 003)

Output Module (type PR 010, 011)

Foldback and Echo Send Return Master Module (type PR 008, 009)

Talkback and PFL Module (type PR 020)

Monitor and Oscillator Module (type PR 021)

Cross-Over and Limiter Module (type PR 030)

It also incorporates a professional Jack Field and Power Supply Unit.

The choice of each module type is quite difficult since all of them represent a very high level of performance. The construction is of a universal nature, the number of channels being practically unlimited (within a reasonable range) for all portable vocal and line purposes.

## CONSTRUCTION

The construction of the input/output modules contain all the individual controls and electronics. The fibre-glass printed circuits mounted with each of the channel's components are connected with the rest of the system through 33-way self-aligning connectors (hard gold contacts). The quality of components and workmanship is excellent; only metaloxide resistors and high quality capacitors are used. All the main controls — made by Penny and Giles, with special dust protection — are among the best on the market.

Each sector of the main frame contains a section of six modules. The light illuminated SIFAM meters and Jack Field are fixed on the sloping top level. The main frame is finished in a dark, high quality enamel, but hardwood cabinets are also available on request. Professional quality V.U. meters, specially selected and modified, have an extended range (-20 to +6) dB and faster ballistics (low inertia mechanism). The "sandwich" build of this system allows easy access for all maintenance, which is, in certain other mixer constructions, rather difficult.

Input module: type PR 001 contains 3 I.C., a matching transformer, sensitivity control, attenuator switch (0 or 30dB), equaliser (bass, treble presence), two independent fold back controls, two independent echo controls, Fader, Pan Pot, the PFL switch with push button momentary action.

Input module type PR 002 contains 4 I.C., with an extra three position toggle switch for the frequency selections on the presence (1.5KHz, 3.5KHz, 7.0KHz). Sub-group routing controls can also be fitted.

Input module type PR 003 contains a discreet four transistor pre-amplifier. The specifications and characteristics are similar to the PR 002, with an added lever key switch (channel mute and track recording selector). All the input sockets are XLR cannon connectors.

Output module PR 010 consists of a low noise summing amplifier, Fader – type 1820, line output amplifier, V.U. meter, and jack sockets (post fader insert, input to mixing bus).

Output module PR 011 has the same facilities as PR 010, with an extra monitoring amplifier, A/B switching and playback input.

Foldback and Echo send/return master module is type PR 008, with a summing amplifier, equiaiser (bass, treble, presence), output amplifier, echo send/return controls, PFL switches and Pan Pot.

PR 009 is similar to PR 008, — with extra lever key and routing switches.

Talkback and PFL module type PR 020 has an AKG (D58) microphone and amplifier, PFL — summing amplifier, a headphone monitoring amplifier, T.B. Level control and lever key switch.

The monitor and oscillator module type PR 021 is for recording use with the PR 011. The Oscillator frequencies are: 50Hz, 150Hz, 1KHz, 10KHz. The output leads direct to the jack field or to the mixing bus, Two amplifiers for summing, the L.H.S. and R.H.S., are also provided with a master control and lever key switch.

Cross-Over and Limiter module type PR 030 contains two active filters (low/high pass frequency division) and an L.E.D. indicator. The cross-over frequency is 800Hz (other frequencies are available if required).

Power Supply unit is fully stabilised + 16V., recommended for use 115/240V. + 20%; 50Hz.

# CONCLUSION

The Midas portable range modular mixing system has very good performance and can be fully recommended as an excellent and reliable mixing system.

Most of the components have been specially selected not very popular in this day and age of mass production. The high quality of the final effect is a direct result of the good co-operation between the design and technical people.

The system has a professional finish, and the high quality of engineering mkaes it a good buy in my opinion.

TEST EQUIPMENT

(Supplied by Midas Amplification)

- 1. Distortion Meter Type TF 2331 (Marconi Instruments Ltd).
- 2. MF Attenuator Type 2162 (Marconi Instruments Ltd), 3. Low Distortion LF Oscillator Type SG 68A (Advance Instruments Ltd).
- 4. Tektroni Type 468 2 Beam Oscilloscope.

A.	INP	UT	MOI	DUL	ES
----	-----	----	-----	-----	----

	Type: PR001			Type: PR002			Type: PR003		
Parameter Parameter	Parameter value or Result	Test Condition	Comment	Parameter value or Result	Test Candition	Соттепт	Parameter value or Result	Test Condition	Comment
Maximum Input Level	0dBm. +20dBm.	Mic. Line	Very good	0d8m. +20d8m.	Mic. Line	Very good	0dBm. +20dBm.	Mic. Line	Very good
Maximum Gain	70dB. 50dB.	Mic. Line	Good	80dB. 50dB.	Mic. Line	Very good	80dB. 60dB.	Mic. Line	Very good
Input Impedance	600 ohm 10 Kohm.		Standard	600 ohm. 10 Kohm.		Standard	600 ohm 10 Kohm.		Standard
Equaliser									
Bass	<u>+</u> 16d <b>B</b> .	f1 = 50Hz.	Vari Q symetrical	<u>+</u> 16dB.	f1 = 50Hz.	Excellent	<u>+</u> 16dB.	f1 = 50Hz.	Excellent
Presence	<u>+</u> 14dB.	ret. 1.0KHz. Excellent f2 = 3.5KHz.	3)metrical	<u>+</u> 16dB.	f2 = 1.5KHz. f3 = 3.5KHz.	Excellent	<u>+1</u> 6dB.	f2 = 1.5KHz. f3 = 3.5KHz. f4 = 7.0KHz.	Excellent
Treble	+16dB.	f3 = 15KHz. ret. 1.0KHz.		<u>+1</u> 6dB.	f4 = 7.0KHz. f5 = 15,KHz.	Excellent	+1 6dB.	f5 = 15.0KHz.	Excellent
T.H.D. (%): Distortion	Less than 0.05%	f = 1.0KHz.	Excellent	Less than 0.05%	f = 1.0KHz.	Excellent	Less than 0.04	f = 1.0KHz.	Excellent
Input Noise Figure	4.0dB		Very good		200 ohm mic source		2.0dB.	200 ohm mic source	Very good
	-126dBm.	200 ohm mic source		-126dBm.	20Hz. f 20Hz	Very good	-128dBm.	20Hz. f 20Hz.	Ì

## B. OUTPUT MODULES

Type: PR010, 011

Cross-Over + Limiter Module

	Type: PRO	10, 011			Type: radou		
Output Level	20dBm.	600 ohm.	Very good	Output Level	20dBm.	600 ohm.	Very good
T.H.D. (%): Distortion	0.05% 0.02%	20dBm. at 1.0KHz. 1\$dBm.	Excellent	T.H.D. (%): Distortion	0.05%	f = 1 KHz.	Excellent
The Residual Noise *)	80dB. 90dB.	Below O V.U. fader fully up Fader fully down	Very good	Noise Level	-80dBm.	Below O V.U. level	Good
The Group Gain	30dB.	Fader fully up before clipping level	Good	Cross-Over Filter Frequency	800Hz.	–3d8. H.P. + L.P.	Very good
0.				Active Filters (a) Low Pass (b) High Pass	18dB. 18dB. octave 18dB.	with nipple in press bend +0.3dB.	Very good Very good

<sup>\*)</sup> One channel selected

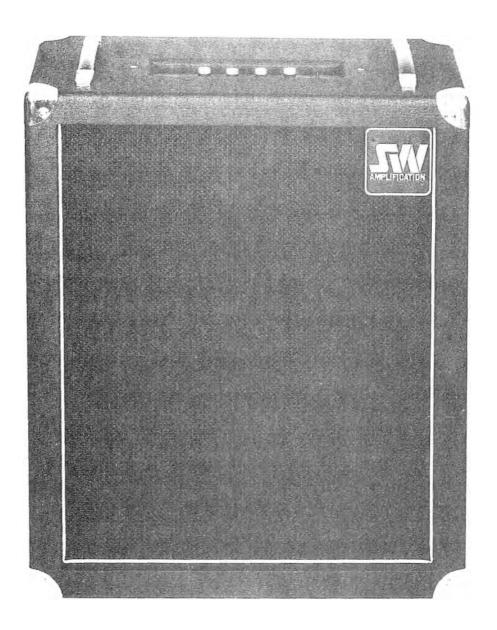


Prototype 1500/25W Combo Amp TEST ON:

DATE:

PRICE: £125.83 Ex VAT

TEST BY: Mark Sawicki M.Se. (Eng)



## INTRODUCTION

The 1500/2 S.W. Combination Amplifier was electric piano/organ or a guitar. The 1500/2 S.W. suit small groups, used in conjunction with an power output.

designed to deliver in excess of 50 watt R.M.S. into Amplifier can also be successfully used for an 8 ohm load. It is designed for low cost and will professional monitoring, as it has a high level of

# CONSTRUCTION

The prototype 1500/2 S.W. combination amplifier consists of four 10" (15 watt) Goodmans Speakers in the speaker cabinet with a 50 watts solid state amplifier. The control panel and chassis is fitted in the top of the cabinet above the speakers and contains volume, treble, bass and tremelo speed potentiometers as well as two hi/low input sockets, on/off power switch and control light. The actual amplifier unit has been designed in three fundamental parts.

Preamplifier and Tremelo Generator; This is built on P.C.B. and, contains a 4 transistor circuit, all the controls, two input sockets and slave output, a standard class preamplifier and Tremelo generator with a frequency control allowing the possibility of changing the tremelo speed effect.

Power Amplifier; built on P.C.B., contains 11 transistors. The two 2N3055 power transistors are

each mounted onto the black anodised rear panel of the chassis unit, which acts as a very effective heat sink. The output stage of the power amplifier possesses an elaborate protection against short and open circuit whilst under full drive conditions.

Power Supply: Unstablised — but sufficient to drive the above units. A stabilised power supply on a particular level of power consumption wouldn't make much difference as the amplifier has a very good linear design. Operating from 240v/50Hz it contains the mains fuse also, 5B2/3J Bridge Rectifier and a professional class mains transformer.

The speaker cabinet has been constructed from chipboard and finished in a black P.V.C. Rexine. Two handles have been fitted to the top of the cabinet and heavy duty chromed metal corner caps provided for protection in transit. The speaker grill design is attractively finished in a black acoustic material.

# **PERFORMANCE**

	RESULT	TEST CONDITION	COMMENT	
Specific Power	45.5 W.	8 ohm; @ 10% T H.D. at onset	Quite good but could be better,	
Output	30.0 W.	of clipping. 3.75%	Specification claimed 50 W. (r.m.s.)	
Total Harmonic Distortion T.H.D.		20.0 W. 10.0 W. T.H.D. of 5.0 W. 1KHz. 1.0 W. into 8 ohm. 0.5 W.	Rather high at 50% of power for transistor amplifier, but mostly second harmonic. Despite this the sound is pleasant and clear when used in conjunction with a guitar.	
	17.5dB. (Swing) 13.2dB. (Swing)	f bass = 100Hz. f treble = 10KHz.	Good Good	
Tremelo Speed	Min. 2.2Hz. Max. 8.7Hz.	Foot control switch ON, tremelo speed potentiometer on min, and max value.	Very good	
Tremelo Depth	0-90% 0-80%	@ 22Hz and 1KHz. @ 8.7Hz. and 1KHz.		
Signal/Noise Ratio	- 60dB.	All gain – zero tone control – mid position tremelo switch – off.	Fair	
Output Protection	Satisfactory	Tested into short — circuit current less than normal peak current.		
Square Were Test	Good	Clean response in practical range of frequency band		
Open Circuitry Stability Test	OK	Gain controls max., tone control, mid position load removed.		

# CONCLUSION

The external appearance of the 1500/2 S.W. Combination Amplifier is attractively finished and the general quality of engineering is good.

Several suggestions about hum 50Hz noise (better filtrations) and the power amplifier section haves been made and discussed with the manufacturer's representative.

Bearing in mind that the test was on the prototype, the amplifier's performance forecasts well for the workmanship and quality of the final product.

In these, inflationary times, this amplifier represents a good buy for those who have to be budget conscious.



# John Birch 1,1

## £350 Ex VAT

This instrument is obviously intended for hard-working professional musicians, and, unless intentionally broken in half, it should last a lifetime, with only regular maintenance and minor repairs. Its design avoids most of the structural weaknesses present in the better known American solids, and it is likely that it would even survive if dropped on its head. This is the direct result of sound design, good workmanship, and the use of what appears to be tough Canadian maple for the entire instrument.

I must disagree with Mr. Birch on the question of whether the wood used for a solid can affect the overall "tone". The neck construction, and the hard, dense wood used combine to make the neck not only strong, but also more rigid than usual. This is in theory a very good idea, but it does appear to affect the vibration of the strings in a different or lesser way from the necks of some of the more "Vintage" valuable American solids. I am willing to be converted, but so far, I still prefer the sounds I am used to. There appears to be a relation between the mechanical impedance characteristics of the neck/body, and the rate of vibration decay on different strings. While this phenomenon seems to be ilf-researched, it may explain why I prefer mahogany solids to maple ones, and why it can be difficult to obtain clean lower notes on certain recently made bass guitars.

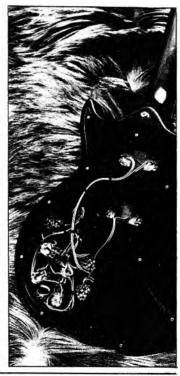
It can certainly be shown that different solid guitars have very different sorts of sustain, and that while musicians may not have suitable words, some of them can recognise these differences. Perhaps my reactions are not entirely subjective.

While Birch guitars are available in an amazing variety of shapes and configurations, this one seems to be designed to obtain the maximum versatility from two twin-coil pickups. (short of installing a battery and electronics). The transparent back panel shows that the internal wiring is about as complicated as one would expect from the NINE controls on the front of the body, and involves several yards of wire and about 100 solder joints.

With so many joints involved, I would be happier if they were all up to Military Inspection standards, but to be realistic, all the joints are adequate.

There are several features of this guitar which deserve some explanation: perhaps I had better start with the nine controls. Closest to the bridge is a master volume control which operates independently of the settings of the other controls, and next to this is a conventional 3-way pick-up selector switch. Between these two controls and nearer the body edge is a knob controlling a 3-way rotary switch. This selects (a) "Stereo" two-channel operation, (b) Mono





operation with one pick-up reversed in phase against the other or (c) Mono operation with both pick-ups in phase. The difference between (b) and (c) is only apparent when the selector switch is in the central position.

Below the selector switch are tone and volume controls for each pick-up. Even here, things are a little unusual - the tone controls give a little bass cut at one end, and rather more treble cut at the other end, and cause less apparent change in volume than the usual sort. The two remaining controls behind the bridge are 3-way switches controlling the internal circuitry of each pick-up, giving a further variety of tones available. The first two settings are usefully different, but I find little difference between the second and third, and I would prefer two-way lever switches for this purpose. Personally, I find all these rotary controls rather confusing, even off-stage; I imagine there is a similar but less complicated guitar available from the same

The bridge is a sort of hybrid between Fender adjustable bridge saddles and the Les Paul Junior "two-forks-on-two-pillars" bridge mounting. The mechanics of this device are not entirely satisfactory, but I have yet to see an adjustable bridge which is. However, it does work, and has some subtle advantages which are not at first apparent. Its value as a bridge is reduced by the poor and irregular cutting of the string grooves within the adjustable saddles.

The fingerboard is maple with a hard satin lacquer finish, and all the frets are well rounded and free of sharp ends and edges. Unfortunately, it is not possible in one week to assess the durability of the fingerboard lacquer, but I have not heard of any complaints about this. I hope this fingerboard presents fewer refretting problems than some American maple fingerboards.

It is almost superfluous to make straight.

comment on the quality and reliability of John Birch pick-ups, particularly when playing at high volume. They are indeed well made and like the rest of the guitar, probably everlasting. I do, however, find nine screws for six strings a little puzzling; six screws or 11 would be easier to adjust. I also find the tone of these units rather dull, but I am aware that there are many varieties of Birch pick-ups and it would be unfair to judge them all by one model only.

Finally, the last distinctive feature of this guitar is made possible by the "straight-through" neck construction. As there is no neck joint, and the neck is blended into the body between the 18th and 22nd frets, the usual heel which gets in the way of your thumb when playing on the top frets is much smaller and less of an obstruction.

Apart from the bridge, some paint on the nut, and about three solder joints, it is difficult to find any significant deficiencies of accuracy or workmanship. I am puzzled, however, about the intended purpose of this instrument. It seems too complicated for recording than the Birch guitar with plug-in, interchangable pick-ups.

Given a choice, I would prefer one of Mr. Birch's less complex guitars.

Here are some detailed measurements: scale length, 625 mm; string spacing at bridge, 51 mm. (about average); string spacing at nut, 34 mm; fingerboard width at nut, 41 mm. (a little anrrower than usual); action as supplied, 1.7 mm. treble, 1.7 mm. bass; lowest action possible under our standard conditions. (The action is already so low, any further possible reduction would depend on playing technique and strings.): 1.3 mm. treble and 1.6 mm. bass seems to be possible.

The neck is quite remarkably straight.

# Hopf J.P. Pro.

# £264.06 Ex VAT

I first discovered Hopf guitars about five years ago at the London Trade Show, where one importer was exhibiting a beautiful reproduction of a Renaissance guitar, and I was particularly impressed by the quality of woods used and the standard of workmanship. Unfortunately, something seemed amiss with the distribution, and I don't think any ever reached the

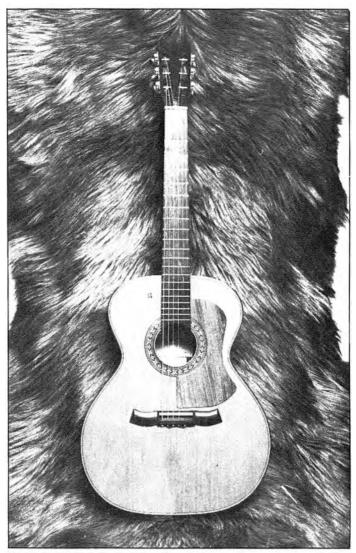
The next Hopf guitar I saw was a very strange "student" guitar with a bolt-on neck and rather crude design and construction. Its apparent age suggested that it was made about the same time as the beautiful reproduction model. From this and what I have subsequently learned, it appears that Hopf make a very wide range of instruments, from too quality professional models to the "Cheap-andnasties". (They also make the "Foky-Gruber" flute which many consider to be the ultimate instrument for Tin Whistle players).

This guitar is definitely one of their top quality instruments, as its price would suggest. It is a middle-sized, 14-fret, folk and blues guitar, with a wide fingerboard, and quite a few unconventional design features. I will deal with the most obvious of these first.

The head is slotted, as on a Classical guitar (in fact the whole guitar is styled rather like a big Classic), and fitted with excellent machine heads suitable for steel strings. Again, like the rest of the guitar, these machines are rather stiff, but after some use, are likely to become as good as Schallers.

Unlike most Japenese, (and some American) guitars, this one does not sound very impressive when brand new. This is typical of some of the better hand-made guitars, and unlike most Japanese. and certain American ones, it rapidly improves with a few hours hard playing, and will probably continue to improve over several years, when the tone will more or less stabilise. If you are willing to have patience with this sort of guitar, it is likely to end up sounding rather better than the "instant-play" variety ever can.

The truss rod adjustment appears in the usual place, behind the nut, and has no cover plate. It looks a little unusual, but the "capstan" and the recess in the head are neatly finished and are not objectionable. This truss rod appears to work backwards, like the Hagstrom ones, by stretching the fingerboard side of the neck, instead of compressing the back. The system is more logical, but also more dependent on good work manship. If the truss rod is made like the rest of the guitar, it should give no trouble. I can't tell without damaging it whether the nut is superb ivory, or one of the better plastics, but from the slight ten-

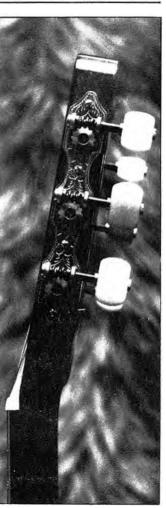


dency for the strings to stick, I would suspect some sort of acrylic. The nut is well made on the outside, but either the material, or the method of cutting the slots, needs attention to stop this "creaking".

The fingerboard is wide, slightly rounded, and it would be difficult to find fault with the fretting or the straightness of the neck. It is not a very slim neck, but I find it comfortable.

The bridge is an unusual hybrid between Jumbo and Classical types and has a system of reversable saddle inserts, which permits some degree of octave adjustment. As supplied for review, the setting was rather unusual in order to accommodate an unorthodox set of strings fitted by the maker. The importers intend to supply the guitar with more conventional strings, and the bridge adjusted to suit. Intonation can be brought to acceptable standards simply by reversing one of the saddle inserts to lengthen the top three strings. This still does not properly compensate the second string, but then very few bridge systems on acoustics do, and 'Adjustomatic' - type bridges are often more trouble than they are worth.

I am not crazy about the looks of the bridge, but others disagree with me, and in any case it is up to you. Mechanically, the bridge is quite satisfactory for the intended strings, and this brings me to the subject of strings. This sort of large,



steel-strung, classic is well known in other parts of Europe, but in England and America, Folk guitars tend to be built much more heavily. to suit heavier strings. Many sets of American light gauge strings are much too heavy for this guitar, and in any case quite unnecessary for a full and loud tone. Suitable continental strings are imported by various specialised companies, and they are not necessarily expensive. I would suggest Handcraft Spanish, which are steel strings, Maxima No. 1727 and Tomastik Light polished bronze Plectrum Guitar strings.

The bridge, fingerboard, and body are made of good rosewood, (I suspect from a variety of sources,) the neck from an African mahogany and the top from brown cedar. Although the decorative soundhole inlay is unusual for a folk quitar of this quality, it is made from pleasing muted colours, and manages to avoid pink and bright green. The front and back edges and the centre of the back are lined with very tasteful inlays (I would prefer some of the same around the soundhole). The scratchplate is also unusual, in that it's made of solid matching rosewood. I like this; some people can't cope with a folk quitar which doesn't have a large black blob on the front.

Finally, it makes a pleasant change to find an instrument made in the old German tradition of having the inside workmanship as good as the outside.

The measurements are as follows: String spacing at bridge, 58 mm; string spacing at nut, 41 mm; fingerboard width at nut, 50 mm, scale length, 653 mm, action as supplied 2.5 mm treble, 2.8 mm bass.

The fingerboard and string spacing is intentionally wider than usual to allow for more precise single string playing (for instance in Classical or Ragtime pieces) and may also be of interest to those who, like me, have wide fingertips, and maintain a constant fight with the "standard width" American folk guitar fingerboards. This wide fingerboard, combined with the rather "classical" tone and dynamics of the instrument, could also be rather useful to any classical guitarist who is looking for new tone colours, or who wants a louder or more robust instrument for restaurant or folk club gigs. A sensitive instrument like this, fitted with light and smoothly polished strings, can be played with virtually standard Classical technique, and will not cause excessive wear to your fingernails.

An unusual Folk and Blues guitar, some way between Jumbo and Classic. Expensive, but no more than many American instruments employing inferior woods and workmanship.

Unusual tone, — you will probably love it or ignore it, but please try to hear a played-in one before you judge it. (Retailers would be well advised to have an assistant play each one of these guitars for a couple of hours.)

Nice one Hopf,

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# IN BRIEF Systech Pedals

Envelope Follower £57

Phase Shifter £87

Overdriver £47

Harmonic Energiser £62

We checked out four of the pédals made by Systems and Technology in Music Ltd., (Systech) of Kalamazoo USA, They were: (1) Systech Envelope Follower, (2) Systech Overdrive, (3) Systech Harmonic Energizer, (4) Systech Phase Shifter.

If you buy a pedal like these, you will obviously need some guidance in their operation - the thing to do would seem to be to look at the leaflet you get with the pedals. Unfortunately they're not very helpful; perhaps 200 words giving a very vague rundown of what the pedals do, (including such gems as "When the Systech Envelope Follower is not in use, the exclusive Systech buffer system does not allow the circuitry to affect the straightthrough signal in either level or tone colour". In other words, you can turn it off.

And so to the actual design of the pedals. A large  $9^{\prime\prime} \times 6\%^{\prime\prime}$  alloy case sloping down the length has a recess near the top housing the controls, usually three rotary switches. To the left of these controls is a sliding cover over the battery holder. Below this is the usual footswitch for on-off operation.

(1) SYSTECH ENVELOPE FOLLOWER "The Systech Envelope Follower is a harmonic shaping device with flexibility and control superior to conventional devices". To describe the way a certain effect sounds is always difficult — I would describe the Envelope Follower as sounding like a very efficient wah-wah pedal, It's very difficult to control what the pedal actually does for

you after you've chosen a setting on the two controls, envelope decay and envelope drive. The envelope drive control is extremely sensitive between 0 and 1½ gives a very bassy, quiet, slightly distorted sound — as you rotate the control clockwise from 1½ there's suddenly a big jump in sound to something very biting and trebly. The envelope decay seems merely to have the effect of a tone control.

"Effective on both chords and also lines" says our helpful leaflet; I tried it with guitar and organ and it was not at all effective on chords. Solo lines can pose problems in that certain notes in a run will be modified to a lesser or greater degree, sometimes giving a very uneven overall effect. This seems to be a very expensive pedal considering how little it does, and how difficult it is to control what it actually does.

(2) SYSTECH OVERDRIVE "The Systech Overdrive is the most versatile distortion unit available." Basically, I found this to be very ordinary fuzz-box/distortion-unit controlled by three rotary switches — EQ, Distortion and Gain. The EQ switch has the effect of a Lone control, distortion does what it says and the gain control affects these two together.

Choosing a pedal is naturally a very personal process and you should always try out as many as you possibly can, so if you're thinking of buying a distortion unit soon give this one a going over.

(3) SYSTECH HARMONIC ENERGIZER. "The Systech Harmonic Energizer, uses synthesizer technique to create punch or bite or colour or depth where it is needed with pinpoint accuracy, and the gain section drives the amplifier for energy previously available only at much higher volume levels."

The controls on this pedal consist of a bandwidth and a centre frequency rotary switch making up the "energizer" section (whatever that means), and, as usual, a separate gain control. The bandwidth control appears to have the effect of a conventional bass boost, while the centre frequency control acts like a treble boost. The gain control acts independently of these controls,

although this can be a disadvantage. For example, if the badwidth and centre frequency controls are both on a high setting there is a tendency to feedback, although the gain control will have no effect on this. Quite a wide variation of sounds can in fact be obtained from the pedal if you are prepared to experiment with different combinations of settings.

SYSTECH PHASE SHIFTER Easily the best of the four Systech units we tried, the Phase Shifter gives one of the most realistic phasing effects we have yet to hear. The controls consist of two Sweep Rate regulators, one Emphasis control and two on/off switches.

The Sweep Rates govern the speed of the "phase" and each are linked to an on/off switch, so you can pre-set two different speeds and switch over during the same number if necessary. A small criticism regarding accessibility to these controls: like the rest of the Systech range, the controls are housed in a small recess at the top of the unit. However, we found the recess a bit too small, and it's very easy to get your finger trapped at the top of the recess area.

The Emphasis control does just that. It emphasises the "amount" of phase, and, as such, is very useful. Distortion units have Fuzz controls, reverb units have Depth controls — why can't more phasers have Emphasis controls?

# Galli Strings

G.20 Long Scale £3.23

1240	75p
1220	86p

How would you like the bright tone of Wire-wound (Round wound) Bass Guitar strings without the rapid wear to your frets and finger-board which often comes from using round-wound strings? Well wouldn't we all...

However, you may be interested in some newly-imported strings from the Italian company Galli: Their G.20 long scale bass set are flat wound strings of suitable length and gauge to fit Fender and similar bass guitars, but they do not suffer from the characteristic "dull thud" of most flat-wound strings.

Most British bass associate the characteristic Roundwound twangy sound with one particular make of strings. For this sound, these strings have no equal. but they are unfortunately abrasive. If you consider present re-fretting costs, you may find rapid fret wear a high price to pay for a slight increase in brightness over the Galli strings, which also have the advantage of a smooth polished surface. Their tone, while not quite the sound of round-wound strings is bright and rich, and rather like the bass of a very bassy acoustic jumbo. They are also very good value.

Galli make many other types of strings, some of which are unsultable and/or unbelievable, but some other sets are excellent and also offer remarkable value for money, for example No. 1240 Silk and Steel low tension Folk guitar strings and No. 1220 "Super high tension" Classical Guitar strings. Galli also make Rock and Roll, and other electric guitar strings and Mandoline strings.

I have given the numbers of sets and I would advise you to ignore whatever else is printed on the packets. Galli's English translations are confusing and, but for the strenuous efforts of the Dogal string company, would probably hold the European Record for Inappropriate English. Don't let the packets mislead you the strings are good, but I would be happier if more of the Galli strings were supplied in the new, and correctly labelled, "view-packs"





TEST ON: MCH Solina C112/ARP Explorer 1

DATE April 76

PRICE £1596 Ex VAT

TEST BY George Gibbs



#### INTRODUCTION

The Solina and Eminent ranges of organs are now being imported into the U.K. by a newly formed company called M.C.H. (Holland) Ltd. The Managing Director, Mr. Jock Robertson, told me recently that "the company are going through a year of change and not only have we re-designed all our organ cabinets, but we've also introduced a number of completely new models, one of which is the Solina C112/ARP Explorer 1. The exciting thing for me, as M.C.H.'s Managing Director, is that this takes us into another world of music . . . a new dimension".

Even allowing for the fact that organ company executives are always "wildly enthusiastic" about their latest product line, Mr. Robertson was obviously well pleased with his new Solina with a built in ARP synthesizer.

The Solina C112 is a very up-to-date organ incorporating many recent innovations in its electronic design. The use of a single Integrated Circuit to generate all 12 pitches from a single master oscillator means that one can modify the pitch of the organ with one control and that the organ will stay in tune with itself at all times.

In various parts of the instrument, other recent developments have been used to create a "Chorus" effect (called Multi-Voice) which works by generating phase-shift and slight frequency shift to create the illusion that one is hearing more than one "voice"

Another application of the same basic circuit is used to create a fairly realistic simulation of a "Leslie" speaker sound. They have called this their "Orbitone" effect. All this adds up a very sophisticated piece of electronic engineering.

#### **UPPER MANUAL**

A 44 note, overhanging (3½ Octave) Keyboard with a pleasant, light touch.

#### U.M. Voices

Apart from the ARP Explorer 1 Synthesizer, which will be looked at separately, the Solina C112 has three other groups of U.M. voices:

Tibias (Flutes): voiced at 16ft., 8ft. and 4ft.

Principal Registers; 4ft Salicet, 4ft Octave 8ft Principal and 8ft string.

Solo Registers: Cello, Bass Clarinet, Oboe, French Horn and Trumpet.

The grouping of these voices does not form a traditional "Organ" pattern but, as there are not many to remember, this is no great problem.

The Solo register voices can be used as percussions, as can the Principle voices, but the Tibias go direct to the output end where the Obitone and MultiVoice effects can be added if desired.

## Percussion Effects

The percussion circuit is used to envelope the voices directed through it. It can be triggered manually by the keyboard or automatically by a repeat-percussion reiteration oscillator and is variable for length of decay, and, in the auto mode, for repeat speed.

#### LOWER MANUAL

Also a 44 note (31/2 Octave) keyboard.

#### L.M. Voices

8ft Salicional, Diapason, Tibia; 4ft Octave, Tibia. The lower manual has its own volume balance control to enable one to achieve a correct inter-manual balance.

#### **PEDALBOARD**

The Solina C112 has a 13 note short pedalboard.

#### Pedal Voices

Four. They are: 16ft Sub-Bass, 8ft String Bass, 8ft Bourdon, and 4ft Octave.

#### Pedal Sustain

A very pleasant sustain enables one to create a really nice bass sound.

# Special Bass Pedal Effects

The C112 is unusual in that the built in ARP synthesizer can be controlled by either the U.M. or the pedalboard, making the advent of bass solos a distinct possibility.

#### ORGAN EFFECTS Tuning Control

One master oscillator drives the "12th root of 2" 1 C. which creates the whole 12-note scale. By changing the master oscillators frequency, the whole organ can be sharpened or flattened. The different octaves are all derived by a system of "divide by 2" I.C's which generate all eight octaves.

The voltage controlled oscillator in the synthesizer is in no way connected with the organ's generators, so it has to be tuned separately.

#### Reverberation

A 12 inch "Gibbs" (Hammond-type) reverberation necklace is installed and it works beautifully directly into the main 50 watt amplifier.

# Multi-Voice

This effect is designed to make one voice sound like three or four; all in tune and in perfect unison, but in chorus. This is normally achieved by creating a fixed phase-shift so that the original sound appears to be near the listener, whilst the chorus voices sound different distances away.

## Orbitone

By creating the above effect and then varying the degree

of phase shift, one can, in effect, move the sound around the room in one direction. By then adding some stereophonic movement between left and right, one can create the illusion that the sound is moving not just backwards and forwards, but around the room in a circle.

If one then adds some real-time delay, a slightly out of tune signal can be created. By going from zero delay to maximum and back again, the out-of-tune effect can be synchronized to simulate the effect a rotating "Leslie" speaker paddle has on an unmodified (straight) organ signal. This "Doppler" effect, together with the phase-shifting and stereo-panning, makes quite a good Leslie sound. The Orbitone can be set for tremelo, chorus or switched off when not required.

#### Rhythmix

This built-in electronic drummer has the following rhythms available: Waltz, March, Swing, Rock, Slow Rock (in 12/8 time), Cha-Cha, Samba and Bossa-Nova.

Apart from its rhythm selectors, it has a tempo and volume slider pot, and the usual stop/start and pedal-start facilities.

## Inputs & Outputs

The C112 has an earphone socket for rehearsal purposes and an input socket for use with any other instrument. In addition, it has facilities to drive an external Orbitone sound cabinet.

#### SYNTHESIZER

Very little needs to be said about something as well known as the ARP Explorer 1 synthesizer. In this application, it is built right into the organ and reads the highest U.M. note played or the pedal played, when so directed.

It has a full ADSR set-up as well as some presets. It is, in all respects, identical to the synth of the same model name available as a separate unit in your local music store. It contains all the normal synthesizer units; they are: a Voltage Controlled Oscillator, a Voltage Controlled Tone Filter, a Voltage Controlled Enveloping Amp and a Low Frequency "Effects" Oscillator.

#### **Electrical Construction**

The method used to mount the C112's printed circuit boards is certainly note worthy. They have built a square sectional steel frame into the main console to hold all the main P.C.B.'s and the associates wire-looms. The bottom of the steel frame is pivoted so that it can be released and lowered out of the back of the cabinet on two string. By tying a loose knot into these strings, one can set the frame to hold the P.C.B.s at whatever angle is most convenient. Full marks for this very good idea.

The printed circuit boards each have a well defined, individual function and are used throughout the whole range, so that the service engineers can become experts on a few versatile panels and less stock needs stocking.

There are three circuit panels in the area directly behind the control panel and keyboards. These carry the tone filter and one acts as the inter-connecting wiring for the keyboards contacts. I found the controls to be very straightforward and no obvious shortcomings in that area. CONCLUSION

The ARP Explorer was the best bit of this package. I was not over impressed with the organs stringy voicing, though this may appeal to some readers tastes.

The pedals worked well, but I thought the pedal contacts (inside the organ console) looked a bit flimsy, I'm told that they give very little trouble, so this could be interpreted as being my personal preference for dust-proof enclosures on organ contacts making me too critical.

When I tested the C112 ARP, I did so at the importer's new factory and had some difficulty due to a recurring hum which, Mr. Robert tells me, is the result of one of his neighbours using too much power from the local Electricity Company distribution transformer, leading to dramatic drop in voltage. I would be very surprised if such a large maker sent out a product with such an obvious shortcoming, so I take Mr. Robertson at his word, but I thought I would mention it, just to be on the safe side.

All In all, I think the Solina C112 ARP Explorer 1 will perform well for a long time without breakdowns. The cabinet work is just about the best I've seen on an organ in this price range and it does look very smart indeed.

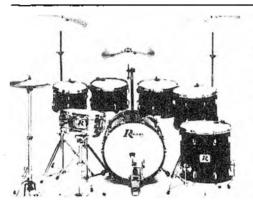


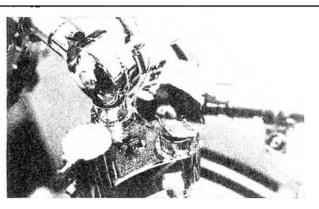
TEST ON: Rosers Memviloc Kit

DATE April'76

PRICE Approx \$500 Ex VAT

TEST BY BOD Henrit





Rogers drums are built in Los Angeles and have been legally imported into England for about 15 years. Up until the seventies they were handled by Boosey and Hawkes who even went so far as to make an English version of them under license from the American Corporation. These English Rogers were good but mainly because of their American-copied Swivo-matic fittings.

CBS acquired Rogers name and patterns in the 'sixties and moved the factory from Chicago to Los Angeles. To my mind, the drums, are better made since because C.B.S. are much more conscious of quality control than their original owners.

For the past couple of years or so I have been aware that some big new drum developments have been going on in California at the Rogers drum factory. Recently I was able to inspect the fruits of their labours. Coincidentally, I chose to examine C.B.S. new drum product at the C.B.S. recording studios in London. I was booked for a session and since my normal recording kit is Rogers, I decided to throw caution to the wind and do both a session and a Drum Check at the same time.

The set in question was a "Londoner Five" which according to Rogers is their most popular set up for basic rock. They boast — "It is not a traditional five piece drum outfit, but part of a whole new way of thinking about drums and drum equipment". I for one agree with them wholeheartedly.

The drums themselves I'm sure have not changed recently.

What is new about this outfit is MemriLac. This is a completely new system for adjusting height, angle and positioning on the drum kit. Gone is the old Swivo-matic tom-tom holder and cymbol tilter, gone is the adjustable — basket type snare drum stand, gone too are the Rogers collets and disappearing hexagonal cymbol arm and spurs.

All of these original 'sixties developments seem to have been bequeathed to the Japanese. (Rumour has it that "tooling-up" for 'MemriLoc" cost Rogers 200,000 dollars which on this evidence I would consider to be money well spent.) Instead we have much more substantial cast aluminium fittings. Basically, the height adjustment on all the stands is held by a cast aluminium clamp (rather like a glarified "jubilee-clip") which is locked in position with your American style drum key. This clamp fits on to any of the extra large diameter tubing used on all stands and fittings. Once set, this clamp fits into a cast aluminium block which is actually the shell-mouth receiver. (One of these blocks is fitted at the top of all the tubes on cymbal, hi-hut and snare drum stands and also on the stoot). The jubilee/Memrit.oc clamp once in position (flush) in its receiver is locked with a new style wing-bolt. These diamond-shaped wing-bolts were the only part on the whole set which I didn't like the feel of. Irrationally, they didn't fill me with confidence. The aforementioned cost aluminium receiver-black is interchangeable for a bass drum mounted tom-tom holder, or tom-tom receiver or spur mounting.

# Bass Drum:

Rogers 22" five ply hardwood bass drum has an absolutely magnificent sound. It was so good with both the heads on that it broke my heart to remove the front head for the recording. The drum has a tube in the middle extending all the way down its diameter which I shall explain later. This tube proved very convenient for stuffing padding behind to over-dampen the drum for single headed play and doesn't

seem to affect the overall sound at all with two heads working in sympathy. Like most manufacturers, Rogers fit twenty nut-boxes and tymponi type tuning handles with claws. The shell is coated with Rogers patented flecked paint which for me is one of the reasons for their unique sound. The ubiquitous felt-strip muffler is supplied in duplicate for this set and does its usual inimitable job.

## Tom-Toms:

The "Londoner Five" set comes with  $12 \times 8$ ,  $13 \times 9$ , and  $16 \times 16$  tom-toms. I'm rather surprised that this "rock" set doesn't have the more up to date sizes  $13 \times 9$ ,  $14 \times 10$  and  $18 \times 16$ . Still, the tom-toms supplied sounded big enough for any application which just goes to show that it's not how big

you are. These drums had a really deep-throated sound, very powerful. Rogers no longer fit internal dampers onto their tom-toms but have instead devised a spring steel external damper which clips in any position to the rim of the drum and acts on the top of the head.

## Snare Drum:

Rogers very famous Ten lug brass-shell Dyna-Sonic is supplied with this five drum outfit. For those of you unfamiliar with the well accepted Dyna-Sonic system it was introduced in 1962 and it uses a special and unique castaluminium frame built completely around its snare which keeps the snare unit itself tault at all times even when the snare is not in the on position and not touching the head. The result of this innovation is an "unchoked" snare drum sound with clear definition and very little distortion. The brass shell is strengthened with five thin "beads" in its centre (to prevent "buckling"), Rogers original triple-flange hoops and a substantial internal damper. The snare-strainer is a

swive-matic which is acknowledged as the most sturdy and positive model around. By the way, the Swive-matic drum was the first snare drum to feature a really wide snare bed.

I got the drum out of its cardboard box, put it on its stand, fitted one of the Super X external mufflers and immediately produced the sound they were looking for in the control room. To set up a real A-B test I put my favourite Ludwig 400 on its stand to compare. I've use this old metal drum exclusively for sessions over the past six or seven years and have always been pleased with its sound. I'm afraid it met its match at this encounter because the Dyna-Sonic sounded much more modern somehow.

# Accessories:

The hi-hat is an updated version of Rogers Supreme model. This one has a two-piece cast aluminium footplate and saddle with two replaceable joining straps to its adjustable spring nylon sleeved centre pull mechanism. This model naturally enough has MemriLoc height adjustment and in this case its bottom cymbal support tube is from 1" diameter, satinchrome finish steel. (This satin chrome finish is applied to all tubes in the areas where locking and adjustment are needed and gives added holding power). This top tube had an extra large and agreeable locking angle-adjustable, nylon bottom cymbal seating unit which contributed greatly to the over all stability of the hi-hat.

This stand at its normal maximum wouldn't extend high enough for comfortable playing with a multi tom-tom set up but on looking through the '76 catalogue I notice Rogers now offer a 7" extension rod which would definitely be the answer to that problem.

The action of this pedal was as smooth as silk and really silent. Absolutely the "bees knees".

The 'Supreme' bass drum pedal is basically the same as the old Swive-matic but like the new hi-hat is almost completely made from cast-aluminium. It also has a two-piece footplate and a new more positive way of clamping itself to the hoop. It's a cam-activated clamp which tightens with an "L" shaped bar. The pedal is adjustable in every possible way: the spring tension, the stroke (for more or less power and volume), the beater weight for larger or smaller bass drums (while the striking arc remains the same), and the angle of the footplate in relation to the drum head. All these variables can be self-customized to your exact playing style requirements. The nicest feature for me of the 'Supreme' pedal was its new beater. It's a double sided affair futuristic and aerodynamic in shape and made from some sort of synthetic fibre which is lighter than wood. A small piece of felt is stuck to one side and the shaft is 5/16" in diameter (much thicker than usual) and less prone to bending and whipping than normal. The sound from this "black jack" beater was amazina.

I have owned an old style Swivo-matic pedal for some years and have never been really happy with it, however, this new one I attached to the drum, tested, adjusted the spring tension down a little and Eureka! It was so comfortable and smooth. Unfortunately, with heavy playing I managed to make the footplate swivel on its horizontal axis. I just didn't seem to be able to tighten the bolt enough to cure this problem. To be honest, I was scared to put too much torque on the test model (which after all was only on loan to me) in case it sheered off. The feet of the pedal which go under the hoop have small ribbed pads glued to them to eliminate movement.

The MemriLoc cymbal stand also doubles as the bass part of a floor standing double or triple tom-tom stand. One just removes the unit from the bass drum and inserts it straight into the cymbal stand which is impossible with the old double tom-tom unit. As a cymbal stand, it is at six feet the highest and sturdiest model I have ever seen. It is made from four lengths of tube and so has three MemriLoc fitments. It can be bought in two different types. There's a flush base type and a tripod base type which used to be called the Samson. The latter is allegedly useful for fitting around spurs and all those other fittings which invariably get in the way. Rogers have designed a new style tilter which uses a spring model ratchet clutch. It doesn't look as good as the old Swivo-matic tilter but I suppose it will work just as well.

Rogers have come up with a completely new sort of snare drum stand and I should think Buck Rogers would turn in his grave if he could see it. It's so unlike anything Rogers have made before. It's not an adjustable basket type but instead has two fixed holding arms and one diametrically moveable one. These arms no longer have rubber tips on them but right angled aluminium brackets which locate into the middle recess of the triple-flange rim itself. They appeared to be coated in Teflon. For safety reasons, the moveable retaining arm didn't adjust too far so to accommodate different size snare drums or tom-toms, Rogers have thoughtfully provided several alternative holes for the right angled brackets to

locate and screw into. The playing angle is adjustable on a sprung saw toothed ratchet like the tom-tom arm and cymbal tilter. Like all the other new stands the height adjustment on the 1" diameter is by MemriLoc.

The multiple tom-tom stand mounted on the bass drum has a large support tube inside which extends to and is fixed to the bottom of the drum and very successfully stabilises. the whole unit. This new holder is very like the original Trixon or Sonor models which utilised an adjustable "I" shaped tube which in this case is made from 1" diameter satin-chrome non-slip tubular-steel. The improved fitting is moveable vertically like its German predecessors on a finetoothed, spring-loaded ratchet. (I hope this ratchet doesn't suffer from the casting weakness which plagued the Trixon one. The German castings were from Mezac: could Rogers cast aluminium be one and the same substance ?) The ratchet is secured by a wing-nut ingeniously shaped like their bass drum hand tuner. If the tom-tom holder block is turned backwards 180 degrees so that the apex is towards the player it's ideally possible to have the shells of the two drums touching. The cast ratchet arm has three grooves cast into it to facilitate more positive and safe vertical tom-tom position.

The triple configuration tom-tom holder block is fitted as standard even to the double tom-tom kit and has three ratchet arm receiving holes bored into it. These holes are ingeniously engraved around their circumference with numbers like a clock. This is to help us to duplicate the "exact horizontal axis setting each time."

The ingenious little dampers I mentioned earlier are called 'Super X' and are I believe sold separately. Either singly or in multiples, they are ideal for recording and from my own experience the answer to a recording engineer's prayer. (I've never used dampers on my tom-toms or snare drum for live playing but I welcome these clip-on no-nonsense dampers.) The damper pressure is adjustable by a fine threaded wingnut and bolt and apart from catching my finger underneath the spring unit whilst fitting it to the drum (in the easiest way, which is completely opposite to the one Rogers advocate) I have few criticisms. The Super X muffler has a built in swivel to enable the damper to be taken off the head without removing it from the drum. This is fine but alas the one I was using on my snare drum swivelled slightly as the drum was struck which changed the sound a little and aggravated the recording engineer no end. However, after the session I experimented with one of the other dampers supplied with the set and this one worked perfectly. It would be much more positive if the damper swivelled on a nut and bolt instead of on a rivet.

The MemriLoc spurs are made of 1" tube with a very shallow working angle which can be used with or without a rubber tip. These tubes have semi-circular diametric section cut out of them at their ends which means the edges so formed work like double spurs, which effectively stop the drum from creeping. The spurs were a bad case of over-kill, they worked well but looked terrible.

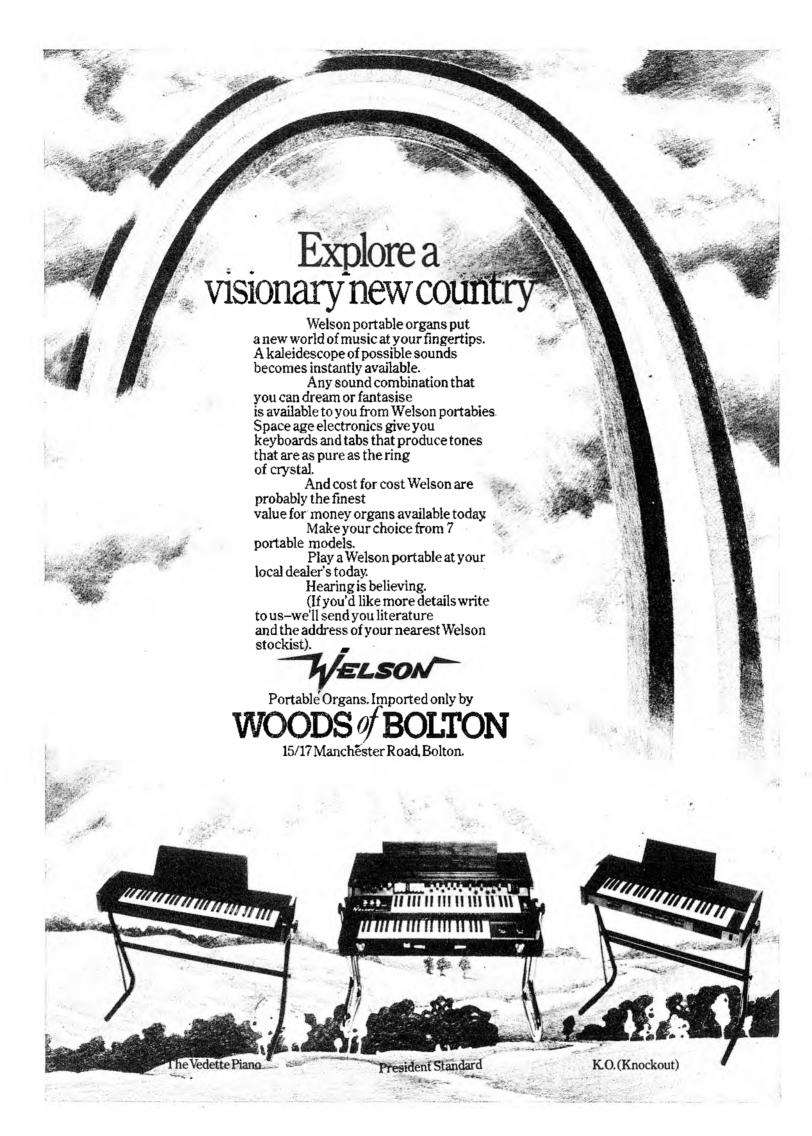
The "beaver tail" nut boxes look the same as they used to but now they are supplied without springs. I couldn't make sure because there's no quick way of taking off a nut box but I suspect they have a piece of polythene tube inside which effectively eliminates any extraneous rattles or buzzes, particularly crucial in recording.

The test kit was supplied in a new colour called Spanish Gold, which looked really tasteful and professional yet modern. They now produce ten finishes of which five seem to me to be completely new colours. Rogers have produced a futuristic new 'R' badge to go with their new developments. It's much larger than any other, about three inches by two, and once I got used to it I thought it fitted very well. It certainly gives a new but very tasteful image. After leafing through the catalogue it appears that Rogers don't make a right handed tom-tom. The test kit had two left-handed drums, that is to say that when the 13 x 9 was mounted on the bass drum its badge was the right way up but facing backwards. I would have thought that Rogers would have worked out a way to remedy this. If the worst came to the worst, they could have fitted two badges, one upside down to the 13 x 9.

# Conclusion:

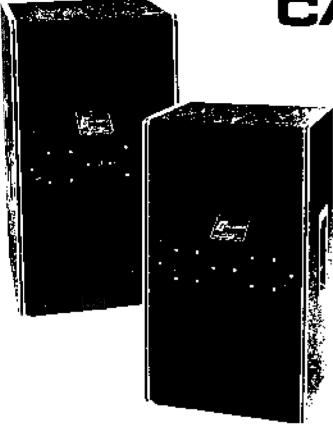
Hair-splitting aside, it would appear that Rogers have consulted not only drummers to help in the production of this set, but also equipment managers, because this set seems to me to be the only one in general production built specifically to stand up to the trials of one night stands and more especially the rigours of American touring. The new MemriLoc fittings were absolutely wonderful; they really showed up my suddenly "flimsy" looking swivo-matics.

I can honestly say this is the most stimulating drum set I have ever played (at least since my first American kit in the early 'sixties). The sound of the drums was not unique, it simply has Rogers' very strong, very good, ballsy sound — but combine this sound with these immovable:, rock-steady MemriLoc fittings and you have a very unique drumming experience indeed.



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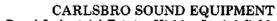
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ADVISION... Gentle Giant completed their new album Interview with engineer Paul Northfield, for release on the Chrysalis label... Druid were recording and mixing for a new album called Fluid, co-produced by Murray Westland and Paul Hardiman... Keith Emerson was in mixing tracks for a Manticore solo project...

AIR . . . Kenii Sawada was overdubbina with engineer Mike Sparrow . . . America were doing some quad remixing . . . John Burgess was remixing a Philip Goodhand-Tait LP originally produced by Lloyd Grossman . . . DJM newie Joanna Carlin was recording a single with producer Ivan Chandler . . . Iulie Covington was doing some demoes for Tim Rice . . . Alberto Y Lost Trios Paranolas were recording with producer Phil Mcdonald Marmalade were doing some overdubbing with engineer Tony Macaulay . . Andrew Powell produced a new album for Leonard Whiting . . . The Walker Brothers recorded some new material for a single with Scott producing and engineers Jeff Calver and John Kelly. . . .

CBS... The Meters were recording with Tom Wilson producing and Bernie O'Gorman engineering . . . David Hitchcock produced a session for CBS Germany with Improved Sound Limited . . . The voice parts for a new animated film of Watership Down were being recorded by engineer Mike Ross with producer John Hubley . . , Sailor continued work with engineer Dick Palmer on various backing tracks and remixes. Mike Leander produced a session by the Glitter Band . . . UA artist Slim Whitman was recording with producer Ken Barnes and engineer Steve Taylor . . . Tony Macatilay produced Marmalade who were husy with some vocal overdubs . . . Classical guitarist John Williams was recording with producer Paul Myers and engineer Mike Ross... Neil Young took some time off his European tour to record some new material . . .

EMI... Soft Machine were in with Sean Murphy producing and John Leckie engineering . . . The Shermann Brothers were recording an album of their film music produced by Norman Newell . . . Norman Newell was also producing an album of Big Band Dixleland for Geoff Love . . . Fivepenny Piece recorded with producer Harry Robinson and engineer Tony Clarke . . . Cliff Richard was remixing an album with Bruce Welch producing . . . Wings were recording their new album with Peter Henderson engineering . . . Tony Clarke engineered a single for Steve Harley . . . Byzantium recorded with Denis Mackay producing and John Leckie engineering . . . Babe Ruth were recording a single; Steve Roland produced and Tony Clarke enaineered . . .

IBC... Ralph McTell continued work on a new LP with producer Shel Talmy and engineer Hugh Jones... Some work was in progress for Barclay Records International of Brussels... Keith Potger was mixing some Seekers material... The IBC cutting room was kept busy with work for Yes and some compiling and cutting for Nell Sedaka...

KINGSWAY... New band Strapps have heen recording an album for release on the Harvest label with Roger Glover and Louis Austin producing . . . Stretch have been in putting down a single with Louis Austin engineering and Clifford Davis producing . . . John Aycock engineered for Eddie Hardin who was recording some original material . . . Chosen Few were recording a single with George Sloan engineering and Tony Ashfield producing . . . Another new artist Tony Austin recorded a single, also with George Sloan and Tony Ashfield . . . Ian Gillan had some mastering done for his new solo album produced by Roger Glover . . .

THE MANOR... Mott had Eddie Kramer producing a new album...
Dutch band Alquin recorded an album with Vic Smith producing and engineering... Pip Williams produced and John Eden engineered a single for Chris Andrews... Procol Harum recorded a single with the Manor Mobile...
The Mobile will also be busy recording Monty Python at Her Majesty's Theatre with Alan Williams engineering...

MASTER ROOM... LP's were cut for Streetwalkers... Mighty Diamonds... Slade... Gong... Supercharge... Shirley Bassey... Julie Tippett... Jethro Tull... Procof Harum... Maddy Prior... Horslips... Singles cut included those for Slade... Splinter... Hudson-Ford... Keith Emerson...

ORANGE... An album was completed by the Realistics with producer Mark Arthur-Worrey... The Daily Mirror's pop club "Convoy" single was recorded with producer Chris Sandford and engineer Steve Churchyard... Guitarist Jimmy Haynes finished his first solo album produced by Mark Arthur-Worrey and engineered by Steve Churchyard...

PHONOGRAM... Singer David Lewis was doing some recording for Polydor with Chris Rainbow producing and engineer Steve Lillywhite... John Stevens was creating some free music with his band "Away" — Steve Lillywhite engineered... Steve Brown was producing some work by Eddie Grant and the Equals... Rod McKuen recorded a new LP produced by Peter Olliss... Status Quo's drummer John Coughlan was in with his band Diesel laying down some tracks...

RADIO WORCESTER... The M & O Band were having a single produced by Muff Murfin and Colin Owen... Bronco recorded a new single with engineer Colin Owen... New artist Alyson recorded a single called "I Do Do Do", produced by Murfin and Owen...

ROCKFIELD . . . Budgie have been resident for a month recording a new album with Pat Moran engineering . . . Van Der Graaf Generator recorded an album with Pat Moran engineering . . Irish band Nightbus were recording with engineer Dave Charles . . . Pat Moran produced and engineered Hobo ... New Zealander Dennis Neal was recording with engineer Dave Charles and producer Hugh Murphy . . . Arthur Brown was compiling a double album of Kingdom Come material with engineer Dave Charles . . . Kingsley Ward engineered and produced a single by Bobby McGhee for E.M.I. . . . Tim Rose recorded with Dave Charles engineering and Lonathan Rowlands producing . . Fritz Fryer engineered and produced Motorhead . . . Fric Sikel was recording with engineer Dave Charles and producer Robin Miller . . .

ROUNDHOUSE STUDIO . . . DJM artist Rob Wright did a final mix with producer Steve Roland and engineer Ashley Howe . . . Mud were recording with Pip Williams producing and Mark Dearntey engineering . . . A new single was being recorded by Osibisa produced by Gerry Bron . . . Hawkind finished an album with Mark Dearnley engineering SCORPIO.... . . . Streetwalkers were just completing their new album with Ray Hendriksen engineering . . . Ian Somuel was producing and Dennis Weinreich engineering for Hummingbird . . . Carl Palmer was in doing some work on his new LP . . . Barbara Dickson had finished an album produced by Junior Campbell and engineered by Dennis Weinreich ....

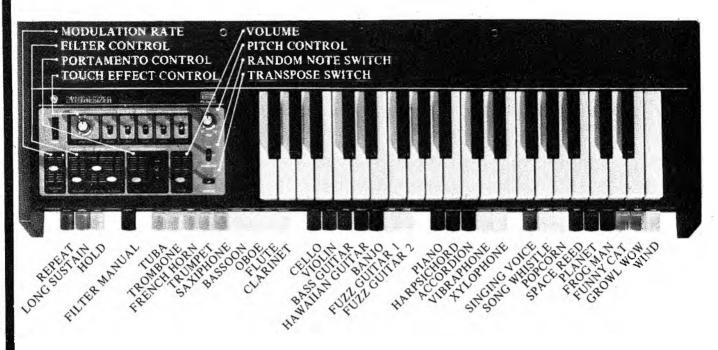
SUN STUDIO... Jane Broadribb was in putting down some cover versions of various tracks with producer Mike Deekes and engineered, as are all the sessions, by Martin Maynard and Rob Boughton... John Kazatsos recorded some tracks for a new album... Dick Jones was recording a version of "Albatross"... Paul Griffiths of Opportunity Knock s fame recorded some demoes ... Terry Clarke put down some tracks with Rob Boughton producing.



Sailor were among recent visitors to CBS

# **SYNTHESISER**

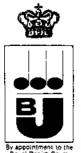
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Just around the corner from the International Musician offices, Freerange Studios have been operating in eight-track format for just over a year. The studios are part of Nick Abson Productions, a company with their fingers in many pies.

Director Neville Wills explained the growth of N.A.P. "It started in about 1963 when Nick (Abson) and I got together. Nick had been involved in the film industry and I had been working in sound for TV and film commercials. With the advent of video disc and cassette, the two industries are becoming more and more closely related anyway. We thought we'd see if we could use each other's experience to make a company work. The problem was at the time this "recession" was just starting to get a hold on the country's economy, so it was a bit of an uphill struggle."

It was a struggle that finally paid off, N.A.P. began making various documentary films and promotional films and eventually opened a small, four-track recording studio in High Holborn, "The studio was basically for film soundtracks and voiceovers." Neville explained: "It wasn't just set up for groups. A few years later, we had a lot of bands and artists using the studio for demos and it really started to build up from there. We were giving a good service - the equipment was old but very strong and we kept prices down, Consequently, we got a lot of business.

The four-track studio in High Holborn is still there, under the name of Budget Studios. Last year, however, saw the opening of Freerange Studios.

Since then, names like Thin Lizzy, AI Stewart, Chick Churchill and Tim Hardin have all been using the studio to lay down demos. For the past year, the equipment has consisted of an eight-track 3M machine, an early Sound Techniques desk (18 in 8 out), 15" Tannoy monitors driven by Quad 303 amp-

lifiers and a selection of AKG and Neumann mikes. There is also a Mellotron, drum kit, two amplifiers, Fender-Rhodes, Bechstein Grand piano and guitar available in the studio free of charge.

However, such is the expansion of Freerange that they have just installed a 24 in 16 out Sound Techniques desk along with a specially built 16-track machine. Neville explained the move to 16-track: "We're going 16track because as the upper end of the market increases the number of tracks, studios like us are directly affected by it. The production of records is becoming more and more intricate, so demos are getting more intricate. We've found there is a demand for more tracks, provided we keep the price down to a reasonable level. Another reason is that we've got an awful lot of space for just an eight-track. The studio space available here really warrants 16-track."

Although Ercerange's work is mainly demos, they have made some masters. "Most of the masters we've done are allied to films and things like radio commercials. The quality has to be really good, Eventually, film music finds its way onto an optical track which is not as frequency responsive as normal magnetic tape. By the time the track gets onto optical, its easy to lose all the top and all the bottom."

Freerange Studios have been so busy recently that they have encountered difficulty in finding time to have the new desk and machine installed. "It's a difficult thing to do, when we're this busy", said Neville. "because you never know how long installing a new desk is going to take."

Freerange also offer a package deal for songwriters, which consists of organising backing musicians, arranging the song, recording it and therefore taking a lot of weight off a writer's shoulders. "With a lot of writers, they come along and continued on page 53

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from page 51

they have a song and nothing else - no arrangement, no idea of how to go about recording it, so we offer this songwriters service. We're actually recommended by the Songwriters Guild because we do a good job and we use very good session men. It's not one of those "get it all together in a back room" affairs. I think a writer needs to understand the recording and production side of the business. If he doesn't, it can be a very hit and miss affair. He will have more of a chance if he understands some of this side of things. I think a writer will learn more in a day's recording than he would in a hundred years."

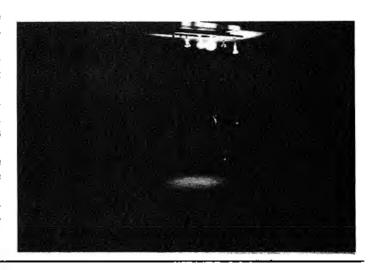
There are four engineers on hand at Freerange — Laurie Dipple, Simon Tassano, Fred Cole and Tim Blennerhassett. All are themselves musicians. "We find that a very useful element," observes Neville. "It gives them a rapport with clients. It saves a lot of time in the studio if the engineer has an

understanding of music. If a guitar is slightly out of tune and the engineer can tell, then he can stop the take and start again and save a lot of wasted time."

Neville doesn't get involved with engineering or producing, although he professes a keen interest in the studio. "As a director, I try and look at the company as a whole, It's the same with Nick — we lay down studio policy, we look at the market and plan future developments. Basically, we make sure the studio is pulling its weight."

Of future plans for Freerange, Neville says: "We want to wait and see how the studio develops with the 16-track facility. We haven't expanded in the studio as quickly as some of our competitors, mainly because we aren't just a studio, but we do have plans for Freerange. Whether they happen depends on how the country performs.

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# iessional Everythi

Echo distinguishes the professional recording from the ameteur. Excess use of echo is, however, a clear indication that despite professional facilities, the engineer is a pure amateur.

Echo - or reverb, in recording the differences are slight - of a mechanical variety has revolutionised recordings made in small studios. Until the invention of mechanical echo in the 1950's. echo was produced by the use of proper chamber, A vast reflective cavern was constructed and a loudspeaker at one end of the chamber reproduced the sound requiring echo and a high quality microphone picked up the echo and returned it to the control room. To get the required amount of echo, the engineer blended the original "dry" sound with the echo "return" as the echoed sound is called

The invention of the echo plate did away with the need for echo chambers. Some classical recording studios still retain their chambers — EMI Studio in Abbey Road still keeps its vast vaulted cellar opened as a chamber — as some classical music engineers insist on chamber echo. For all practical purposes, however, the plate and the tape have taken over.

The plate echo exploits the natural echo effect of sheet metal. Sending a signal across a plate causes an echo and previously there had been no effective way of amplifying this sound without losing quality. As technology improved, the means of amplifying the signal arrived.

The two other main means of producing an echo are springs and

tape loops. Springs are basically compact plates and the only criticism is that the echo duration is short and poor springs can add sharpness or harshness to the sound. Springs are usually used in compact reverb units, the most famous example being the Hammond reverb spring made for the Hammond organ. In addition to providing the reverb that helped to make the Hammond sound, the springs have long been available separately and well known amplifier manufacturers like H/H fit Hammond reverb

Plenty of reverb "boxes" which contain a spring and a tiny pre-amp are available, a prime example being the battery-powered Colorsound Reverb.

The tape echo system is exemplified by the ubiquitous Wem Copicat, This little machine has been on the market for 15 years and has provided guitarists with a variety of echo effects on stage. In the context of recordings, it presents problems of tape noise and limited effects but I will deal with this problem more fully at a later date. The tape type echo works on the principal of recording the signal to be echoed ON the first head and then replaying it from a replay head placed just an inch or so after the record head. Usually several record head and the unit returns the original "dry" signal plus the later signal to form an echo. The best known unit of this type used in demo recording is the Binson Echolette. This has a wide variety of effects available and has the maximum life for the tape loops.

The large professional echo

plates are usually too bulky and expensive for domestic recording. The costs of these plates - mono and stereo versions are available -includes special housings and they have to be properly installed. It's hard to believe that one - new or secondhand - could be fully operative including power amps for under £1,000. If your studio is getting that ambitious, then you'd better talk with a company like F.W,O. Bauch in Borehamwood, Herts about installations. Incidentally, a good tip for all second-hand recording gear is to go to Malcolm Jackson at Jackson Recorders in Rickmansworth, Herts. His prices are a little on the high side, but you can usually be sure the gear works well,

The most usual choice for home recording echo and reverb is either a spring or reverb device. With a spring, you get reverb of different duration but no other effects. With a tape unit, you get echo effects as well but sometimes it's very hard to get pure reverb without a faint repeating echo. Ideally, the small studio should have both echo and reverb facilities and if you're prepared to take a little care and a little extra time over your recordings, great things can be achieved for a small outlay.

Professional studios win because they have money; musicians at home can put in their own capital — their time. Time to mess about with wires and to control awkward peices of equipment is the one thing pro studios haven't got. If you're prepared to take time over your recordings, there are many areas in which care can take the place of money — echo and reverb is one example,

The biggest problem you'll have to face is noise from the unit. Reverb springs often usually have a small battery-powered preamp as part of the circuit and if the battery power drops you can start to get an intrusive hiss on tape. Keep the batteries in top shape and if you're buying a unit especially for recording, listen to the noise levels of the unit on an open circuit carefully before choosing which one to buy. Similar units vary on noise levels, so it's worth shopping round. If there's a gain control incorporated on the reverb box, experiment with the control to keep the hiss down, often keeping the gain down and turning the record sensitivity up will lose a lot of hiss. A poor tape deck can get a lot of its own hiss that way, so it's swings and roundabouts.

With a tape loop unit like a Carlsbro, HH or Wem the noise problem is doubled. We tested an HH echo unit on this magazine recently and found it to be particularly quiet but there is still the added problem of tape noise. By it's very nature, the tape echo need to re-record the signal you want to be affected by echo and the end product can only be as good as the recording system in the echo unit, But realising the economic facts of life for

musicians recording at home, it's important to stress that acceptable results can be achieved with even the worst units.

Presuming that the echo or reverb unit has arrived in the studio set-up after the mixer, it's necessary to set one channel aside for echo return, Ideally, the signal requiring echo (a vocal mike, for example) should be fed into the mixer, and the channel governing that mike should then be switched to send the signal to the echo unit. The signal from the echo unit can be returned to the board on the echo pot on the same channel or on another fader. Either way, the amount of echo in relationship to the original "dry" signal can be carefully controlled.

At this stage, a noise of poor echo effect can be kept well in the background adding just a touch of echo without letting its noise intrude on the signal out from the mixer to the tape machine.

Small mixers often don't have an echo send and return facility. In this case, it's necessary to plug the mike direct into the unit provided the impedances match and then plug the unit directly into the mixer channel. Cheaper tape echoes and reverb boxes are usually high impedance and if you're using a lot of stage gear in your home studio, it's likely that most of your mikes and the mixer will fall into this category. However, low impedance is the only professional approach to recording so if you have a small amount of high impedance equipment that won't convert to low and you're thinking of increasing your studio facilities seriously, consider changing over to a low impedance set-up now.

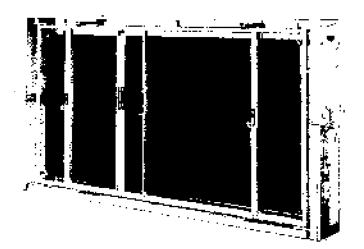
Plugging the echo unit directly into the mixer causes several problems. First, there's no separate way of controlling the amount of noise against the dry signal because no dry signal is available. Sometimes it's possible to split a mike lead and take one offshoot to the echo unit, which is then plugged into one channel and one directly fed from the mike which is plugged into another to provide a dry signal source. This can cause problems with interelated levels when one channel fader controls the other, but it can be an answer.

A new type of echo device just coming onto the market is the electronic delay. Usually, these are digital, and Carlsbro are launching a unit of this type shortly. There's a great advantage here, in that there's no tape noise problem and little space is required for the unit, but they tend to be a little expensive.

If you have a choice of tape echoes, opt for one which gives you echo rather than repeat echo and effects. H/H offer a choice of units and the H/H Echo Unit is suitable for recording whilst the Multi-Echo is a little less usable.

Use less echo rather than more is the golden rule.

# Home Recording: Echo&Reverb



Front view of the Stereo Reverberation Unit EMT 140 TS.

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These essential music-making tools let you get in, around, and behind your music. One part, one track at a time. Then when all the elements are the best they can be, you blend them together and generate the finished product. A process that involves your innermost sensitivities and perceptions. A personal statement.

The 3340 has undoubtedly helped more people make more demos and masters than any other tape recorder. Our new model, A-3340S, has extended high end frequency response in the sync mode, plus manual cueing. The Model 2 is about the best value going in small mixers - 6-in, 4-out with full panning and multiple patch points. Plug in a few high quality TEAC ME-Series electret condenser mics, and you could be quite literally in business.

When you have the right tools, the work is more



Destined to be one of the most popular echo units, the recently introduced HH MULTI-ECHO is a sophisticated solid-state tape loop electromagnetic delay linesystem. It has four separate playback heads in addition to a record and erase head, and offers a wide variety of effects. Each of the heads is controlled by a push-button switch, while another four switches control the Repeat section. It is claimed a total of 240 different effects are available, depending on the combination of push buttons selected.

The front panel of the unit houses two input sockets, each with its own Volume control and a common Treble control. There are two independent outputs - Echo Out (echo signal only) and Output (clean feed signal). Each of these Outputs can be connected to different power amps, separating "clean" and "echo" signals. When the Output socket only is used, echo signal plus clean feed are provided. Echo equalisation is provided by bass and treble controls, which only affect the echo signal. In addition to this, there is an Echo Volume Control and a Repeat Volume Control, adding further combinations of effects. The Multi-Echo also has a built-in compressor/limiter which prevents tape overload distortion.

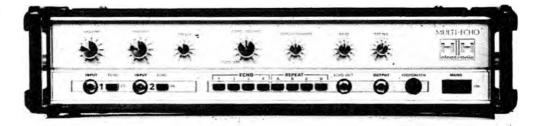
The HH ECHO UNIT has a single playback along the tape's length to vary the echo delay time. It is identical in appearance to the Multi-Echo, but has a slider Echo Delay control in place of the eight push buttons. The manufacturers claim a tape life of 300 hours; we found this to be an extremely conservative rating. The unit was reviewed in a soundcheck in the March issue at IM.

The Supa-Reverb is only one of the wide range of COLORSOUND effects units. It is a battery-operated Reverb unit, specifically designed for use with P.A., can be applied to studio use.

one output. In addition, there is a Reverb control which varies the depth of reverberation and a volume control.

EAGLE INTERNATIONAL manufacture two inexpensive reverb units. The RA 856 is mono-only unit with Volume and Reverb Depth controls, and is battery operated. The RA 859 is a Stereo reverb unit with two microphone inputs and two instrument inputs together

# **ECHO AND EVERB UNITS**



with mixing controls (mic and instrument). It is mains operated and has a footswitch facility.

Although a little expensive for most "Home Studios" (at £2,000 plus), EMT plate reverb units are worth checking out. They are used by recording many leading studios the world over. The basic principle is a steel plate suspended in a (usually) steel frame. Parallel to this plate is a damping plate suspended to permit it to swing towards or away from the reverbiplate, thereby shortening or lengthening the reverberation time. This movement of the damping plate is controlled by a hand wheel, although, with some models like the 140 TS, it is possible to vary this movement by a special remote control unit,

A long established favourite among echo machines is the WEM COPICAT. It features a fairly short tape loop, of which replacements are always readily available in most music shops. The usual depth and gain controls are provided, together with three push button switches for different delay times. These effects can also be mixed to give different combinations guitar or organ, although it of echo repeat and reverb. Still relatively inexpensive. It has two jack inputs and it is well worth trying out.

# £300 REWARD



# WANT WATKINS COPICAT SERIAL No. 01

This reward is offered for the return of the first COPICAT echo machine built 21 years ago in Balham — London by WATKINS GUITARS LTD.

SECONDARY REWARD of £50 paid to any person giving information leading to the recovery of this machine.

**DESCRIPTION:** — Gold control deck with white printing. Two colour box — grey and light blue. Words "WATKINS — LONDON" on top

right hand corner of deck. Jockey bar is flat type and finished black. Erase magnet mounted on bracket to left of motor spindle. Known to have been in HAMBURG — Germany

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Peacock surprise! This amazing bush guards the A48 just a few miles outside Cardiff.



Although Wilks Music Stores Ltd of Swansea specialise in violins, cellos and violas, they are also Premier agents, and carry a fair range of Premier percussion. They also offer extensive repair facilities.

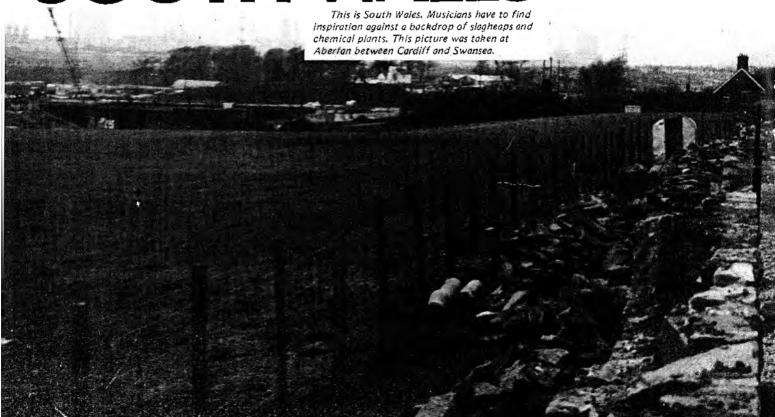


One of the main music shops in Newport is the Music Centre. The shop's thinking about changing its name in the near future.



Inside the Music Centre there's a massive display of amps, drums and guitars. Brand names on show include Premier, Paiste, Novanex, Selmer, Carlsbro, Gibson and Fender.

# BUZZ: SOUTH WALES

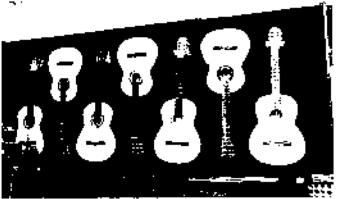




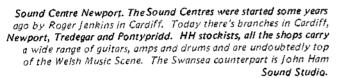
Bridgend's just North of the A48 Cardiff to Swansea Road and the little town manages to support two music shops. A third went out of business recently. This is Soundwave and although there's a good cross section of instruments available here, there's a strong accent on percussion.



A little further down the same road, Electronic Services offers a surprisingly wide selection of instruments considering the small size of the shop.



Inside Electronic Services there's a really comprehensive range of classical guitars, despite the shop name.







Roger Jenkins is something of a personality in South Wales. In addition to running the Sound Centre's he's also an offshore powerboat racing champion.

# BUZZ: SOUTH WALES



For the serious keyboard player Newport has Crane's. This is one of a chain of shops and as well as console and portable organs the shop also stocks concert grands. A special offer on Yamaha organs was running while we were there. The shop also carries some small amplification and rarer instruments like piano accordions.



Hi-fi, sheet music, guitars, amplifiers, keyboards and all the rest can be found in Duck Son and Pinker's of Swansea.



A popular port of call for many local and visiting musicians to Swansea must be Picton Music. It's a large shop with instrument, record and organ departments. They've been there for nine years and, with their impressive range of instruments, look like they are there to stay.



Gamin Pianos is a huge music store taking in four floors of an impressive building in the centre of Cardiff.

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The John Ham Sound Studio is almost two shops in one. There is an impressive hi-fi and stereo section on one side, while the other is given over to instruments. The second floor also houses a comprehensive drum department.

Swales are a long-established instrument shop in Haverfordwest. With 14 years trading behind them, Swales are something of a tradition in South Wales. Instruments, accessories, sheet music, records and tapes are what Swales offer, plus tuition on most instruments.

Eiler Davies runs The Music Studio in Carmarthen, where musicians of all sorts shop around for organs, pianos, records, sheet music and acoustic guitars. They also offer piano tuning, reconditioning and tuition on the premises.



Just to prove we're taken seriously; this poster was displayed in the John Ham Sound Studio.



An old Hofner and a Jap Les Paul displayed in a Swansea antique shop.

Peter Noble (Llanishen) Ltd has been there for ten years, but it's only in the past few years they have been dealing in musical instruments. They now cover most instruments from acoustic guitars to Moog synthesizers, and also have a wholesale company called Bear Amplification (Wholesale) Ltd. This side of the business distributes Novanex sound equipment throughout the U.K.

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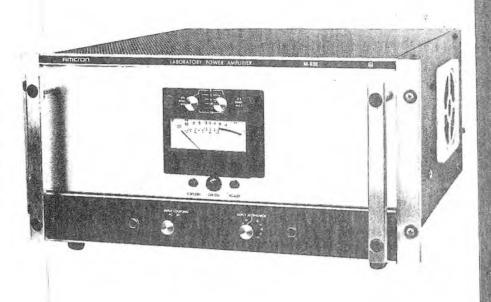
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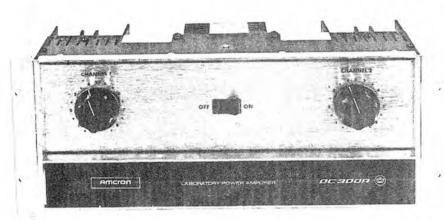
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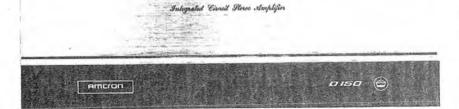
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The New DC300A will give up to 500 watts from one channel with distortion lower than 0.05%. Hum and noise is below 110dB below 150 watts, and the DC300A is now able to operate into loads as low as 1 ohm. Power Response + 0db DC - 20 KHz @ 150 watts into 8

The new D150 offers up to 180 watts from each channel or 330 watts as a mono amplifier. Again very low distortion and rugged construction make the D150 ideal for smaller PAs and fold back systems. The Power Response of the new D150 extends from DC to 20 KHz.

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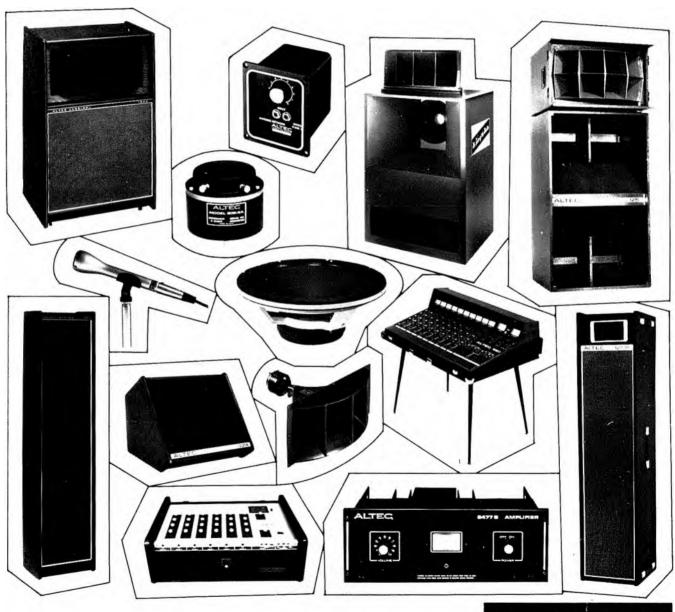
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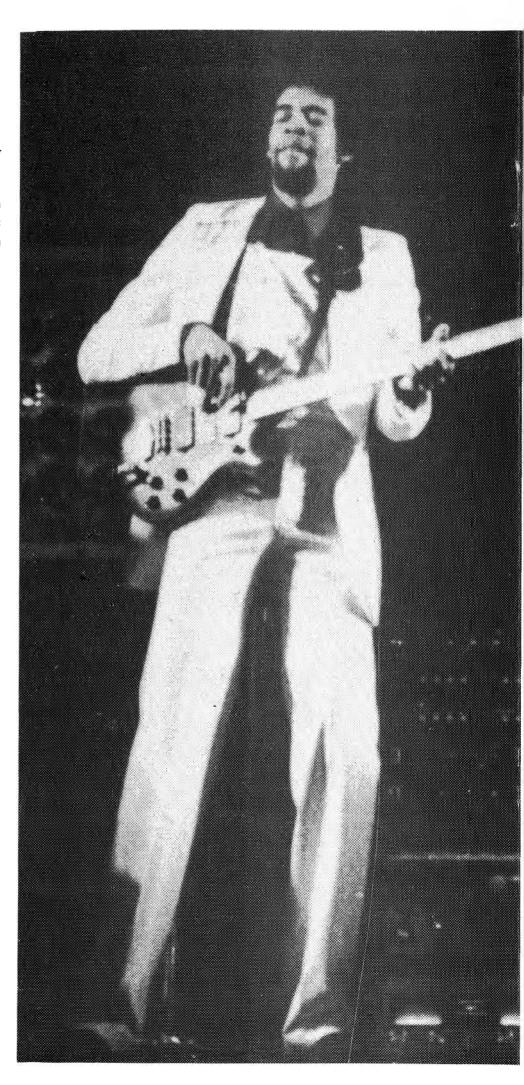
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And for our brass and woodwind friends we have done the impossible – we have even improved this department – now a brass mezzanine for everything from a soprano cornet to a BBb bass. And an enlarged woodwind section where you can see and try anything from a piccolo to a bass clarinet. Full ranges of Boosey & Hawkes brass and woodwind, Selmer saxophones, Olds brass, Yamaha brass and woodwind, Conn brass, Getzen brass, Buffet woodwind, also King, Armstrong, Corton, La fleur and many more.

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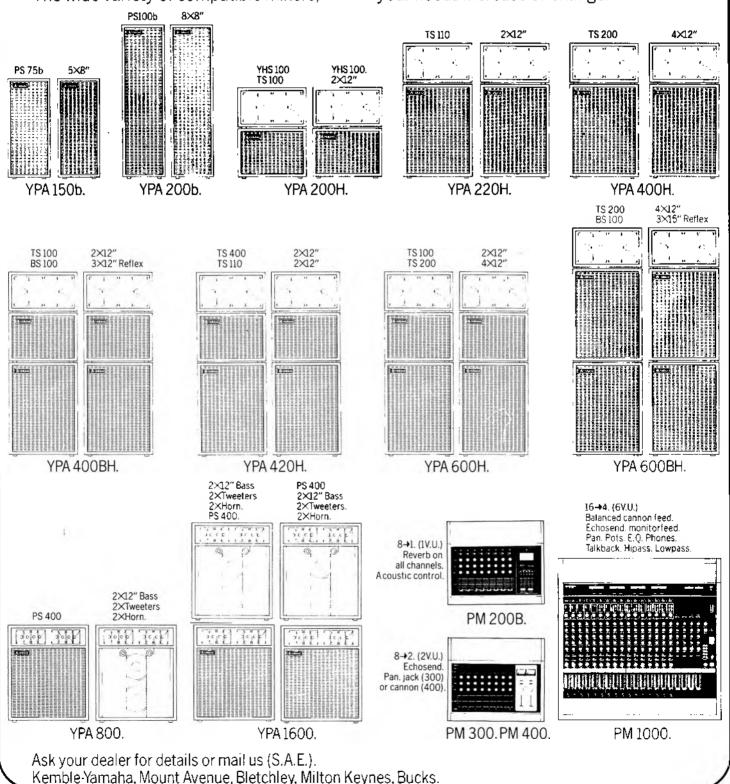
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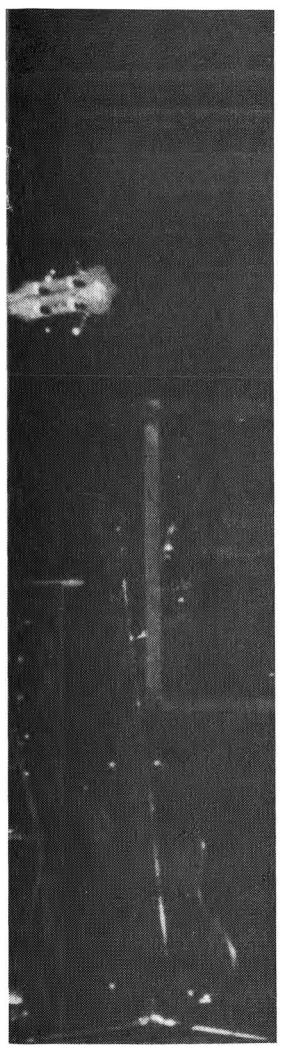
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columns and cabinets means that you can choose units to provide exactly the facilities and the sound you want and the 'building block' principle lets you add on units as your needs increase or change.





A half interesting person was talking recently about the height of American working class children. In Britain, the higher social orders benefited from plenteous orange juice as children, whilst American affluence ensured that even welfare waifs got sufficient vitamins to grow as tall as their immigrant genes allowed.

Height was the deciding factor in Stanley Clarke's musical development. A poor Black, he learnt cello and violin as a child and his rapid growth promoted his switch to double bass.

Today he's well over six feet tall, 25, and in the front rank of musicians pushing back the borders of music towards infinity.

Return to Forever, his main occupation, Chick Corea and his solo recording projects have been his principal occupations in the last few years.

"About 15, I realised you could improvise, you know, play things that weren't actually written down. Since then, I've been playing music that isn't written down."

To play this music, Stanley first had to re-learn how to write music down. The album released in the U.K. in November 1975 contained several almost free-form musical works written and scored by Stanley in collaboration with such musical luminaries as Mike Gibbs and John McLaughlin.

Stanley's first success came as a bass guitarist. He followed the predictable pattern of small group participation and ended up playing sessions on New York recording dates. He was fortunate to hit a fruitful period in New York music and played beside Billy Cobham — who's agreed to play on his next solo album.

The education was intense. Over a long period of time (in the music world's terms) Stanley earned a reputation. He toured the world, more or less as a pick up bass player, finding the limits of conventional contemporary music before falling under the influence of musicians like Chick Corea,

Stanley stepped outside of the 12 bar, outside of patterned music and into the world that's called "free-form" or "jazz" and Return to Forever have picked up a large minority following in the U.S.A. and the musical elite of Europe are currently feting the band following their European tour.

It's hard to see why a band like Return To Forever have received attention when similar and perhaps more interesting bands like Soft Machine have had to concentrate on France and Europe to make a living.

There's a stone cult around Corea and the band, and heads do get stoned to the albums, but when all that shit is cast aside, the records have to be assessed on the basis of making a valid musical contribution.

Stanley Clarke is offering new music of worth. Because it's not easy to get into and lacks the common guide lines of repetitive melody or rhythmic patterns, it takes a little investigating. Does he feel conscious of the danger of stepping on stage and failing to communicate?

"I feel really confident of my music, so I don't really worry when I'm on stage. When I'm making records I've got the audience in mind and they're controlling how far forward I can go; if I lose them, I'm not communicating and that would make it all pointless."

To control his art form, Stanley has had to understand the nuts and bolts. He now can express pure feeling through the musical experience only by learning the boring mechanics of the art form.

"When I started scoring for the recent album, I had to re-learn how to score for different instruments. I write mainly on the piano — not many people know that I played keyboard professionally for a while — but on one occasion I was writing parts for piccolo in a hotel room. I just wrote down the notes I could hear in my head and when I came to check them out on a piano later on, I only had to make minor adjustments. I was really lucky."

Having total control over the music he writes and exhibiting mastery of the section has brought him to the attention of many important names. As a top session player, he was used to gigging with John McLaughlin and Billy Cobham and the mutual respect from these master musicians has resulted in several interesting team efforts. But people outside of the musicians union have also been attracted to this new flame on the musical horizon.

Free form pioneer Mike Gibbs — regarded by Stanley and many others as a master "total" musician — scored a large section on Stanley's album and fashionable engineer Ken Scott laid the tracks onto tape for the select group. Fashionable is not, in this instance, meant as a derogatory term, because Ken's popularity has come from years of engineering and his proven mastery of the technical barriers that lie between the musician and the communication of his music.

On the Stanley Clarke album, the barrier is reduced to a shadow and only short playing times and domestic replay equipment limit full translation of the music created in the studio. Scott is the technical equal of the musical leaders.

Life for pioneers is the same as for entertainers — like Status Quo. Gigs have to be played, tour schedules adhered to and tiresome, ignorant journalists courted. The fact that Stanley Clarke manages all these things in a relaxed, easy manner is a comment on his freedom, which he gains through truthful musical expression. He might suggest Scientology is a contribution,



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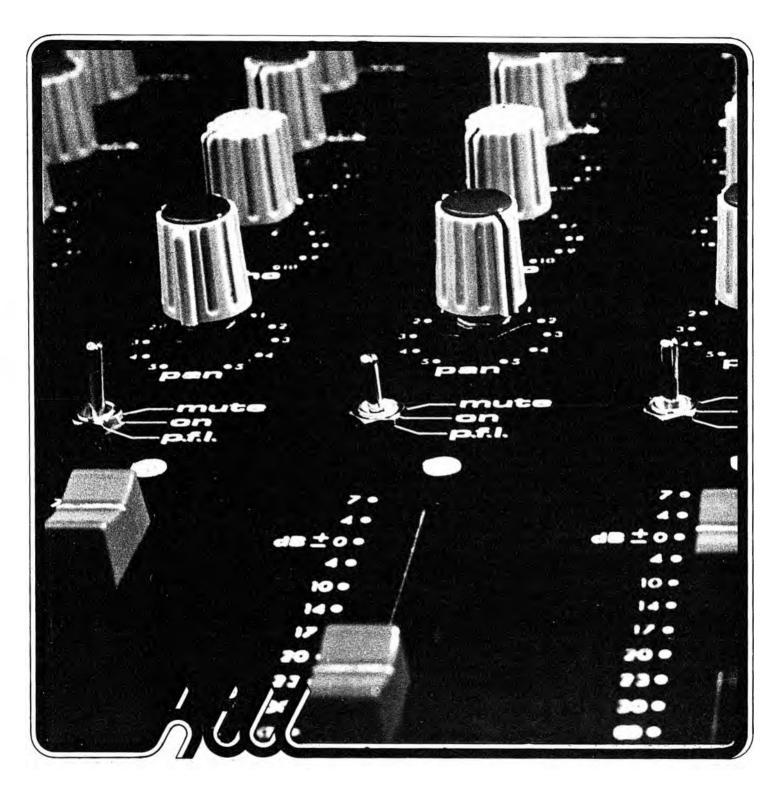


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# 1st Prize

#### Roland SH-1000 Synthesizer

An absolutely superb instrument capable of producing an amazing range of sounds. There is a 37 note Keyboard (F to F) and a Transpose Changeover switch can vary the musical interval by one octave up or down. The specification includes:

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The synthesizer is attractively designed into a teak console and comes complete with water-proof carrying case.



# 2nd Prize

#### Hohner K4 String Machine

A fine string synthesizer with a 49 note keyboard (C to C). The control panel is neatly and ergonomically designed with four fader controls linked to three push buttons on/off controls. The cello and strings voices each have a decay and volume fader control. Two push-button controls switch the voices independently and the third acts as an ensemble switch. The unit is housed in an attractive case and comes complete with a power supply swell footswitch unit, together with all connecting cables packed in a waterproof bag.

# COMPETITION

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ANSWER THE FOLLOWING FOUR QUESTIONS ABOUT KEYBOARDS AND KEYBOARD PLAYERS AND TELL US IN NOT MORE THAN 30 WORDS WHY YOU THINK KEYBOARDS ARE IMPORTANT IN A SMALL GROUP LINE-UP. THE QUESTIONS ARE PRINTED HERE FOR YOUR CONVENIENCE, THE ACTUAL ENTRY FORM IS ON PAGE 134

# **Q**uestions

- 1. WHO WAS THE KEYBOARD PLAYER IN YES BEFORE RICK WAKEMAN?
  2. WHICH PARTICULAR MAKE OF SYNTHESIZER IS KEITH EMERSON
  ASSOCIATED WITH?
- 3, WHAT INSTRUMENT FIRST USED PRE-RECORDED TAPEŞ TO SIMULATE STRING SOUNDS?
- 4. WHICH KEYBOARD PLAYER WAS CLOSELY ASSOCIATED WITH BEATLE RECORDINGS AT THE END OF THE '60s?
- I THINK KEYBOARDS ARE IMPORTANT IN SMALL GROUP LINE-UPS BECAUSE.....

DO NOT USE THIS AS AN ENTRY FORM: THE CORRECT FORM APPEARS ON PAGE 134. You'll also fine a Reader Service form and a Reader Survey enquiry on that page. If you'd like catalogues or brochures from any of our advertisers, just put a tick against their names and if you can spare the time give us a little information in the reader survey which will help us make this magazine even better!

Please make sure we have your entry before August 1st.

The decision will be announced in the September issue.

The Editor's decision about the winners of this competition will be final and legally binding and no correspondence can be entered into.

# **3rd Prize**

# Crucianelli CEP72B Electronic Piano and Clavichord.

An interesting and versatile keyboard instrument with a 4½ octave manual.

The specification includes four effects: walking bass, plano, honky tonk and clavichord operated by four rocker switches. The manual walking bass operates on the lower one and a half octaves. There is a built in sustain operated by a remote on/off switch and the instrument comes, complete with a tubular steel stand. There is a Hi-Lo Bass rotary control and a Master volume control.

# 4th Prize

#### 9924 Diamond 70 Organ

A completely new organ from Boosey & Hawkes. This is a fine Instrument with a 49 note keyboard (from C to C).

The specification includes:

Voices — Melodia, Trumpet, Violin, Bass. Vibrato — On/Off Tab.

Bass — First 17 Keys Bass/Treble convertible. There are two controls (overall volume and bass volume), and a built in 7 watt amplifier with 4 ohm speaker. The unit comes complete with a removable support, and waterproof bags for both the organ and the support stand.



#### CENTRAL MUSIC, Leicester

Local band Jinx purchased some second-hand Carlsbro cabinets from part of Central Music's extensive range... The High Vibrations were in checking out various instruments... Good sellers in the second-hand amplifier range have been Marshall, Wem and Carlsbro

# CHRIS STEVENS MUSIC CENTRE, Southend

Doctor Feelgood's drummer The Figure had just bought his son a drum kit for his (the son's) third birthday . . . Business was very good, with HH amplifiers selling particularly well . . . A couple of Hohner clavinets went, one to local music teacher Mike Beecher, bringing his keyboard total to seven . . . New Faces successes Whisky Machave been in for spares . . . Brass and woodwind sales have been good, with Norman Langford's tocal under 16 swing big-band heading the front . . .

# CRYMBLES Belfast

Have unfortunately been bombed out of business but moved to temporary premises . . . Business was predictably slow, although copy guitars have been selling very well with Gibsons and Fenders beyond most people . . . Strong sellers have been Premier Kenny Clare kits and Carlsbro Martin and Stingray amplifiers . . .

# KINGFISHER MUSIC CO., Fleet, Hants.

The Nashville Teens were in for an Acoustic 134 Combo . . . Radio stars and ace country band the Original Shades sent bass-player Nick Holden in for a Telecaster Bass; guitarist Tony Aston had a Telecaster . . . Maine amps are selling very well to all and sundry . . . Caravan were proud purchasers of an MM 12 channel mixer . . . Steel guitarist Jerry Hogan bought a Fender Vibra-sonic . . . Axis came in for a nice new Hill PA, with Gauss speakers put into the band's own cabinets, plus Hill mixer and slaves . . . Bass player Bernie Hagley bought an Acoustic 301 . . . Local band Bullitt had an MM 12 channel mixer and a stage-box and multicore custom built by Colin Fisher Kingfisher have announced that they now have a resident drum salesman, Eddie Allen; Bob Bigg is now in evidence as the shop's steel guitar expert and player . . . . Big Jim Sullivan's recent Fender demo at the shop went down very well with the 650 people present, especially as Rod Argent turned up to play Fender Rhodes on the night . . .

#### MOSS MUSIC, Kent

9 piece jazz-rock outfit Extension had new Fender guitars, Roland effects pedals plus a new Baldwin electric piano . . . A complete new range of brass instrumentation was supplied to the Medway Taxidrivers Silver Band , . . Sailor popped in to have their Pianomate fixed just before a gig . . . An experimental organ set-up was made for Matlin, Miller and Feast . . . Unit 5 acquired a Carlsbro PA, a Fender-Rhodes piano and a Showboat Pedal steel guitar

#### MUSICAL SOUNDS, Sheffield

MS are probably one of the biggest movers of Pearl drums in the country; several of the big Dynafamily kits have gone recently, to Virgin : band Supercharge, Birmingham band City Boys and one to Sheffield's big nightclub The Fiesta, where drummer Terry Clayton will now be using this kit with the houseband there . . . The Fiesta have also expressed an interest in the new Pearl 22 channel mixer to replace their Allen and Heath mixer. The club added a large number of mike stands to their stock which they need to have in reserve for visiting orchestras . . .

#### ULTRA SONIC, Pudsey

Bands up here are only just beginning to change over to bins and horns from columns, and as PA specialists, Ultra Sonic are well aware of this trend. . . . Bastille are a heavy band working the college circuit; guitarist Pete Russell has bought a Les Paul and the band as a whole had some Wing PA bins . . . A Custom Sound 5 channel mixer and 150 slave went to Jobe-St. Day . . . Nova recently acquired a Command PA system with 2 x 12 cabs and add on horns . . . Solo Artist Paul Hartley had a new automatic drummer custom built by Stefan Shearer . . .

# BOTTLENECK Salisbury

Country band CC4 have been in for quite a lot of equipment, including a Precision Bass, a custom Telecaster and a Rhodes stage plano for Ricky Pickett; Stan the drummer had a Rogers kit and some Paiste cymbals and Pete the singer had a nice new Peavey 200 watt PA setup . . . Flintlock had an Ampeg G212 combo for steel guitarist Jimmy Pritchard and a Rickenbacker stereo bass for Morry Pitman . . . Mason bought a custom built 2000 watt PA system with a 20 channel mixer . . . The Sounds Blue Showband purchased an Ampeg SR 6 PA system and also numerous Paiste cymbals . . . Tich (yes ! THAT Tich) of Tracker bought a custom Fender Stratocaster and a Fender Super Twin, and Beaky (yes! THAT Beaky) had some Paiste cymbals . . . The Theodore Watkins Band had a Stratocaster, a Jazz Bass and a 200 watt PA system with an 8 channel mixer . . Si Reed of Jeep had a new Traynor monitor system . . .

#### YARDLEYS, Birmingham

The trend in PA now seems to be towards full range cabinets, rather than the usual separate units — Yardley's make custom bins to any specifications using high quality drivers, going well are Gauss, JBL and Altec . . . A complete Altec system was recently sold to Moonlight, who were doing a residency at the Nightout Theatre . . . Locals Stress also had an Altec system and their drummer was in regularly for spares . . Tom Fisher of local band Baroque bought a new Tama kit . . .

#### CASCADE Tooting, London

Bandy's bass player Jim came in for an Acoustic 150 top . . . Doctors of Madness have some relatively sane roadies who've been in recently for all kinds of spares . . . Tony Stanley of Stanley and Livingstone acquired a Yamaha FG 200 acoustic and a Custom Sound 150 watt mixer amplifier . . . Arthur J. have a reggae single out soon and bought a specially imported Slingerland kit to celebrate . . . Matumbi, recently number one in the ever-popular reggae charts, had some Paiste and Zildjian cymbats for drummer Lenny Fagin . . . Eruptions, a local soul band bought some Gauss bins



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# A CASE FOR DRUMS



by Bob Henrit

This month's article is about drum cases which to all intents and purposes may sound a little mundane; however, all drummers have need of cases so I thought I'd do a little research on your behalf. All hard cases are made from compressed fibre which if treated with respect, should last the normal gigging drummer several years. However, if they don't last for ever its important to accept the fact that the case is doing its job and sacrificing itself to protect the instrument inside it. Professional drummers who can work a hundred or so gigs a year are a different kettle of fish since their cases can not possibly be expected to stand hasty loading and unloading into vans and trucks or whatever, but on the other hand these fortunates are in a position to change their cases frequently.

There is another type of drum case which has emerged since British bands began to tour America. This is the flight case; made from wood covered with fibre, fibre-glass or aluminium, these cases invariably take three or four different sized drums and are the only way to tour America whilst getting on and off one or two planes every day. (Argent's average was fifty five planes in fifty five days!)

At the moment I have five flight cases for my touring set but like everything else, these all cost money so I find myself in the position of having a set of cases worth roughly the same as the drums inside them.

There are basically four manufacturers of fibre drum cases in Britain, but the material for all the VULCANISED cases is produced by a single Manchester based company. They are a jointly owned American and English organisation called SPAULDING RUSSEL who also make their own blue cases.

As far as I can ascertain, Spaulding Russell cases are the best sellers outside of London and the home counties but in my experience are virtually impossible to find in London shops, which is a pity since they are well made, traditional-shaped drum cases. They sport a few innovations which make them a little longer lived than some of their competitors.

Vulcanised fibre is an American invention which first came to England at the turn of the century and has been used ever since for making suitcases and industrial storage containers. The homogenous material starts life as a reel of paper which is soaked in a solution of Zinc Oxide, then wrapped several times around a large cylinder which vulcanises or laminates the layers together. The acid must then be neetralised and washed out com-

pletely, cared and pressed under heat. This produces a light and durable material which at the price is best for case making applications. Spaulding Russells own cases are made from 55 to 60 gauge material whereas their competitors make do with slightly thinner material. Some of the cases which they make for industrial and Audio/Visual applications can be made of up to 80 gauge material. The main colour their cases are made in is blue although if you had a penchant and a little extra money you could have them in red, black grey or mahogany.

All of our manufacturers make their cases in roughly the same way. The characteristic "tongues" are first cut into the sides and then heated and bent Just prior to rivetting. Everyone these days uses bifurcated (split) rivets, although solid or tubed rivets are better but really need a thicker material to work well. The top or bottom has been previously cold stamped to shape and is then joined to the sides with a rivet through its "tongue". If it's a square case three sided fibre corners are attached together with locks, huges and straps.

Spaulding Russell make single tom-tom cases from 12 to 16 inches diameter, also double cases to take a 16" or a 14", and a 12" or 13", and bass drum cases from 18" to 28" diameter. All of their cases have flat bottoms and unlike the other manufacturers, have no joins at the bottom which is the area which takes most wear. They make several cymbal cases one of which is 22" square with a fixing bolt in its centre. This one has a webbing strap where as the others have leather straps which I am very much against. When a case is new It works fine but as the case gets older the leather strap stretches and in my experience invariably breaks where it was weakened. Since a leather strap is normally rivetted to the case it always makes replacement difficult. A webbing strap is not fixed directly to the case and if it fails it can be replaced in no time.

There are two types of accessory case on the market at the moment. The suitcase type of which Spaulding Russell make two depths (one to accommodate a 6½ snare drum) and the American style PAK-N-ROLL also with a snare drum compartment plus an accessory plus wheels and heavy duty handles.

Their ordinary accessory case has fibre corners with all exposed edges bound in metal including the drum compartment. Three heavish hinges are fitted which arrest the lid when it reaches the vertical and hold it in that position. It has Cheney locks and handle with a fibre patch underneath and a single pivot at each end.

I have two of S.R's pak-n-roll cases and have never been happy with them because although they are substantial this is partly their weakness because they will take a lot of equipment and then become too heavy to be easily manageable. One of mine was dropped on to its wheels and because there wasn't a really substantial block behind them the two wheels forced themselves up inside the case. Nowadays, they fit two inch battens underneath and along the length of the case and the rubber wheels are bolted to these which should cure that problem. Again all the exposed edges are clad in metal and the case has a substantial portex metal chest type handle fixed to each end. A deepish tray with webbing handles is fitted inside which takes sticks and anything which you can't fit into the case itself. I must say that I have never been in a position to put cymbals into the compartment designed for them because once my bass drum pedal was in the accessory compartment my hi-hat, stool, snare drum and cymbal stands had nowhere to go other then the space where the cymbals were supposed to go.

None of the edges of the round cases are strengthened with anything and when I mentioned this I don't think they realised that putting a large drum into a case could in time ruin its edges. It turns out that no one had ever suggested this but it could be done with suitably shaped fibre but not metal strip since it wouldn't bend round the corners too well,

S.R. did make some prototype square cases but decided not to manufacture them since they felt they would be unwieldly and there wouldn't be much of a market for them,

My final question was an enquiry about whether they could make drum cases from moulded A.B.S. (ACRYLO NITRILE, BUTADIENE, STYRENE) since they already make guitar cases from this wonder substance. Evidently it would be possible to do it but to tool up for these much larger shapes would be terrifically expensive and only worth a manufacturers investment if he was 100% sure of his market.

LE BLOND: Wally Le Blond makes his vulcanised fibre cases in Redbourne, Herts and has the market sewn up in the London and Home counties area. Le Biond have more stock sizes than any other manufacturer with bass drum cases from 30" to 18" and singles or double tom-tom cases to fit any size drum presently in production. They also do a whole range of cymbal cases from 16 up to 28".

Their suitcase type accessory case is made without hinges or catches and the top merely fits over the bottom like a tubular drum case, the whole is then held together with a leather strap. It uniquely has its two top edges rounded to take the snare drum in a compartment. This case is deceptively roomy and would reasonably contain hi-hat and bass drum pedals, snare drum stand, stool, and a couple of cymbal stands as well as sticks and other bits and pieces, and is good value at £11.29 V.A.T. Unfortunately, the edges are not finished off which would seriously effect the longevity of the case with all those heavy stands bashing against them on their way in.

Le Blonds trap case on wheels is fitted out inside with a snare drum compartment, cymbal compartment, a bass drum pedal/accessory compartment plus a largish stick tray. The lid has a plastic handle but there are also two more handles on the ends all strengthened with a subsidary piece of fibre underneath. The top is held on very securely by four leather straps and the whole thing sits on four plastic castors each with a unique double independent rotating action. Unfortunately, these wheels have no bottom reinforcement under them and the result would be disaster if the case were dropped or even abused.

Cases for our set from Le Blond would be roughly: 10.07, 9.69, 13.17, +10.46 or (19.37) + 6.97 = £50.26 + V.A.T. or with a trap case on wheels: £59.17 + VAT

ARBITER: Arbiter's 747 drum cases are made for them from resin bonded paper by Henry Glass specifically for their Auto-Tune drums. Resin bonded fibre is nowhere near as strong as vulcanised fibre since its laminations are only stuck together and can therefore become unglued and the edges will split with wear. However, to go a little way forwards solving the problem the 747 cases have double edges where a strip of fibre is rivetted to the outside around the circumference. The cylindrical cases all have flat bottoms, Chemey heavy duty plastic handles and a fitted lid held in place with a webbing strap.

Since these cases are for Auto-tune and a 16" tom-tom has an 18" shell, it is possible to buy these sizes for a normal set and have

ample room to fit them out with foam rubber to protect your instrument.

No English manufacturer seems to fit heavy duty stands to the bottoms or sides of his cases to take the wear which is a pity because it couldn't cost them more than a few pence. However, you could fit furniture leg type protectors if you wanted.

Every manufacturer these days fits plastic handles some of which are better than others but none of which are better than the old style metal variety, I am more wary of the ones with only two pivot fixing points because these can pull out.

These 747 cases could have done with an extra strengthening piece of fibre underneath their handles because without this I'm sure the handle would eventually pull out. Arbiter's cases are made for all the Auto-tune sizes but only make single tom-tom cases. Their largest case is 24" and their smallest 12" in diameter. They too make a suitcase type accessory container and at the moment no trap case or wheels. However, they do make a stick bag which no one else seems to. It's a good American copy with a zip and strings to hang it on your floor tom-tom.

The price I was quoted for cases for a large set plus a 22" cymbal case are: 11.50, 13.56, 15.75, 22.47, 17.00 + 12.00 total £92.28.

FLIGHT CASES: Flight cases for musical instruments are a direct off-shoot of an industry which sprang up in the states in the early fifties and is flourishing still, which makes containers to carry all sorts of diverse material for the U.S. forces, - first for the Korean and subsequently for the Vietnam wars. The most luxurious cases ever saw were repatriated from Vietnam and were khaki coloured with all the normal flight case features except they had red crosses all over and the legend - Blood Plasma handle with care. These cases must have cost thousands of dollars to make and were owned by a fellow from columbus called Freaky Steve (who incidentally wore trousers made from Holiday Inn towels) who used them to house his lights and paid something like 20 dollars each for them.

Several case companies are now busy at work in America the most famous and possibly the first being ANVIL in Los Angeles.

PACKHORSE: Rick Wakeman's company Complex 7 build flight cases called "Packhorse" and their philosophy has been to look at the competition and make theirs a little better in every area and at a more reasonable price where possible. Their cases have some small but unique refinements which seem to make them stronger and also less likely to let you down in the middle of a tour. For instance, their butterfly locks which are imported from America do not have springs like everybody elses because they found that once the spring is broken the lock becomes completely useless and has to be replaced, a none to easy job while you're on the road.

They also felt that the lid edges left something to be desired so designed their own extruded aluminium lid location strips with fluting inside to crimp better to the laminated fibreglass and wood sides. Other manufacturers merely bend this location at right angles to form the corners of their cases but Peter Robinson thought this did not make a satisfactory and long lasting corner so they devised some simple steel "L" shaped corner pieces which effectively stop the corners inside the lid from springing apart. The company also felt the top and bottom edges could be "breathed on" a little and designed a double skinned "L" shaped section extruded aluminium strip to locate the side panels of the case.

Packhorse cases are fitted with wheels which they consider are the right size for the job. A case to take a lot of weight will have wheels of up to 6" in diameter, and a case

which doesn't have an awful lot to carry will have smaller wheels, say 3". (The three inch wheels do not shed their tyres as easily as the larger ones do.) Obviously, its more convenient for the manufacturer to fit the same size wheels to every case since he can buy in bulk and therefore get a better deal.

When the company, started they experimented with several different kinds of materials to "skin" their cases with. Fibre was a no-no because once laminated to wood it could bubble in extremes of temperature, sheet aluminium was out because although it was strong, if it was damaged by a fork lift or some other sharp object it became very dangerous for road managers hands, polypropylene was perfect in every way but unfortunately, it made the case twice as heavy. Finally they decided to use leather finish sheet fibre-glass which was perfect once laminated to 6 mm. or for some applications 12 mm. plywood.

All present all case corners and locks are made by Sessions in Connecticut which of course means additional expense for the manufacturer and consequently for the consumer but I understand there is a move afoot to have these costly items made here which might well result in a slight drop in price. All cases are padded inside with foam and the ones with piano-type hinges have their weight taken off them when the lid is open by very strong yet thin wire which would otherwise be operating the aelerons on an aeroplane. Like their competitors Packhorse would rather send someone to the customer to inspect the equipment to be packaged and work out the best way to do it. This is by far the safest and in the long run cheapest method. One problem which all manufacturers try to steer their prospective customers away from is cases which are too big to go through doors. Argent owns one of these white elephants which is more trouble than its worth, or so the road crew tell me.

Packhorse do not make a trap case as such but given the details they could make one to order at roughly £60 which I consider a real bargain. They could not really quote me prices for a single tom-tom case but thought that a  $12 \times 8$  case with catches and corners but no wheels would be about £20, but then so would one for a  $13 \times 9$  or a  $14 \times 10$  since the only difference would be a few square inches of material whilst the hardware would remain the

Two cases to take our single bass drum, triple tom-tom kit plus snare drum, cymbals and lots of stands would work out at £65 and £75, which ain't that bad considering.

C.P. CASES: C.P. cases have a factory in what used to be a laundry down by the river at Kew bridge. Its run by Chris Sherwin and Pete Ross, Chris worked 12 years for Jim Marshall and so must know from hard experience exactly what protection a musical instrument needs from its case.

They now make two different qualities of case. C.P., which is sold direct from the factory, and the lighter-weight less-robust and cheaper Rainbow cases which are sold mainly through retail shops. The C.P. cases are covered with fibre and the Rainbow covered with textured P.V.C. laminated to 6 mm plywood.

The C.P. cases do not have aluminium edging strips because they say quite wisely that once the metal edges begin to scuff they become lethal to hands, so they fit ready-bent edges made from the same fibre as their case lamination. They fit steel lid locating strips imported from Bristol, Connecticut to their C.P. cases and aluminium strip to their Rainbow cases. They say that for a heavy duty case it's important for it to not be too rigid and to spring out of an back into shape a little when subjected to any stress. Thus the case acts as a shock absorber to effectively "spring" the object inside which its built to protect. Since

their Rainbow cases are neither built nor recom-

mended for really heavy duty treatment this facility is not quite such a critical factor.

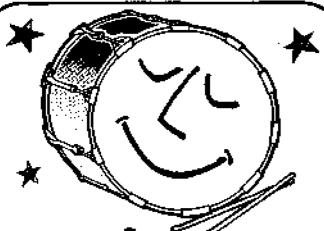
Whilst I was there they were building the biggest and most substantial flight case I have ever witnessed for Keith Emerson's new Yamaha synthesizer, Normally C.P. cases are built from 30 gauge fibre laminated to 9 mm plywood with 12 mm bottoms to take the wheels etc., but Emerson's monster was being constructed from 18 mm laminated ply, C.P. have a very logical way of making their cases. First of all they cut holes for the handles and fittings and then make a six sided cabinet pinned, glued and left to dry; they then cut off the top, this of course is standard cabinet making practice and ensures a perfect lid-fit. The corners and edges are then fitted to protect the cabinet instead of to secure the edges and keep the case together. Rainbow cases like all other manufacturers are assembled at the rivetting machine. You take two pieces of wood and some edging strip and then join the case together with some bifurcated rivets, one every three inches. This isn't the best way to case make, the six sided pinned and glued cabinet is, but its fine for these correspondingly cheaper cases.

All of C.P.'s hardware, butterfly catches, male and femate locating strips, heavy duty corners, piano hinges and sprung loaded handles are supplied by the American firm Sessions. This of course is a considerable factor in the price of their cases because of import duty etc. They used to import the castors too but found they were paying £8 each for them whereas they now have their own rubber-tired, roller-bearing, self-swivelling, castors made at a quarter the price and fit 100 mm mdoels to their C.P. cases and 75 mm to their rainbow models. These wheels are bolted to the cases with pronged nuts which hammer into a hole and very substantial 5/16" bolts.

The C.P. cases are lined with high density reconstituted chip foam while the Rainbows use cheaper but perfectly serviceable polyester foam.

I asked C.P. how much they would charge for cases for our mythical large size five drum set plus fittings. They told me they could fit everything into one large C.P. case with partitions for roughly £150 + V.A.T., or two smaller more manageable cases at roughly £125 + V.A.T. each. If we were to want Rainbow cases which they would emphatically not recommended for heavy touring, it would work out to roughly 2/3rd of the price. They could if you twisted their arms make a Rainbow trap case with partitions and a tray for roughly £60 + V.A.T. Indeed some years ago they used to make a very, very good and amazingly well designed heavy-duty fibre case which retailed at about £30 - but alas they don't make them anymore. They could make you individual Rainbow cases for tom-toms etc. but their price might be somewhat restrictive at about £160 + V.A.T., plus the trap case at £60 + V.A.T. C.P. do have an associate company which makes fibre cases although so far mainly for the electronics and film industry. These are really well made and look to me like they would last for ever with metal frames bound with leather and lined with some sort of velvet material. They do not make cases especially for drums although they could if you ordered them. However, they are not cheap by drum caes standards with a medium sized 20" suit type case selling for £45.

C.P. now have a new foolproof binding machine which hot-laminates their fibre to the plywood and uses a completely new damp resisting adhesive. This will eliminate the bubbling problem which they admit beset their cases late last year which was aggravated by the unusually long dry summer which dried out the fibre more than ever before.



# Keep the Smile on the Face of your Bass

Whatever a good drum kit's worth .... £200.... £400.... £600.... it's worth protecting.

Not just 'dust cover protection' but real kick-and-bash defence against careless handling when the show's over. (After all, no Roadie is perfect!)

Any instrument retailer will tell you: Spaulding Russell drum and cymbal cases are Essential Equipment with your kit. These are the cases in tough, vulcanised fibre.

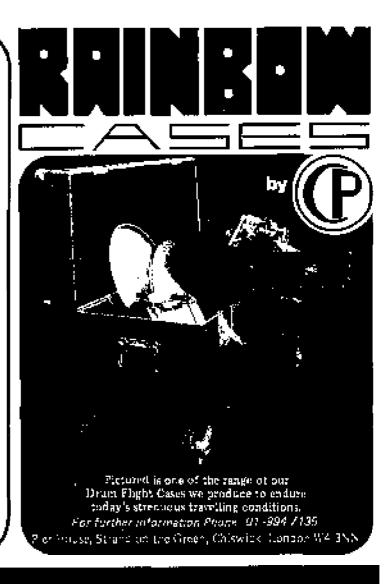
Lightweight, certainly. But virtually indestructible and in fact, those Spaulding Russell cases often pay for themselves in helping you command a better price for your drums at trade-in time.

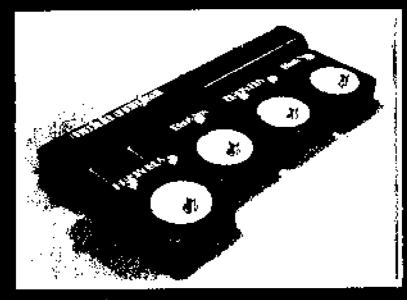
Iust make sure Spaulding Russell cases come with that drum kit, and you can say with confidence 'Have drums – will travel'. For all the facts about drum cases, ask for Spaulding Russell, by name at your local dealer.

#### Spaulding Russell Ltd.

Container Division, Bridge Mills, Hadfield, via Hyde, Cheshire, Telephone: Glossop 318 4







# BLACH BDH by Eurotec

#### The black box conception was developed in

response to a growing demand from Musicians and Roadies for a professional modular effect system. The system had to be mains powered and enable

the player to have several units inter-connected, all switches is with pre-set controls.

The effects are selected at the touch of a switch and the preset controls enable the player to contour the sound to his own requirements.

Black box units are housed in a robust pressed

The mains unit can be purchased at a later date, into which up to four units may be plugged. In this way "In" and "Out" sockets are automatically connected, battery power is disconnected and

At the present time black boxes are available in the following modules, Fuzz unit, Phase unit,

Special feature for studio use: The energiser incorporates a noise gate for a perfect clean sound. Try the system at MACARI'S 20 Denmark Street, or 122 Charing Cross

80





#### SID BISHOP

Top Gear

Top Gear is a "client's shop" rather than a "punter's shop" according to Sales Manager Sid Bishop, Situated in the heart of London's West End - Denmark Street to be precise - Top Gear's regular customers number amongst them The Who, Bad Company, The Shadows and Humble Pie and, from the States, Country Joe and Dr. Hook. The shop is, in fact, only part of the whole Top Gear organisation, whose headquarters are in Shoreham By Sea, Sussex. Brighton and Worthing also boast Top Gear retail outlets.

The Denmark Street shop was opened eight years ago and Sid Bishop joined a year later, moving up to the position of Sales Manager 18 months ago. Sid has a fairly extensive musical background, including a stint as lead guitarist with The Social Deviants. "In fact, all the staff here are fairly competent musicians" he revealed.

Assistant Manager Guy Mason plays bass guitar, "Mac" McErlane is a drummer, Stan Smith a guitarist, Bernie Goodfellow plays steel, guitar and bass, John Sutton-McLaren is another guitarist and "Jude" plays both bass and guitar.

Of the staff, Sid adds "We're very choosy when it comes to picking people to work here. We pay good money, and expect hard work and, above all, honesty."

Honesty is an important word in Sid's vocabulary. "You've got to be honest to exist in this business for any amount of time. We have a reputation for honesty, together with fair deals and good prices. It's a reputation which we've built up very carefully. We've never done anybody – we always honour guarantees, for instance. A guy bought an S.G. Standard a while back and the neck

split soon after, so we gave him another one.

"It obviously hadn't been dropped — there was a weakness in the joint, so we just gave him another one. We lost out on that, because we were landed with a broken guitar, but in a case like that, even though we lose, we honour the guarantee. It's a retailer's responsibility to give the customer a fair deal, and decent after-sales service."

The main Top Gear repair department is in Brighton and Sid has two vans a week going back and forth with various repair jobs. "We also subcontract repairs to anyone who's good at a particular job – people like Dick Knight for guitars, for instance. We pride ourselves on being able to repair almost anything. Edgar Broughton brought a Melody Maker in to us which was virtually smashed to pieces, but we managed to repair it."

Top Gear's repair facilities have to be versatile because of the extensive range of equipment they stock. The front of the shop is given over to new and second-hand Fenders, Gibsons, Rickenbackers, Guilds and other guitars of similar calibre "We tend to specialise in the more professional type of gear" says Sid, "rather than get into the Jap copy market. Being in a side street, we have passing trade. The customers we have have been here before and they know it's worth looking for us. We aim for the professionals. We get them and we therefore cater for them. That's what I mean when I say we're a client's shop rather than a punter's shop. Other shops in the main road (Charing Cross Road) have got the Jap market - if we did it, we'd trip over ourselves.

"Our biggest single problem here is space. Every square foot must be working, continued on page 83

# DEALER OF THE MONTH

# JOHN ENTWITTLE



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**GROUP & GAUGE CHART FOLDERS AVAILABLE FROM** YOUR LOCAL DEALERS



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DENMARK STREET LONDON TEL. (01) 240 2118/2347

EUROPE'S BEST SELECTION OF AMERICAN **GUITARS PLUS** AMPLIFICATION and DRUM BASEMENT



FULL RANGE FROM STOCK

LONDONS LEADING PEAVEY POWERHOUSE

THE LEADING SPECIALISTS FOR NEW, USED AND VINTAGE AMERICAN GUITARS

#### AMPLIFICATION

by Peavey, Fender, Hiwatt, Maine, Carlsbro, Wem, JBL, etc.

#### DRUM BASEMENT

Featuring Ludwig, Gretsch, Pearl, Asba, Hayman, Maxwin, Rogers, Beverley, Natal, Tama, Paiste, K and Avedis Zildjian, Toso, Remo, Le Blond, Evans, etc, etc.

Gibson, Fender, Guild and other scarce guitar spares

#### EFFECTS and ACCESSORIES

Barcus-Berry, Bigsby, MXR, Badass, Schaller, Grover, Kluson, Maestro, Electro-Harmonix, Top Gear, Dearmond, Ibanez, etc., etc.

Strings & Things by Ernie Ball, Earthwood, Gibson, Guild, Rickenbacker, Rotosound, D'Angelico, Darco, Picato, Martin, Fender, D'Aquisto, Labelca, Savarez, Concertiste, etc. etc.

Part-Exchange/Hire Purchase/ Access/Barclaycard/Money

Guild Gibson Rickenbacker Fender C.S.L., Harmony, Yamaha,

Plus Martin, Ovation, Mosrite, Mossman, Gretsch, Harptone, Epiphone, Etc.,

## TOP GEAR

from page 81

On pro gear like Gibsons and things, we have a higher turnover than any shop in London; therefore our stock level must be high"

There is a drum department in the basement, housing percussion by Maxwin, Pearl, Ludwig, Gretsch and Natal among others, together with a wide selection of heads, beaters, stands and other accessories. "It's only recently that we've been doing drums," explained Sid. "When Drum City closed, Mac came to work for us, and, as there wasn't a drum shop in the West End, we decided to open a drum department. Mac's a good drummer and knows a lot about percussion, and it's been improving all the while "

Keyboards are noteworthy by their absence in the shop at the moment, again due to a lack of space. "Keyboards tend to be bulky instruments and take up a lot of room. We do them in the Brighton shop, but with the limited space we have here, guitars must take precedence. We are basically known as a specialist guitar shop, so most of the space is devoted to guitars."

As with most "specialist" shops, spares play an important role in the Top Gear story. At the front of the shop, there is a large counter area literally overflowing with spares of all kinds. "We try and keep a good selection of spares for Gibsons and Fenders and guitars like that, to availability. according. We've got machine heads. pick-ups, necks, bridges you name it. We also have a wide selection of strings by Ernie Ball, Gibson, Fender, Picato, D'Arco, Rotosound, Martin and Guild to name but a few." Other "smalls" include various effects pedals by Electro Harmonix, MXR and their own Top Gear range.

As old Les Pauls and vintage AC 30's have developed their own special kind of appeal recently, Top Gear usually have a fair selection of second-hand equipment, "We used to go out looking







for good second-hand gear, but find we don't need to now. One of us travels over to the States once a year and usually pick up a few things over there, but prices have gone up so much now. What with 11.3% import duty and VAT, it's pretty difficult now. If the pound goes up, then we'll probably do it again."

Top Gear's Mail Order business is currently doing well, particularly overseas. Sid explained. "We take a lot of orders from both England and overseas, but at the moment, with the pound so low, most of this side of the business comes from foreign customers. With the Mail Order service, we can supply almost anything anywhere."

Such is the success that Top Gear are enjoying, that they are soon to open another West End instrument shop. Called Music City, it will be managed by Guy Mason and will be situated in Shaftesbury Avenue, just a stone's throw from Denmark Street.

# 

STANDARD 100W AMP: £124.23 + VAT Superb Tones, Natural Overload, D1 Output, Great for Bass.

ARTIST 100W AMP: £150.97 + VAT Standard Spec. Plus: Beautiful Reverb. Clean Sustain, Color Distortion

CABS + COMBOS TOO - ASK YOUR MAINE DEALER:

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FUNKSHUN, Northampton CORNELLS, Hull MUSIC UNLIMITED, W'hampton KITCHENS, Leeds

# Congratulations Top Gear from Carlsbro Sound Equipment



The above photograph shows the Marlin MkII P.A. amplifier. The Marlin is part of a new range of professional solid state amps from CARLSBRO SOUND EQUIPMENT. Go to SOUND PAD MUSIC and check out the range.



Carlsbro Sound Equipment. Cross Drive, Lowmoor Road Industrial Estate, KIRKBY-IN-ASHFIELD, Notts. England.

# MUSIC NEWS

# INDIGO REFIT



Dave Rohl of Indigo

INDIGO STUDIOS in Manchester has recently had a £10,000 refit. Included in the refit is the installation of a Technik variable speed

stereo recorder, new noise expanders, phasing units and eq systems.

# OOPS!

DUE TO a production error, several incorrect items appeared in our feature on Advision studios last month. The studio has been recording the new Gentle Giant album and has also been recording Druid, but Roger Cameron was not personally engineering the sessions. Keith Emerson has been mixing in Advision but not recording the London Philharmonic Orchestra.

# Chingford TV Success

GENE ASHWORTH of Chingford Organs has reported great success from the TV advertising campaign the company mounted last month. The campaign was run in conjunction with Elka Orla and the pilot area chosen was Anglia TV.

Commenting on the campaign Gene Ashworth said: "We are probably going to see a good deal more TV advertising for easy-play products."

# **SKEWES NEWS**

DAVID SIDEBOTTOM was recently appointed Purchasing Manager for John Hornby Skewes & Co. Etd. Still in his midtwenties, Mr. Sidebottom travelled to both Frankfurt and Leipzig Fairs to represent the company recently. At university, he studied music and mathematics, and graduated with honours in music.

His interest in music dates back to his grandfather, Nathan Sidebottom, who was a respected cornet player and conductor, and David's father, Alick, who is a percussionist and has been in the music trade for 37 years, the last ten of which as Northern Sales Representative for a leading drum company.

# KITCHENS GROUP SHOP

KITCHENS OF LEEDS have opened a group shop. The new premises is directly opposite Kitchen's main Leeds shop on Queen Victoria Street, and is the culmination of a long term effort by Kitchens to offer a specialised shop for groups.

Mike Cooper, Managing Director of Kitchens, told I.M. that the new shop would give Kitchens an opportunity to expand their service. "We'll be moving virtually all the group gear across to the new shop. The ground floor is quite large (roughly 60ft, long and 25ft deep) and will give us ample space for all the top ranges of guitars, as well as the best copies."

This of course means that the ground floor of the old shop will be able to house an expanded display of classical and jumbo guitars.

"We're also going to expand the amplification side of our business in a big way. We'll carry complete ranges of Marshall, Fender, Simms-Watts, and Dynacord, and we'll be adding Maine Amplification and both Kustom and Custom, as well as Roland, Meazzi, Lem, and Peavey. We also have taken delivery of a Canary mixer, which I think is among the first stereo mixers available in this area."

The basement of the new will be given over to disco equipment, an Dave Simms has built a light show especially for the shop. In addition, all the portable keyboards — but not the standard uprights: these and the larger keyboard instruments will remain at the King Edward Street show-room — will be on show at the new shop.

The direct management of the shop will be done by Howard Franklin-Smith, but Mike Cooper added that he will be there often as well. The staff will consist of at least three at all times, and kitchens are determined to maintain the same high standard of general service, while increasing their specialist emphasis.

# **TakeOver**

ALLEN & HEATH, the mixer manufacturers have announced their take over of Brennell Engineering.

# REW Colour

REW, the highly successful audio/video company situated in London's West End, has opened a fully professional colour TV studio above in Charing Cross Road. The studio represents a further investment in the visual arts by the company and this section of the operation is under the control of Jan and Richard Murray.

The studio has already been used by advertising agencies and record companies keen to make video tapes of the product and an exciting feature of the studio is that REW are pioneering the UK use of video by the rock music industry.

Richard Murray said at the opening: "Many UK record companies are beginning to realise that a video cassette is the perfect way of promoting an act both overseas and in this country. Agents and managers are also finding that making a video tape of an act can demonstrate potential to record companies far better than anything else."

REW are offering the studio out-to bands who want to record their own video tape. The cost is expected to be just a few hundred pounds, for which the band walk away with a video tape of their act.

## **AMEK Grow**

AMEK HAVE recently won a contract for supplying the main mixing console at the giant Wembley conference centre. The installation will be completed in mid-summer. Two further expansion moves for the company have been the appointment of Ian Jones of 16 Wallsey Crescent, ickenham, Middlesex as their London PA representative and the formation of their company into Amek Systems and Controls Limited.

# Hohner Week

After a very successful "Hohner week" at Macari's Musical Exchange in Charing Cross Road, the new Korg Polyphonic Ensemble became the centre of attraction. At a recommended retail price of £740 including VAT, it features a pre-set section of voices which include Strings, Pipe Organ, Brass, Electric Piano, Piano, Harpischord and Clavichord. These presets can be "switched out" and the five-octave keyboard brought into manual operation.

There is also an Envelope Generator control section with Attack, Decay and Sustain facilities, which can all be used in conjunction with two sliding, High and Low peak Traveller controls. In addition to this, there is a Tune control which raises or lowers the overall pitch by a semitone either way. To the right of the presets there is an Octave Coupler control together with Vibrato Depth, Vibrato Speed, Pitch Expand and Glide controls. At the moment, Macari's have the only one in the country, although they should be generally available by Mid-May. An in-depth review of the Korg Polyphonic Ensemble will appear in a future issue of Interntional Musician.

# **BATH NIGHT**

A WILD night occured in Bath recently when Assembley Music opened their new retail shop. Many friends and customers turned up and as the picture above shows, the spirit was extremely festive. Included in the picture are Dick Rebel of Carlsbro Sound Equipment, Steve Gardner of Assembley, Michael Booth of J.T. Coppock, Tony Taylor of Carlsbro and 'Dirk' Kommer, Hohner's Managing Director.

# GOOD NEWS

THE BUDGET'S reduction of the 25 per cent VAT rate to 12½ immediately stimulated sales of certain musical instruments and electronics products. First to heave a sigh of relief were the electronic organ dealers who have been labouring under ridiculously heavy taxation and it is expected that much of the old organ bouyancy will return.

It is thus expected that the classifications about which instruments and items are 8 per cent and which 12½ per cent will remain similar to the existing situation.



# STOLEN!

and 6 channel mixing.

MANY BRAND new guitars were stolen from J. Reno of Manchester on the night of March 19. A substantial reward for information leading to the recovery of the instrument is being offered.

Anyone having any knowledge should contact either the police or J. Reno, 64 Oxford St. Manchester 1. Phone 061-236 6273. The instruments stolen include:

# KITCHENS PROMOTE

KITCHENS OF LEEDS have announced two new senior appointments within their company. Miss Gladys Paul has been appointed to the board of directors. She has been with the company for 27 years and has been both personal secretary to Ron Cooper and Company Secretary and Cashier.

Colin Hardy has been appointed an executive responsible for the whole of the brass band operation with Kitchens. A member of the Black Dyke Mills Band, Colin has had to resign from the band to concentrate on his extended duties. He has been with the company for four years.





GIDSOI			IS.G. Special Cherry,	No 400075;
41	16	"	S.G. Special Walnut,	553035;
"		14	S.G. Standard Chrome P/ups Cherry,	398922:
**		**	S.G. Standard " " "	398913;
**		**	Les Paul Custom Ebony,	430162:
**	F4	14	Les Paul Custom Gold,	395826:
64	44	+ 6	Les Paul de Luxe Cherry Sunburst,	403808;
••	"	11	Les Paul de Luxe Sunburst,	395846:
••	Right	••	Les Paul Signature Gold,	120946:
**	41	**	Les Paul Signature Gold,	177255:
**	H	44	Les Paul Signature Bass Gold,	509076;
6.4	41	**	S.G. Custom Walnut,	397087;
**	44	• • •	S.G. Special.	395995;
44	**	4.4	S.G. Special Unpolished Walnut,	409596;
44	44	44	Bass E.B.O. Cherry,	512096;
Epipho	ne Bass	5	Semi Acoustic Sunburst.	67358;
	backer			or 093470:
44			Stereo.	OG 4047:
- 11	Six Str	ing 2	P/up. Solid Black,	NH 5018;
Fender	504016;			
44	529933:			
44			Custom, Walnut, Custom Black with Tremelo,	552021:
44	500440;			
Reyno				
	wn. Coi			240277;



# .FANTASTIC!

#### "it's fantastic" Rick Wakeman



MAKING a guest appearance at Brands was pop musician Rick Wakeman, who was full of enthusiasm for the new Indylantic format. "I think they really ought to do one of these once a month. These sort of meetings bring along people who wouldn't normally be involved. I think it's a good promotional thing. It's fun and it gives a lot of people a lot of enjoyment. You maybe get 5000 people who would be here anyway and 7000 who would be normally and appear. and 7000 who wouldn't normally come. Even if only 1000 come next time it's 1000 you wouldn't have got otherwise."

Although keyboard virtuoso Wakeman is a keen racing enthusiast he wasn't able to join in the Pro-Am Superstar action as no insurance company will risk letting him go racing - they'd need to insure his hands for two million pounds! Rick's latest album, No Earthly Connection, comes out tomorrow.

MOTORING NEWS, THURSDAY, APRIL 8, 1976

On April 4th, 1976 over 12,000 people watched ace driver Tony Trimmer drive the Capital "95.8" racing car to victory in the first meeting of Indylantic '76.

They had already watched an extremely exciting couple of races: the Clubman's supersports race, and the Kent Messenger Trophy for 1 litre saloons.

They had watched incredible Jon Marshall, blindfolded under medical and RAC supervision, drive an Escort R52000 at high speed round the track, avoiding obstacles, and coming to a half-within two feet of a pre-arranged point. They had seen the amazing. point. They had seen the amazing aerial antics of phyl Meeson, in his Jaeger — Pitts special bi-plane. They had enjoyed the races between the Shellsport Superstar cars of Rick Wakeman, Kenny, Babe Ruth, Screaming Lord Sutch, Tony Prince and Peter Powell of Radio Luxembourg, Anne Challis and Gerald Harper of Capital Radio, Marmalade, Andrew Bailey of the Old Grey Whistle Test, 5000 volts, Mud, Family Dogg and Knave Magazine. point. They had seen the amazing Magazine.

Magazine.
They had visited the Capital Bus and the funfair, been given trips round the circuit with racing drivers, gone for rides in the two Bell-Jet Ranger helicopters, they had seen the stars, Stirling Moss, Adrian Love, Graham Dene, and Nicky Horne. Nicky Horne.

# DON'T MISS THE NEXT ON

There'll be a whole lot of good from the fantastic 150 mph + indylantic race, and the fun for fans of the SuperstarRace, there will be:

The MCD Formula Ford 1600 Championship, The BRSCC Renault 5 Elf Challenge and The Euro-Burgess Southern League Production Sports Car Championship Race.

All of which makes a day full of thrills skills and spills on the racing circuit. And that's not all: Funfairs will be going all day. The Capital Bus will be there with "All the hits and More;" There'll be bands, stunts and plenty of fun for all the family. All day —

except during the big race, when they have to stand by for they have to stand by for emergencies — the beautiful Bell Jet Rangers of the Alan Mann Helicopter company will be giving trips.

Brands will be packed with stars. Adrian Love, Michael Aspel, Graham Dene and Nicky Horne of Capital Radio will be there. Tony Prince and Peter Powell of Radio Luxembourg will be there.
Among the heroes of disc and screen who have said they want to be in the Framus Superstar Series race in aid of the National Deaf Children's Society are Mud, Rick Kenny, Silv Dogg, Chiloren Wakeman, Kenn Hamily Showaddy-Savages. Who w

Who will win the International Musician's Trophy?



# IDS HATCH

# Indylantic at Brands Hatch

# ProAm Superstar victor wins International Musician Cup

INTERNATIONAL MUSICIAN staff were in the pits at Brands Hatch on April 4th to witness the first event in a new and exciting racing series. Sponsered by Formula Atlantic Promotions Ltd., London SW1, the Indylantic 76 racing series is a new concept in motor car racing, which combines top class racing cars which boast speeds of 150 mph and BHP figures of 215 competing in Indianapolis style races, (paced by racing drivers John Surtees and Stirling Moss), with a host of other events, including Pro Am Superstar Saloon Car Races between a variety of top celebrities, including representitives from the Entertainment, Sports and Broadcasting worlds.

Competitors in these races will include Status Quo, Paul McCartney, Lynsey De Paul, Slade, Alvin Stardust, Rick Wakeman and 10cc.

The Pro Am Superstar Races are jointly sponsered by International Musician and Framus guitars, and the winner of each of the races throughout the season will win the International Musician Trophy, while the overall winner at the end of the ten meeting series will receive a gold plated guitar from Framus of Nashville.

International Musician staff were not alone on this, the first

occasion at Brands Hatch; the pits were literally teeming with pop stars, musicians, footballers, television and radio personalities, many of whom will be competing in the event in the future. The first winner in the series was Barry Andrews of Framus guitars.

A champagne and cold buffet lunch was served in the Capitol Radio Grovewood Suite before the first event, and privileged guests included Rick Wakeman, Rick Desmond and members of the International Musician staff.

Future dates of the Pro Am Superstar Races are as follows:



I.M.'s Rick Desmond with Pro Am Superstar winner Barry Andrews.





Pro Am Superstars line up for the first heat



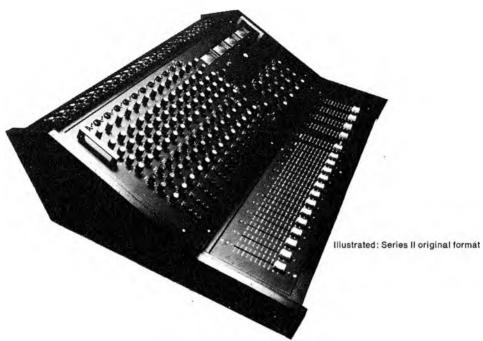
A close up of one of the other Indylantic competitors



Rick Wakeman, of the many Superstars in attendance

# Soundcraft-Series II

revised specification.



The Series II range of recording consoles are now available with many more facilities as standard, enabling the engineer to record four and eight-track with the four-group output mixers, eight & sixteen-track with the eight group mixers. Input modules are available in groups of four channels. All connections between the channels are by multipin connectors and a mother board system. Two types of equalisation:—the standard module features the Soundcraft four-band E/Q with the addition of a high pass filter (bass cut), 12dB/octave below cut-off frequency, continuously

variable between 20Hz and 350Hz. The special module features sweepable frequency of the two mid-frequency peaking and dipping equalisers, addition of a low pass filter to the HF shelving equaliser, and the same 50Hz shelving equaliser and high pass filter as supplied on the standard module. There are four due sends from each input and monitor channel.

Write for complete details direct to Soundcraft Electronics Ltd., or to the local agent or distributor if listed below.

## SOUNDCRAFT - Mixing Consoles to the World of Music

U.S.A. Systems & Technology in Music, Inc., 2025 Factory Street, Kalamazoo, Michigan 49001.

Tel: (616) 382 6300. (Mr. Verne Wandell)

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NETHERLANDS. Selectronic B.V., Sluisplein 3-4, Ouderkerk aan de Amstel. Tel: (02963) 3838/3966. SWEDEN. Ing. Jan Setterberg, Forstavsgatan 1, S-431 36 Molndal. Tel: (031) 13 02 16 87 58 93.

GERMANY. Franchised dealer network - write for your local dealer.

**BELGIUM.** Delta Equipment, Rue de Calevoet 112, 1180 Bruxelles. (02) 376 60 34. Calevoet Straat 112, 1180 Brussel. (02) 376 60 34.

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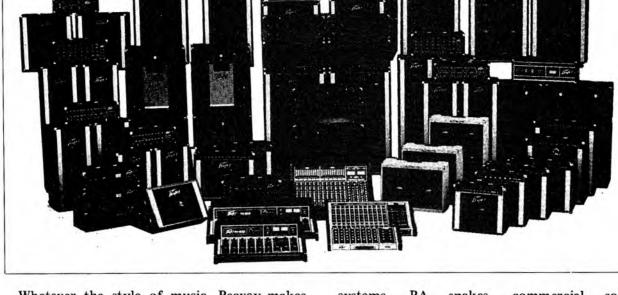
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A paradox common to ail musicians is that while they must never cease to develop their individual talent, they must at the same time subordinate that talent to the needs of the band they play in. There is just as great a need for flexibility in rock as for genius. The first watershed comes for most guitarists at about the age of 20, when they discover they won't be the new Alvin Lee.

The alternatives are always there: working in music shops, or a host of other trades, skilled and semi-skilled. It's only the great and the real pros who last; the tough and the single minded, yes, but more important, the flexible.

At the age of 20, Zal Cleminson was at that first critical point. A professional since he left school, he was, in 1970, struggling in Teargas. "The Scottish circuit is pretty small, and we'd moved down to England, but things were going badly. There wasn't enough money, our albums hadn't really got us off, and we were struggling".

Teargas had tried to catch the last big wave of heavy rock and failed. The reasons are unimportant now; Zal sees the explanation of that failure in the light of his success with Alex Harvey, and he's probably right. "We tried to be very heavy, very progressive, a bit like Led Zeppelin. We were using a Sound City 300 watt P.A. system in venues about the size of the Marquee or the Cavern in Liverpool."

And no one was listening. Teargas was about to fold, there was "no money, no support, nothing."

For all but the tough, the single minded and the flexible, that point is the second watershed and the beginning of the end. The tough and the single minded starve, and the flexible end up as semi-pros or badly paid pros. The people who can live with the paradox grow up.

"I had never thought of being a musician as a long term proposition or as a profession. If it packed in, I thought I would just do something else. But you eventually realise that you can't do anything else."

That is where the growing up begins. And just as Zal and Teargas (Hugh and Ted McKenna, and Chris Glenn) began to realise that, they met Alex Harvey. Eddie Tobin, who managed Teargas, went to work for Mountain. Alex Harvey was and still is managed by Bill Fehilly, head of Mountain. Harvey was looking for a band, and Tobin suggested Teargas.

"Alex had heard the albums, he came up to Glasgow to hear us, and we went out for a drink. He thought we were very loud, irate . . and uncouth," He didn't,

of course, say that at the time. "He's told us that since then."

"It started with us doing some Teargas gigs, and then Alex would come on in the second set and do some songs like 'Midnight Moses'."

The strong story lines of even Harvey's earliest songs, coupled with his vocal style, wrought immediate changes in the band. "The first thing you'd notice is that rather than have Teargas in the middle, listening to what you were playing, Alex impressed on you to listen to the song, to how he was projecting it listening to how you could fit in." The alternative would have been for Alex to modify his vocal "That style. would have heen impossible."

Alex Harvey's Soul Band had had its own distinctive style, "like James Brown or Sam and Dave, something like that. Great. Since that time, he'd been trying to get rid of that soul singer type of approach. He'd picked up the kind of approach he has now, telling stories and expressing, rather than singing."

The music was in a way being subordinated to the story and to the vocal,

"At first we thought it was too simple; we were musicians who liked to play, to prove that we could play, prove that we could do technical things with keyboards or guitars. It was difficult for the band to cut off, to leave a lot of space, because we tended to overplay a lot.

"A lot of it's maturity, when you're young and you want to prove that you're a great player, you play it fast. It takes a lot of maturity to learn where to play the fast notes, and where to play the slow notes."

There were spaces for Alex to fill, but Zal and the rest of the band found other contributions to make. "At first, Alex told us not to wear anything special when we went on stage, but the whole thing, with the make-up and acting out the songs, slowly evolved. I started out by mimicking Alex a lot, behind his back almost.

"I think a lot of the time, people can take Alex the wrong way. They may think he's being aggressive, heavy, the way he sings and maybe he starts to shout. I think it frightened people a bit, therefore I would try to be funny, to compensate for Alex's frightening people. I would leap in to try and soften that side of the band.

"I didn't even really know I was doing it, I just did it because of Alex's kind of approach and attack."

All of which is fine: The Sensational Alex Harvey Band are perhaps the most exciting and theatrical stage show in this country. They have worked with David Toguri, the noted choreographer whose triumphs include Rock Follies, and they can be counted on to sell out the largest halls even as they play the smaller provincial ones.

None of which sells records. The band seem always on the brink of success, and the forthcoming album, Zal reckons, may go some way in changing that. "We started this time working in a very small rehearsal room, using much smaller amps and less volume, and you hear it differently in a situation like that. It's more melodic." But it is difficult, Zal admits, to take what the band have on stage into the studio.

"The music is there first. When we go into the studio, there's no lights, no make up, there's no crowd, it's just me and my guitar, you and your drums, you and your bass. It's awfully difficult for us to take what we have on stage and put it on record, with the same amount of humour, the same excitement, and communication.

"The stuff that we're doing now, we've stopped worrying about how it will look live. We're saying forget about it, just record it and don't worry about doing it on stage. In the past, we've tended to think about how it'll look on stage."

Even as the band are concentrating on improving their music, and their record sales, they are also toying with the idea of stepping the other way, in the direction of the stage: the legitimate stage, that is.

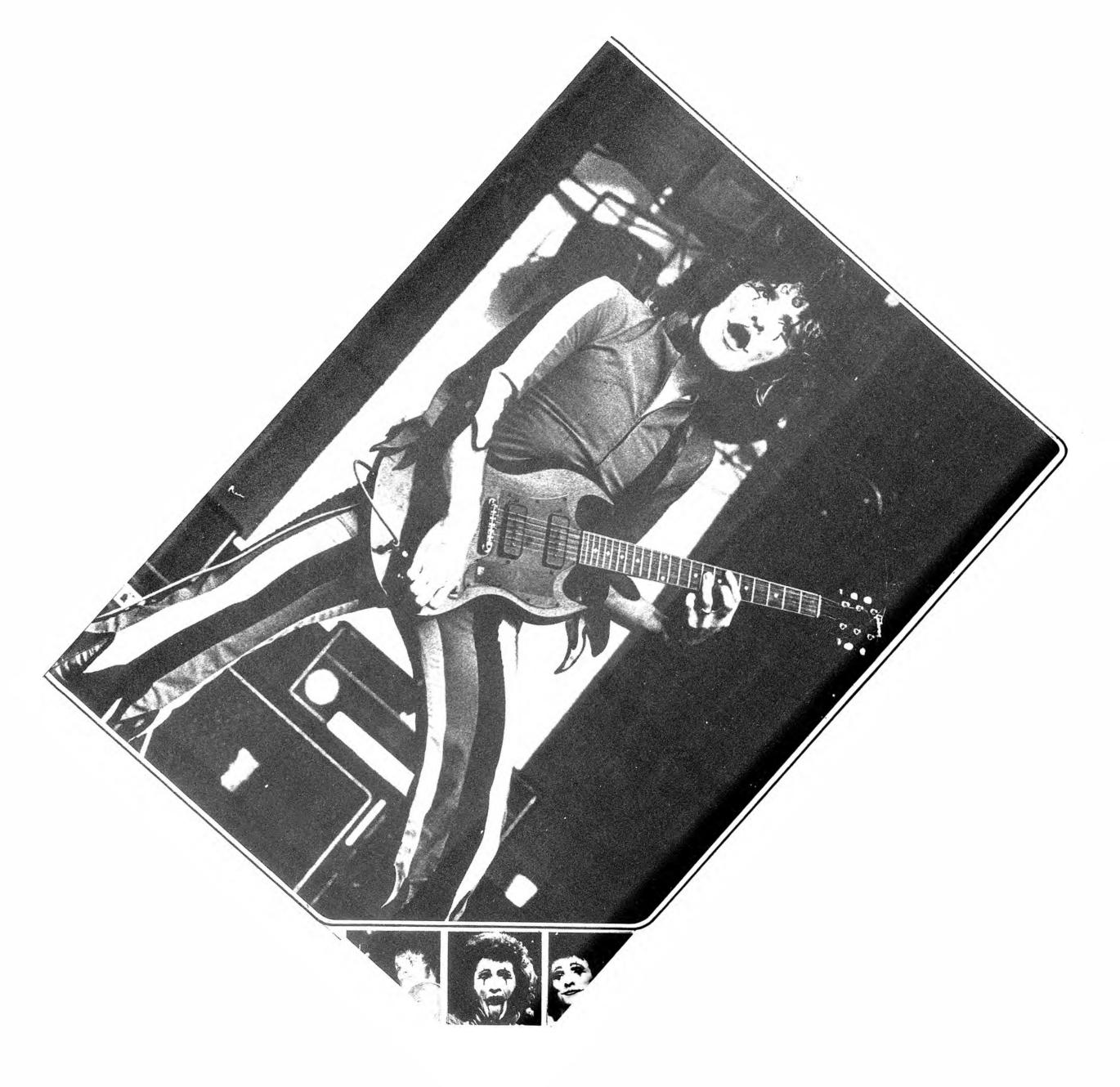
"Alex has this idea about Vibrania, a mythical country with Vambo (a recurring character in Harvey's songs, Vambo is a kind of moralistic gang leader, mixing philosophy and street savvy) as a roving ambassador. All the band would be characters, and we'd have actors as well."

At the moment though, most of Vibrania's story line rests in Alex Harvey's head. "Occasionally, he spins out a bit of the story to us. We'd like to do it in the West End, and then go around the country, doing, say, two weeks in Glasgow, two weeks in Manchester, Newcastle, that sort of thing."

The Sensational Alex Harvey Band are poised to succeed in either of two directions, or to balance well, if less affluently, in the middle. If their next album (after The Penthouse Tapes) sells well, it's likely they'll stay within the conventional framework of working bands. If it doesn't, it's likely that they'll move even further towards theatre. The musical stage is ready to accept rock now that Hair, Jesus Christ Superstar and Rocky Horror have broken the ground.

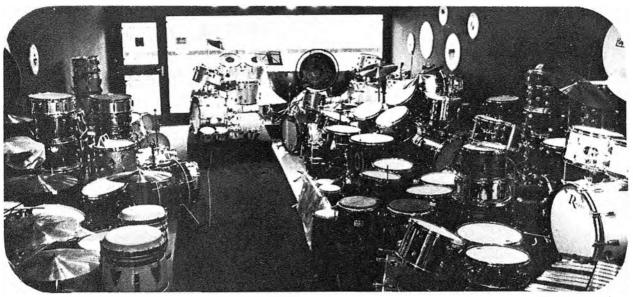
Mountain management would then be the only stumbling block, and that is unlikely: Bill Fehilly flew the band to Paris to see Alcazar, which Zal described as a combination of "Vaudeville and French theatre."

In the end, then, flexibility seems to have worked out pretty well. The future is a long time for musicians, especially when, like Zal Cleminson, they can't do anything else. Fortunately, it doesn't look like he'll have to.



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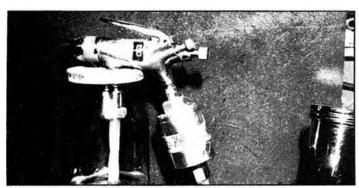




# **Guitar Renovation Part4**



Front of finished Tele



De Vilbiss EGA502, with interchangable lacquer cup made from a screw top jam jar.



De Vilbiss MP Gun. The support fork is set at an angle to the wall to keep the cup upright when not in use. Note the filter attached between the airline and the gun



Back of finished Tele

Grain-filling, sometimes called pore-filling is not essential to any normal guitar finishing or re-finishing process, but in most cases, it will save you about one third of your time and lacquer, and more than half your wet and dry paper, in achieving a smooth and glossy finish.

The basic problem is that wood has holes in it—a lot of very small holes, called pores, which range from needle-sized to microscopic. If you want a smooth lacquer surface on this wood, then the lacquer coats will have to fill up, or bridge over these holes. Obviously, you will need fewer coats of lacquer, if you first pack the holes with a mixture of varnish and microscopic-sized gravel, and let it dry. Varnish and fine stone dust is roughly what goes into a tin of wood-filler.

A warning:- Polyfilla and Spatchel are very good products in their own fields, and could be used for filling pores, holes and minor blemishes before using household or spray-can paint. They are not generally suitable for such use under clear finishes or Cellulose (or similar) lacquers. Not even all proper grain fillers are suitable for use under Cellulose, and some of those which are have serious disadvantages. I would recommend Thixotropic fillers from either Morrells or Hill, Son and Wallace.

For most purposes, filler (when dry and lacquered) should be one or two shades darker than the (lacquered) wood. Dark walnut or a dark, warm mahogany will be adequate for most jobs, and can be mixed thoroughly with a little "earth colour" to adjust its tint. (For instance, carbon black, to produce a darker filler for dark rosewood). Pale woods need an

exact match filler.

It is always wise to apply a coat of sealer before filling, as described last month. I always follow the makers' advice about filler application, thinning, and drying time to the letter, and I suggest you do the same. After the filler is dry, I sand off all of the coloured surface film on the wood, leaving filler only in the pores. The surface film may give a very pleasant effect, but I have found that leaving it can later cause the lacquer to blister. It is possible that certain lacquers may adhere to certain fillers without sanding, but I have sometimes found manufacturers' advice about this to be unreliable.

If you want the base colour of the wood changed overall, then it should be done with separate colouring material. (Either waterstain before sealer and filler, or with spray colour during the lacquering process.) There are some faster drying stains which may be used in place of water - soluble; ones, but the most commonly found types can also affect adhesion, and you should take the advice of a specialist manufacturer. For information on the use of water-based and other stains, see Wood Finishing by J.W. Collier (Pergamon Press) and Furniture Finishing, Decorating and Patching by Patton and Vaughan (Publ. Drake - From the Art Veneers Co., Mildenhall Indust. Estate, Mildenhall, Suffolk - about £5 and worth it).

After cleaning up the filler, apply a coat of thinned lacquer on top, preferably by spray (but a soft brush is possible) and allow it to dry overnight,

Fancy wood inlays can easily be spoiled by

the darker shades of grain filler. I usually paint several coats of 50/50 lacquer directly onto these inlays and/or purflings with a fine brush, at least 12 hours before filling. Any larger area which should not be filled (for instance the soundboard on an acoustic) should be masked with polythene and well rubbed down tape. Soundboards should have several thinned coats of lacquer, and a day to dry, before sticking tape to them. It minimises the chances of the tape pulling off fine slivers of wood; this sort of damage is almost impossible to hide, but sealing well, and pulling tape off SLOWLY and bent back on itself, instead of away from the wood surface, will reduce the risk. You do need the masking or filler will get everywhere.

There are two main exceptions to filling: close-grained woods such as maple, which don't need it and often look better without, and acoustic guitar soundboards which should never be treated with wood filler of the sort I describe here.

There is another sort of filler, basically a thick lacquer, loaded with something like Talc to make it easier to sand level, and called Sanding Sealer. Exactly what is put in it as a lubricant, and in what quantity, can be rather critical if the subsequent lacquer film needs to take hard wear, and I don't recommend its use.

Spray painting can be very satisfying work: it can also chew up your nerves and cost you a lot of time and money until you know what you are doing. It can also be very dangerous unless you act sensibly. Here are a few hints, A spray-gun is rather like an Army flame thrower, All it needs is a spark or a light. Dan't

give it one! Any spray equipment maker will advise you on safety precautions.

Ensure adequate ventilation when spraying (see abovel

Don't try to spray brushing lacquer.

Don't waste time with a compressor which is underpowered for your gun. Its displacement should be at least 50% more than the gun needs.

Read the books mentioned earlier. information on spraying technique,

Forget about electric sprayers which buzz, guns which fit to your vacuum cleaner, and package - deal spray outfits with 'internal mix' guns. If necessary, buy the right gun and hire a decent sized compresser when you need it.

Use the best quality of Cellulose lacquer you can obtain. For thinning it to spraying consistency, you will need to work out some sort of compromise between the spray-gun maker's suggestions and those of the lacquer maker.

You will need a small, sensitive, suction or gravity feed, EXTERNAL MIX gun. I use a De Vilbiss type E G A 502 gun, with 390/F cap and tip, for major work, and an M.P. gun with the largest cap and tip, for repair patches. The E.G.A. is good, but you have to decide at the beginning whether you are going to nurse it, or fight it all the way!

Also essential is a small air line filter, fitted directly to the oun. I use a Hydrovane compresser, but they are now a fabulous price and I have had problems with oil in the air line.

The best value in small compressers, seems to be the "Portaspray Plus" unit made by Dawson, McDonald and Dawson, Ashbourne, Derby. (Their guns are also good value, but not sophisticated enough for work on guitars).

#### The Completion of the Fender

. After initial problems with stripping, everything went much better. The soft parts of the body absorbed rather a lot of lacquer even after filling, and 1 had to spend too much time sanding excess lacquer off the harder areas, to make the surface level, but this was only a problem of time.

I masked the fingerboard and the holest in the body and gave the neck and body each three light coats per day for a week, Each morning before spraying I levelled the surface lightly with at first 400 and later 600 grade wet and dry paper. I allowed another week for drying and then flatted the surfaces with 600 paper and soapy water, and finally burnished with a fine rubbing compound. Metal parts did not really need re-plating and were cleaned up with SOLVOL AUTOSOL chrome cleaner.

Re-assembling the fittings and electrics presented no problems and the finished guitar was finally adjusted and had a bit of cleaning up work done on the frets and fingerboard to improve action and general feel. (See Improve A Copy Guitar in May and June 1975).

Once you have a little experience; most refinishing jobs are quite simple: the real skill, as you have seen, lies in careful preparation, and in knowing what you should not attempt.

Incidentally, the guitar shown in the photographs was actually finished with Acrylic lacquer, as I am allergic to Cellulose compounds, but the processes are all the same.

Acrylic Lacquer is available in clear and in fancy colours, from Custom Car shops, Compared with good Cellulose, it can be tricky to spray, but both materials can produce an equal

if you want a clear, uncoloured finish, and you are not re-finishing a vintage instrument, then the obvious material to use is Speedthane. made by Marrable and Co., Delamare Road, Cheshunt, Herts. Some clever people have learned to apply this by brush or pad, but I suggest you spray it. Speedthane is a 2-pack polyurethane lacquer, mixed in equal quantities: it dries quickly and produces a glossy and durable film. It appears expensive, but remember that most of the contents of a tin of Cellulose will evaporate and be wasted, wheras most of the Speedthane is used to make up the lacquer film. Speedthane should not be applied over other types of material, and is not available as a coloured finish.

Suppliers: Marrables: Callulose, Nitrofiller, Nitrostain, Speedthane, Wet and dry paper, tape, gloves etc.

Hill, Son and Wallace: Thixotropic Filler, Cellulose, Spray colour, wood stains.

Morrell & Co (London and Manchester) Thixo filler, Cellulose, N.G.R. stains.

(214, Acton Lane, London N.W.10)

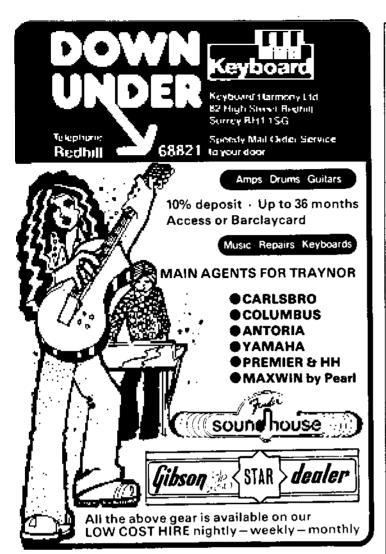
Gedge and Co. Cellulose brushing lacquer. (88 St. John St. London E.C.1,)

For providing technical assistance, advice, and samples, I should like to thank: Dennis Jones, Tompkins of Marrables, Mr. Flack of Portaspray, and Bela, who is my friend and a very fine French polisher.

Our particular thanks to Messrs, Rose-Morris of Shaftesbury Avenue who lent us the Telecaster on which these articles were based.

For another opinion on refinishing, please see









The anechoic chamber at the Vitavox Westmoreland Road factory

Vitavox Limited gave top priority to extensive research and field trials before production began last year on the Company's new Thunderbolt loudspeaker system, Testing of sound quality, carried out in the anechoic chamber of the research departinent of the Vitavox Westmoreland Road Factory, was one important aspect of Thunderbolt research. Trials included an extensive six week field test under every kind of acoustical condition. From the time the first Thunderbolts came off the production line, immediate home interest underlined the value of the pre-production research policy. Overseas interest quickly followed, with the first large Thunderbolt order coming from Nigeria in January, 1976.

in the Thunderbolt sales story, considerable international interest was shown at the 1976 Frankfurt International Trade Fair, when all the Thunderbolt systems on. display were sold on the spot to Germany, Over sixty enquiries were received from eighteen different countries during the exhibition and once again orders were placed. It is interesting to note that no business at all was done in Germany in 1971. In 1972 the Company exhibited for the first time and now in 1976 is confident of achieving figures twenty times better than those of the first year. Vitavox believes that perfecting a product is a continuous process and improvements to Thunderbolt are already in the pipeline.

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# PA SYSTEMS BY KEN DIBBLE

After last month's discussion about the suitability and safety of jack plugs and various types of mains connectors in general use, we shall now return to matters more directly related to P.A., and consider the types of connector likely to be encountered on a professional quality P.A. rig.

It is most unlikely that jack plugs will be found connecting up microphones or linking separate pieces of electronics together. Instead, a rather more sophisticated system of connectors will be used in accordance with an internationally agreed practice. These are generally known as XLR connectors and have now been almost universally accepted by equipment manufacturers and broadcasting organisations as the standard input and equipment interface connector.

The system comprises four main components: a chassis plug with its mating cable end socket, and a chassis socket with its mating cable-end plug. The cable-end socket also intermates with the cable-end plug. There are two main manufacturers of these connectors. ITT-Cannon and Switchcraft and both are to be found in wide use in the music industry. For the purposes of this article, the Cannon part numbers will be used as they are probably better known, and to use both would lead to confusion. Both feature a heavy cast alloy body shett, a substantial cable clamping arrangement incorporating a rubber sleeve to prevent cable fracture at the point of entry into the alloy housing, a mechanical latching arrangement to prevent accidental withdrawl of the mating connector and three large well-spaced pins or sockets as appropriate. Fig A shows some typical connectors for identification purposes.

The confusion that was evident when XLR connectors first came into general use has now largely disappeared, and apart from its electrical and mechanical superiority, one of its prime advantages is quite simply that its application and wiring configuration has to a large extent been standardised so that any XLR connecting lead or piece of equipment will be fully com-

patible with any other using the XLR system in its standard form.

The standard XLR-3 system is used as follows:

Microphone connector, a special plug built into the body shell of the microphone itself.

Microphone lead, XLR-3-11C cable-end socket at microphone end, XLR-3-12C cable-end plug at mixer end;

Mixer input, XLR-3-31 or XLR-3-13 chassis socket mounted either on the back panel of the mixer or on the stage box.

Mixer output, XLR-3-32 or XLR3-14 chassis plug mounted as for mixer input; connections, Pin 1, Screen or Earth; Pin 2, Signal feed (pos); Pin 3, Signal return (neg).

The input to a power amplifier would be the same as the input to the mixer, so that any standard XLR-3 lead can be used as a microphone lead, as an extension lead, or as an equipment interconnecting lead, thereby providing a very flexible system based on component parts that are both electrically and mechanically reliable. In fact, these connectors can be thrown on the floor, trampled on, crushed under heavy cabinets, have been poured over them or be subjected to a host of other abuses, and still come out in one piece and working.

It is important to realise that several quite different and incompatible types of connector are available in the same basic XLR type housings, including the XLR-4, XLR-5, XLR-7 and XLR-LNE mains connectors. Some of these variations will be mentioned later in this article, but it must be emphasised that it is only the XLR-3 series of connectors that are used for low level interconnection purposes on professional P.A., studio and broadcasting equipment in a standard form. The others are sometimes used for special purposes, but it is not proposed to deal with these here.

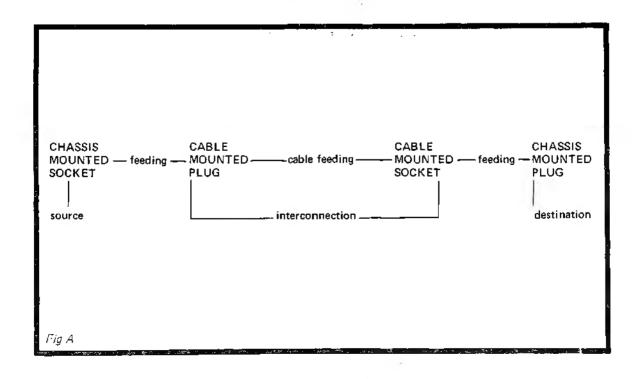
When loudspeaker connectors are considered, things are not so clear cut. There would appear to be two basic schools of opinion. The Association of Public Address Engineers recommend that its members use the

XLR-4 series, and the music trade at large, the broadcasting companies and many studios use the XLR-3 types (the same ones used for microphone and interconnecting leads.) Before going further into this, let's consider the basics of any plug and socket system.

It is the usual practice to use a socket wherever volts are present on a live connector, and to use the plug to make contact. If you think about it, this is common sense, as the socket members of almost any family of connectors are usually shrouded in insulating material. while the pins on the plug are usually exposed (consider jacks, P73 or CEE-22 type mains connectors, 13A power sockets and so forth, and you will see that this is so). The obvious reason for this is to prevent any possibility of shock, and to prevent live circuits from being shorted out and damaging the equipment, as would almost certainly be the case if live circuits were connected to the exposed pins of a connector

This is one of the many reasons that I do not advocate the use of jack plugs for loud-speaker circuits, (see last month's article) as on a jack to jack speaker lead, it is too simple to plug in the amp end and leave the exposed plug at the cabinet and dangling on the floor to short to earth on any nearby metal pipe or stage trap. A properly designed connector system should then look like this:

If we now return to loudspeaker connectors, and relate this to amplifier outputs, it is obvious that the amplifier output should be fitted with a socket, that the loudspeaker cabinet should be fitted with a plug, and that a plug-to-socket lead should interconnect the two. This is just the system that is recommended by the APAE using XLR-4 series: four pin connectors, wired with two pairs of oarallel connected pins to increase the current carrying capacity of the connector so that it is suitable for use on really high-power amplifiers. A similar arrangement is also widely in use, but uses the XLR-3 series and this is also OK for high power use because the pins on



the XLR-3 series are much fatter than on the rest of the XLR system, and are also capable of carrying sufficient current for the purpose.

Further confusion creeps in when we find some manufacturers actually using the system the wrong way round altogether, with volts coming out of plugs, some fitting sockets to both amps and cabinets, so we have leads with plugs on both ends, while others fit plugs to the equipment, necessitating leads with sockets on each end! At least one P.A. hire company is using both XLR-3 and XLR-4 connectors on the same system, to differentiate between feeds to bass bins and horn cabinets on their biamplified systems. At first thought, this probably seems absurd. While some misuse is due to ignorance, in most cases, there are very valid reasons for using the XLR system the wrong way round and in odd configurations. There are two basic schools of thought on cabling systems.

- (a) If one assumes that a P.A. rig is to be plugged up and operated by idiots, then there is a very good case for using a different type of connector for each different type of use, and this to design the system so that it is virtually impossible to plug microphones into amplifier outputs, treble horns into amplifiers intended to drive the bass bins, mixer power supplies into amplifier outputs, and so forth.
- (b) If one assumes that intelligent and experienced people are to look after the gear, then a totally different approach can be made, based instead on convenience, compatibility and general suitability for the job in hand.

Whatever the school of thought, there can be no excuse for ignorance or dangerous practices, like using mains connectors for any purpose other than for mains, or exposing dangerous voltages on unshrouded pins of connectors, or the like.

I think that enough has been said about the problems involved, and so we will now very briefly consider the cables themselves. As shown in the table published last month, the two criteria for cable selection are electrical rating and mechanical suitability to its task. For loudspeaker circuits, a cable should be selected that is rated at about double the maximum current it is likely to carry, but the insulation of anything other than bell flex should be adequate for the voltage it will have to dea! with, A particularly flexible type of cable should be selected, and as a general guide, the larger the number of wire strands to each conductor, the more flexible it will be, and the less prone to fracturing. The quality of the PVC insulation will also affect its flexibility. The outer sheath should be particularly thick and durable so that it can protect the inner conductors when run over by the castors of a heavy cabinet. Further, it is desirable that the two conductors are twisted together, as this will significantly reduce the radiation from the cables when under load, and will also improve amplifier stability.

A basically similar specification will hold good for microphone cables as well, except that the considerations of current carrying capacity obviously do not apply, although it is still

advised that a fairly thick cable be used simply for mechanical strength. The main additional consideration for microphone cables is the electrical screening properties of the outer braid, and the electrical capacitance between either conductor and earth. A cable screened with a properly platted braid will invariably be found to have far better screening properties that those types with a simple wrapped screen.

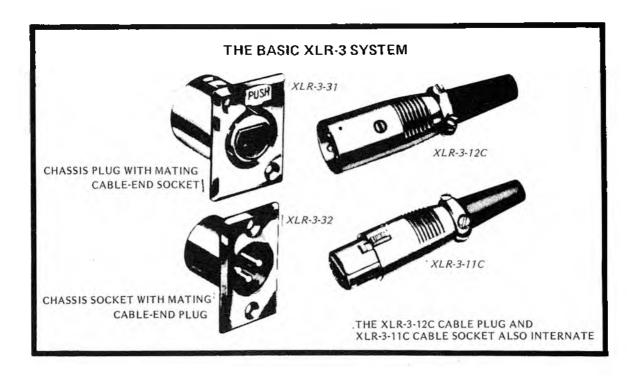
Another very useful feature of some heavy duty cables for both screened and unscreened types is the inclusion of a core of cotton or string interwoven with the two conductors within the cable. This adds considerably to the mechanical strength of the cable and renders it less prone to fracture. Good cables are not always easy to find, as most retailers stock whatever the wholesaler happened to have in stock at the time it was ordered, rather than identifying a particular cable and keeping it as

a specific stock item.

A frequently overlooked aspect of cables is colour coding the various types of leads used for ease of identification. One possible coding, and one which I try to stick to where possible; is grey cables for all signal and mic leads, white cables for loudspeaker feeds, and orange cables for all mains leads. With the advent of multicoloured screened cables, it is often quite useful to use a different colour cable for each microphone, in order that a particular microphone lead or plug can be quickly identified when a fault develops, or for re-plugging purposes, or even for identifying the channels on a mixer. Future Film Developments, for example, carry ten different colours in stock.

A multiway cable system is really no more than an extension of the back panel of the mixer onto the stage, to facilitate the connexion of microphone and amplifier lines to the mixer. It usually consists of a really thick cable, often up to an inch in diameter containing anything between 15 and 40 separately screened twin cables. Some of these cores will be used for the microphone inputs. and other for the mixer outputs. At each end of the cable there should be one or more really heavy duty multi-pin connectors and, at the stage lend, a box housing all the necessary XLR-3 connectors. On some of the larger systems, two or even three multiways may be used, some for inputs and a separate one for outputs. The cables used for this purpose must be of the highest quality and the necessity of having all cores separately screened cannot be overstressed if breakthrough between circuits and/self-oscillation of the P.A. system is to be avoided. Such cables, and the multi-oin connectors that go with them, are very expensive, and not easy to obtain, except through dealers specialising in high power P.A. systems, or direct from companies undertaking custom building of equipment.

This concludes Ken Dibble's series on P.A.

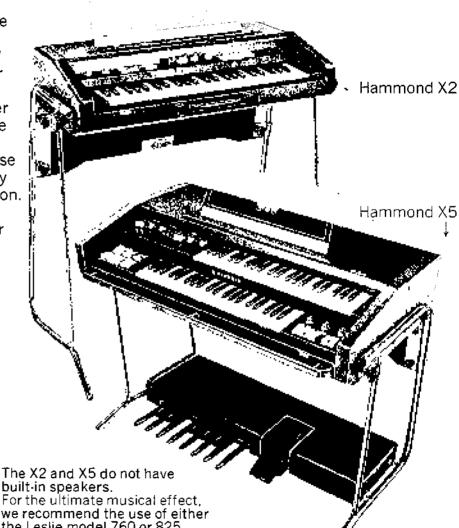


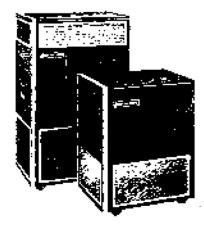
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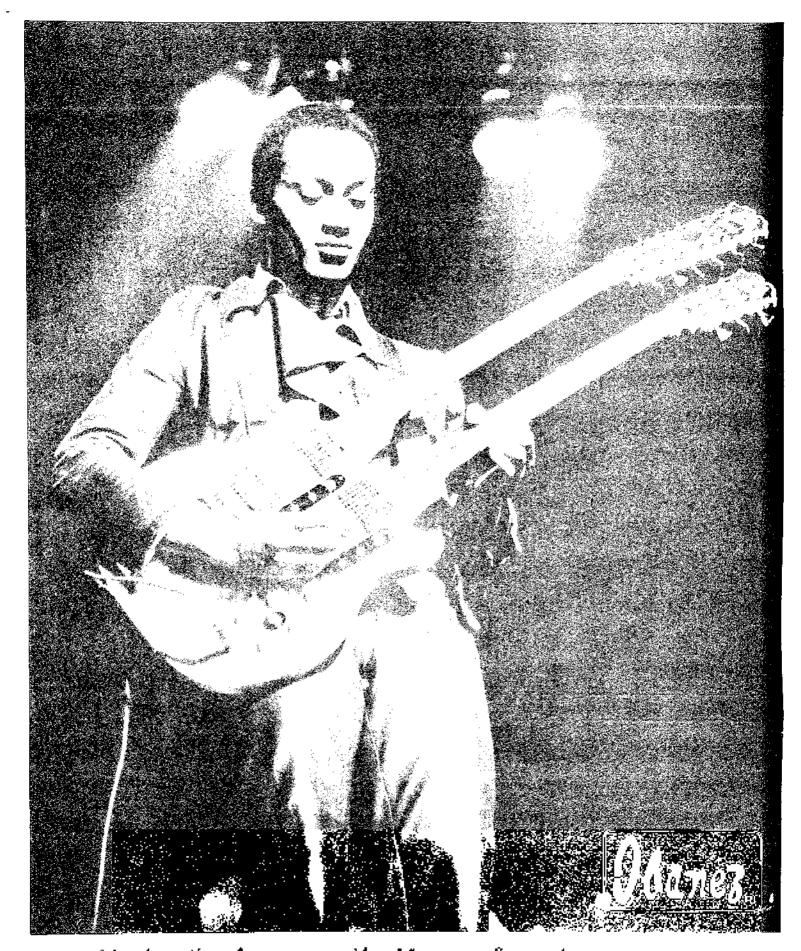
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Marla Henderson with Minnie Riperton. plays Thomas Pro Twin

# Harvey Andrews

# RITCHIE GOLD

A record producer who feels for music (and there are some) has the difficult task of reconciling his interest in the art form with commercial consideration.

Ritchie Gold is lucky. He works for Transatlantic, the company who have pioneered the ethnic and minority in records and despite their recent take-over by Granada they still consider music to have a worth of its own. Ritchie is American and steeped in the business. His father was a pro musician with the Glenn Miller band at one time, his uncle's a record producer with artists like Blood, Sweat and Tears to his track record. Despite an early commitment to music, brass and woodwind, Ritchie started vocational training to be a lawyer, Involvement in a local radio station in Indiana during his term at law school finally provoked him into abandoning two years of law studies and returning to New York to hang around his uncle and get into the record industry.

He wanted to produce all along. A bare-foot hitch-hiking trip to England as a student had forced him to see the value of the music coming out of London and he found his break into the U.K. business through working as a balance engineer in Livingstone Studios, Hertfordshire.

"I was only working as an engineer as a way of becoming a producer," he recalls. "People become producers a hundred different ways, as managers and as agents, but I felt that engineering was best."

Taking the advantage of some studio time a friend had to offer, Ritchie produced some tapes by unknown artists and hawked them around the record companies. Every company turned them down but Transatlantic liked the production and said they might be able to put some freelance work his way.

After a couple of months they came up with a band called Randy and asked Ritchie to produce the album. "That was quite difficult. I liked the band but they were all new to it and in fact they split up a couple of weeks after we made the album. It's wasn't their fault they were ripped of, but the album came out and sold a couple of thousand."

A little later another album was put Ritchie's way. The relationship between him and Transatlantic developed gradually and he was finally invited to join the company as house producer.

In the last few years, the term "house" producer has been suffering and the idea of one man committed to working within a single label has died.



"I'm lucky because although I have an office in this building and work full time for Transatlantic, I'm also free to place material elsewhere after I've completed so many albums for this group of labels. The result is that I feel morally obliged to bring the best acts here but at the same time a rejection doesn't automatically mean that I won't be able to record the artist."

One act in which the conflict between the artistic and commercial considerations exists is with Harvey Andrews. Andrews is one of the most powerful and compelling writers working in Britain today. His strength of imagery and ability to communicate feeling has been perfectly displayed on his last three albums, the last release being "Fantasy From A Corner Seat", which Ritchie produced. Despite a production that is superb and which won great critical acclaim, the record failed to sell and Ritchie is now working on a follow up. "We want to sell records now. I'm working with some fine musicians who've played on hits before, I'm arranging Harvey's stuff and I'm frankly trying to get him a hit. The feeling here is singles, singles. It takes maybe £8,000 or £10,000 to make an album, considerably less for a single so you can see why people are anxious to get singles away. We've always been an album company, but economics are forcing that to change, it's not hard to understand,

The solid central group of Harvey Andrews, fans may be horrified at what Ritchie is planning to do with his material. Questioned closely on the validity of commercialising his material he admits that perhaps Harvey

shouldn't be recording. His strength is in his imagery and despite the fact that the melodic vehicle communicates those images perfectly in a pub or club, the record and media system of exposure require adulteration of Harvey's main strength.

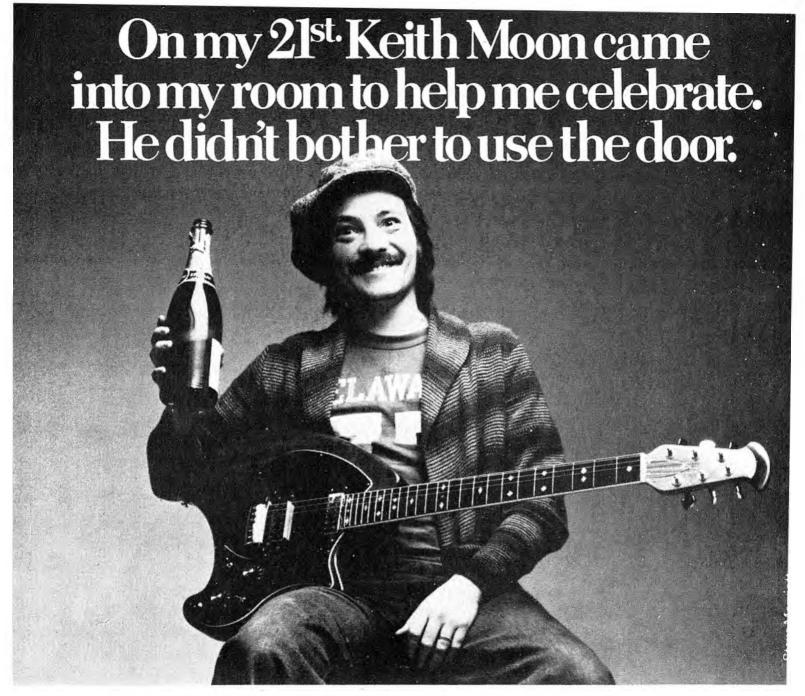
But Ritchie lives with the compromises happily. He feels that at certain times it's possible to combine both artistic satisfaction and commercial attitudes and when that happens he's a happy man.

He's a kind of hack producer dealing with anything that's thrown at him. He's done the Pasadena Road Orchestra "I know they're not as good as the originals", he does Roger Stanley and Peter Knowles "purely artistic, no commercial considerations", and he's just finished a Mae McKenna album.

"Recording this album was a real chailenge. I had to feed Mae with over 200 songs before we got an II track album. We recorded at Chipping Norton studios and unfortunately Mae got a touch of flu or something and we had a real problem getting the vocals."

The future holds some exciting prospects for Ritchie. He's going to produce a couple of acts with whom contracts still have to be signed and he's listening hard to the hundreds of tapes that arrive in his office each week.

"Until a few weeks ago, we were still sceing people off the street, something no other record company was doing. In the end we had to stop it because it was just getting ridiculous. Maybe I hear two or three things a year that really excite me."



"Keith never was one to go through accepted channels.

So when he came through the wall of my hotel room in Wellington, New Zealand, I didn't bat an eyelid.

Of course, he's come on a lot since then. Now he ditches Rolls Royces into swimming pools.

And me? Well, I admit I used to get fired up and knock the speakers around, but not too often nowadays. I mean, you get rather attached to your gear.

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And I think I could safely put it through a stack and it'd still be in one piece.

Not that I would of course.

It'd be like putting your best mate through a wall."

Steve Marriott has been with us in one form or another since 1965, with the Small Faces, Humble Pie, and now Steve Marriott's All Stars. Albums such as 'Nut Gone Flake', 'Rocking the Fillmore', and 'Smoking' have increased Steve's stature from a compact 5' 6" to that of a Giant of Rock Music.

He is pictured holding an Ovation Deacon Sunburst guitar.

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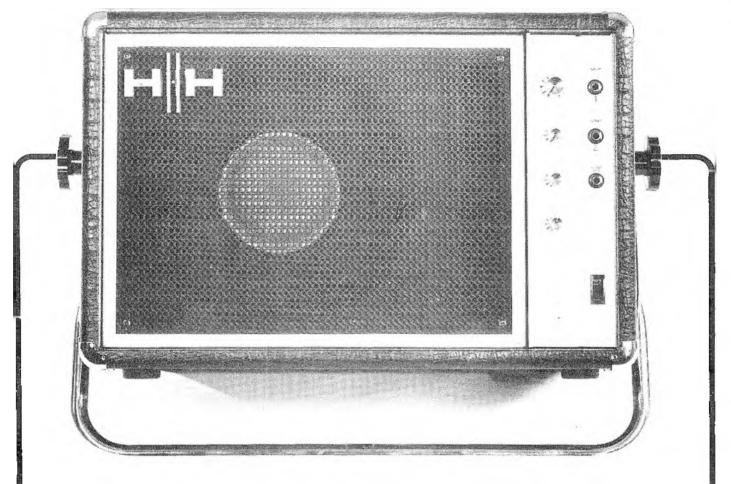
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# REPORT



HH started eight years ago. In the beginning the company made and sold electronic equipment for industrial applications - high powered amps for studio use, that type of thing. But the prime movers of the company, Mike Harrison and Malcolm Green, were children of the rock generation, having grown up with '50s rock and '60s beat. and they fancied making something a little more creative. Mike, the design wizard, came up with the 1C-100 instrument amplifier and Malcolm Green had the job of converting the musical instrument trade away from the traditional valve Marshall and Fenders and onto the solid state sound of the IC

The fact that the amp succeeded in a massive way is a tribute to the hard work of the individuals concerned, as well as to a superb amp design. Plastic handles which formed chassis ends, and ABS covers rather than the traditional wooden case were the most obvious signs of the professional thinking that carried throughout the design.

Today big changes have taken place at HH. Malcolm Green has bowed out of the operation, and Mike Harrison remains in total charge. The company is busy building a giant new factory on a three and a half acre site and a new range of amplifiers comes onto the market this summer.

HH has always been Cambridge based. The present factory is at Milton a few miles outside of the city but by the end of June, the address will be Bar Hill, Cambridge.

Some people have criticised the timing of the launch when sales of the IC-100 have

been going so well. Mike Harrison:

"We felt desperate to get the new amp onto the market. We've been working on it for quite some time, and now that we've finally got the true valve sound in the VS-Musician and we've thoroughly patented it, we were very anxious to get it onto the market. It was a case of being too excited to delay the launch really."

HH have gone to great lengths to protect their design which, they claim, produces valve sound from solid-state circuitry for the first time. In addition to exhaustive patent protection, the company have also encased the main circuit module in an epoxy-resin that is X-Ray proof and acid proof. No one, it is claimed, can gain access to the circuit without destroying it first.

Mike Harrison is convinced that musicians want to retain the valve sounds in instrument amplifiers. The HH sound which has become so familiar in recent years is a clean, clear sound, HH have now added the facility of the valve sound.

Whilst great activity has been going on in the music field, the company has also been developing its industrial market. Sales of industrial power amplifiers get better each year and the company has moved into the electronic security systems market as well.

Later this year further musical products from HH will be launched and plans have been laid for other launches next year. Effects units are one area in which the company is intent on exploring. The future looks good,

#### H/H MA 100 P.A. Amplifier

The MA100 is an excellent P.A. amplifier from the point of view of design and performance. It has a power rating of 100 watts RMS into 4 ohms and, as such, is one of the most noise-free amps we have yet to see. It is a five channel mixer amplifier with Reverb on each channel. Each channel has two inputs (with a 60dB degree of isolation between each input) and individual Volume, Bass and Treble controls. There is also a push-button (on/off) switch which brings reverb into or out of operation on each channel. A Master Reverb control varies the amount of reverberation added to the signal, in conjunction with the individual channel push-buttons. Master Presence and Master Volume controls are also provided on the right hand side of the front panel. The Master Volume is particularly useful as individual channel "mixes" can be left and the overall volume taken up or down. A mains on/off switch is also provided and, like the rest of the controls, is illuminated.

The rear panel houses two speaker sockets, one slave output

socket, a reverb footswitch socket (the S1 footswitch is an optional extra), Echo send and return sockets and an auxilliary input socket. By connecting the slave output sacket of one MA100 to the auxilliary input socket of a second MA100, ten channel operation is possible. Naturally, the slave output can also be used for driving a further power (slave) amplifier. Thus, when linking amplifier channels together like this, the slave output on the second MA100 can be utilised either for further "channel linking" to a third amplifier or for driving a power stage.

The design of the MA100 can hardly be faulted. Like the rest of the H/H range of amplifiers, it is solid-state, very compact (670 (L) x 108(H) x 292(D) (mm) and extremely lightweight (11Kg.). The unit is covered in black "Heavy Bison" grained ABS (a new, military-standard plastic substitute for steel) and the end panels (which also form the carrying handles) are injected moulded ABS.

#### The New Range

HH dealers travelled to Cambridge from all over the UK last month for the revelation of a well-kept secret. The VS-Musician range of amplifiers was launched at a particularly professional presentation which included a slide show, lunch and a forum type presentation with musicians on hand to demonstrate.

The VS-Musician looks very similar to the existing IC range. It's had a design facelift, like this year's Ford, but there are two main circuit differences. The amp is provided with a Voice switch which offers three main "tones," light, medium, and heavy. The valve sound control is a simple rotary on/off switch but a floor switch is also available. The on position brings in distortion of the 2nd, and 4th harmonic and HH claim that the sound exactly reproduces the valve amp sound.

The footswitch for the valve sound is the forerunner of a complete range of H/H effects pedals. The switch is unique in several respects. It draws its power from the amplifier down a special lead which carries the signal and provides the juice — no batteries or separate mains connection are needed — and it lights up. One of the big selling points of the original HH amps were the illuminated front panels. The foot-

switch lights up when the switch is "on" to give a clear indication. about the condition and the switch has been designed to allow other effects pedal to be plugged into it, module fashion. Eventually it will be possible for an HH equipped musician to have three or four pedals locked together to form an automatic pedal board, all pedals drawing their power from the amp through the lead supplying the first in the chain. HH pedals will not work with any other amplifter. HH admit to being a little aggressive in this marketing policy, but they're convinced they've got a winner.

The new amp was demonstrated at the launch. It can sound quite like a valve amplifier, but without a chance to sit down and experiment for half an hour, it's unfair to offer any criticism or praise. In the near future we're hoping to run one of our highly technical soundchecks on the amp and reveal the truth about it.

The bass amp, which is also new, is easier to assess. On demonstration it had a particularly full and clear sound and, in this worst served of all areas, offered hope to despairing bass players. I feel this amp could be particularly successful.

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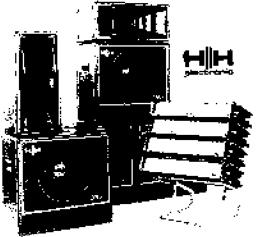
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John Holmes Music Centre, 219 Cheltenham Rd, Bristoi	2 Years	6	3	3	8 or 9	5 Pairs
Hessys, 62 Stanley St., Liverpool	Beginning	V	ARIES, UN	PREDICTABI	E	
C.E. Hudsons & Son, 40 Burlington Rd., Sheffield	4 Years	6	2	0	6	0
B. Miller, 2 Queensgate, Inverness	2 Years	6-10	2 Each	6	10	2 Pairs
Jeavons, 33-35 Percy St., Newcastle	Beginning	9	2	On order	5	4

This is the Market Report. We asked musical instrument dealers about their stock of HH equipment and their opinions about it. The dealers are listed down the left; the questions they answered range from left to right across the top of the page.

Items Sold Per Month	Service Personnel,	Average repair time	Factory repair time	H/H reliability	Stock De- livery order	Bands Supp- lied with H/H		Sale service
Considerable	e Staff	Same day	_	Good	Pre-order	King & 1	No	Good
Impossible	Freelance	24 Hrs.	3 Wks.	Average	Varies on Unit	Camel	No	Good
5 - 6 (P.A. Amps)	Staff	24 Hrs.	Never	Good	_	Chateau	No	Good
4	Freelance	Not Long	Poor	Excellent	6 Weeks	_	No	Average
Not Sure	Freelance		1 Week	Good	6-8 Wks.	Swag	No	Good
4 - 5	Freelance	Very Quick	Good	Long Time	System	Never	Good	
8	_	To factory	2-3 Days	Good	18 Weeks	_	No	Good
10 - 12	Staff	Same Day	None	Good	8-10 Weeks	_	No	Good
<u> </u>	Staff	Wait While	1 Week	Good	15 Weeks	Las Vegas Showband	No	Good
15	Staff	24-48 Hrs.	Quick .	Average	3-12 Weeks	Fat Max	No	Good
	Freelance	6-24 Hrs.	None	Good	6-8 Weeks	Be Bop De-Luxe	No	Good
15-20	Staff	Same Day	2 Days	Average	15 Weeks	White Heat	No	Good
Not Sure	Staff	Depends	Never have	Good	8-10 Weeks	Local bands	No	Good
40-50	Staff	½ Hour	None	V. Good	3 Mths	_	No	Indifferent
20 +	Staff	Same Day	Don't Know	Good	3-4 Mths	Morris Price	No	Good
6	Staff	Same Day	1 Week	Good	8 Weeks	Linc's	No	Good
12-15	Staff (4)	24 Hrs.		Good	2-16 Weeks	Panthers	No	Good
10	Staff	Same Day	_	Good	8 Weeks	Jinx	No	Good
Not Sure	Staff	1-2 Days	<del></del>	Fairly good	4-4 Mths	Tick le(local)	No	V. Good
_	Staff	24 Hrs.	<del>_</del>	Good	Pre-order	Top Groups	No	Good
10	Shop (3)	24-48 Jrs;	_	Good	Varies	Suger Beet	No	Good
-	Staff	20 minutes	_	Good	6-8 Weeks	Canada	No	Good
"roaring business"	Staff/Freelance	1 Hour	_	Good	Very Long	_	No	Good

continued on pages 116 and 117

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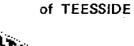


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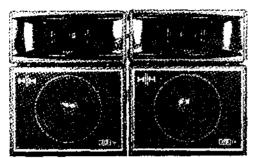
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# HDEALERS

	How Long HH Dealer	UNITS IN \$		. Echo Units IPA	Amps	Dual Concentric PA Spks.
Johnsons Sound Around, 227 London Rd, Sheffield	Beginning	6-8	3 Each	12	26	5-12 Prs.
John King Sounds, 6 Richmond Rd, Kingston-on- Thames	4-5 Yrs.	6-7	1	3	4-5	2 Pairs
John's Music, 142 High St., Scunthorpe	3½ Yrs.	3-4	3	2	2, 3	2 Pairs
Luton Music Centre, 114, Leagrave Rd., Luton	3½ Yrs.	5	2 or 3	Constantly going out	5	4
Marcus Musical Instruments	2 Years	4	1	4	6	Await Deliv <b>e</b> ry
McCormacks, 33 Bath St., Glasgow	6 Mths.	10-12	10-12	5	_	5 Prs.
MSL 55/7 Albert St., Rugby	5 Years	3.5	2	2	2-6	2 Pairs
Mr. Music, 7 St. John's Bedford	18 Mths.	2	1	3	3 or 4	2-3
Music Box, 56 Strand St., Douglas, I.O.M.	2-3 Yrs,	0	0	2	4	2 Pairs
Nat Berry, 48 Grand Pde., Green Lanes, N.4.	6 Years	6-8	-	2 or 3	Impossible	To Say
Normans, 1 Lichfield St., Burton-on-Frent	4 Years	3	2	5	3	4
Pepper Music, 86 Northdown Road, Cliftonville, Margate	4 Years	2.3	0	1	6	1
REW, 146 Charing Cross Road, London WC2	6 Mths.	3	15	20	20	10
Rumbellows,Coronation Bldg. Wallasey Rd., Wallasey.	s I Year	6	2	6	6	2 or <b>3</b>
Scheerers, Merrion Centre Leeds	4 Years	12	2	6	12	4 Pairs
Sound Centre Cardiff, 9 St. John's Square, Cardiff	4 Years	6-8	ь	8	.25	4 рап
Chris Stevens Music Centre, 11 Queens Rd, Southend	2½-3 Yrs.	3	1	3	6	. 1
Telecoms, 73 Twyford Ave., Stamshaw, Portsmouth.	6 Mths.	4	1	6	12	9 Pairs
Yardleys, 87-89 Old Snow Hill, Birmingham 4	4 Years	6	2-3	3	6	2-3 Prs.
Salop Electronics, 23 Wyle Cop, Shrewsbury	12 Mths	1	0	1	1 Each	1
Chatfields, 2 Hope St., Stoke on Trent	3½ Years	12	6	9	12-20	12

items Sold S Per Month	Service Person	nel Average repair time	Factory repair time	H/H Reliability	Stock De- livery order	Bands Supp- lied with H/I	Discount	Sale service
15-20	Staff	1 Day	_	Good	Poor	Mel Davies	No No	Good
12	Freelance	Don't do it	1 Week	Good	2 Mths.	Not Sure	No	Good
20-30	Staff	V. Good	_	Good	10-14 Wks	Seaguil	No	Good
20	Staff	24 Hrs.	Average	Good	Varies	August Rain	No	Good
Varies	Staff	1 Day		Good	2 Mths	-	No	Good
55-60% of all sales	Staff	1-2 Days	_	Good	4-5 Weeks	Downtown Flyers	No	Good
10		varies	2 Days	Good	12-30 Weeks	Voyage	_	Average
8	Freelance	_	2 Hours	Good	2 Mths	Oasis	No	Good
_	Freelance	Hours	_	Good	12 Weeks	_	No	Average
20-30	_	_	24 Hrs.	Good	3 Mths	<del>-</del>	No	Good
7 or 8	Freelance	2-4 Days	3 Weeks	Good	6-10 Weeks	-	No	Good
15-20	-	-	3 Days	Good	12 Weeks	Hollywood	No	Good
Not Sure	Staff	None so far	-	Good	12 Weeks	Emp. Rosko	No	Good
20-25	Staff	Average	2-3 Days	Good	6 Weeks	Local bands	No	Average
30	Freelance	24 Hours	_	Good	4-5 Days	Country Craze	No	Good
30-35	Staff	24-36 Hrs.	-	Good	3 Mths.	Grumble- weeds	No	Average
10	Freelance	Next Day	1 Week	Excellent	10-12 Weeks	Local bands	No	Good
30	Staff	Same Day	7-10-Days	Good	6-12 Weeks	Threshold	No	V. Good
18-20	Staff	1 Day	_	Good	6-8 Weeks	Jinda	No	Good
_	Staff	Immediate	_	Good	4-12 Weeks	-	No	Good
6-8	Freelance	Same day	_	Good	6 Weeks	Blister	No	Good





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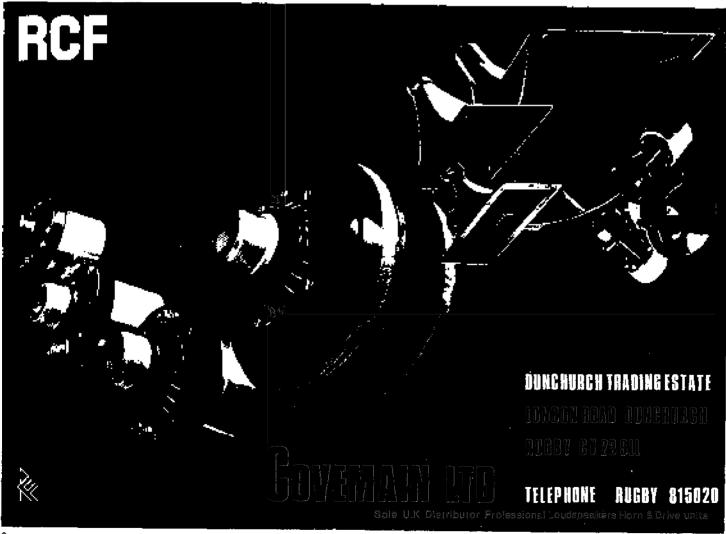
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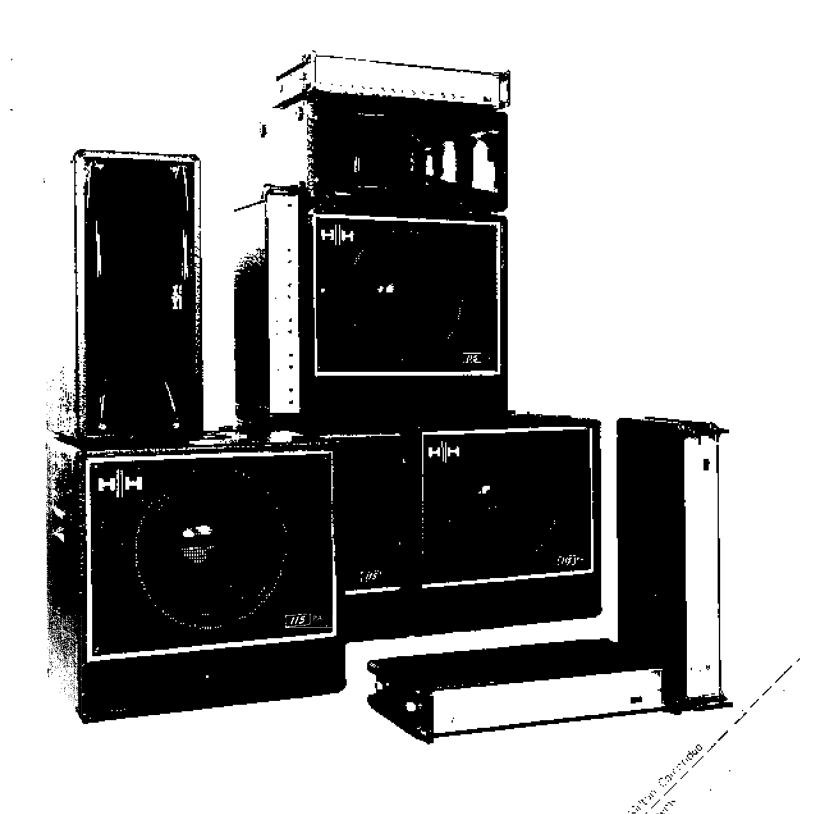


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130 145

147 147 RV

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770

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825

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2 ch 3ch

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102.2 ch ma

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MACINNES

IC150 Console

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I.M.'s Price Scanner aims to be the most comprehensive anide to the retail prices of musical instruments and equipment available.

All our new retail prices are exclusive of V.A.T. and while we have taken exhaustive cure to ensure that the prices are correct, we'd he obliged if you could let us know of any alterations, additions or deletions necessary.

Unfortunately we have to disclaim responsibility for any problems arisina out of any inaccuracy in this price ouide.

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292.59	t	
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CZ538B

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12 ch

15 ch 18ch

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20 37 26 78

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V 326 3004	315.	7/
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VH 48 000	W 092	1-
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G 32 200M	256	D3
GB 38 400	W 453 (	O:
BF 36 300A	v 305	74
B 36 300W		8
R 48 400W	405	B.
B 36MF 30 B 48MF 40	OW 345	50
B 48MF 40	OW 455	O.
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L.48CF 500		25
L 48CFD (I.	48CF with	
bom ext	op) 517	7,
L 4800 200	00W 1027	84
BMH 1 100	W 293 (	B٤
M 36 300W	/ 375 (	Ô
M 48 500V	v 430 (	65
HMF 4 200	VV 41 <b>3</b> .;	J.
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100w ster traits	31
6 Cha Mx	21
8 Cha Mx	2.
6 Cha Mx	27
4 Cha Ma	18
4 Cha PA Mx	2:
	20
	2
100w Siv	16
	50w ster trans 100w ster trans 6 Cha Mx 8 Cha Mx 6 Cha Mx 4 Cha Mx

60w 1 × 12 0 60w 1 × 12 00 120w 1 • 15	165 00	6 Cha PA Mx. 8 Ha PA Mx 100w Siv 10 Cha PA Mx
ÆTS Din 50w 12	95 00	16 Cha PA Mx 100w Comb 200w Comb
-bin-100w 12 100-bin-100w	155 00	100w Amp & Cab 200w Amp & Cab 100w6 Cha Mx
15 150 has 150au	165 00	200w6 Cha Mx -100w8 Cha Mx

## 1F. $\Delta$ .1

1	
Minstell	24.7
Maestro	45 0
Bass Fiesta	55.0
Phase 50	45 O
Super 50	63 0
Phase 50 Super 50 Phase 100 2 Super 100 Model 120-6	72.0
Super 100	76 R
Model 120-6	898
P100 Stave P200 Stave	42.0
P200 Stave	53.0
FAL 50	33.0
FAL 100	55.0
FAL 100 PA 200 Cols pa	136.0

# TEAREISA

1	
RSC 350 RSC 180 OR 200 TR 70	558 - 323 - 487 - 220 -

EVENTIDE CLOCKY FL 201 Flamer	321
ODL 1745M Dgil	0
delay Line	2400
2826 Oninipi s	325
PANDORA	
4-080   808 9m-	SC
di-1 orpi	1450
Additional detay -	
modules	232
Additional output	
modules	261
The above equipme	ent as
HSO available for Im	ret

E.S.E. S.Eu	UIP.
1002 N/\$	224 75
1005 AP200 11006 S1L200	187 54 157 28
1007 PA200 R 1010 PA100TC	204 50 133 00
1011 PA100S	133 00
1012 PA60TC 1013 PA60S	83.03 83.03
1015 8200	225 00
1018 FH200 1022 S120	225 00 155 00
(BINSON SALES)	

1022 81	20 155 00
(BINSON	
30w Cot	ARS VLT REGS 97.00
60w Col	166.00
120w Cd	
60w Col	126 00
100w Co	1 215.00
60w Col	149 00
100w-Cc	162.00
l .	

100w-Col	162 00
AMPLIFIERS	
50vv ster	185.75
IQQw ster	293 50
50w ster trans	781 50
100w ster traits	318.75
6 Cha Mx	210.00
8 Cha Mx	234 00
6 Cha Mx	223 50
4 Cha Ma	197 00
4 Cha PA Mx	231 00
6 Cua PA Mx.	262 00
8 на Рам×	275 50

## 635 00 761 50 336 50 393.87 42 / 00 487.50 61867 200w8 Cha Mx 686 50

1.7.6	
Minstell	24.75
Maestro	45 00
Bass Fiesta	55 00
Phase 50	45 00
Super 50	63 00
Phase 100-2	72 00
Super 100	76 80
Model 120-6	89 80
P100 Stave	42.00
P200 Stave	53 00
FAL 50	33.00
FAL 100	55 00
PA 200 Calcus	136.00

RSC 350 RSC 180 OR 200 TR 70	558 46 323 07 487 69 020 06	
EELDON A	UIDIO.	Į

All prices subject to	o currency
adjostment	
EVENTIDE CLOCK	WK
Ft. 201 Flanger	321 00
ODL 1745M Doil	
delay Line	2400 00
2826 Oninipis	325.00
PANDORA	
4-080 L808 9m	SC
di-1 orui	1450 00
Additional detay	
modules	232.00
Additional output	
modules	261.00
The above equipments available for a	

H.H. ELECTRONICS		
POWER AMPS TPA100D IPA50D AM 8 12 IPA25D IPA25D 19" IPA25D -M	107 B0 77 00 55 00 57 20 57 20 55 00	
AMPS 1 C 100 ld bs org tw rev 100w 1.C 100-5 od bs.org. 100w V5-Musician	137 94 111 60	

100w	111 60
∨5-Musician	
R.100W	150.97
VS-Musician 100 W	130.97
VS-Bassamp 100 W	124.23
PA AMPS	

# MA100 5 ch rev 138.72 MA100 S 5ch 100w 119 34

S130 sl amp 120w	89 90
P.A. SPKRS	
2120C 2•12″100w	92 54
41200 4412°col 160w	139 50
HANT O A SYSTEMAS	

UNIT P A SYSTEMS		
100w radial fin	99 20	
115bs compact		
1-15" 100w	100 75	
COMBINATION AMPS 1 C100:Twin Rev.		
Fremelo - Sustain	206.15	

## C100 S,Sustain 75 100w 189 10 VS-Musician R.100W

INSTRUMENT SEKAS	
4126L,kd-bs org 4 4 12″, 200w	155.00
2156L.kl bs org	
Twin ported rollex	
enclosure, 200w	165 85
Mini Horn	62 77
l	

# Multi Head

STA200 slave 200w NCA108 solid state 200i
COMBOS
SA212 50w 2 + 12 SA212R 100w 2 + 12
CARINETS
SE4121 50w 4 = 12 SE4123 100w 4 = 12
SE4122 150w 4 •12 SE4129 200w 4 • 12
SE412450w4 * 12col SE4125100w4 × 12col
SE4126 150w 4 × 12cul

	15
107 BO	1 1
77-00 55-00 57-20 57-20	G00 IC 21
55 00	SP Mini

A25D -M	55 00
IPS C 100 ld bs org w rev 100w C 100-5 od bs.org. 100w	137 94 111 60

130 slamp 120w	89 90
A 5PKRS 120C 2*12*100w	92 54
1200 4+12fcol 160w	139 50

140,000	130 30
UNIT P A SYSTEMS	
100w radial fin	99 20
115bs compact	
1-15" 100w	100 75
CONADURA TION ANADOC	

# 212.35 V5-Musician 100W 196.85

# INICTOLINAENT COVOC

MONITOR SYSTEMS Combo Extension	134 46 68 98	
ECHÓ UNITS Single Sliding Ha	134 85	

# HIWATT

1	
AMPLIFIERS	- 1
DH504 AP 50w 115 00	- 11
DB103 AP 100w 149 00	I.
DR201 AP 200w 189 00	- 1
DH I 12 PA 100w 6ch 158 00	ı
DH203 PA 200w 6ch 214 00	t
STA100 slave 100w 118 00	- 1
STA200 slave 200w 174 00	- 1
NCA 108 solid state 200wr 178 (	oo Tu
	- 1
ı	DH504 AP 50w 115 00 DH103 AP 100w 149 00 DH201 AP 200w 189 00 DH112 PA 100w 6ch 158 00 DH203 PA 200w 6ch 214 00 STA100 slave 100w 118 00

COMBOS SA212 50w 2 + 12 SA212R 100w 2 + 12	168.00 217.00
CABINETS SE4121 50w 4 × 12	123.00

3E4123 100W 4 1 12 135 00
SE4122 150w 4 +12 152 00
SF4129 200w 4 × 12 189 00
SF4129 200w 4 × 12 189 00 SE4124 50w 4 × 12col 118 00
SE4125 100w 4 × 12col = 141 00
SE4126 150w 4 × 12col - 158 00 -
SE2123 30w 2 = 12
monutor 71.00
monutor 71.00 SE2124 75w 2 * 12
munitur 90.00

## STAGE MONITOR AMPS 110M spkr amp/combo 150w amp 12" spkr 110

+ horn	159 00
GUITAR AMPS	
IC210G200wTon	e boost
+ overdrive	159 00
l	

# PEAKERS n lim (100w) 15" • 1 borns

# THE MAXIPA SPEAKER SYSTEM Maxi bass bio (200w)

## 1 - 15" Gauss Maxi-midrangeBin (200w) 1 × 12" Gauss 169 00 Maxi-HF-Horn (100w) 95 00 Variable Active Crossover

JENNINGS	
AMPS V 30 30m AP 50 50m V 100 100m AP 100 100m	163 00 174 00 145 00 115 00
FR 100 100w	79 00 96 00

# SPEAKERS 0 1 1-48" 8 2 2+15" 95 00 115 00 78 01 135 00

## B 3 1×15" B 4 4×12" 1 50 2/12" 83 00 P A 100 148 00 2×12 colehorn 2×12 col

KEMBLE		
COMBINATION	AMPS.	
YTA 15	89 99	
YTA 25	99 09	
YTA 45	171 81	
YTA 95	226 26	
COMBINATION BASS AMPS		

## 214 54 YBA 65 Ld STACKS PE 200A TS 100 196 44 YEA ROOM

# 322 64 126 20 222 72 348 93 PE 200A rs 110 YIA 110A PF 200A TS 200 YTA 200A 435 28 BASSISTACK

YBA 100	269 61
HORN SPKR YHS 100	176 00
c a escuee c	201144 201442

	[Gand8SFRIESCOM8	OAMPS
	G50112	156 48
	G1000212	221 30
	G100115	263 89
	G100410	273 14
	B50115	184 25
1	8100115	273 15
ľ	PM200B	214 81
	PS75 pr	31817
	VPA150	532 99
	28.75 <b>B</b> pr	351.85
4	YPA 150B	<b>566</b> 67

433.63

691 67

323.15

PS100 pr YPA100B

DOCMT

# LESLIE SPEAKERS

192 00 337 96 407.40 435 18 523 14 435 18 523 14 504 62 453 70 550 92 523 14 232 00 384 26	SELF-CONT MIX 101 H 15ch ster 104 A 6ch pro P A AMPS 104 96ch 120w 105 6ch 25w 107 120w 102/80 80w4ch SLAVE AMPS 103 250w 111 120w
370 37	111/80 BOW RM

# 523 14 675 92 85 18 77 77 47 92 50 80

1200

150 00 120 00

120.00

87.00

135 00

145 00

372.00

493.00 P O A.

94 0 34.10

172 50

202 50 135 00

232 50

129.60

97.50

209.00

160 00

495 00

12 00

1	1031 200W.Ichs	196 94
1	AMPLIFIERS 110/250w	364 80
- 1	112/120 120w	141.42
- 1	112:80 80w	134 69
- 1		

946.65

14730

327 44

134 69

124 80

ORANGE

	112:80 800	13409
	COMBINATION AMPS	
J	, 115 BOW	203 84
- 1	115 R 80w rev	244.65
	115/120 120w	259 50
	115/120R 120w - rev	300 30
	125 50w twn	264 75

# CABINETS 114 1×15 60 ·· 152.25

114/ 110 I×15 100w	
113 2×15 120w	214 19
113/200 2×15 200w	285.44
109 4×12 muoi 120w	145,04
f09/200 4×12 200w	180 19
109 4×12 mm 120w	144 95
109/200 4512	
mini 200w	180 00
107 2×12 mntr 60w	89 25

## 107/2H 2×12 127:2B 1×15 148 25 140 75 195 23 164 25 128'8\*10 120w

-114-4H 1×15	254 55
P A SYSTEMS	
107 · 2×12 60w	89 25
107/2H 2×12	148 44
127:2H 2+12	140 94
127:2H 2*12 128 8*10 120w	164.25

## 114/4H 1415 254 55 64.50 REVERB 75.0 116

## PA: CE Sch Mis Arms

Graphic Equal	200 00
FPR Slave 200w FPR Slave 350w	118 00
E.P.B. Slave 350w	132 00
Storeo 5 way	
G Equal	80 00
10-way Parametric	
Equal	250.00
12ch Mor Desk	1050 00
18ch Mix Desk	2250.00
Bass Bios	120 00

## 285.00 Hadial + Sectional Horns 950.00 Two fley Unit 120 00 1900 00 Phase Unit, 190 00 Stan Mone 70 00 Chase Unit Star 120.00 Phase Unit, Stan 440 00 Ster D b Leo on

# B.L. PAGE

Electronic Xilovers

DYNACORD	
Echechord Spr	333.25
Echochord Mini	243 00
Magic HS	84 00
D350 80w cab	243 00
disa world HOLED	249 00
A1000	333 00

30.00

EXB25B 120w 2×15" spkrs     Basis reflex     Basis reflex     Indinate bailite     EXV2120w 4×12" spkrs     Indinate bailite     EXV2120w 4×12" spkrs     Outed reflex     Sykrs     Active directed port     8v 10" enci. 1124.07     V-48 100w bass ump/folded     hors enci. 124.07     V-68 240w ump/ 2×15"     ducted part enci. 545.37     ducted part enci. 54	10.4 × Fender 10"   301.30   10.4 × Jab. 0-1100   482.80     Musicmaster Bass, 1 × Fender 12"   106.50     PUBLIC ADDRESS SYSTEM     PA 100 Vocal Amp/8*   476.75     PA 100 Al-8 Sound Col. 4 × Fender 10   317.05     PA 100 SA-8 Sound Col. 4 × Fender 10   204.50     PA 100 SA-8 Sound Col. 4 × Fender 10   505.00     PA 160 Vocal Sound System with 4 × SC3-10 Col. 102.30     PA 160 Vocal Amp Top. 517.00     PA 160 SC3-10 Col. 102.30     CERWIN VEGA     AMPS   A1800 400W + 400W     Led meters   450.00   A1800 / 1400W + 400W     PA SYSTEMS   550.00     COVER   895.00   A3000 / 1700W + 700W     PA SYSTEMS   COMPLETE WITH AMPS     S00W 3 way system   35.1800 Hz     + 2 amps   4 Ch. 1718.00     1718.00   1800 Hz     + 2 amps   4 Ch. 1718.00     1718.00   1800 Hz     + 2 ch. 3 way   1718.00     PA SYSTEMS   1718.00     PA 500   206.5   309.5     PA SYSTEMS   1718.00     PA 500   206.5   309.5     PA 5	MAXIMIN CABS 210 50w 65.16 410 100w 65.39 212 100w 105.62 152 100w. 40m 106.91  J.T. COPPOCK  ELGEN 100w Id. 115.27 100w ster. 127.31 100w ster. 127.31 100w ster. 127.31 100w ster. 127.31 100w pA. 115.27 100w PA. 119.90 100w PA. 127.31 100w PA. 130.462 100w PA. 130.30 137.07 18d. hn. cob. FHTOA 150w bs. combo 18d hn. cab. FHTOA 150w bs. combo 18d hn. cab. FHTOA 150w bs. combo 18d hn. cab. FHTOA 1412 cols. pr. 177.31 157.00 cols. pr. 177.31 15	PA30A 22.39 PA30A-45 24.00 PA30AT 2 30.39 PA30AT-7 34.09 PA30AT-1 12.90 Musicaster IA 72.90 Musicaster IA 72.90 Musicaster IA 72.90 Musicaster IIA 259.33 Ehminator I 259.33 Ehminator I 259.33 Ehminator I 259.33 Ehminator I 279.30 Ehminator II 220.00 Sentry IA 194.44 Sentry III 49.00 Sentry III 49	CRTOFON GO741 7285.00 DSS731 3695.00 DSS732 3160.00 ST1.732 955.00 CPS741 2750.00 SM721 440.00  FM ACOUSTICS  E2.E4 Network in housing 55.56 E2.E4 Network 3-way 275.00 E2.E4 Metwork 3-way 57.41 D4 Drover D2 Medicell driver PM C3 E5Thn 28.70 PM C7 E5Thn 21.30 SSH Destort, boaster SSH Phase-fetter SSH VdI Super padal 1315F200-FM 21.30 SSH DSSON BSSH 1114.81 1315G200-W Guass 89. 1317X200-W 604 1336X400-W 15 cell 1336X400-W 15.61 1345X200-W H.F.  MALCOLM HILL ASSOCIATES  MODULAR DESKS: 16/2 A series 600.00 16/4 A series 755.00 16/4 B series 940.00 16/4 C series 1100.00 16/4 C series 1380.00 16/4 C series 1380.00 16/4 C series 1540.00 16/4 C series 1380.00 16/4 C series 1540.00 16/4 C series 100.00 16/4 C series	\$E2125 100w 2 × 12 munitor	PM400 98300 pr 90740  YPAR00 1288 89 EM60A 91.59 ES60A pr 18.51 YES60OA 111.11 ES70 (ES90A)pr 27.76 YES96OA 111.11 ES70 (ES90A)pr 27.76 YES96OA 111.11 ES70 (ES90A)pr 27.76 YES90A)pr 37.03 YES1300 237.03 YES1300 237.03 YES1300 237.03 YES1300 237.03 YES1300 217.59  ROTARY AMPS. RA.50 280.00 RA.100 434.00 RA.200 666.00  KINGFISHER ACOUSTIC  Acoustic gear all P.O.A.  KEYNOTE MUSICAL INSTRUMENTS  Consort 637.96 Vortex 600 P.O.A. Vortex 501 18.A. Vortex BC 125 T.B.A  Vortex BC 125 T.B.A  LANEY  AMPLIFIERS AS00 114.66 AS1UR 135.47 AS50PA AS70Slave 97.65 COMBOS K20 120.13 K400 120.1	MM ELECTRONICS  Sound Blooder 150w 187.50  Slave Amp. 150w 187.50  N.B.  AMPLIFICATION  Nolan 100w.amp. 106.00  Nolan 50w.amp. 75 00  NOLAN SESSION MSTR. Rev. Comb. 164 25  Nolan 4+12 P.A.cabs. 167 00  Nolan 2+12 P.A.cabs. 175 00  Nolan 2+12 P.A.cabs. 190.3  Nolan 4+12 Ld/Bs 117.00  Nolan 4+12 Ld/Bs 162 00  Flame 50w amp. 67 50  Flame 50w amp. 67 50  Flame 50w 2+12  Combo 191.525  NICHOLLS  HORN SYSTEMS  25-12 shoulcab. 2 Middax  hrs. 150w 2-13  SPRR SYSTEMS  25-12 shoulcab. 2 Middax  hrs. 150w 2-13  21 100 C ab. 119.81  SPRR SYSTEMS  25-12 100w G Bs. cab. 92.16  2-12 100w G ab. 92.16  2-12 100w C cols. Pr. 236 96  4-12 200w C cols. Pr. 236 96  4-12 200w C cols. Pr. 211.20  4-12 200w C cols. Pr. 211.20  4-12 200w C cols. Pr. 211.20  4-12 200w Slave 15.13  120w Slave 15.12  6-chn 120w PA 173.15  200w SL  120w SL  120w SL  120w SL  120w PA 173.15  200w SL  162.74  120w PA 173.15  200w SL  162.74  120w SL  162.74  120w PA 173.15  200w SL  162.74  170.44   NOVANEX  BEAR  BEAR  COMBOS  AUT3 3 00  AUT6 35.20  AUT10 50.40  P15 69.60  175 00  170w PA 173.15  200w SL  2	Grigant   549,00 Grigant   516,00 Eminem   1059 44 Eminem   1069 44 Eminem   1069 44 Eminem   1069 40 O G2002   396 00 His Fisyont   1264,00 B1001 by a mp   360,00 SUNN   1719,44 Model 81   1580,56 Model 82   1719,44 Model 81   1580,56 Model 82   1719,44 Model 81   1580,56 Model 62   1580,56 Model 62   1580,56 Model 66   1302,78 Model 67   1302,78 Model 47   1302,78 Model 48   1163,89 SPKR'ENCS   1444,67 Model 47   1302,78 Model 47   1302,78 Model 48   1302,78 Model 49   1302,78 Model 47   1302,78 Model 48   1302,78 Model 47   1302,78 Model 48   1302,78 Mode

SHARMA

500 Professional

2000 Professional

500 de luxe

650 Combo

Sharmette 900

900 Combo 2200

2000 Combo

2000 de luxe 2100

5000 Cambo

5000 GT Combo

2300

5000

5200

5300

Combo IV

Combo de fuxe

AUGUST AMPS

prs. 1 × 12" PA/Cols.

prs. 1 × 12" PA/Horn

1 x 15" Horn Bin

pra. 2 × 12" Horn Pa/

SW AMPLIFICATION

Cols ors.

12067 APEO

12071 AP100 12072 PA100

126 PA 200w 120 PA 100w

182 PA spkrs 226 PA spkr.

186 Monitor box 182/S sliamp spkr 226/S sliamp spkr 186/S sliamp monitor

SM30 organ Leslie

SOLA SOUND

SOUNDCRAFT

ELECTRONICS

MIXER CONSOLES

16/2 (Mk.2)

SM300 Leslie

SM100 Leslie

Buckason 7w

Mighry Arom Col/Snd. Compact

Power Pack 30

12070 PA 100 Rev.

12052 100 Stave 20001 Vocal blender

15001 30w combo 12028 Add on born

12032 R100 cab 12054 2 × 12 col. pr

12055 2 × 12 cab. 89.81 12057 Tri-tone 165 74 12063 1 × 12 horn pr 144 16

20021 4× 12 mini-cab. 141.57 12085 1×18 ported cab. 64.77

SISME/GODWIN

prs. 2 × 12" Cab. 4 × 12" Cab.

DAVE SIMMS

PA 100w 4ch./echo/ slave. 2 × 12° PA/Cols.

MUSIC PRODUCTS

5000 GT

ORGANISPKR. CABŞ

120.20 158 03 174 15

232 94 261 17

232.22 294.52

322 10 259 01

300.14 381.05

363.61

792 29

403.50

34 59 38.22

101.50

127.87

81.37

111.50 69.75 115.95

123 00

85 80

162.00

141.57

123.61

104.17 53.47 178.70

212 03 89.81

389.00 137.00

212.00

395.00

354.00

777.00

493.00

26.41 22.73 34.25 50.60 77.27

1000.00

Vibrasonic snare

16" × 16" T-T (lgs)

HAYMAN CYMBALS (SWISS)

12" × 8 1-t

22" Bass

14" High Hot 18" Cymbal 20" Cymbal

DAVOL

TAM-TAMS

REDSOUND

HEAVY BAND CYMBALS

EMI HAMMA

32" 36" **40**"

20"

12" pr. 13" pr. 14" pr. 15" pr.

18" pr. 20" pr

Kii W770 Kii 660

Kn W660 22" bass 24" bass 13 × 9 tom

14 × 10 tom 13 × 9 tom (SH) 14 × 10 tom (SH)

14 × 51/2 snare.

[metal 14 × 5½ sance

Bass drum pedal

FLETCHER COPPOCK

& NEWMAN

KENT DRUM KITS Superstar Outfit Apollo 5 Outfit Apollo 4 Outfit

**HOHNER** 

CONGAS 1823 29"

L824 25"

BONGOS L640

QUITFITS

K120 4 dr. K130 4 dr. K132 5 dr.

L841

L642

(wood)

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64.90

50.05 51.70 71.50

10.00

25 00

9.50 10.50

13.50 17.00

18 00

21.00

29.50 36.00 44.00

65.00 90.00 125.00 295.00 350.00 390.00

5.50

8.00 8.50

11.00 12.00 16.50 20.00

19.18 23.90

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37.50

56.25 67.87

277.73 277.73 237.04

237.04 55.32 58.70 29.30 30.92 23.15

27.73 42.87

40.69

40.69

13.05 16.43

245.37

180.00

80.74

29.91

44.86

157.87 218.33 265.97

SOUND	) EQUIPMI
SM100 100w cc 2/12" SM100A/rev. SM10/1100w cc 4/12"	omb 168 95 192.20 omb 233 20 246 45
SM30T/30w Ira 1*12"	740 45 ns 84 84
CABINETS CSR100 2×12*1 CSR120 2×12*1 CSR200 4×12*2 CSR240 4×12*2	00w 75.95 20w 79.82 20w 122.45 40w 130.20
WITH COLUMN CSM 100 2×12" 1 CSM 120 2×12" 2 RPA12 2×12"(1)	100w 75.96 200w 79.82 20w)
+ 50w hn. driv RPA15 1 × 15"(10 + 50w hn. driv CSB200 2 × 15" 2	er 209.25 DOwn
gs cab CSR1001 × 15" I Flet. turn. bs	151.13 00w 151.13
ROSE-MO	RRIS
1959 100w Ld, 1992 100w Bs, 2098 Frans 100 2099 Frans 100 1986 50w Bs, 1987 50wLd, 2989 50w Artis 2048 50w Artis 2008 100w Artis 2003 100w Mai 2005 Trans 100 0/p L 100	171.04 171.04 171.04 145.61 133.46 133.46 1 133.46 1 rev. 139.14 1 rev. 139.14 1 rev. 139.14 10.87 ster 171.04 133.46 10w st. 113.80
WSTRUMENT CI 1982-19828 4** All purpose 1960-19608 4** Ld Organs 1935-19358 4** Bass organs 1979-19798 4**	134.82 134.82 12G12M(8) 134.82
Bass organs 2095-2095B2× Reflex Horn 2064-2064B1×	190 65 12 Bass 134.82
Purcel 2065-2065B 1 > Purcel	132.06
2045 2 × 12 G1 All purpose	2H 80.41
1990 8 × 10 Lea 2049 2× 12 Art 2069 4 × 12 Art 2052 4 × 15 Pow Bellax	62,93 ad 134,82 st 113,94 ist 138,73 rercel
2056 2 × 15 Pow Reflex	316.40
COMBINATION / 2200 Trans 100 2 × 12 Ld/org	AMPS w 217.00
2201 Trans. 30w × 12 Bs 2040 50w 2×12.	108.50 Artist 206.62
2077 Trans. 100 4 × 12 Bs. 2078 Trans. 100 4 × 12 Ld.	ha.
4 × 12 Ld. 2041 50w Artist 2059 100w Artis	stack 253 08 SI
stack P.A. AMPS	319.63
1985 50w PA To 2003 100w PA	
2071 Trans mini- 6ch 1994 Trans, Miss	66.40 er 9ch
mono 2050 Trans, Mixe	322.50
stereo 2051 Trans. 250w Slave 2205 Trans. 100 O/P T/X	187 04
P A. CA8S. 1995 2* 12 + 2 Disco/PA cabs 2097 8 × 8 PA	125.86 166.66

_			
	200w 4 × 12 300w 6 × 12 + harn 150w 2 × 15 + hern 100w 1 × 18 bass	192 20 257 30 217 00 240 25	SPEAN YS-15 YT-15, YF-10,
	PEAVEY SLAVES 260 Booster 130w 800 Booster 400w	147.25 289.85	YC-8 1 YC-6 1 Y-2 12
	PEAVEY PA AMPS. PA120 100w Bin Standbrd 130w Bin PA400 200w 12in PA500 200w 18in PA500 000w 27in Monitor amp 130w PÉAVEY MIXER: 800 M8 x Hi, 8 x LO in	178 25 193.75 257.30 482.05 609.15 164.30	YCV-1: YCV-2 YCV-2 P.A. YVM-3 YVM-4 YVM-4 YVM-1 MX8,8 MX16.
			w.N
	PEAVEY P.A. CARS 2 × 10 30 w COI. 4 × 10 65 w coi. 1 × 12, 1 × 10 3 tweeter: 4 × 12 150 w coi. 2 × 12, 2 × 10	85.25 s 116.25 116.25	AMPLI CM.8
	2 × 12, 2 × 10 3 Tweeters widge 1 × 12, 2Tw. widge 2 × 15, 5 + horn 2 × 15, 2 × 10 2tw Hf rad horn 115HT voc. proj 216HT voc. proj 114 17 Tweeters 1 × 15 + rad (in bin	144.92 80.60 217.00 240.25 162.75 178.25 272.80 147.25 288.30	K.66 ZOO BASS BB1 20 Gou BB2 40 Gou BB3 20 Gou BB4 20
	TYAS		Gau
	AMPLIFICATION L.C. 60 Stave L.C. 60 Ic P.S. 125 Stave T 125	60.00 75 00 96.00 130 00	MID BI MB1 1 MB1 4 Gua:
	SPEAKERS Single 12" Twin 12"disco pr Twin 12"PA pr Single 15"bs bin Twin Horo box	30.00 109.00 108.00 120.00 85.00	HOHN HU1[2] HU2 1 HU3 3 HU4 6 HU5 1 HU6 6 HU7 6 HU8 6
	VITAVOX		S1075 ST240
	PRESSURE UNITS Type S3 Type GP1 Type GP2 Type Gp2 T	74.07 30.42 20.37 31.94	MONIT F85 75 F86 15 F87 15
	LOUDSPKRS. AK 123 15 ohms AK 124 15 ohms AK 156 15 ohms AK 157 7.5 ohms WN 350 15 ohms	42.13 42.13 64.91 64.81 17.45	NON-N 10 into 16 into 20 into MOOU
	VOX	17.45	10 into 15 into 24 into
	VOX AMPS AC 30 Top Beest AC 50	158 10 109.26	3XF 32 X/over STUDIO
	SPEAKERS FB 118 Cab. FB 215 Cab.	99 07 105.56	Custon
	W.E.M.		KEY
	Copical echo Halle cat echo Chihman amp. Westminster Nebra Westminster Is-bra Wastminster Is- Dominator MkIII Pwr. muscrte Dominator bs Dominator 30w,	70.37 231 48 42 00 46 40 46 40 52 80 78 70 78 70 87.96	BOC HAV Diamoi /rhy. Diamoi /rhy.
	v amp Dominator 30 bs. Dominator 50 fd Dominator 50 'k-brd' Dominator 50 amp top Dominator 100 rev. transistor	115.74 125.00 148.15 152.78 92.59	Diamor Zamp Diamor Diamor Zang Diamor
	Dominator 100 stan.	180.56	Diamor

180.56 77.76 101.85 77.78

GX 100

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PEAKERS		DAVOLI	
F-15P, 15" T-15,2×15" F-10, 4×10"	81.00	ORGANS & SYNTHS.	
F-10: 4×10°	102 0 102.00	K249	`575.99
C-8 10,8×10°	170.74 129.00	K249 K217 K205	749 99
C-6-10, 6×10" -2-12, 2×12"	96 00	Davotisint	2299.99 225.00
F-10, 4×10° C-8 10,8×10° C-6 10, 6×10° -2 12, 2×12° F-12, 4×12°	96 00 138 00	ELECTRIC PIANOS	
CV-188 1×18" CV-215 2×15" CV-212, 2×12"	252.00 252.00	Group	750.00
CV-212, 2×12"	159 00	Baby Grand	850 00
Α.		Leve one	
VM 2, 30wr VM-3, 30w VM-4, 4ch, VM 6, 6ch,	69.00 90.00	ELKA-ORLA	
VM-4, 4ch.	150 78	CHICAGO	
VM 6, 6ch. PM-1, 100w	198 00 90 00	37/12 Chicago 49	98 66 100 62
IXB,8 ch	179.00	Triffany 3/6rhy Triffany 4/6rhy	100 62 114 77
IX16, 16 ch.	TBA.	Companion P37/12	117.99
V.M.1.		6 i hy	128.96
		Companion P21/6rby Companion P37/12/0 auto bsi acc.	ijiz.υs βrhγ&i
MPLIFIERS M.8	15.69	Suio bs acc. Companion 15/6 rhy	149,38 136,82
.66	15.69 27.73	1	130.62
		CONSOLES Fantasy 20 37/12/	
OOT-HORN		6 rhv	157 22 161.97
ASS BINS		Fantasy 20/6 rhy Fantasy 27/10 rhy ELKA POST, ORGANS	161.97 204.44
B1 200W ×15"	195.00	ELKA PORT, ORGANS	104.77
Gauss B2 400W 2*15"	195.00	Tornado 4 T.L. 49	182.90 182.90
Gauss 83 200W 1*15"	315.00	Capri Junior	191.50
Gauss	195.00	Capri Junior/rev. X-55	211.98 658.58
B4 200W 1×18" Gauss	309.00	Concord 400	754.97
	305.00	ELKA CONSOLE ORG. Minuelte 99	ANS 372.48
IID BINS	186.00	Minuette 99/MT	438 98
B1 150W 2×12"ATC B1 400W 2×12"	100.00	Capriccio 11 Capriccio 11/MT	457 32 523.85
Guass	229.00	Capriccio 11/0	607.01 690.14
OHN UNITS		Capriccio 11/MT Capriccio 11/0 Capriccio 33 Capriccio 33/MT Capriccio 33/0 Capriccio 33/0 Notturno 44/MTL	756.70
U1(2) <del>5</del> 0W U2 120W	160.00 342.00 206.00	Capricolo 33/0	939.69 939.64
U2 120W U3 30W U4 60W	206.00	Notjurno 44/L	806.58
U5 120W	332.00 396.00	Notturno 44/MTL	873.13
U6 60W	326 00 373 00	Notturno 44/L Notturno 44/MTL Notturno 44/OL Notturno 66/L	956.33 1005.78
U7 60₩ U8 60₩	215.00	MOREUMA 007 C/C	1155.90 1072.70
IO75 40W	145 00	Elka Elec. K-brds	
T2405 60W	155.00	Elkapiano 88/corigs Elkarhapsody 490	209.52
ONITORS	130.00	/cs•lqs	250.32 240.18
85 75W 86 150W	295 00 521 00	Elkarhapsody 490 Elka rhapsody 610/	240.18
97 150W	521 00	cstigs.	432.80
ON-MODULAR MIXE	R	As above, amplified Elkapiano 98/A	433.85
	895 00	Elkarhapsody 610/A	
0 mle 4 6 into 4	1200.00		
5im∔n-4	1200:00 1400:00	1	
6 inn 4 Dinto 4 IOOULARMAXERSIPA	1400:00 N	. AFISA	
6 inn 4 Dinto 4 IOOULARMAXERSIPA	1400:00 AJ - 880:00	ARFISA	194 61
6 into 4 O into 4 IOOULAR MIXERS(P/ O into 2 5 into 2	1400:00 N	Pianorgan Balfour	324.61 387.69
6 into 4 O into 4 IOOULAR MIXERS(PA O into 2 5 into 2 4 into 2	1400:00 AJ 880:00 1183:00 1650:00	Pianorgan Baifour Beaumont Beigraye	540,00
6 into 4 O into 4 IOOULAR MIXERS(P/ O into 2 5 into 2 4 into 2 XF 3-WAY ELECTRON	1400:00 AJ 880:00 1183:00 1650:00	Pianorgan Baifour Beaumont Beigraye	540,00 700.00 780.00
6 inh 4 O Into 4 O Into 2 O Into 2 5 into 7 4 Into 2 XF 3-WAY ELECTRON / over	1400:00 AJ 880:00 1183:00 1650:00 UC 249:50	Pianorgan Baifour Beaumont Beigraye	540,00 700.00 780.00 007.69 260.00
6 into 4 O into 4 IOOULAR MIXERS(P/ O into 2 5 into 2	1400:00 AJ 880:00 1183:00 1650:00 UC 249:50	Pianorgan Balfour Béaumont Belgrave Balmoral Berksfoyu 1 Berksford 1 Buckingham 1	540,00 700,00 780,00 007,69 260,00 518,46
6 into 4 D into 4 D into 2 5 into 7 4 into 2 XF 3-WAY ELECTRON 7 over TUDIO MIXING CONS	1400:00 AJ 880:00 1183:00 1650:00 UC 249:50	Pianorgan Balfour Béaumont Belgrave Balmoral Berksfoyu 1 Berksford 1 Buckingham 1	540,00 700.00 780.00 007.69 260.00 518.46 743.07
6 inte 4 Dimte 4 Dimte 4 Dimte 2 Dinte 2 Sinte 7 Sinte 7 A into 2 Expanded the second of the second	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Pianorgan Balfour Béaumont Belgrave Balmoral Berksfoyu 1 Berksford 1 Buckingham 1	540,00 700.00 780.00 007.69 260.00 518.46 743.07 44.61 395.38
6 into 4 D into 4 D into 2 5 into 7 4 into 2 XF 3-WAY ELECTRON / over TUDIO MIXING CONS	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Pianorgan Balfour Béaumont Belgrave Balmoral Berksfoyu 1 Berksford 1 Buckingham 1	540,00 700,00 700,00 707,69 260,00 518,46 743,07 44,61 389,20 603,07
6 inte 4 Dimte 4 Dimte 4 Dimte 2 Dinte 2 Sinte 7 Sinte 7 A into 2 Expanded the second of the second	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Planorgan Ballfour Beaumont Beigrave Balmoral Beresford 1 Buckingham 1 Supper Plano VIP200 Amp VIP2	540,00 780,00 780,00 007,69 260,00 518,46 743,07 44,61 395,38 389,20 603,07 316,92 220,00
6 inh 4 D inh 4 DOULAR MIXERS(P/D) into 2 D into 2 S into 2 4 into 2 4 into 2 XF3-WAY ELECTRON OVER TUDIO MIXING CONS TUDIO MIXING CONS USION BUILL  (EYBOARDS	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Planoroan Balfour Basumont Belgrave Balmoral Berkefoy, 3 Beresford 1 Buckingham Super Plana VIP200 Amp VIP200 Amp VIP200 App TR70 OR200 OR200	540,00 780,00 780,00 007,69 260,00 518,46 743,07 44,61 395,38 389,20 603,07 316,92 220,00 167,69
6 inh 4 0 inh 4 0 inh 4 0 inh 6 0 inh	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Planorpan Balfour Basumont Belgrave Balmoral Berkefoy, 3 Beresford 1 Buckingham Super Plana VIP200 Amp VIP200 Amp VIP200 App TR70 OR200 Pro, Duo VIP800 Pro, Duo VIP800	540,00 780,00 780,00 007,69 260,00 518,46 743,07 395,38 389,20 603,07 220,00 467,69 973,84
6 inh 4 D inh 4 DOULAR MIXERS(P/D) into 2 D into 2 S into 2 4 into 2 4 into 2 XF3-WAY ELECTRON OVER TUDIO MIXING CONS TUDIO MIXING CONS USION BUILL  (EYBOARDS	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Planorgan Ballfour Beaumont Beigrave Balmoral Beikeloyu Ji Beresford Ji Buckingham Ji Supper Plano VIP200 Amp VIP200 Synlorchestra RSC350 ASC18P TR70 OR200 Pro. Ouo VIP500 VIP500 VIP500 VIP500 VIP500 VIP500	540,00 780,00 780,00 007,69 518,46 743,07 44,61 395,38 395,38 395,38 395,38 395,38 395,38 395,38 467,69 973,84 564,61
6 inh 4 0 inh 4 0 inh 4 10 OULAR MIXERS(P/ 0 into 2 5 into 7 4 into 2 4 into 2 4 into 2 7 over TUDIO MIXING CONS ustom built. CEYBOARDS EOOSEY & IAWKES	1400:00 AJ 980:00 1183:00 1650:00 UC 249:50 SOLES	Plantorgan Ballfour Beaumont Beigrave Balmoral Benekeloy Beresford Buckingham J'Super Plana VIP206 Amp VIP206 Syntorchestra RSCS56 RSCIBP TR70 OR200 Pro. Duo VIP800 VIP800 VIP800 VIP800 Pedalboard VIP233	540,00 780,00 780,00 9260,00 9518,46 743,07 44,61 395,38 319,20 316,92 220,00 973,84 973,84 564,61
6 inh 4 0 inh 4 100ULAR MIXERS(P/ 0 into 2 5 into 7 4 into 2 KF 3-WAYELECTRON COVER TUDIOMIXING CONS USTON BUILT CEYBOARDS COOSEY & LAWKES Damend 70 amend 70 amend 70	1400.00 880.00 1183.00 1183.00 1650.00 IIC 249.50 60LES	Planorpan Balfour Beadmont Belgravel Beneder B	540.00 100.00 180.00 180.00 180.00 180.00 180.60 180.66 144.61 1819.53 1819.20 1603.07 180.00 167.69 1773.84 158.86
6 inha 4 D inha 4 DOULAR MIXERS(P/D) into 2 S into 7 S into 2 S into 3 S in	1400.00 880.00 1183.00 1650.00 RIC 249.50 60LES	Planoroan Balfour Basumont Belgrave Balmaral Berksford I: Buckingham Super Plana VIP200 Amp VIP200 Amp VIP200 Amp VIP200 Plana VIP200 Pro. DUD VIP500 Pro. DUD	540.00 100.00 180.00 1007.69 260.00 518.46 1395.38 165.39 165.39 165.39 165.39 165.39 165.39 165.39 165.39 165.39 166.39
6 inha 4 D inha 4 D inha 4 D inha 2 D inha 2 S inha 3 S i	1400.00 880.00 1183.00 1650.00 IIC 749.50 GOLES 131.36 166.48 440.20	Planorpan Balfour Beaumont Belgrave Balmoral Belgrave Balmoral Benekkloy Berestron Buckingham Super Plano VVP106 ASC18P TR70 PR20 PR20 PR20 PR20 PR20 PR20 PR20 PR2	540.00 100.00 180.00 1007.69 1
6 inha 4 Di mina 4 DI mina 4 DI mina 4 DI mina 2 Si mina 7 A mina 2 KF 3-WAY ELECTRON TODIO MIXING CONS DISTORMENT OF THE MINISTRATION CEYBOARDS COOSEY & LAWKES Damond 70 Damond 70B Damon	1400.00 380.00 1183.00 1650.00 107.249.50 30.00 131.36 166.48 140.20 454.15	Planorpan Balfour Beaumont Belgrave Balmoral Belgrave Balmoral Belgrave Balmoral Belgrave Bedgrave Buckingham J: Super Plana VIP206 Amp VIP206 Amp VIP206 ASCIBP TR70 DR200 Pro. Duo VIP600 VIP600 VIP5370 Pedalboard VIP233 VIP370 Pedabboard Pro. Plana Crist Prostore	540.00 000.00 007.69 260.00 6514.3.07 44.61 315.31 316.92 200.00 167.69 47.53 46.61 47.53 46.61 47.53 46.63
6 inha 4 D inha 4 DOULAR MIXERS(P/D into 2 D into 2 To into 7 To into 7 To into 2 To into 7 To into 2 TO into 3 TO into 4 TO i	1400.00 880.00 1183.00 1650.00 RC 749.50 60LES	Planoroan Balfour Basumont Beigrave Balmacal Berkefoy. 3 Beresford 1: Buckingham Suber Plana VIP200 Amp VIP200 Amp VIP200 Amp VIP200 Pro. Synlorchestra RSC350 RSC180 TR70 OR200 Pro. Duo VIP580 VIP580 VIP580 VIP580 VIP580 VIP1800 VIP580 VIP1800 VIP580 VIP580 VIP380 VIP370 VIP	540.00 00.00 00.00 00.00 007.69 060.00 518.46 5143.67 44.61 395.38 389.20 603.67 336.367 336.367 336.367 34.561 538.46 64.51 641.53 158.461 671.53 158.461
6 inha 4 D inha 4 DOULAR MIXERS(P/D into 2 D into 2 To into 7 To into 7 To into 2 To into 7 To into 2 TO into 3 TO into 4 TO i	1400.00 880.00 1183.00 1650.00 RIC 249.50 60LES 131.36 166.48 440.20 454.15 378.20 392.15	Planorpan Balfour Beaumont Belgrave Balmoral Belgrave Balmoral Belgrave Balmoral Belgrave Bereston Belgrave Bereston Buckingham J. Super Plano V. P	540.00 009.00 080.00 007.69 260.00 518.46 743.07 44.41 915.38 8003.07 836.92 836.93 846.15 846.15 846.15 846.15 846.15 846.15 846.15 846.15 846.15
6 into 4 0 into 4 0 into 2 0 i	131.36 166.48 440.20 454.15 378.20	Planorgan Balfour Baldour Bald	540.00 000.00 000.00 0007.69 260.00 518.46 144.61 395.38 395.38 316.92 316.93 3
6 into 4 0 into 4 0 into 2 0 i	1400.00 880.00 1183.00 1650.00 RIC 249.50 60LES 131.36 166.48 440.20 454.15 378.20 392.15	Planoroan Balfour Basumont Beigrave Balmaral Berksfoy. Bersfood Berksfoy. Bersfood Berksfoy. Bersfood Buckingham Super Plana VIP200 Amp VIP231	540.00 009.00 080.00 007.69 260.00 518.46 743.07 44.41 915.38 8003.07 836.92 836.93 846.15 846.15 846.15 846.15 846.15 846.15 846.15 846.15 846.15
6 inha 4 Di mina 4 DI mina 4 DI mina 4 DI OOULAR MIXERS(P/D) into 2 S into 7 S into 7 S into 7 S into 7 S into 2 S into 7 S into 2 S into 7 S into 2 S into 7 S into 2 S into 3 S into	1400.00 880.00 1183.00 1650.00 RIC 249.50 60LES 131.36 166.48 440.20 454.15 378.20 392.15 654.10 292.95	Planoroan Balfour Basumont Beigrave Balmaral Berksfoy. Bersfood Berksfoy. Bersfood Berksfoy. Bersfood Buckingham Super Plana VIP200 Amp VIP231	540.00 0000.00 0000.00 0000.00 0000.00 0000.00 0000.00 0000.00 0000.00 0

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3034 Domus 44(A)	516.00	i		CBS/ARBITEF	₹
3002 Majestic Auto	1196.00	lvox		ROGERSORUMOUTF	rs
30037 Cokseum é.p	1328 00	!		(with MEMRILOC STAN	IDS) 475 00
3003R Coliseum	1340.00	String Thing	370 36 370 18	Headliner IV   Studio X 1	041 70
3003TR Coliseum/ Rhy • Trans.	1359 20	Cors. Clec. Org Elec. piano	175.86	Londoner V	640 00
. ,	.000 00		110.00	Londoner V (Superten) Londoner VI	580.00 720.00
LOGAN CONSOLE		ľ welson		Lundoner VII	855 00
ELECTRONIC ORGAN 10.022 Weekend	18 559 20	PORTABLE ORG	AME.	Ultrapower VII	950.00
10.060 Holiday	55520	Condor T	288.00		020.00
300	719 70	Personal Duo	435.19	Starlighter IV Starlighter IV (Superter	560.00 L 520.00
10.061 Holiday 400	940 00	President/\$td. President De-Luxé	608.00 728.01		020.00
700	540 00	ì		ROGERS DRUMS	121.00
ADD-ON ELECTRONI	C	MANUAL KEYBO		Dynasonic Share 5 < 12 Dynasonic Share 6 % × 1	4 126 50
KEYBOARDS 10.023 Logan		Syntex Vedette	432.00 212.00	SupercenShare5×14	90.20
String Melody	462.04	K.O_(knock-out)	348.80	Superten Snarc 61/2 × 14	94 60
l		1		Powertone 14×20Bass Powertone 14×22Bass	140 80
ELECTRONIC PIANOS CEP2 Gromar	•	RHYTHM UNIT	115.20	Powertone 14 × 24Bass	156.20
Piano	184.26	3.12	11270	Powertone 8 × 12 T-T Pwertone 9 × 13 T-T	70.40
CEP3 \$ Cromar		HOME AND CON	CERT	Pwerton 10 × 14 T-T	73.70 88.00
Piano CEP72 B Crumar	194.44	CONSOLE ORGA	820.00 320.00	Powertone 12×15T-T	96 80
Piano	226.85	M.G.40 T Festival VB	3.36.00	Powerione 16 × 16T-T Powerione 16 × 18T-T	106 70 126.50
I		Fastival VBS	364.00	Powertone 18 × 20T-T	156 20
JENNINGS C	RGANS	Festival B Winner 45	384.00	Powertone Bongos	60.50
	. –	Winner 45 S	544.00	Powertone Timbales,	118.80
J.70 2 Man Port.	536.00	SM 3300 BS	720.00	Brass Powertone Tunbales.	• 19.dU
J.71 3 Man. Port.	648.00	SM 3300 BL SM 3300 S	752.00 <b>6</b> 72.00	Chrom.	129.80
MEMBI C		SM 3300 L	704.00	Accusonic Timbales, 20 Accusonic Timpani, 23	7 287.10 310.20
KEMBLÉ		MG 300 T MG 300 TS	736.00 784.00	Accusonic Timpani, 26	366.30
YAMAHA K'80S		Romantic 130	608.00	Accusonic Timpani, 29'	365.00
BZR	276.00	Romantic 130 &	556.00	CONCERTION TONG	
BK2	412 00	Romantic 130 L Romantic 130 LK	686.00 752,00	CONCERTIOM: TOMS	44.00
B4CR BK4B	480 00 524.00	Romantic 150	704.00	7" × 10"	44.35
B5CR	600 00	Romantic 150 S Romantic 150 L	752.00 784.00	8" × 12" 9" × 13"	48.95 52.25
BK5	676.00	Romantic 150 LK	848,00	10" × 14"	61.05
B20BK B30R	900.00 988.00	Melodic 236	672.00	12" × 15"	64.90
CSY1	1040.00	Melodic 23#S Melodic 238 L	720.00 752.00	PAISTE CYMBALS	
CSY2 BK20B	1200 00 1120.00	Melodic 210LK	816.00	and GONGS	
D3A	1200.00	Melodic 25 0	768.00 816.00	2002	
D3R (white)	1240.00	Melodic 2505 Melodic 250 L	848.00	13"	76.25
DK40A E10AR	1576.00 2176.00	Melodic 250 LK	912.00	15"	83.20 88.35
E5AR	300.00	Prestige 330 L Prestige 330 LK	976.00 1040.00	13" Ut-Hat	52.80
EX42	7500 00	Prestige 35 0 S	1040-00	14" Hi-Hat 15" Hi-Hat	54,30 60.75
COMBO ORGANS		Prestige 35 0 L	1072.00	16" Crash, Medium or	00.70
YC 25D YC 45D	651 00	Prestige 350 LK	1 [ 36.00	Ride	34.80
YC.45D	1225 00			18" Crash, Medium or Ride	41.80
PORTABLE SYNTHES	SIZED			20" Crash, Medium or	
SY1/case × Exp.	, , , , , , , , , , , , , , , , , , , ,			Ride	51,75
ped	440 00	Privilage 4005	1216.00	22" Crash, Medium or Ride	66 30
SY2/stand × pedal	480 00	Privilege 400 L	1248.00	24"Crash, Mednim or	
PORTABLE ORGANS		Privilege 400 LK	1312.00	Ride	79.80
VC250	651.00			18" China type 20" China type	55 20 70.00
YC45D B.P.1	1225.00 85.00	WURLITZER		8" Bell Cymbal	27 20
15	20 00	305 Sprite	159,00	11" Splash Cymbal	32 30
LIVINGSTON	1	320 Sprite, Fwd	554.00 595.00	FORMULA 602	
Livingsion	•	160 Sprite, Fwd 3.75 Sprite, Fwd	887.00	13" Hi-Hai Sound	
Chorister 61 MB	380 00	JAGO Sprite, Fwd	909.00	Edge 14" Hi Hai Sound	76.25
Minstrel Abbey Chapet	T B A 590.00	415 Sprite, Fwd 542 Chapel Spinet	1098.00	Edge :	83.20
Abbey Chapel/13	330.00	Wal	1284.00	15" Hi-Hat Sound	00.05
Ni odlbrd.	648.00	\$45 Chapel Spinet		Edge	88.35 59.65
Abbey Chapet/ spkr.cab.	690 00	Mah/Fwd 55 Chapel Spinel,	1190.00	1 14" Hi Hai	63.60
Choral 30/30 nt.		Mah/Wal.	1548.00	1 15" Hi-Hai	71.20
pd/brd. Chorale 30/30 nt.pdi + spkr. cab.	960 00	605 Centura Wal. 600 Centura, Wal.	2025.00 2221.00	16" T.Te.M. Mr. 17" T.Te.M.Mr	40.65 45.80
Chorale 30/30 nt.pdl 4 spkr. cab.	1090 OO	1802 Chancel Wal.	2221.00	1.18" T.Tc.M.Mr.	48.95
Chorister 2-69 '8' / 32	2	1805 Centura, Wal.	2623.00	1 19" T.Tc.M.Mr.	56.95
nt adibid.	1350.00	4700 Concert, Wal	3574.00	20" T.Tc.M.Mr. 22" T.Tc.M.Mr.	61 00 78 10
Charister 2-69 B1/33 nt_pdlbrd+spkr.cab	147000	PIANOS		I 24" T.Tc.M.Mr.	93 94
The pre-pro-aperitor		206 Elect, Black	467.00	18" Flar Ride	
м.с.н.		2109 Fwd. 2126 kt.Prov/Fwd	549.00 62.19	Medium 20" Flat Ride Med	55.25 70.15
IVI.C.M.		2850 Wal.	810.0	18" China 20" China	55.25
A100 Solinat Rhy.	528.60	I		20" China No. 1.7 Sound	57.80
G110 Solina + Rhy.	620.00	PERCUSSIC	N.	No. 2 7 Sound	23.95 28 40
A104 Solina * Rhy //ge Ruh-l-Matic	752.00	1 TUCOSSIC	71 <b>4</b>	No. 3.7 Sound	48.55
B206 Solina /Rith-O-	-Manc,	1,00,		No 4.7 Sound No 5.7 Sound	55.25 55.25
Multivoice C116 Solice Streets	1000.00	ASBA		No 6 7 Sound	55.25 55.25
C116 Solina Straight Rith O-Matic, Mult	ivoice.	24 Y 14 hace	776 11	No 6 7 Sound No 7 7 Sound 14" Joe Marella	70.15
Orbitone	1240.00	24 x 14 bass 22 × 14 bass	236.11 203.70	14" Joe Marella Hi Haj	83.20
C116 Solina, Semi-ho Bub-O-Matic, Molt	orshoe, ivoice	20 × 14 bass	194.44	17" Joe Morello	48.45
Orbitone	1276 00	14 × 9 tom 13 × 9 tom	115.74 110.11	17" Joe Morello 18" Joe Morello 20" Joe Morello	55.25
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2043 2 × 12 + 2 × 10 PA 2047 1 × 12 1 1 × 10 PA 2056 2 × 15 Reflex Oms 2057 HF Horn Unit 2120 Spr bins (horne) 2121 100w slave monitor 2122 30w slave monitor	173.60 119.35	Mod. Čons. Court/JBL Spkr Systems SOUNDOUT HE1c,50w HE2c. 100w	975 00 1120.00 P.O.A. P.O.A.	AX100 Slave pwr. stage Bandmaxer Reverbmstr. Audiomstr. Pre-mix,IV Super dual 12 Super 40 Starfunder be. Starfunder twin 15 Super staffdr 200 Starfunder superf80 Starfunder superf80	101.85 07.96 129.63 194.44 275.93 48.80 74.07 87.96 106.48 148.15 115.74	ARP SYNTH.  AXXE  760-50lost  Fro-50lost  560.00  Explorer  369.45  Odyssey  736.00  2600  BRODR	GALANTI  X300 P/L 305.2 X300 P/L 347.2  F.HANGE F.1. 361.4 F.2 425.7 F.2 D/L 618.2 F.3 639.6 F.5. 740.4	14 13 10 14 13 17	310Emment Theatre / Rhy Obritone, String 1420.00 2000Eminers Grand Theatre, Rith-O-Maile, Obritone String Ensemble, Arpegoio, Drawbars and tabs 3516.00 SE4 SulinuShring Ensemblo/ pedal tone cabs, 70w, 3ch.	16 × 16 tom 12 × 8 tom ASBA ALTOGLASS 24 × 14 bass 22 × 14 bass 20 × 14 bass 14 × 9 tom 13 × 9 tom 16 × 16 tom SNARES 14 × 5 wood	175 89 107.41 236.11 203.70 194.44 115.74 111.11 175.88	CLEARTONE  SLINGERLAND Joe Custais 4 N 20" 375.81 Joe Custais 4N22" 460.85 Suddy Rich 22" 506.81 Suddy Rich 22" 24" 512.58 Geng Krupa 20" 426.16	K162 5 dr. K183 4 dr. K189 P.A. 4 dr. SNARES 0426 0441 0454 0556 0856	394 44 460.00 490.42 106.02 43.01 43.01 87.96 93.24
2123 50w monitor MXR 2890 Phase 100 2891 Phase 90 2892 Phase 45 2896 Distortion ( 2893 Blue Box 2894 Dynu comp 2895 Norse Gete Line Driver S.A.I.	85.65 69.00 37.18 34.72 63.43 45.83 45.83	DI.3.100w DI.6.100w SPERRIN AMPS. 100w 4V 100w 2ch. 100w 7ch. + rev. CABS. PA200 2 × 12 cols. paw	73.15 82.41 105.56 72.00	Aggressor 1×12" 1×12"/vol. con. 2×10" 2×10"/horn 4×10" 6×10" diffuser Club 2×12" Band 2×12" Club system Foot munitor Introder reflex bin Vendetta sys.MKII 4×12" A super	120.37 40 40 49 60 41.60 49.60 50.19 52.59 60.19 75.93 74.07 87.96 143.52 134.26 143.52	JORGENSEN  SH1000 Synth 396.00 SH3A Synth 415.74 SH2000 Synth 452.00 EP20 Elect. piano 310.37 EP30 Elect. piano 393.82 RS101 396.92  CBS/ARBITER  Rhodes Suntcase	Insta-sir. ×   legs/cs   276.8	17 00 00	GEMELECTRONIC KCYUOAHUS 297 Intercontinental Oual Manual organ 726.85 18A Dakota Synthis Duol Manual organ 550.95 291 Caravan sgle man 4 octave 290 Europa sgle man 3 octave 30 Caravan sgle man 104.00 293 Jumbo Gem 140.00 293 Jumbo 61 5 oct 164.00 293 Jumbo 61 5 oct 164.00	14 × 5 metal 14 × 5 glbss STANDS H-Hat Store CONGA-BONGO Tumbador Tumbador Tumbador Tumbador Tumbador Tumbador Bongos Metal bongos K. Zii,DJIAN	148.10 148.10 53.70 34.21 156.48 263.89 138.84 53.70 40.28	22" 431.94 Avante 22" 541.54 24" 547.31 Jazz Rock 2×24" 731.00 Modern Solo 22" 429.05 Pop 22" 429.05 Dwut 2×22" 564.35 Mod Jazz 20" 359.63 San Juan 22" 456.22 Concorde 2×24 928.17 SLINGERLAND DRUMS 4N Joe Custatic,20" 303.32 4N Joe Custatic,20" 380.08 50N New Rock,22" 380.08	1520 1528 1629 1630 1632 1658 1659 1660 1660 1662 1663 1652 A.T. BASS G230 G231	36.11 39.63 40.56 40.56 47.73 60.97 58.06 58.06 67.04 79.26 97.31
AMPS 50w T & B twin ch. 50w save 150w FC150 slave CABS. Eliminator + Gauss/Al + EV horn Eliminator + standardo + EV horn	264.00	Por 2 × 12 PA 2 × 12 empty Pair THEATRE PROJECTS	39.00 36.00	WHITE LW50 G/B/k-b amp 70w LW100G/B/K-b amp 120w	263 89 139.50 158.55	Pano 88 1191 30 Rhode's Suitcase Pano, 73 1038 40 Rhode's Stage Piano, 88 811.80 , Rhode's Stage Piano, 73 691 90 Super Satellite Power Spiks. 731 50	Monarch 16122 3196.6 Graudee 11122 3996.6 Regent 4172 3996.6 Concorde 2107 4797.6 PORTABLE X 2 412.6 X-5 1088.6	00 00 00	199 Combo piano 184,50  LORENZO ORGANS 296 17.0s 67 42  MINI. KORG SYNTH. 280 Model 700 300.90 281 700s 349 95 279 800 542.25	K. Zil, DJIAN 10° crash 12° crash 13° hi-hat 15° crash/ride 16° Hi-Hat 17° crash/ride 18° crash/ride	17.55 22.68 25.88 29.63 33.79 35.65 37.73 43.98 48.84	51N Super Rock, 24" 417.80 60N Buddy Rick, 22" 408.96 60N Buddy Rich, 24" 420.37 1N Gene Krupa, 20" 309 11 1N Gene Krupa, 22" 319.74 60N Avante, 24" 445.09 60N Avante, 24" 445.09 57IN New Rock, 241 647.13 2R Model Solo, 22" 380 00 58N Pop. 342 46	G260 G261 G262 HI-HATS Z5451 Z5452 SONOHCYMBALS ZYMBOR	108.43 109.81 117.73 15.56 35.88
Y go high Minte im. + standardd + EV horn Minte im. + standardd + MF1000 horns Front loaded 15 + Gauss/Altec Direct paffle+ Gauss + EV horn Front loaded 2 × 12 2 × 12 + 2h ported	r. 164.00	ALTEC 1204 B 50w 120B B 50w 121B A 50w 1215 A 150w 1225 A 100w 1207 C col. 75w 1211 A col. 75w 512 C spkr. 328 B spkr.	435.00 420.00 400.00 225.00 400.00 203.00 185.00 317.00 70.00	CM30 G. combo 30w/ spks CM30 Combo/rev. PA100 Gat. 100w PA150 Gat. 150w PA200 Gat. 200w POWER SLAVE AMPS PS100 100w PS150 150w	196.65 213.00 149.22 168.99 189.00	Rhodes Piano Buss 399 30  CRUMAR LTD.  HAVEN ORGANS 200 548 00 202 996 00 203 1196 00	Auto-Vari 64 chythm unit 182.6 Hammond Synthesizer SY-100 380.6 SYNTHESISER SH 1000 348.8 SYNTHESISER SH.3A 386.4	00 80	SELMER  LOWREY TG-1 599.20 TG-44-1 920.00 TG-88-1 1199.20 TG98-1 1439.20 TG90-1 1768.00 TGS-1 2136.00	20" crash/ride 22" crash/ride IZMAR 12" 13" 14" 16" 16"	54.63 64.77 11.06 12.92 18.47 19.40 22.17 28.66	14N Duet, 22" 487.27 3N Modern Jazz, 20" 296.86 9N Modern Jazz, 20" 296.94 65N San Juan, 22" 354.10 11N Concorde, 24" 830.36  SNARE 120 Super Sound King 5 × 14". Ten Lug 121 Super Sound King	Z1002 12" Z1003 13" Z1005 14" Z1007 16" Z1009 18" Z1011 20" TURKO: Z2002 12" Z2003 13"	3.56 4.26 5.97 9.31 11.71 13.80 7.27 8.43
design 2 × 12 Folded horn 18 + Gouss Mini bass bin Super lead SELMER	237.00 144.00 252.00 102.00 96.00	315 LF/HN B16 A LF/HN MONITORS 9844 A 30w 9845 A 50w 9846-8 A 100w 9849 A 60w	140.00 68.50 440.00 530.00 530.00 320.00	PS250 250w PS300 Stereo ENCLOSURES A200 A150 A150H A250 PAENCLOSURES S50 1× 12" 60w	148.50 185.22 157.68 216.63 269.73 277.50	61 Portable 1106.49  CRUMAR KEYBOARDS Mutuman 462.00 Mutuman P/board 45.00 Stringman 369.00 Ogranizer 396.00 Ogranizer 396.00 Ogranizer 396.00	RHYTHM UNIT 1R.330 88 8 RHYYHM UNIT TR 55 95 3 HOHNER KEYBOARDS		TLOKS-25 2388 00 GAK-4-1 340,5 °C GAK-25H-1 3465.00 H25-3 6360.00 MOOG SYNTHESIZERS Mini-moog 856.48 Sonic so: 841.67 Tariris podal synth 480.55 Micro-Moog 480.55	BOOSEY & HAWKES BEVERLY Panorama 21 Panorama 22	35.14 50.88 196.70 293.98	60,814",Ten Lug 96.06 Sound King, 5 v 14" B Lug. 131 Sound King,61,914". B Lug 64.95 132 Sound King, 5 v 14", 10 Lug 64.05 133 Sound King, 60,814", 10 Lug 67.00 176 Buddy Rich,	22005 14" 22006 15" 22007 16" 22009 18" 22011 20" 271 CYMBALS 272 274 275	10.79 12.41 14.03 18.06 22.95 3.94 6.05 7.19
SOLIO STATE 15SS combo SR30 combo Lead 100 Bass 100 Slave 100 PA 100 Futura-na 3 combo VALVE AMPS.	34.00 115.74 119.44 95.37 78.70 152.78 18.20	9440 A 2X 225mr 9477 B 130m 417-8 H 12 in 150m 418-8 H 15 in 150m 421-8 H 15 in 150m 425-8 H 10 in 75m 601-8 D 12 in 220m 604-8 G 15 in 65m 511 B 16 in	735.00 320.00 82.00 90.00 103.00 82.00 130.00 220.00 62.00	\$100 2 × 12" 120w \$150 1 × 15" 100w \$200 4 × 12" 240w M50 1 × 12" 66w H50 HI, 50w CONCERT RANGE PA ENCLOSURES 812 815	84.82 174.21 157,65 61.74 66.45	Brassman 320,00 Compacting 230,00 Compacting 212,00 J.T. COPPOCK  ELGAM ELECTRONIC ORGANS 244 445,37 2446 504,82	Mini KORG 700 Mini KORG 7005 3566 Clavinet D6 223.8 Pianet N 221.3 Combo Pianet 173.8 HI Piano 212.2 Bass 2 125.8 CORGANS	48 56 39 98 27	PIANO ACCORDIONS Bellim Midili-grade 206 55 Bellim 180 129 63 Bellim 48 88.89 Bellim 124 62.04  SOLA SOUND	Pannorama 24 Galaky 18 Galaky 21 Galaky 24 ZILOJIAN CYMBALS 8" 10" 12"	293.96 158.56 171.34 174.21 13.43 15.74 19.91 22.22	4x14", 8 Lug 68 12 141 Featwal, 5x14", 8 Lug 50 82 152 Artist 5tys 14", 8 Lug 60 99 173 D/b Concert King, 5x14", 10 Lug 86 93 174 D/bux Concert King, 6x14", 10 Lug 83 11	JOHN HORNBY-SK HOSHINO DRUM OUTFITS HSD500	8 50 EWES
T'n'B 100 SV T'n'B 50 SV Teverh PA100/6 SV reverb PA 100/4 SV CABS. S412 4 x 12 S212H 2 x 12 + horn	118.52 104.63 125.00 162.04 137.04 134.26	811 B'hii. 808/8 A 30w H/F N609/8 A crossover TOP GEAR PEAVEYCOMBOS. Pacer 45w I × 12 TNT 45w I × 15 bs	48 00 87.00 57 00 147.25 162.75	830 H100E H100V 170 L100 M0NITOR ENCLOSUR M100/12 100w M100/15 100w M200/15 200w	398.58 136 23 187 23 171 48 314.85	237 300.00 237C 361.11 2049C 152.77 249 281.48 249R 326.00 610 249.00 610R 298.14 3049 DL 189.81 3049 DL 238.88 2049 145.37 1049 112.96	Organet 41 223.8 Organet 40 386.3 Organet 240 RA 539.9 Organet 240 S 735.4 Consul 40 S 328.4 Weekend 432.9 President 3 684.7 Organetta 1 D/L 123.4 Organetta 2 D/L 123.4 Organetta 2 P/L 180.8	33 95 46 43 96 70 44	Synthi DK2 k'bd. 220.00	14. 15. 16. 17. 18. 19. 20. 20. 20.	26.85 29.17 31.02 33.33 37.96 43.98 40.28 43.98 50.93	TOM TOMS 1411 12* 8" 51.19 1401 13 x 9" 55.46 1398 14 x 10" 59.07 1399 15 x 10" 61.43 1400 15 x 12" 65.61 1403 14 x 14" 76.48 1405 16 x 16" 87.94 1470 18 x 16" 103.06 1475 20 x 18" 123.07	HSD500T HM1000 HCT8 HM300 HK500M PREMIER	314.81 148.15 212.96 101.85 33.33
S115 1 × 15 vgr, S2H Obt. horn S115A 1 × 15 Altec vgr. TV35 column TV 20 column (pair) SEPTEMBER	105.55 68.52 171.30 50.92 69.44	Classic 50 w 2 × 12 Classic 5 8 w 4 × 10 Detrice 120 w 2 × 12 Vintage 120 w 2 × 12 Vintage 120 w 4 × 10 Artist 120 w 1 × 12 Mace 150 w 2 × 12 LTD 200 w 1 × 15 JBL Session 200 w 2 × 12 Session 200 w 2 × 12 Session 200 w 2 × 12 Session 200 w 2 × 12	193 75 236 95 286 30 320 85 356 50 288 30 385 95 458 80	MIXING DESKS D8 Stan. mono 8ch. D8 D/lk mono 8ch. D16 stereo 16 ch. D24 stereo 24ch	185.79 229.80 870.00 1275.00	1037   67.96	Organa Steel 236 3 Organa Steel 10 8 HORNBY-SKEWE: EKO ELECTRONIC CHORD ORGANS 3160 Twols 188 127.2	34 88 <b>S</b>	1129 Cavaller D/L 340.00 1130 Europeán 423.80 1157 Majestic Royale 479.80 1160 Le Grande 679.60 Royale 679.60 183 Troubádour 786.76 184 Troubádour 879.20	21" 22" ZILD JIAN BRILLIANT 10" 13" 14" 15"	49.07 55.56 62.04 19.44 25.93 30.56 32.41	BASS (mc. spurs.) 312 14 × 18" 97.14 323 14 × 20" 114.87 335 14 × 22" 125.50 306A 14 + 24" 141.22 314 14 × 26" 158.00  CONCERT TOMS (mc. stands) 90 Low Pitch 227.39	201 20" B201 22" C201 1B" 202 20" B202 22" D202 24" B203 22" D2 03 24 " B204 22"	282 36 283 39 275.71 294.13 295.15 304.02 361 47 368.64 422.59
10/2 - 12/2 - 14/2 - 16/2 - 18/2 - 20/2 - SERIES 2 - 10/2 - 12/2 - 14/2 -	170.00 199.00 230.00 255.00 289.00 326.00 206.00 240.00	PEAVEY AMPS. Century 100w Standard 130w Bass 200w Eq Musician 200w Eq F800G 400w bass eq. F800G 400w bass eq. F800G 400w bass eq.	147.25 178.25 241.80 257.30 449.50	COMBOS YGM-4, 30 YGM-4, 40 YGL-3.90w YBA-2B, Bass 30w YBA-4,50vy	90.00 111.00 198.00 90.00 141.00	ORGANS (ELECTRIC REED and ELECTRONIC)   Chord   30.00   Chord   44.00   Little Duchy   Electronic   47.00   Electronic Chord   148.00   Electronic Chord   148.00   Electronic Chord   148.00   Electronic Chord   148.00   Chord Chord   148.00   Chord Chord   148.00   Chord Chord   148.00   Chord Chord Chord   148.00   Chord Chor	EKO PORTABLE ELECTRONIC ORGANS 3208 Tiger 3205 Tiger Mate 43205 Tiger 1319.2 3206 Tiger 61 3119.2 3207 Tiger Duo 8 380.0 3212 Tiger Duo 8 399.2	00 00 00 20 00	1266 Comeo Suprome 1199.20 266 Californian Quad 1299 00 267 Californian 1399.60 371 Montrcello moog. 328 Montreello Theare	17" 18" 18" 20" 20" 22" 22"	34.72 37.04 41.20 48.15 48.15 54.40 59.26 65.51	91 High Pitch 141 02 LATIN AMERICAN PERCUSSION Pricus to be announced.  DALLAS  Arbiter Autotune 642.40	1204 24" 304 20" 8304 22" 1304 24" 305 20" 8306 22" 1308 20" 8308 20" 8308 22" 1308 24" 808 20"	429.75 360.30 361.38 370.25 390.88 391.90 400.77 418.84 419.86 428.73
14/2 16/2 18/2 20/2 20/2 200w Stave Custom buil amps	275.00 308.00 343.00 380.00 T.B.A. P.O.A.	PEAVEY CABS. 1 80w 1 × 18 1 100w 2 × 12 150w 2 × 15	100.75 128.65 170.50	YBA-1, 50w Bass YBM-1, 50w YBA-1 A, 100w Bass YGL-3 A, 100w Monoblock 325	89.00 111.00 120.00 141.00 225.00	Organon   24.00 New Chord (Pet) 22.50	3212 Yiger Duo A 399.2 EKO CONSOLE ELECTRONICORGANS 2022 Domus 37(A) 424 0 PRICES ARE WITHO	m	806 Trianon 2617 /1 871 Celebrity Royole 3193.97 1050 Mong Sattelite Synthesizer 350 48	ZILDJIAN HI-HAT 13" 14" 15" 16"	44 44 53.70 58 33 62.04	Arbiter Authtune/ stands 477.30 HAYMANOUTFIT Shownam 22" Outfit 367.40	604 20" 8604 22" D804 24" 605 20" B605 22" D805 24"	346.55 347.57 356.44 411.85 412.87 421.74

S PERCUS	SION/G	UITARS				ALL F	RICES ARE V	VITHOL	JT V.A.T.				_	GUITAF	RS.
₽ P	1	l	GUITARS		HAWAIIAN 2390 Ger	21.75	FLETCHER,		LE 200 -ыб 23я.	74 49 79.77	LS2G08 F.339R	44 00 39 36	SELMER	MITSURU TAMURA P700	217.59
606 20" 8606 22"	522 18 524.22	SELMER	ARC		2391 O/lic	42.61	COPPOCK		LP 200 G LS 200 €	72 36 54 77	F 340 MD.25	32.41 27.78	1	P800 10P1200	254.52 379.62
0606 24" 717 20"	541.95 471.35	PEARL Dynafamily 22 plann 601.85	_		ANTORIA CLASSICAL 361	30.09	& NEWMAN		LS 200 YS MB 200 Bass	54.77 33.61	C132S	41 67	GIBSON	MASARU KOHNO	
8717 22" 10717 24"	472.38	Dynafamily 22 satio 643.52	ELECT.SLD.BDY Swede	166.80	HA2	31.02	KIMBARA ACOUSTICS		ME 20 TS PM 302	39.58 41.25	FG.10 TG.20	25.00 27.78	CUSTOM ORDER/ÉLÉC ACOUST Cristion outhi 2691 20	C.M.K.10 M.K.15	370.37 550.93
908 20"	481 24 646.80	Dynatamily 24' plain 619.44 Dynatamily 24 satin 665.74	Swede bs. F.200N	176.36 101.83	ANTORIA CLASSICAL		N105 Cls.	26.39 27.73	PM 302 Bass SA 200	42.69 40.37	TG.30	30 56	Super 400C outfit 887 96 L-5C outfit 789.81	M.K. 20	736 11
0808 22" D808 24"	648 84 666 57	Fulldimesmon 22 pt. VV/(gts. 412.04	F.400 Nbs	101.83	2839 2840	39.35 45.37	N106 Cls. N169 Cls	28.66	SE 2 B Bass	36.81	B.L.PAGE		Johnny Smith JSD 1025 60	M.K.30	902.78
1031 20" (B1031 22"	119 06 202.63	Fulldimension 22 sat. W/lgls 439.81	F.100.B	65 78	2841 2850	47.22 39.81	N175 CIs N29 CIs.	35.09 43.06	SE 2 T SG 2 S	26.81 37:36	MICRO-FRETS		Johnny Smith JS 992 00 Super 400 CES Q/F 1068.00	IBANEZ + CIMAR WESTERN + FOLK	- 1
1033 20" B1033 22"	237 49 241.07	Full Fals. 449.07	SEMI-ACOUSTIC V.IN.	122 20	2855 2858 sto.grd.	53.70 94.44	N108 Cls N75 Cls. w/cs	55.51 76.20	SG 10 B Bass SG 22	43.10 37.45	Theduistr.	244 44	Howard Roberts O/F 596 00 Byrdland O/F 890.40	60 flk. 610 jmb.	39.35 45.83
<b>J</b>		Fulldimension 22 sat.	Jimmy D'Aquisto	P.O.A.	F2871 Fimco	94.44	N76 Cls w/cs N30 Flk.	96.30 30.70	SG 220 V SG 2000	54.03 54.03	Husky Stage II	195 56 171.11	ES 1750 432.80 L-5 CES O/F 925.60	165 M.	44.90 50.92
DRUM OUTFITS/CYN	320.49	Fgls 486.11 Fulldimension 22 pl.	COUNTRY & WESTERN H.45-6str (bo	72.0 <del>8</del>	TAMA		N71 Jmb N72 12 str	35.68 40.69	SP 1 ST 30	25.74 51.76	Sytr.Bs B/(n.6/s.bs.	171 11 183 33	THIN ELFC. ACQUSTIC	615 jmb. 615/12 12st.	56.01
B201 22" C201 18"	321.52 313.64	NPP 430.55 Fulldimension 22 sat.	H.33-12str.jbo.	77 57	3661 S 3560 S	120.83 133.33	N73 Jmb.	49 95 52.31	ST 300 TF 200 N	65.19 52.31	Huntington Spacetone	305 56 256 67	ES365 TD-SV 617 60 ES346 TD s burst 492.80	620 jmb. 647 jmb.	56.01 56.01
202 20° B202 22"	395.34 396.37	NPP 462.04 Fulklinension 24 pt	CLASSIC	43 10	3550 S Jbo 3550 P Grd	119.91	N107 12 str. N95 Cust c/w		ř	32.31	Swng.Cust. Stage II	226 11 207 7B	ES345 TD cherry/	647/12 12st 684BK imb	61,11 58.79
9202 24" 8203 22"	405.23 490.90	W/igls. 421.30 Fulldimension 24 sat.	H.C.4 H.C.5	32.64	concert 3650 S Grd	86.11	blond wic/s N95 Cust c/w	92 55	CONCERTER SK 614 N	14.77	Swng Sgtr.Cust.	195.56 195.56	ES335 TD s.burst 392.00	755 jmb 755/12 12si.	56.01 61.11
D203 24" B204 22"	498.06 552.02	W/fgls. 450 00 Fulldimension 24 pl	DYNELECTRON		concert	88.89	SWO W C/S	92.55	GK 200 WK 599 SH	20 28 30.37	Sgtr.	195 56 171 11	ES 335 TD Cherry/ walnut 373 60	369 jmb. 3700 jmb.	45.83 40.28
0204 24" 304 20"	559.1B 465.30	Fgls. 458 33		161 67 151 67	YAMAKI	93.51	ELECTRICS N114 Solid Blk		WK 599 F FK 599	30.65 27.15	Calibra ( Calibra	152 78	ES325 TO 314 40	370/12 12st.	43.29
B304 22"	466.31	Fulldimension 24 sat. Fgls. 486 11	265 bs.f/ls.	151.67	225 12 str.jbo. 220 12 str.jbo.	83.80	w/cs N115 gold	90.80 90.80	FK 299	25.50	2005 11000		LES PAUL SERIES Signature — tobacco 404 00	371 jmib. 355 jmb	37.03 39.35
0304 24" 305 20"	475.19 495.81	Fulfdimension 24 pt NPP 434.26	PEARL PF.200 flk.	41.31	215 12 str  bo. 120 6 str.  bo.	75.46 81.02	N116 sun N117 nat	90.80 90.80	JOHN		ROSE-MORRI	i Ş	Signature — gold 385.60 Signagure bass	355/12 12st. LH620 prob.LH	39.35 56.76
8305 22" D305 24"	496 83 505 70	Fulldimension 24 sat. NPP 463.89	PF.25076 jbo. PF.250712 jb.	49 20 51 96	115 6 str. jbo. 112 6 str. lk	62. <b>96</b> 43. <b>51</b>	N118 mahog	76.40	HORNBY		ELEC GTRS. Shaft.Ned Callan		tobacco 392.00	LH647 imb.LH LH649/12 12st	60 64
308 20" 8308 22"	523.78 524.80	Soundventure 22 pl. W/fols. 398.15	FT 155 (bo	54.13	ANTORIA		N120 white N121 nal.	105 60 114 40	SKEWES		Cody Shalt.NedCallan	99 20	Signature bass gold 373.60	LH LH615 imb.LH	62 96 56 61
0308 24" 604 20"	533 67 447 77	Soundventure 22 sat. W/(gls. 423.15	DANA		756 Herald 757 Gi Wsin Sid.	74:54 58:33	N123 Bass sun N124 Nat.	105.60 114.80	PALMA ACCOUSTICS		Cody bs. Shait,Ned Callan	99.20	Recording-nat 415.20 Recording white 433.60	LH615/12 12 st	60 64
9604 22" D604 24"	448.79 457.66	Soundventure 22 pt. Fals 452.78	R.30 T/pc. R.105	8.23 10.67	758 Gt Watn Art Jbo.	103.70	N125 stereo Bass	171.20	500 300 N	10.14 11.57	Hombre	94 24	Triumph bass Nat. 403.20	LH684BK (mb	64.35
605 20"   B605 22"	516 79	Soundventure 27 sat.	F 33 filk.	19.58	695 Nishvill 6	40.28	N126 Bass nat	111.20	C103N WE5	18 10 22.69	Shalt, Ned Callan Cody bs.	99 20	Triumph bass 421.60	2846	60.18
D605 24"	517 89 526 88	Fgls. 471,30 Soundventure 22 pl.	SCOR. SCORR	200 08	697 D'ngt 357 Fk.	69.44 37.96	N128 Solid net	107.20	FW301 FW301.12	30 09 35 65	Shaftesbury 2 p/u   Shaft, Gold Top	72 73 89 09	De luxe — gold 356 00 De luxe = cherry/	752	64.35
606 20" B606 22"	679 66 681 70	NPP 431.48 Soundventure 22: sat.	L/scl.bs.	250.00 225.00	62 B'cu Fk 627 LI/h	32 67 47.22		101.20			Shalt.bs Shaltesbury 3 p/u	77.27 68.17	tohacco 374.40	CSLWESTERN D/NIGHT	1
D606 24" 717 20"	599.44 600.63	NPP 456.48 Soondventure 24 pl	37 561.05.	223 00	627 B co jbo. 627/12 B cojbo.	40.74 48.15	RESONATA N87 classic	17.58	I NEUTSCHMANN CLAS 203.7	53 33	West-1 6 st Top 20 6 st.	32.41 26.74	Custom O/F — white 479.20	D30 D40	101 85 152.77
8717 22" 0717 24"	601.65 610.52	W/fgls. 409.26 Soundventure 24: sat.	JOHN BIRCH		79 Calil.fk. 628 Calil jbo.	34.72 47.22	N89 Classic	23.15	KASUGA ACOUSTIC		Top 20 4 SIbs	40 33 47 69	Custom — ebony/ wine red 439.20	D60 D80	166.07 194 44
808 20" 8808 22"	812.34 814.39	W/fgls. 434.26 Soundventure 24: pf.		240 00	628/12 Calif.jbo. 684/6 L J/h	53.70 53.70	VICTOR GARCIA N I 88 Spanish	22.92	G100L G200	33.33 40.74	Aven 2 p/u Aven 2 p/u 1753 cov	50.45	Custom — cherry/ tobacco 457 60	LEVIN	.3444
0809 24" 1031 20"	832.12 223.31	Fgts. 452.76	SCDR SCDL	230.00 220.00	69476 Sup.jbo.	50.00	N169 N127	23.04 26.76	F140 0200	40.74 44.44	Avon 2 p/u Avon 2 p/u 1754 cov	49.48 52.24	SOLID BODY SERIES	W36	138.89
81031 22"	226.8 <del>9</del>	Soundventure 24 sat Fgls. 480.55	SCSL	203.70 350.00	648/125up.jbo. 693 Gnt.Jm.d/l	56.94 52.78	LORENZO		T250 D350	49.07 71.30	Avon 1 p/u hs Avon 1 p/u bs.	46 67	15-S O / F 623.20 16-S custom nat /	W32 WR34	194.44 148.15
1033 20" 81033 22"	270.28 273.85	Soundventure 24 pl. NPP 436.11	SCDB'DUO	350.00 206.06	696 Gnt.Jm. 698 MGi Wst.hs	50.00 71.76	N98 Student	12.92 14.12	TERADA ACQUSTICS	71.30	1755 cov Avan 2 p/u bs.	49 43 54.36	8l. 300.00 L6-S custom (abacco 315.20	W12-36 LG17	166.67 92.59
BASS DRUMS		Soundventure 24 sat. NPP 462.04	SVB	220.00	698 Gt.Wst.jbo. 684 E.Sup Elc	61.57 56.48	N111 Cls N99 Cls.	17.55	6306	45.37	Avon 2 p/u bag 1744 cov	61 33	L6-S De Luxo Nat.	LG19	131.31
124 28" 125 24"	73.48 70.25	Rock kit 24 pt. Wood 366.67	SVL alr.stg.	220.00	698 E.Gt.Wst Elec. 2374 sem-Ac.ld	72.68 87.04	N110 Fik N102 Fik.	13.84 22.64	G307 G310	48.15 54.63	ACOUSTICS	0133	Sat 213.60 LG-S De Luxe Wine	CSL MACCAFERRI Mac. 1	101.85
126 26" 127 18"	72 97 53.70	Rockkit 24 sat. Wood 387.04	SNCL SCDLX	200.06 230.00	2371 sem-Ac.bs 2370 sem-Ac.ld	75.46 79.17	N103 Jmb. N104 12 str.	27.41 28.06	F604 FW650	47.22 67.59	AVATION		Red 236.00 SG Custom Walnut/.	Mac. 2 Mac. 2/0	101.85 106.48
130 20" 132 22"	60.36 61.38	Rock kit 24 pt. W/lgls. 369.44			1752/4S/mstr.bs. 1755 S/mstr II	39 35 48.15	COLUMBUS		W624 FW645	56.48 90.74	Std.Balldr.6str Std.Balldr.12str.	163 63 227 28	Wine 415.20 SG Custom White 433.60	Mac. 3	125.00
142 22" 144 24"	69.56 76.72	Rock kit 24 sat.	BOOSEY &		1917 Twncst.bs	47.22 45.37	N197 Jumbo sun N122 12 str.	31 96 34 36	KASUGA ELECTRIC		GI Cambi.Ar(6str. Gl.Cambi.Art. (2str	209 09 254.54	SG Custom & bigsoy Wainut/White 421.60	CSL + IBANEZ ELEC.	
166 36"	92 24	W/Igls. 388.89 Rock kii 24 pl.			1912 Twnestr. 2385 Clpr.T/boy bs.	107.41	N36 s/ac. 6 str N83 solid	45.20 32.76	(NEW MODELS) SG360	97.60	Folklore Cis Bal'dr.	209 09 163.64	SG Custom + Bigsby White 440.80	23500X	88.00 120.00
1161 20" 1163 22"	50.47 52.52	Fgls. 407.41 Rock kit 24' sat.	DI GIORGIO No 16 Signorina		2384 Clpr.d/III 2386 U I/h	109.26 127.31	NB4 Bass	38.04 39.68	PB 420 LG 380 D	100 80 102.40	Art.Elec. Country Elec.	236.36 236.36	SG Standard Walnut cherry 274.40	FG360S 2351DX	86.00 110.40
1170 20" 1171 20"	45.01 45.35	Fgls. 430 55 Rock kit 24 pt	Classic No 28 Classico Classic	36 25 43 52	2386 Wemphis ctn/d/l 2376 Dixie f/hs.bs.	98.15	M113 N85 BM	50.36	SE480 S	104.80	SHAFTES.WESTERNS		SG Standard	2351DXCS 2341	106 00 104.00
1172 22" 1173 22"	48.43 48.94	NPP 383.33 Rock kit 24 sat.	No 36 Belsom Classic No 30 Amazon Classic	66 22 50 92	2375 Ash 2375 N Rock'mn	118.96	N85/S sun N82 3 p/u	50 36 52.76		136 60 142 40	Jibo.	97 26 114.57	Tobacco/white 292.00 SG Standard • Bigsby	23410X 2350W	136.00 97.60
1175 24"	52.85	NPP 421.30 Powermaie 22 pl.	TAKEHARU		Natural 2375 Ls'6st.l/h	97.22 89.81	N54 mahog. N66 Bass	43 80 46 04	SG1800 V LG2000 V	169.60 214 40	Jbo.	130.03	Walnot/cherry 281.60 SG Standard • Bigsby	2451 24528	132.00 128.00
SNARE DRUMS	44.84	W/lgls. 332.41 Powermate 22 sat.	GT230A small GT 308 small	49.00 49.00	2375 W Rock'mn White	90.74	N77 sun	51 15	ZENTA ELECTRICS		Jho. Jbo	147.30 163.67	Tobacco 300.00 S-1 Natural 237.60	2342 2344	96.00 120.00
33 14 x5 + 35 14 × 5%	53.19 55.93	W/1gls. 350.00	GT 86 GT 120	32.30 37.00	2375 Rock'mn	86.57	FRAMUS		(NEWMODELS) EG501	23.96	6 str. Jbo 12 str. Jbo	29 44 36.82	S-1 Ebany 266.40 S-1 Sunburst 284.00	2343	108 00
36 14 × 5½	58.14	Powermate 22 pl. Egls. 369 44	GT 190	49.00	Maple In. 2375 Rock mn		CLASSIC		EG502 EB511	27.16 27.56	OVATION		Marauder-Natural 207.26 Marauder Wine 238.80	2663	116.00 160.00
37 14 × 5% 101 14 × 5%	47.06 56,94	Powermate 22 pl, Fgfs. 369.44	WT 100 jumbo WT 200 jumbo	36.35 50.90	R'wd.fb. 2366 FLB. F/les	81.02	01010	50.92	HEG5006	30.40	Breadwinner sol. Deacon sol	279.70 332.92	Marauder Custom - s/b 296.00	2464S 2459	200 00 150 00
1002 14 × 5½ 1005 14 × 5½	31.20 31.71	Powermate 22 sat. Fgls. 387 63	VITTORO		Bass 2366 BMksmn.	75.46 75.46	01210 01510	69 44 137 96	HEGB5004 HET5001	38.40 37.20	Glen Cambell Ar.6st. Glen Cambell		SG Special 239.20	26600X 2390	124.00 100.60
1180 14 × 4 11182 14 × 5½	27.62 28.81	Powermale 22 pt. NPP 355:55	570 small 575 Full size	11.80 18.45	2365 B Dixie bs 2365 Dxrostr.	76.85 58.33	WESTERN 6 STRING		HES5000 HEP5002	29.56 42.40	Ar. 12st.	370 99	LEFT-HANDED SOLIDS Les Paul Deluxe Gold 366.00	2671PRO 2671	220.00 556.00
2000 14 × 5% 2001 14 × 5%	60.36 57.63	Powermate 22 sat. NPP 373.15	2851 Full size	14.60	2368 Cpr. F/bl. 2353 LOX Clpi	64.81	05011 Dix 6 05810 Falcon	66.66	l		Balladeer 6 și. Pacemaker 12 st.	241.58 332.97	Les Paul Deluxe Cherry 374 70	2402	176.00
2003 14 × 6% 2004 14 × 6%	62.57 71.78	Imagecreater 22 pl Wood 293.52	CBS/ARBITER	•	2/6s.hik. 2353 Clor.t/bs.	89.91 56.33	D/ngh) 05550 Falcon	118.51	KEMBLE		Folklore Steel st.	241.65 272.06	Les Paul Custom Cherry 457.60	24020X 2404	192.00 176.00
2006 14 × 12 2011 14 × 4	70.25	Imagecreater 22 sat		1	2352 C'iom.	71.66	Jumbo 05710 Nasv	147.22	CLASSICS G 55	33.33	Cust Balladeer 6st. Clas. Nylon string	256.82 325.30	SG Special Cherry 239 20 SG Standard Cherry 274 40	2364 2364B	100.00 132.00
2020 14 × 5½	58.65 63.59	Wood 310 18 Imagecreater 22 pt	FENDER SOLID BODY ELECTRIC	***	2352 d/lx. 2352 MClpr.d/l	83.33 56.48	0/nghi 0/910 Nashv.	180.55	G.65 G.90	37.03 40.09	Conc. cf. nyl. string Legend 6st. steet	256 82 313.15	SG Standard + Bigsby Cherry 281 60	2372 2372DX	132.00 156.00
TIMBALES	·	W/lgls. 293 52 Imagecreater 22 sat.	Jaguar	263.00 280.00	2352 Clypper 2354 W/stk.!/bs	50.00 80.09	Jumbo	205.00	G.120 G.150	45.61	Artist 6st, steet	258.35 258.35	ELECTRIC BASSES	2373 2380	132 00 156.00
531 13,14 × 6 531C 13,14 × 6	78.94 80.65	W/fgls. 310 11 Imagecreater 22 pt.	Stratocaster/trem Stratocaster	232.00 200.00	2354 BW/sik.hs 2394 W/sik.nat.	70 83 77 31	WESTERN 12 STRING		G.180	50 92 61.44	Electric Art. steel Electric country art	348.15	Ripper (I.9-S) 278 40	2381 23990X	168 00 176.00
532 13,14 × 6 532C 13,14 × 6	72.97 74.68	Fgls. 325 00 Imagecreater 22 sat.		251.00	2347 W/stk.jn 2338 W/stk.std	96 30 94 00	06011 Dix 12 06810 Falcon	76.38	G 220 G 280	72 52 89.81	Nyl Electric Clas Nyl.	348.15	Ripper fretless ehony 278 40	2387C 2387B	140 00 156 00
TOM-TOMS	-	Fgls. 340.74 8 Brothers conc	Telecaster custom Telecaster custom/Bigs	195.00	2383 W/sik.cim 2382 W/sik.d/I	110 19 86 11	D/nghi	128.70	GC 6 H/made	111.11 157.40	Electric Folklore	409.01	Ripper frotless Tobacco 296.80	23888/S	136.00
112 12 × 8 S H 113 13 × 9 SH	24.56 26.77	toms. pl 304 63 8 Brothers conc.	Trem.	234.00	2377 W/stk.pro.	81.94 74.54	SOLID 800Y 10170 FS/74	78.70		212.96	Steet Electric Pacemaker	355.76	Grabber 3 (G-3)Nat 231.20 Grabber 3 (G-3)ebony 260.80	23888/DX 23888/DX ster.	152 00 176.00
114 14 × 10 SH	32.22	Toms sat. 330.55	Telecaster stan. Telecaster stan /Bigsby Trom.	225.00	2354 St. I/h 2354 SW/sik std.	65 28	10200 5/155 11010 Nashv.	127.77	FOLK FG 75	39.30	12 st.	416.56	Grabber 3 (G-3)sunb 278.40 Grabber Natural 195.20	[1288 [LH23888/S	128.00 152.00
			Trem. Bronco.	225.00 112.00	2354 W/sik. 2350 B Mem.hs.	67.78 72.69	Sian,	165.74	FG 11 ON	43.57	i		Grabber Ebony/Wine 216.00	7613	100 00
									1		1			1	
													1		1

116 16 × 16 SH   39.39     118 18 × 16 SH   39.39     313 × 9 D/H   39.90     340 14 × 10 D/H   37.17     346 16 × 16 O/H   37.17     346 16 × 12   35.93     442 8 × 12   32.74     444 8 × 12   32.74     444 8 × 14   36.82     444 8 × 14   36.82     444 8 × 14   36.82     444 8 × 12   32.74     444 8 × 12   32.74     444 8 × 12   37.17     446 16 × 16   50.98     1433 8 × 13   25.57     1435 14 × 14   36.82     1441 8 × 12   24.21     1442 6 × 12   24.21     1445 16 × 16   38.36     1446 16 × 16   38.36     1446 16 × 16   38.36     1446 16 × 16   39.90     CYMBALS — ZYN.     232 12" Pall   8.60     233 13" poir   10.07     234 14" poir   12.01     235 15" poir   14.88     236 16" poir   14.88     238 18 * stzte   2.48     272 12"     272 12" poir   7.91     273 13"   10.07     274 14" pair   10.07     275 15" pair   14.77     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20"   14.99     280 20"   13.87     280 20"   13.87     280 20"   13.87     280 20   10.27     280 20"   13.87     280 20   10.27     280 20"   13.87     280 20   10.27	PEARL PRO. SNARES Meiel 5 × 14 31.48 Briss 5 × 14 48.15 Briss 60 × 14 54.63 PEARL PRO. ACCESSORIES ***10**18.29 **800 H-har stand 12.95 **803 Cymbal ft. st. 11 115 **805 Snare stand 12.95 **800 Cymbal ft. st. 11 115 **805 Snare stand 12.95 **800 PEARL MAXWIN Stage 706 22 175.00 Stage 701 22 156.48 **Studio 503 20 91.67  MAXWIN SNARES Metal 5½ × 14 **Wood 5½ × 14 6 tens. 16.67 **Wood 5½ × 16 tens. 16.67 **Wood	Mustang 103.00  Mustang 162.00  FENDER SEMI-SOLID Tolocaster thinline 234.00 Telecaster thinline 234.00 Telecaster thinline 236.00 Sarcaster Semiacoustic electric 372.00  FENDER F' SERIES ACOUSTIC CLASSIC FC-10W 33.00 FEC-10 36.55 FC-20 44.70 FC-20 44.70 FC-30 57.26 FC-30 57.26 FC-30 57.26 FC-30 57.26 FC-40 65.25  STEEL STRUNG F-15 42.85 F-25 49.90 F-35 5480 F-46 5595 F-35 6480 F-46 5595 F-35 68 115.55 F-85 115.55 F-95 1481 15 FENDER SOLID BASS Procision Precision Original Precision Original Precision Original Precision Freeless 188.00 Jazz 22 23.00 Tolocaster 19.00 Mustang 152.00 Mustan	2405 Mem.urg.d/l   123.63   2381 N Mem.urg.d/l   17.31   2381 N Mem.urg.d   16.11   2381 N Mem.urg.d   17.31   2381 Mem.urg.d   17.31   2381 Mem.urg.d   17.31   2380 Mem.sud.d   17.36   2380 Mem.sud.d   17.76   2385 Meg.Jhm.   112.96   2385 Meg.Jhm.   12.96   2385 Meg.Jhm.   20.10   10.85   2385 Meg.Jhm.   20.10   10.85   2385 Meg.Jhm.   20.10   10.85   2385 Meg.Jhm.   23.50	11110 Nashw   Stan-D/bx   121210 Nashw   Stan-D/bx   368.51   10980 Jan Akkerman   508.33   SOLID BODY BASSES   122002 J/156.2   12510 Nashw   169.74   12980 Trumph Bass   339.61   12980 Trumph Bass   137.03   13503 A2/10   362.95   137.03   13503 A2/10   362.95   137.03   13503 A2/10   362.95   137.03   13503 A2/10   362.95   13470 O/4   69.44   14670 FS/1000   5.mgle   703.70   14570 FS/2000   0.0016   924.07   G.M.S. PICATO   ELECTRIC   ELECTRIC   ELECTRIC   ELECTRIC   E.S77 Fune gall.   2.32   10.77 R*N.R.G.   2.47   771 L.G.   2.47   771 L.G.   2.47   7736 L. Nyl. Long   735 M. Rind Med   6.97   736 L. Nyl. Long   735 M. Rind Med   6.97   736 L. Nyl. Long   738 M. Fil. Long   739 M. Fil. Long   6.97   738 M. Fil. Med   6.97   736 L. Nyl. Long   737 M. Fil. S.   737   712   2 sir.   3.89   CIASSIC   76 Grind Nyl.   1.86   HOHNER   ECONOMY   6.98   89   MUSIMA   1612 S   13.24   RESONATA   730 class   16.43   731 class   22.73   732 clas	FG. 160 Jumbo 53.9b FG. 170 55.12 FG. 200 N Jumbo 67.22 FG. 200 N Jumbo 67.22 FG. 260 Jumbo 76.96 FG. 360 Jumbo 76.96 FG. 360 Jumbo 101.85 FG. 360 Jumbo 101.85 FG. 360 Jumbo 101.85 FG. 580 Jumbo 101.85 FG. 580 Jumbo 123.79 FG. 1500 It/mudc 336.11 FG. 2000 It/mudc 379.62 FG. 289 80.00 FG. 700S With Handmade 289.00 FG. 700S With Handmade 299.00 FOLK & PICK UP FG. 110 E 53.05 FG. 160 E 54.53 SEMIACOUSTIC 5A. 30 78.18 SA. 60 175.80 SA. 60 175.80 SA. 60 175.80 SA. 30 77.26 SA. 30 83.84 SOU.IDS SG. 35 183.84 SOU.IDS SG. 35 183.84 SOU.IDS SG. 35 193.84 SOU.IDS SG. 35 193.84 SOU.IDS SG. 35 193.84 SG. 40 104.52 SG. 45 109.10 SA. 80 160.88 SB. 35.80 SB.	SIGMA Grd. Con. Fk. 6 st. Grd. Con. Fk.	18250 Mastertone   600 00     18100 banjo o'f     PB800 Mastertone   1054 63     PB800 Mastertone   1054 63     PB800 Mastertone   1054 63     PB820 Mastertone   1054 63     PB820 Mastertone   1054 63     PB820 Mastertone   1054 63     PB820 Mastertone   1076.92     F-12	2816CS 132.00 22453 137.60 22455 140.00 22455 140.00 2355 108 00 2355M 120.00 2355M 120.00 2366H 212.00 2366H 80 00 2355M 120.00 2368F 80 00 2352C 80.00 2352C 80.00 2352C 80.00 2352C 80.00 2352C 80.00 2461 212.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 2460 200.00 247352DX 100.00 247352DX 100.00 247372 145.00 2474 140 2376 00 2348 152 00 2348 152 00 2348 152 00 2348 152 00 2348 152 00 2348 152 00 2368 00 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 23680 60 237371 248 00 2480 60 2480 60 2500 60 2500 60 2600 60 26180 60
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126	CHITAR	s/MICR	OPHONES —					AII PR	ICES ARE WI	тиолт	· v a t ——				··		NCROPHONI	ES
126	GUIL DEASSES SFB2 JS01 JSB1LS JSB2 JS01 JSB2 JS02 JS02 JS02 JS02 JS02 JS02 JS02 JS0	304 25 197 02 2197 02 2197 02 2197 02 2198 40 2188 40	OPHONES — IPIN BODY ELECTRIC Caravel 105/21 T DS/Artist BASS ELECTRIC Special Buick DS/Starture Red WOODS (BOI WELSON ACOUSTIC Serenata I Srenata II Serenata II Ser	84 60 100.34 110.85 113.85 98.89 98.90 70.05 19.70 17.05 19.26 29.70 22.56 38.21 40.71 49.50 b6.10 74.81 30.26 36.30 45.66 52.31 33.00 45.66 52.31 33.465 36.30 45.66 52.31 33.465 36.30 45.66 52.31 49.90 66.10 74.81 107.81 88.01 97.71 88.01 97.71 97.72 88.01 97.72 88.01 97.73 88.01 97.74 88.01 89.01 99.84 89.01 99.84 89.01 99.84 89.01 99.84 89.01 99.84 89.01 99.84 89.01 99.84 89.01 99.84 89.01 99.84 89.01	MICROPHO  AKG  CONDENSER C4114E/Comib. C451E/Comib. DST11/41 DST11/43 D112 D11/43 D120 D190C D	176 00 63 00 63 00 63 00 65 00	M 410 MIC) M 411 MIC) M 412 MIT) M 412 MIT) M 413 MIC) M 413 MIC) M 413 MIC) M 413 MIC) M 550 LMS M 810 N M 818 LM. X 1 MIC) X 1 HL M. X 1 MIC) ENTERTAINMENT DYNAMICS CM450D CM562D CM662D CM662D CM662D CM663D	25 69 25 69 27 69 27 69 27 69 27 69 27 69 27 69 27 69 27 78 27 78 27 78 27 78 27 78 27 78 27 78 27 78 27 78 27 78 27 78 27 78 28 28 28 28 28 28 28 28 28 28 28 28 28	1CES ARE WI  644 647 L 649 B 647 H 651 660 650 V 671 671 672 673 674 676 670 V 671 729 729 729 729 729 729 729 729 729 729	54 00 34 00 34 00 34 00 42 50 34 00 42 50 34 00 43 50 36 00 37 50 36 00 37 50 38 00 41 25 00 43 50 44 1.25 53 36 00 45 50 46 00 47 39 80 48 60 49 60 37 85 53 80 63 10 49 60 37 85 53 80 63 10 100 37 85 53 80 63 10 100 39 80 40 50 50 80 60 90 60 90 6	200 315S 330 401U 404B 404C 407A 414B 419A 414B 419B 444T 48B 48B 48B 48B 48B 48B 507B 515B 515B 515B 515B 515B 515B 515B 51	68 40 41 40 51 40 10 20 11 5 00 16 20 16 20 15 00 16 20 15 00 26 40 19 20 26 40 19 20 26 20 18 20 21 20 22 20 22 20 22 20 22 20 23 20 24 20 25 20 26 20 27 20 28 20 20 20 20 20 20 20 20 20 20 20 20 20 2	SOUNDOUT MICROPHONES AKG D 190 cs. AKG D 190 cs. AKG D 190 cs. AKG D 190 cs. AKG D 707 LM 300  TOP GEAR PEAVEY Low 1 mp High 1 mp. VITAVOX MICHROPHONES R 50 25 ohms 25 ohms 25 ohms 25 ohms winght. VOX  W.M.I. KTM-1 KTM-2 KTM-3 KTM-4 KCM-33 KCM-44 KSH-22  DISCO EQUIPME  CARLSBRO Twin Dock CUSTOM SOU CS 7212PA/enclosur CS 7212PA/enclosu	153.00  JND  = 56.00  or 84.00  LIES  249.00 199.00  87.00  154.00  291.00 354.00 108.00 135.00	SPEAKERS Prince Consort Sprince Consort Sovereign Royale Mine Mine Mine Mine Mine Mine Mine Min	51.0C 81.00 120.00 240.00 129.00 165.00 200.00 129.00 200.00 235.00 242.59 266.00 340.00 375.00 4409.00 453.00 230.00 18.57 18.40 78.75 117.30 72.35 87.00 66.00 79.50 102.83 102	SW DISCOS 20012 Disco 100A 18009 Disco 100A 18009 Disco 30  SOUNDOUT DISCO CONT.MODS Str Ill mon/170w SPERIN MKV VI MK. VI Mixer TYAS MIXERS & DISCO UNITS MMX-88 MIXERS & DISCO UNITS Minimiz chassis	215.74 134.72 156.02 324.00 262.00 210.00 339.00 450.00 270.00 189.00 75.00
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Track
Cap Capacity
High gard of Disc cutting
A Cap Capacity
High gard of Disc to tape
Q Quad
Of per day
D Goldy
Transfer facilities
FIR Reel to Reel
CP Copying
A Keyboards available
Ra Keyboards available
Ra-Cr Reel to Cattridge
CP Copting
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A.1		learning about our readers can we	Guitar				
A.P.R.S	Jeavons	ensure that we write about what	Bass				
Acorn	Johnsons	you want to read. This survey is	Drums				
Acoustic Research 56	Keyboard Harmony 96	entirely separate to the com-					
Allan & Heath 40	John King	petition and the survey forms will	☐Brass/Woodwind				
Allsound 22	Kingfisher 27	be detached from the competition entry coupons before judging	☐ Vocals				
Amek.,,31	Kitchens of Leeds 68, 69	takes place and the survey will in	Others				
Andertons 6	Kneller 127	no way affect your chances in the	How old are you:				
Assembly Music 27	Luton Music	competition. We designed the	∐Under 16 ☐16-20				
Mrs. Bean	M.C.H	survey questions to tell us about	☐20-25				
Becketts	M.S.L	our readers and if you feel in-	<u> </u>				
Berry Pianos	McCormack 109	clined to enter the details asked	<u>]</u> 30-40				
Boosey & Hawkes 53, 62	McInnes	for we'd be very grateful for the	Over 40				
Brodr Jorgensen 49	Maine	information. If you don't want to	Which musician do you feel has				
CBS/Arbiter 93	Marcus	bother we understand completely.	influenced you most ?				
C.P. Cases	Midas33	Please place a tick against the	militarios you most r				
Cardiff Sound Centre 61	Musical Sounds 32	relevant boxes.					
Carlsbro Sound Centre 27	Nashville 53	How long have you been reading					
Carlsbro Sound Equipment 47, 83	Nexus 15	International Musician:					
Cass Music , 112	Normans,	☐14 months	How much did you earn				
Chingford Organs3	PA:CE	One year	personally from music last year (if				
Cleartone	B. Page 10	Six months	you choose to answer this				
Cleveland	Pearl	Less	question you may be sure of com-				
Complex 7	Pepper Music 119	Do you buy it:	plete and absolute confidencel:				
A.E. Cooke	Percussion Sounds 92	Regularly	Less than £100				
J.T. Coppock	PROfessional PERCusion 30	☐Occasionally	☐£100.£250				
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Custom Sound	Radio Worcester 109	get it from a friend:	∐£500-£1,000				
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D.J. Electronic 135	Rose-Morris 103	Friend	[]Over £2,000 If you have a day job what do				
Dandelion	Rosetti 2, 28, 29	Are you:	you do:				
Oharma	Rumbellows	Semi-pro	702 do.				
Dynacord 52	S.A.I	Amateur	Do you classify your knowledge				
E.M.C.O	S.M.I	Which of the following news-	of technical aspects as:				
E.M.I. Tape 22	Salop Electronics 113	papers and magazines do you read	Non-existent				
Elka Orla 10, 23	Scheerers 112	(place a tick against the ones you					
Fletcher Coppock	Selmer 136	read):	☐ Slight ☐ Fair				
& Newman	Sharma	☐Melody Maker	☐ Good				
J.T. Forbes	Shure,FCI&11	New Musical Express	Excellent				
Chas, Foulds	Sisgo	Sounds	Have you ever built your own				
Freedmans	Sound Equipment, 19	Street Life	equipment:				
G,M,S, , ,	Sound Pad	Record Mirror	□ Yes .				
Gamlin 62	Soundcraft	☐Beat Instrumental ☐Studio Sound	□ No				
Gear Box	Chris Stevens 108	☐Zig-Zag	What kind of features would you				
Greenhaugh 109	Stage Equipment21	Black Music	like to see more of in this magazine (please tick two				
HH Electronic 104, 118	Summerfield 101	How much did you spend on	choices):				
John Ham 115	Telecomms, 115	instruments and equipment in the	☐ Musical tuition articles				
Hamiltons 114	Theatre Projects 65	last 12 months:	How to build equipment				
Hammond 100	Top Gear	■Nothing	News about new equipment				
Hastings Sound	Top Gear Shop 82	Less than £100	Studio reports				
Hessy	Vitavox 96	Between £100 and £300	Equipment tests				
Hill	Vox	☐£300 · £500	Interviews with artists				
Hohner	W.E.M	LlOver £500	Interviews with people in the				
James How	W.M.I	Are you a member of the Musicians Union:	trade (guitar makers, producers				
Hudsons	Woods of Bolton 46	Wusicians Onion:   Tyes	etc.).				
Indylantic	Yardleys	I ⊟No					
Competition Coupon  1. Who was the keyboard player in Yes before Rick Wakeman?							
2, Which particular make of synthesizer is Keith Emerson associated with?							
3. Which instrument first used pre-recorded tapes to simulate strings?							
4. Which keyboard player was closely associated with Beatle recordings at the end of the 60s. ?							
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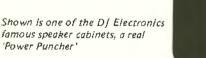


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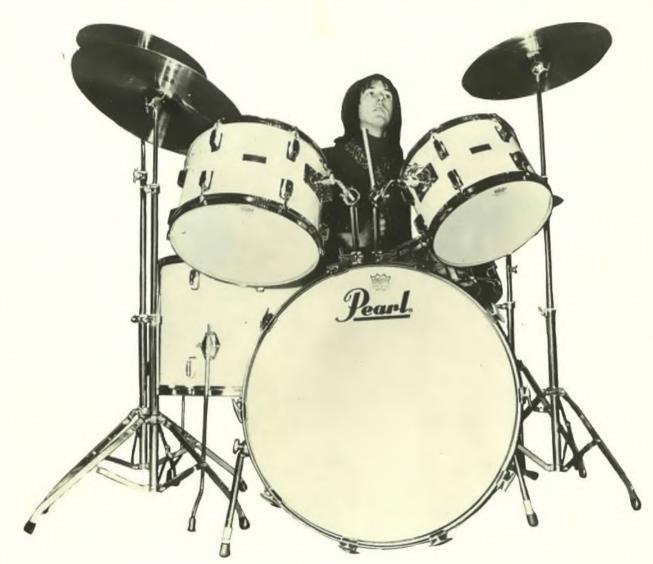




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