

Undeniably the Success of the Year



for the Merriest Christmas

and the Happiest New Year

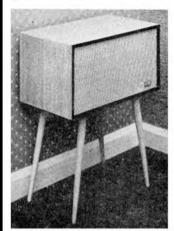
the Wyndsor "Viscount"

at 49 guineas complete

Wyndsor Recording Company Limited, Wyndsor Works, Bellevue Road, Friern Barnet, London, N.11 Telephone: ENTerprise 2226/7 Telegrams: Wyndreco

BRITAIN'S LEADING PUBLICATION IN THIS FIELD DECEMBER, 1958

A BETTER APPROACH TO STEREO



At HARROGATE make a point of visiting our special demonstrations at WIGGS PIANOCRAFT GALLERY, SCALA HOUSE, 5, STATION PARADE.

The use of two C.Q. Senior Reproducers together with two C.Q. "Tetraq" High-note Units provides stereophonic sound without the need to remain confined to a narrow field of listening. By any standards, C.Q. Loudspeaker systems provide exceptionally high standards of reproduction and at attractively moderate prices. Details of C.Q. Loudspeakers. Stereo Amplifiers and other equipment gladly sent on request.

C.Q. SENIOR REPRODUCER (40-17,000c/s. 7\db down at 20Kc/s) 17\fmathref{tgns}.

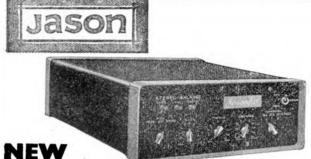
C.Q. "TETRAQ" (Commencing at 4,000c/s)

£6 15s.

C.Q. AUDIO LTD.

2, SARNESFIELD ROAD, ENFIELD, MIDDLESEX Phone: ENField 8262

FULL WHOLESALE AND RETAILER DISCOUNTS



STEREOPHONIC KITS and EQUIPMENT

Two designs are offered. The first, Model J.4-4 is for the more experienced constructor to build, and as well as providing for microphones, disc, etc., it has sufficient gain to play off a tape head. As designed by Mr. H. Lewis York, of Cape Electrophonics, and described in Hi-Fi News. Model J.3-3 is a somewhat simpler version of the original design, and less complicated to build. A special stereo amplifier is also available, the Jason J.2-10. This is virtually the original J.10 converted to stereo, and like the J.10 is intended for shelf mounting and costs £37 10s.

JASON STEREO PRE-AMP. J.4-4

All parts, complete with punched and drilled chassis, nuts, bolts, wire, etc., and full instructions. Without valves

JASON STEREO PRE-AMP. J.3-3 All parts complete with punched and drilled chassis, nuts, bolts, wire, etc., and full instructions. With valves less case.

JASON JSM.I Tape Unit £37. 10s.

Information sheets gladly sent on request.

THE JASON MOTOR & ELECTRONIC CO.

3-4 (M) GREAT CHAPEL ST., OXFORD ST., LONDON W.I (Between Tottenham Ct. Rd. & Oxford Circus Und. Stns.) Phone: GER. 0273/4



I SELL THE | FINEST

TAPE RECORDERS ON INTEREST-FREE TERMS

Yes, no interest, and that is not all-for my personal attention, advice, and help, are freely given. Full demonstrations at any time (evenings and weekends by arrangement) and in addition to the superb Harting you can see and hear a selection of the most interesting recorders available. Remember, I am here to help you. Leaflets gladly sent if you are unable to call.

Model	D	epo:	sit		Mon		Cash Price
	£	s.	d.	£	8.	d.	
Philips A.G.8109	4	19	0	4	10	0	39gns.
Elizabethan Escort	7	5	0	5	0	0	45gns.
Verdik S.I	7	5	0	5	0	0	45gns.
Magnafon	8	8	0	5	5	0	48gns.
Wyndsor Regent	8	8	0	5	7	6	49gns.
Grundig T.K.20	8	10	0	5	10	0	50gns.
Dulci Harting Deck (with							
pre-amp.)	7	15	0	6	5	0	55gns.*
Saja Export	7	16	0	6	7	6	56gns.
Brenell 3 Star	7	18	0	6	12	6	58gns.
Veritone Venus	9	6	0	7	10	0	66gns.
Baird	10	7	0	-7	10	0	67gms.
Brenell Mk. V with Mic.	9	9	0	7	17	6	69gns.
Truvox R2	9	9	0	7	17	6	69gns.
Elizabethan Essex	12	15	0	. 8	5	0	75gns.
Harting H.M.5	14	2	0	9	0	0	82gns.*
Wyndsor Dauphin	15	9	0	9	15	0	89gns.
Reflectograph	18	14	6	10	0	0	94gns.*
Grundig T.K.830/30	25	0	0	10	0	0	100gns.*

All machines are complete with tape and microphone, except those marked *, which are less microphone.

Please note that the Dulci Harting Deck is for use only with existing Hi-Fi equipment and is supplied without mic. or tape.

COME AND SEE THE MAGNIFI-CENT NEW HARTING HM. THE RECORDER WITH OUTSTANDING SPECIFICATION.

- We are also demonstrating the Dulci Harting Deck with preamplifier.
- C.Q. Speakers.
- The Wyndsor Dauphin and Console Model with the Harting Deck.
- The Tandberg recorder Stereophonic reproducer.

Dickinsons of Pall Mall Ltd.

II, Royal Opera Arcade, Pall Mall, S.W.I. TRA 2881

The Royal Opera Arcade lies behind Her Majesty's Theatre in the Haymarket. One minute from Piccadilly Circus or Trafalgar Square.



6 Salient Features

- 3 speed Tape Deck—3 hours
 12 minutes playing time
- Twin Track Recording
- 3 Loudspeakers. Superb tonal quality perfectly distributed
- 1,800 ft. Spool Tape
- Built-in Mixing Unit
- Built-in Public Address System

In these days a reliable Tape Recorder is a "must." Think how you could use a Winston Thoroughbred . . . Recording Speeches . . . Radio Items . . . Telephone Conversations. Can also be used as a separate amplifier for Public Address systems. In the home, the school, for business and recreation a Winston Thoroughbred is essential. The Free Winston Booklet that gives the many uses of a Tape Recorder, and includes a chapter for the technicallyminded on recording, is available on request.



WINSTON ELECTRONICS LIMITED

GOVETT AVENUE, SHEPPERTON, MIDDLESEX

Telephone: WALTON-ON-THAMES 6321, P.B.X.

Cables: "WINSTON, SHEPPERTON"



These two new Telefunken models are unique. Model KL85K with its individual certificate that guarantees the remarkable frequency range of 30-20,000 c.p.s. and the KL75K that for 50gns. give two-speed HI-FI that is as yet unchallenged-If you missed the Audio Fair you should get the fully illustrated colour brochures that give full technical detailssend for them today.

The Telefunken KL85K has a frequency range of 30-20,000 c.p.s. at 71 i.p.s. ± 3 dB and 30-15,000 c.p.s. at 31 i.p.s. The certificate issued with each model guarantees this unprecedented range. D.C. heated pre-amplifier valves cut out all hum and background noise while the two matched oval speakers have separate input controls for mike, radio and gram. Five push buttons give instant control including quick-stop and trick button for super imposition. Over 4 hours play using Telefunken DP Tape at 33 i.p.s. on 7 inch reels. The machine can be used as straight-through amplifier. Magic eye-level control and incorporates special tape-splicing

TELEFUNKEN Model KL85K 75 GUINEAS*

KL85KL specification as KL85K but with 6 watts push-pull output stage 79gns.*

KL85T Table Model for direct use with Hi-Fi equipment or radiogram 63gns.

KL65 specification as KL75K but with compartments for mike, tapes and accessories 57gns.*

KL75T Table model for direct use with Hi-Fi equipment and radiogram 45gns.*

· All prices excluding microphone-extra from 5 gus.

The Telefunken KL75K has two speeds with frequency response from 60-16,000 at 32 i.p.s. and 60-10,000 at 17 i.p.s. giving over 4 hours playing time on one Telefunken DP Tape. Weighing about 20lbs and built into a lightweight Styrol case this remarkable model has push button controls and finely adjusted magnetic heads specially aligned to give maximum fidelity at low speeds. The modulator control for radio and mike are combined in one control with facilities for remote control allowing for use as a dictating machine.

TELEFUNKEN Model KL75K 50 GNS+



FREE!

Send coupon now for Illustrated brochures

NAME	



THE VIKING TAPE RECORDER

Uses the MOTEK K9 deck. 3-speeds, "Pause" Counter. Hatfield oscillator. Switch for Amplifier. 2 inputs. Vol. control scale. Unique method of super-imposing recording. Accessibility for service. C.C.I.R. linked equalisation. Detachable lid. Do you know that the VIKING is the only recorder, under £50, which allows you to super-impose and synchronise with the previous recording?



Send now for leaflet to:—
HATFIELD RADIO

78, STROUD GREEN ROAD, LONDON, N.4

Tape specialists since 1952



TeleTape

FAST AND DEPENDABLE MAIL ORDER DELIVERY. ALL TYPES OF TAPE RECORDERS AVAILABLE ON CREDIT TERMS WITHOUT INTEREST OR CHARGES

TELEFUNKEN KL.75

60-1600 CPS Frequency Range. Over 4 hours play on one tape. Lightweight hard-wearing case. Push button controls. New magnetic heads with superfine alignment. Supersensitive mechanical system. Remote and modulator controls and built-in splicer for tape edit-

equency purs play ightaring atton

ONLY 50 GNS

exc. mic

TeleTape Britain's Largest Tape Recorder Specialists

Every make of Tape Recorder is available from our branches. Our experience and independent advice are freely available to all Tape Recorder enthusiasts.

De	posi	t		Nin	e Pa	yme	nts	-	Cash
£	5.	d.		£	S.	d.			
6	12	0		5	2	0		50	gns.
7	9	9		5	16	5			
13	2	6		10	4	2		100	
3	16	2		2	19	3		29	
4	19	9		3	17	7			
5		6		3	19	6			
5	10	3		4	5	9			gns.
5	18	6		4	11	10			
5	18	6		4	H	10			gns."
6	9	0		5	0	0		49	gns.
6	12	0		5	2	0		50	
6	19	0		5	3	11	-		gns.*
8	2	9		6	6	7			gns.*
8	8	0		6	10	8			gns.t
8	10	6		6	12	. 9			gns.
8		3		6	14	9			gns.
9	9	o		7	7	0			gns.
	7	4		8	1	4			gns.*
10	15	3		8	7	5			gns.t
10	15	3		8	7	5			gns.
	2	6			4	2			gns.
one	-		s m		bhoi	_			
	66771334555556666888889101013	£ 12 7 9 13 2 2 3 16 4 13 3 16 5 18 5 18 6 12 2 8 8 10 8 13 9 7 10 15 10 15 13	7 9 9 9 13 16 2 6 2 9 9 6 3 3 6 6 6 19 9 9 6 8 8 10 3 9 9 7 4 3 10 15 3 6 10	£ s. d. 6 12 9 9 13 2 6 2 6 4 19 9 5 10 3 5 18 6 6 19 0 6 19 0 6 19 0 8 8 0 8 8 13 3 9 9 0 0 10 15 3 .	6 12 0 5 7 9 9 5 13 2 6 10 13 16 2 2 4 19 9 3 5 10 3 4 5 18 6 4 5 18 6 4 6 9 0 5 6 19 0 5 6 19 0 5 8 2 9 6 8 10 6 6 8 10 6 6 8 10 7 4 8 10 15 3 8 10 15 3 8 10 15 3 8	£ s. d. £ s. 6 12 0 5 2 6 13 2 6 10 4 3 16 2 2 19 4 19 9 3 17 5 3 6 6 4 11 5 18 6 4 11 6 9 0 5 2 6 19 0 5 2 6 19 0 5 2 6 19 0 5 3 8 2 2 9 6 6 8 8 8 0 6 10 8 10 6 6 12 8 13 3 3 6 14 9 9 0 7 7 7 10 15 3 3 8 7 10 15 3 8 7	£ s. d. £ s. d. 6 12 0 5 2 0 6 19 9 5 16 5 13 2 6 10 4 2 2 19 3 4 19 9 3 17 7 5 3 6 6 4 11 10 6 9 0 5 5 0 0 6 19 0 5 3 11 8 2 9 6 6 7 8 8 0 6 10 8 8 10 6 6 12 9 9 9 9 0 5 10 15 3 8 7 5 10 15 3 8	£ s. d. £ s. d. 6 12 9 9 9 9 0 5 10 8 8 10 6 12 9 9 9 9 10 10 17 7 0 10 15 3 6 12 9 9 9 9 0 0 5 10 10 8 11 10 10 10 10 10 10 10 10 10 10 10 10	£ s. d. £ s. d. 5 d. 6 12 0 50 7 9 9 9 5 16 5 57 13 2 6 10 4 2 100 3 16 2 2 19 3 29 4 19 9 9 3 17 7 38 5 3 6 3 19 6 39 5 10 3 4 5 9 42 5 18 6 4 11 10 45 5 18 6 4 11 10 45 5 18 6 4 11 10 45 6 9 0 5 0 0 49 6 12 0 5 2 0 50 6 19 0 5 3 11 66 8 2 9 0 5 3 11 66 8 2 9 0 6 10 8 64 8 10 6 6 10 8 64 8 10 6 6 10 8 64 8 10 6 6 12 9 65 8 13 3 6 14 9 66 9 9 0 7 7 0 72 10 15 3 8 7 5 82 10 15 3 8 7 5 82 10 15 3 8 7 5 82 10 15 3 8 7 5 82 10 15 3 8 7 5 82 10 2 6 10 4 2 100

Demonstrations daily; open until 6 p.m. Saturdays. Phone or write for the address of your nearest branch, or order direct from:

59A, Edgware Road (2 mins. Marble Arch), W.2. 230, Hertford Road, Enfield Highway, Enfield, Middx. Tel.: PADdington 1942 Tel.: HOWard 1799



FOR THAT NEW CHRISTMAS RECORDER COME TO AUDIO HOUSE

-write for lists and terms now!

* * * * * * * * * * * * * * * * * *

TOPPER TAPE

introduces the first ever— RECORDER CHECK SERVICE

Here's a service that many owners of tape recorders have wanted for a very long time and found much to their disappointment that such facilities are not available with the average dealer. We at Audio House, therefore, are the first to offer this special service.

WHAT A TAPE CHECK IS: After a period of use, say 12 months, a tape recorder needs a check over to ensure it is in proper working order to maintain perfect performance. Send it to Audio House for check over and apart from servicing we will advise you whether or not repairs and replacements are necessary. In the event of a machine being sub-standard an estimate is given to rectify any deficiency.

Price of service: **2 gns.** plus return carriage

Collection and delivery by arrangement within 10 mile radius



TAPE RECORDER

for

home, car or office

Inexpensive, yet a machine giving good quality reproduction. Its versatility in use makes it a tape recorder you can take with you anywhere. Features include:—

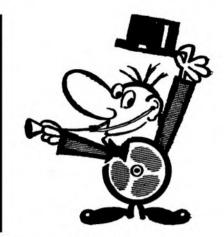
2 speeds: 3½ i.p.s. and 1½ i.p.s. Fingertip control

Exceptional economy of tape (Equivalent to 3 L.P. records on one 3" spool)

Supplied complete with microphone Compact. Size I0in. × 5½in. × 6in. Price complete......38 gns.

FOR THE CAR. Converter for car battery power supply 14 gns. extra FOR THE OFFICE. from 43 gns.

This includes dictation and transcription with foot control, including back spacing. Can record telephone messages. This model compares very favourably with the more expensive well known office recorders.



The tape check includes:

- * CLEANING
- + LUBRICATION
- * DEFLUXING OF HEADS
- * INDICATION OF FREQUENCY RESPONSE
- * MEASUREMENT OF WOW AND FLUTTER
- * EXAMINATION OF ALL MECH-ANICAL PARTS
- * TESTING OF VALVES
- * SPECIAL REPORT GIVEN ON THE CONDITION OF THE MACHINE



AUDIO TAPE LIBRARY

Every tape recording enthusiast should be a subscriber. It will prove to be money well spent as its resources.

open up a new world of entertainment. You can hire by post all the available monaural and stereo pre-recorded tapes. Cost? Only 52s. 6d. for a single reel—which you can change up to 12 times within a six-mouth period! Or exchange those 12 times within six months—making 24 different tapes! For 112s. 6d. you get three tapes—over six months, that's 36-different tapes! At less cost for people who-call. For details and catalogue send 6d. in stamps.

Watch for AUDIO HOUSE advertisements

in next month's issue which includes special features in the Stereo supplement.

AUDIO HOUSE

8, DARTMOUTH PARK AVENUE, LONDON, N.W.5.

Our showroom is open for demonstration daily, 9-30—6. Friday, 1-30—9. Closed Monday.

Only 16 minutes from Charing Cross by Northern Underground (or Bus 27, 134, 137) to Tufnell Park Station, thence 4 minutes walk.











Two-position stand for use either free-standing or held in the hand



Model MIC 40 A neat and handy pack-away microphone designed particularly for use with tape recorders. Pleasant appearance and good performance.



COSMOCORD LTD WALTHAM CROSS HERTS. TEL: WALTHAM CROSS 5206 (London telephone subscribers dial WA4 5206)

You're on the best of terms with

THE TAPE RECORDER CENTRE

All makes of tape recorders and Hi-Fi equipment FREE OF INTEREST

on orders over £30



Elizabethan Escort
—45 gns. £5 5s.
deposit and 12 monthly
payments of £3 10s.

All leading Tape Recorders, Saga-Elizabethan recorded tapes, and a complete range of Hi-Fi equipment — Amplifiers, Tape Decks, Tuners, Pick-up Arms, etc.

Unbeatable NO-INTEREST terms: H.P. deposits from 10 per cent. Delivered free U.K.

FREE illustrated catalogue on request

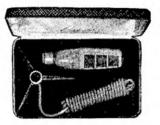
Call, write or phone

SYPHA SOUND SALES LTD. (Dept. T.)

THE TAPE RECORDER CENTRE

75, Grand Parade, Harringay, London, N.4 Telephone: STAmford Hill 1146

Open Monday to Saturday 9-6, Wednesday 9-1



the perfectionist's **microphone**

The thrilling acoustic quality of the Cadenza Ribbon Microphone is something that every recording enthusiast has wished for. This is no microphone for the mediocre-the Cadenza is a superb instrument that will do full justice to the finest performers and the best of recording equipment alike. With a virtually flat output over the entire 50 - 12,000 cps range, gems of tone and clarity that make the original performance sparkle are caught and held by the wonderful Cadenza ribbon microphone, Yet it is not in the 'expensive' price class; its moderate cost places it within the reach of every discriminating devotee of recorded sound.

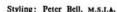


ribbon microphone

designed and manufactured in England

Microphone with dual impedance head, in presentation case. 84 gns.

Microphone (dual impedance head) and tripod desk stand, with 11 ft. of cable. 10 gns.



Send now for illustrated folder or ask your radio dealer

Simon Sound Service Ltd

46-50 George Street, London W.I Telephone: WELbeck 2371



... till you've heard

a 00000

R2 TAPE RECORDER From the very first replay—pre-recorded or your own home-recorded programme—you'll be thrilled with its sureness of tonal quality and ease of control. Just as you recognise the voice of a friend on the 'phone or your favourite songster on radio or record, you'll know that this is the instrument you've always wanted. Designed and built by pioneers in the development and manufacture of Tape Decks and Tape Recording Amplifiers—TRUVOX are justly proud of an instrument that lives up to "all that the name implies." Increased production at our new, modern factory now enables us to offer this famous 56 GNS. instrument at reduced prices—Models now available from

★ GO STEREO with TRUVOX

Truvox Tape Recorders can now be supplied fitted with a stereophonic head at extra cost—add a second loudspeaker and amplifier and you can enjoy all the thrills of stereophony in your own home.

Available from all leading radio dealers or full details from:—



TRUVOX Stereophonic Head for replay of pre - recorded stereo-



TRUVOX Radio Jacks for direct radio reception and recording.



TRUVOX Telephone Adaptor for 2 - way telephone conversation recording.

TRUVOX LIMITED, NEASDEN LANE, LONDON, N.W. 10 (Tel.: GLAdstone 6455)

WE HAVE THE

LARGEST SALES **ENGLAND!**

BECAUSE WE GUARANTEE YOU THE BEST TERMS

Any make only 2/- in £ deposit, balance of retail price by 9 monthly payments with NO INTEREST CHARGES * H.P. over 2 years—one-third deposit—No INTEREST CHARGES over 24 months * Special cash terms * Free delivery anywhere in U.K. (we are the biggest Mail Order Specialists with thousands of sales over the whole country) * Free service for .12 months * Part-exchanges * Free demonstrations in your own home, etc.

150 machines, 35 models on permanent demonstration in our showrooms * Open all day Saturday * All accessories in stock or sent by Mail Order Main Agents for all the best makes.

You may purchase from us by post, in complete confidence.



HIGH ST. 218. **BROMLEY** KENT **RAV 4477**

TAPE RECORDER AND CAMERA CENTRE



MODERN TECHNIQUES WEDMORE STREET LONDON ARChway N.19 Tel:



Choosing a tape recorder is a serious business . . .

Upon the wisdom of your choice will depend the many hours of satisfaction and pleasure
you have the right to expect. Before making your choice see and hear the Brenell first
—consider the outstanding features of this truly remarkable machine.



Maximum playing time: up to 6 hours * Rewind time: Approx. 55 seconds for 1,200 fc. tape * Tone Controls: Separate Bass and Treble on Playback * Frequency Range: 60—10 kc/s + or — 3db at 7½ 1,p.s. * Monitor Socket: For high impedance phones Net Weight: 25 lbs approx.

Brenell tape recorders

Brenell performance is true-to-life performance

Send for full details to Sole Manufacturers: BRENELL ENGINEERING CO. LTD.,

Ia, DOUGHTY STREET, LONDON, W.C.I.

Brenell *** Three Star

- * Three recording speeds 17, 31, 71 i.p.s.
- * Frequency compensation at all speeds
- ★ Push Button operation (interlocked)
- * Printed circuit amplifier
- * Separate Bass and Treble controls
- ★ High quality loudspeaker (8in. by 5in.)
- Spool sizes up to 7 ins. to take standard pre-recorded tapes (All E.M.I. pre-recorded tapes are on 7 in. reels)
- * Pause control
- * Digital revolution counter
- ★ Modern style wooden cabinet designed for improved acoustic performance

58 gns.

Price includes Microphone, 7in. spool and 1,200 ft. Tope.

For the professional recordist the

MARK 5 PORTABLE TAPE RECORDER

Four recording speeds. 3 independent motors. Permits use of 8½ in. reels. Price including 1,200 ft. of tope 64 gns.

Because the Mark 5 is of unit construction the following can be supplied as separate items for incorporation in your own equipment.

Tape deck with provision for extra heads
Tape Pre-amplifier Type T.P.2.

Power Unit T.U.2.

Mixer Unit

28 gns.
17 gns.
44 18 0
42 18 0

See and hear our full range of models at the

TEL. CHA 5809 AND HOL 7358

FRANCIS OF STREATHAM

THE COMPLETE TAPE RECORDER SPECIALISTS

WE STOCK THE LARGEST SELECTION OF RECORDERS IN LONDON. LATEST MODELS ONLY

	Price	Price		Price
*Brenell Mk. V Brenell 3 Star Wyndsor Dauphin Wyndsor Viscount Philips 8109 Philips 8108 Truvox R.2 Sound 444 Sound A20 Sound 555 Magnafon Courier Magnafon Diplomat Elizabethan Essex	64gns. 58gns. 89gns. 49gns. 49gns. 39gns. 62gns. 55gns. 65gns. 45gns. 55gns. 65gns. 45gns. 65gns.	Uher 52gns. Geloso 38gns. Verdik 45gns. Phonotrix 26gns. *Vortexion WVA £93 13 0 *Vortexion WVB £110 3 0 *Ferrograph 3AN 79gns. *Ferrograph 3ANH 86gns. Grundig TK20 50gns. Grundig TK25 62gns. *Grundig TK30 72gns. *Grundig TK35 82gns. *Grundig TK830 100gns. *Simon SP4 95gns.	*Harting Walter 101 Walter 303 De Luxe Walter 305 Perth-Saja Standard Perth-Saja De Luxe Sound Belle Spectone *Reflectograph Stuzzi Magnette Telefunken KL85 Telefunken KL65 Telefunken KL75	82gns. 29gns. 42gns. 57gns. 56gns. 26gns. 76gns. 94gns. 69gns. 75gns. 57gns. 50gns.
		Missanhauss susses		

All machines available on NO INTEREST—NO CHARGES terms for Credit Sale or Hire Purchase (at terms to suit the customer) plus Free Service whilst under guarantee. Recorders for hire from 45s. weekly. Personal callers welcome to continuous comparative demonstrations. Open all day Saturday.

MAIL ORDER DEPARTMENT FOR ALL AVAILABLE SIZES: E.M.I. GRUNDIG = SCOTCH BOY = BASF = PHILIPS = TELEFUNKEN GELOSO = FERROGRAPH = STENORETTE = TAPES AND EMPTY SPOOLS = EMICASES = SPLICERS = DEFLUXERS = TELEPHONE ATTACHMENTS = STETHOSCOPE EARPHONES = RADIO JACKS MIXERS = AND ALL TAPE RECORDER ACCESSORIES = POST FREE LARGE RANGE OF CRYSTAL = MOVING COIL = DYNAMIC RIBBON MICROPHONES BY: LUSTRAPHONE = ACOS = RESLO

GRUNDIG = RONNETTE = PHILIPS = CADENZA = SOUND DESK AND FLOOR STANDS = TUNERS BY: DULCI = T.S.L STIRLING = ELIZABETHAN = PHILCO = PAMPHONIC = STEREO AND STRAIGHT AMPLIFIERS BY: DULCI = LEAK = PAMPHONIC TRIXONIC 800 = TRANSCRIPTION UNITS BY: GARRARD = LENCO GOLDRING = COLLARO = PRE-RECORDED TAPES BY: COLUMBIA HMV = SAGA ELIZABETHAN

TAPE TO DISC SERVICE

169-171 STREATHAM HIGH ROAD, LONDON, S.W.16

STReatham 0466-0192

.......



MICROPHONES FOR TAPE RECORDERS

SINGLE CHANNEL AND STEREOPHONIC

LUSTRAPHONE LTD. design and manufacture a wide range of microphones including a new model, the "Stereomic" for stereophonic sound. Of the many types available, the microphones indicated below are of special interest to all who use tape recording equipment.

- "STEREOMIC" Double Ribbon Microphone.
- "LUSTRETTE" Popular priced general purpose, dynamic.
- "RIBBONETTE" Pencil Ribbon velocity.
- "STUDIO RIBBON" Broadcast type Ribbon Velocity.
- "FULL VISION" High quality dynamic.

Full descriptive literature free on request

LUSTRAPHONE LTD. ST. GEORGE'S WORKS, LONDON, N.W.I

Phone: PRI 8844

Now! it's easy to edit tapes—economically



USE A PROFESSIONAL TYPE RECORDING TAPE SPLICER FOR EDITING AND MENDING RECORDING TAPE

On the new Mark II Bib Recording Tape Splicer both clamps are now of the easy lift type and are fitted on the same side to facilitate rapid removal of the jointed tapes. These improvements ensure even easier and quicker precise jointing of tapes. Because you can use all odd lengths of tape, you soon save the cost of the Splicer. If desired the Splicer can be attached directly to a tape recorder deck.

The technical experts say . . . "Everyone who uses a tape recorder will need this little tool. It is indispensable." P. WILSON, Gramophone.

"As a test I asked a non-technical person to splice some tapes and, after a couple of practice joints, perfect splices were made. A really useful gadget." D. W. Aldous, M.Inst.e., M.B.K.S., Gramophone Record Review.

"The Bib Tape Splicer . . . produces a perfect joint with the minimum of effort." WIRELESS WORLD.

18/6

Bib

RECORDING TAPE SPLICER Get one from your local stockist today. In case of

Get one from your local stockist today. In case of difficulty write to us giving his name and address. Send stamped addressed envelope for helpful leaflet on tape editing.

Multicore Solders Ltd., Dept. T.R.3, Multicore Works, Hemel Hempstead, Herts.

CLOSING THE GAP...

Most of us know, or knew, what could be expected from a good tape recorder in terms of frequency response at the various speeds.

But a major advance in the design of the recording head has altered all that.

By closing the 'gap' in the cylindrical wall of the head - closing it in

fact, to such an extent that the 'gap' can only be seen through a microscope—the

top frequency limit of tape recorder performance at any given speed has been radically lifted. This development has made it possible for a new speed to be introduced - the speed of 17 inches per second. Once considered impracticable, this speed now provides a surprisingly high fidelity. More than sufficient for a wide range of sounds one would want to record such as speech and probably even for 'pops'. Correspondingly the high frequency response at $7\frac{1}{2}$ " per second is enhanced to a very high level

.. OPENS THE NEW WORLD

OF THE

The Grundig TK 35 is the first Grundig model to have three speeds: $-7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{7}{8}$ inches per second. The frequency response at 71" is 50-18,000 cycles, at 33" 50-14,000 cycles and at 13" 100-8,000 cycles. The playing times are no less impressive, being 1½ hours, 3 hours and 6 hours respectively when Grundig Polyester L.P. Tape is used. All the first-class features expected of the foremost model in the Grundig range are, of course, included.

> Ask your Grundig Dealer for a demonstration or write for free illustrated literature to



Joundia

MAKERS OF THE FINEST TAPE RECORDERS IN THE WORLD

GRUNDIG (Great Britain) LTD. Advertising and Showrooms: 39/41 NEW OXFORD STREET, LONDON, W.C.I Trade enquiries to: NEWLANDS PARK, SYDENHAM, LONDON, S.E.26 (Electronics Division, Gas Purification & Chemical Co. Limited)

GS 134a

IT'S SPECTACULAR! THE STUZZI 'MAGNETTE'



A fully transistorised battery operated recorder with all the features expected from a mains operated recorder of advanced

NEW waterproof covers to protect your valuable recorders. Choice of colours: navy blue, tan and wine with white piping. Specials made to order. Full range to suit.

Popular models in preparation: TK5 Cover complete with microphone pocket. Price now only 36s. TK8 Cover complete with microphone pocket. Price now only 39s. TK 830/3D Cover. Price now only 40s. 6d.

TRADE ENQUIRIES INVITED

- Size II"×41"×8" Weight 8lbs.
- Twin Speed 17 and 32.
- Twin Track.
- Frequency 80-9000 cycles.
- Up to two hours per reel playtime.
- Magic Eye.
- Position Indicator.
- Amplifier Facilities.
- ld. an hour to run-approx.

69gns. complete with microphone and radio connecting leads.



also the



One of the world's smallest wire recorders

TAPE RECORDERS BY

Grundig, Geloso, Telefunken, Truvox, Elizabethan, Wyndsor, Simon, Phonotrix, Tutor and last but not least the

STUZZI MAGNETTE and MAMBO

TAPE DECKS.

MICROPHONES AND STANDS. Grundig, Cadenza, Geloso, Cosmocord, Lustraphone, Reslo, etc.

CRYSTAL PEN STAND MICROPHONE complete with ball point pen—suit Geloso TR 175. Price £6 18s. 0d.

TAPES. Grundig, B.A.S.F., Emitape, Scotch Boy and Telefunken Double Play. JOINTING AND EDITING ACCESSORIES. Mixers, Tuners, Amplifiers, Converters, Speakers, Record Transcription Units, Spares.

★ No Interest Terms

Free Delivery

A. BROWN & SONS LTD. TAPE RECURDING DEFT. 24-28 George Street, Hull, E. YORKS Telephone: 15412, 15413

European

CAPACITORS

now obtainable

No dollars, no licence required.

Also all types of High-Stability Resistors.

Miniature ELECTROLYTIC **CAPACITORS**

Complete range of all types of Transistors.

Some sole agencies still available.

For more details apply to :-

SUPER ELECTRONICS Ltd.

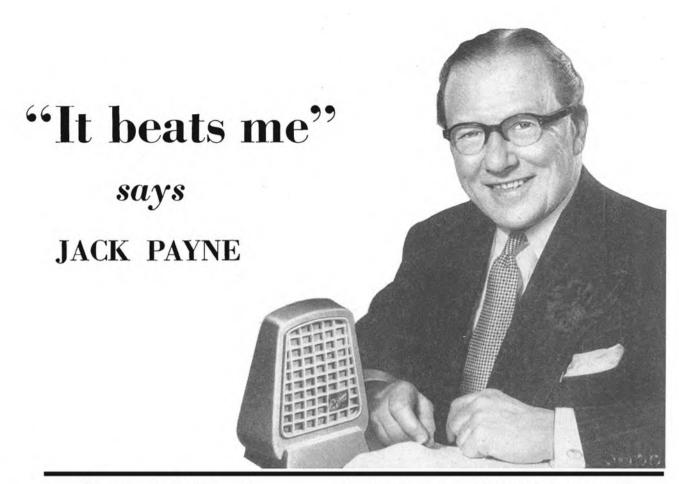
5, Violet Hill, London, N.W.8

Maida Vale 0569



134 UXBRIDGE ROAD, SHEPHERD'S BUSH, LONDON W.12 Open all day Saturday

Dept. T.R.



"Beats you, Jack? What . . ."
"How you do it at the price?"

"Put it down to 'know-how' ".

"Yes, of course . . . but there's more in it than that. It's GOOD y'know; good at ANY price".

"What do you mean by "good", Jack?"
"Musically good. True sound. Easy to operate too. In fact it's better than many expensive types... and I've heard most of them".

JACK PAYNE'S COMMENTS apply to all three 'Sound' Tape Recorders. Each in its class represents the finest value for money and just cannot be bettered. Just whet your appetite with the following brief descriptions and then make sure you see and HEAR a 'Sound' Tape Recorder demonstrated before you buy.

'Sound' Belle—at only 26 gns. the lowest cost, fully automatic quality tape recorder in the world! Top class musical reproduction, built-in speaker, 3 watts output, push button control. Complete with crystal microphone and tape.

'Sound' 444—a high performance lightweight 3speed tape recorder with newest high fidelity transcriptor deck; 3 hours playing time. In two-tone carrying case complete with crystal desk microphone and spool of tape. 45 gns.

'Sound' 555—the supreme recording instrument with a luxury specification—but a moderate price. 4 watts output with three loudspeaker system. Complete with dynamic desk microphone, Stethoset for monitoring and personal listening, 1,800 ft. spool of L.P. tape, etc. 65 gns.



784/788 HIGH ROAD, TOTTENHAM, N.17. Telephone: TOTtenham 0811-3

HAND MADE.

This is no idle statement, it virtually sums up the REPS recorders, for high quality products such as these cannot possibly be mass

ducts such as these cannot possibly be mass produced. Our production capacity is therefore strictly limited, and for this we make no apology; rather we pride ourselves that all models manufactured comply with this published technical specification.

The whole mechanism is mounted on rubber which together with careful selection of motors reduces mechanical noise to a minimum.

Provision is made for the addition of a stereo head with both channels available either to an external stereo amplifier, or one channel through the internal amplifier and the other externally.

TECHNICAL SPECIFICATION

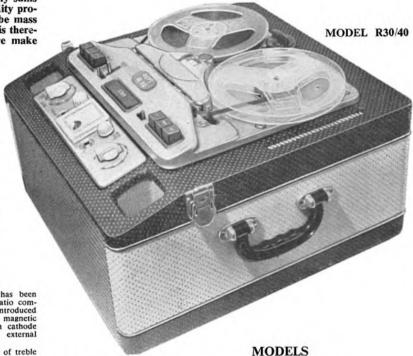
Amplifier $30 - 25,000 \text{ cps } \pm 2 \text{ dbs}$ (R20/30) 15 - 50,000 cps ± 1 dbs (R40)

 $3\frac{1}{4}$ ips at 60-5,000 cps \pm 3 dbs $7\frac{1}{2}$ ips at 50-10,000 cps \pm 3 dbs 15 ips at 50-10,000 cps \pm 3 dbs 15 ips at 40-16,000 cps \pm 3 dbs (Signal/Noise ratio at $7\frac{1}{2}$ ips—47 dbs)

The frequency range in the treble region has been limited to obtain the maximum signal/noise ratio compatible to a low distortion factor. Distortion introduced in the recording process is so small that the magnetic tape becomes the limiting factor. 600 ohm cathode follower line output socket, for feeding external amplifier.

ampliner.

* Separate bass and treble controls. * Range of treble control at 10 kcs + or - 12 dbs. * Range of bass control at 60 cps—15 dbs. * Push/pull bias erase oscillator, for low background noise, minimum interference with radio reception. * Loudspeaker 9" x 5" hi-flux magnet with extended treble response. * Amplifier output 6 watts peak no models R20, R30—10 watts peak R40. * Mains on/off indicator lamp. * Supplied complete with Acos 39/1 microphone, stand and 1,200 feet of P.V.C. tame. cator lamp. * Supplifeet of P.V.C. tape.



R20 62 GNS, with magic eye record indicator. R30 66 GNS, with meter record level indicator R40 70 GNS. as R30 but with push/pull sound output

* All recorders can be adapted for replaying Stereo tapes.

A selection of HI-FI Dealers in the London Area who will be pleased to arrange a demonstration.

QUALITY MART

8 Dartmouth Park Avenue, N.W.5 GUL 1131

TELETAPE

230 Hertford Road, Enfield Highway, Middx, HOW 1799

59a Edgware Road, W.2 PAD 1942

H. C. HARRIDGE

8 Moor Street, Cambridge Circus, W.I **GER 7108**

HOLLEY'S

ROD 4988 315 Camberwell Road, S.E.5

CLASSIC ELECTRICAL Co. Ltd.

352-364 Lower Addiscombe Road, Croydon ADD 6061

SYPHA SOUND SALES

75 Grand Parade, Harringay, N.4 STA 1146

For demonstrations write or phone 9 a.m. - 6 p.m. Monday — Friday. By appointment Saturday

REPS (TAPE RECORDERS) LTD

118 Park Road, North Acton, London, W.3 Phone : ACOrn 4141

TELEONICS

181 Earl's Court Road, S.W.5 FRO 2468

WADDON AND HILL, Ltd.

44 High Street, Hounslow HOU 1736

MUSICRAFT

SOU 3828 20-22 High Street, Southall RIC 6798 13 King Street, Richmond 80-82 Uxbridge Road, Ealing, W.13

RECORDER Co.

186-188 West End Lane, West Hampstead,

Please send me without obliga	ition full details of
your range of Tape Recorders. interested in Model R	I am particularly
interested in Model K	

Mr.	

DECEMBER 1958 Vol. 2. No. 12

Associate Editors:

IAN ARNISON R. BROWN

Technical Advisory Editor:

CHARLES LANGTON, A.M.Brit, I.R.E.

Advertisement Department:

I, Crane Court, Fleet St., London, E.C.4

Telephone: FLEet Street 8197



Published on the 20th of each month from 426, Camden Road, London, N.7. NORth 3419

CONTENTS

A COMMONWEALTH TAPE NETWORK

Feature by Gordon Pemberton Pages 18 & 19

HOMO TAPIENS

By Douglas Gardner

Page 21

INTERNATIONAL AND SCHOOLS TAPE CONTESTS

Pages 22 & 23

GOLDENTONE AND THE THREE SPEEDS

Pages 28 & 29

NEWS FROM MANUFACTURERS

Pages 33 & 35

MORE ABOUT SPEAKERS

Pages 36 & 37

AMPLIFIERS

Charles Langton concludes his review

Pages 38 & 39

THE SPECTONE

Review by Angus McKenzie

Page 41

KNOW YOUR RECORDER No. 11:

"Elizabethan 56"

Pages 42, 43 & 45

CLUB NEWS

Pages 46, 47 & 48

THE EDITORS' VIEW

Drawing a line

WITH THE GRADUAL increase in the number of battery portables on the market, tape recording away from the family circle becomes more commonplace. Consequently, there is a new importance about a problem which we have discussed before in these pages. It concerns the ethics of recording.

Are there any circumstances in which it is permissible to record the speech

of another person, or other persons, without their knowledge?

The immediate instinctive answer should be a categorical NO. But the problem is not dismissed so easily. If you are making an actuality recording of some public ceremony, it is almost certain that you will pick up stray comments from members of the public who are near your microphone. Those comments may be a valuable constituent in building up a sense of atmosphere in the recording.

From that situation, it is a short jump to the use of a midget recorder and a camouflaged microphone to record conversational snippets in the street or public transport. If the words are spoken in such a way that they can be easily overheard in the ordinary way—and it is realised by those speaking them that they can be heard by others—then is it wrong to store them on tape instead of in the memory?

And what about the recording of telephone conversations, which is now commonly performed, but rarely with any warning to the person at the other end of the line?

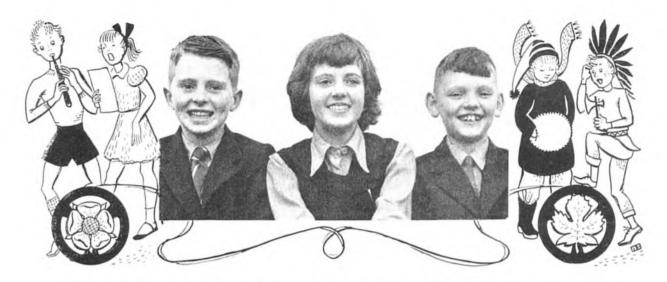
In the majority of cases, no evil consequences may flow from these actions, whether or not we judge them undesirable in themselves. But it requires little imagination to conjure up situations in which a tape of an odd conversation between two strangers in a tube train might prove a grave embarrassment to one or other if it was played back before a third person known to them.

Over and above such considerations, there is a deep-seated emotional objection to secret recordings. Mentally, many people link them with the idea of a Gestapo, or with a nightmare 1984. If an idea comes to be generally accepted that there could be a secret microphone in every stranger's button-hole, all sense of privacy will be lost. Something of freedom will have been destroyed. Persons on their guard will cease to act with natural ease, and the human personality will be eroded.

We hope that these remarks do not sound pompous, for we have a serious purpose. Nothing could so discredit or undermine tape recording as an activity as a suspicion that it can serve dubious ends. There is no evidence yet that such suspicion exists widely, and that is why the problems should be faced now.

We have two duties. The first is to pursue our tape activity at all times in such a way as can never arouse antagonism or suspicion. That means, among other things, no secret recording.

The second is to demonstrate at all times the creative and humanitarian aspects of tape recording.



John Parkin, Sandra McJannett and Barry Hellawell (see above) made the story possible; Betty Wadsworth supplied the photograph

T was probably John Parkin's idea in the first place, for John is always bubbling over with ideas. Most of them are unworkable, but the odd one in a hundred shows a touch of genius. We were all studying Canada at the time and writing letters to all kinds of Canadian agencies, in search of information.

The tape recorder had been in the school for a few weeks and we had all been playing with it—just to see what it could do. We talked to it, sang to it, told it jokes, made

TAPE OF THE TAPES

BRITISH AMATEUR TAPE RECORDING CONTEST, 1958

A tape of the winning entries in the four individual sections is now available, price 36s., post free, from Tape Recording and Hi-Fi Magazine, 426, Camden Road, London, N.7.

queer noises into it (including a few derisive ones!) and, of course, we trapped many of the uninitiated into providing us with cause for hearty laughter. The machine did everything perfectly, even being polite enough to refrain from commenting upon the ignoble uses we were making of it!

Then came the spark of an idea. Why not ask our questions on the tape, post it to Canada, sit back and wait for the answers? Why not, indeed?

But where should we send it? To whom should we address it? There was a good deal of argument about this and I refrained from taking part. After all, thirty-six fertile ten-year-old brains ought to be able to sort out something.

They did.

It would be sent to the Mayor of a town in Canada, who would be asked to pass it on to a school. Then we had more argument. A mere list of questions would not be enough. We ought to tell them something about ourselves, our homes, our school and the way we live. Hosts of impossible suggestions were made, until out came the bright idea of leaving a few people to do the planning. That is how the Tape Recording Committee was born. I was appointed secretary for the sole reason that I would be useful in typing out the final script.

After a few days, the Committee produced a skeleton programme which they "farmed out" to the rest of the top classes. There were to be spoken descriptions of the school, the village and the valley, some Yorkshire dialect, a description of a Yorkshire Pudding, a selection of songs and some questions about Canada. For a week there was feverish activity. The Committee gave auditions, judged the best descriptions, and fitted together the pieces of script to form a continuous programme. Grandparents were roped in to help with dialect, parents to help with facts, and a former pupil to give a special greeting to the French-speaking Canadians. The whole thing was given a trial and, to everyone's surprise, the result was fairly encouraging

Our arithmetical "boffins" calculated that the programme would use up about 800 feet of tape at 3½ inches per second and so, armed with a grant from the School

Pioneers of a Commonwealth schools network on tape

Told by GORDON PEMBERTON

Fund, the Committee set out to purchase a suitable spool. They returned with a 5 in. standard Emitape, deeming it best to send British produce to the Commonwealth. Of course, the boffins pointed out that there would be a good deal of spare tape left on the second edge, but this problem was shelved for the time being.

Sandra McJannett was appointed commere, because of her clear voice, and Barry Hellawell got the job of recording engineer. The staff had some misgivings about the engineering, but Barry's expert handling of the machine soon reassured them. In any case, our Philips AG 8108 could be worked by a five-year-old, let alone a mechanically-minded ten-year-old like Barry.



What we lack in technique is more than made up by our enthusiasm and, apart from one or two coughs and a bus changing gear outside the school, the recording seemed fairly good. At any rate, a gathering of parents a few nights later thought it was top-hole and contributed towards the expenses.

Preparations for the School Carol Service solved the problem of the spare tape. A short, separate programme of carols used up the remainder and then the whole spool was ready to send, the boffins having calculated the weight and postage. The precious package was borne triumphantly to the local Post Office, accompanied by a large crowd of interested spectators and consigned, by common consent, to the Mayor of Calgary.

Weeks of impatient waiting followed. The postman's every call was watched by hundreds of hawk-like eyes until, at last, the letter came. Our tape had reached Calgary. But that was not all. Kindly Mr. Donald McKay, the Mayor, liked the idea so much that he passed our tape on to the Prairies' Radio Network. The carols were broadcast over Christmas and the exchange programme in the New Year. We also learned that Kensington Road School, Calgary, had been selected to send us a reply in due course.

After that, things happened with bewildering rapidity. In came the local press, followed by the national press and other interested bodies, until our Committee became expert interviewees. Soon afterwards the Canadian tape arrived—a magnificent recording, packed with information and beautiful singing—and we played it umpteen times to the children, parents, officials and, of course, the postman who,

by this time, was as keen as the rest of us. Finally, the B.B.C. came and interviewed the Committee, who later found themselves on Children's Hour. Heads became almost too big for hats that day!

There was no stopping the Committee now. Renaming themselves the Commonwealth Exchange Committee, they began to arrange other tapes. Exchanges with Christchurch and Alice Springs were soon put into gear and sent off. News was later received that the former had been broadcast in New Zealand's Empire Day programme. It wasn't long before the reply came from Christchurch and soon our school was ringing with the songs of Maori and Pakeha.

Then we had a real surprise. Out of the blue—to us this time—came a tape from a school in Auckland. They had heard the Christchurch broadcast and had decided to play the game our way. Naturally, the Committee got busy again and, within a week, the reply was on its way.

All this time the rest of the school had been watching the activities of the top classes, with not a little envy. Unable to contain themselves any longer, the Third Year asked if they could "have a go." They produced a first-rate effort, including the singing of a Yorkshire calypso, and sent it to Jamaica.

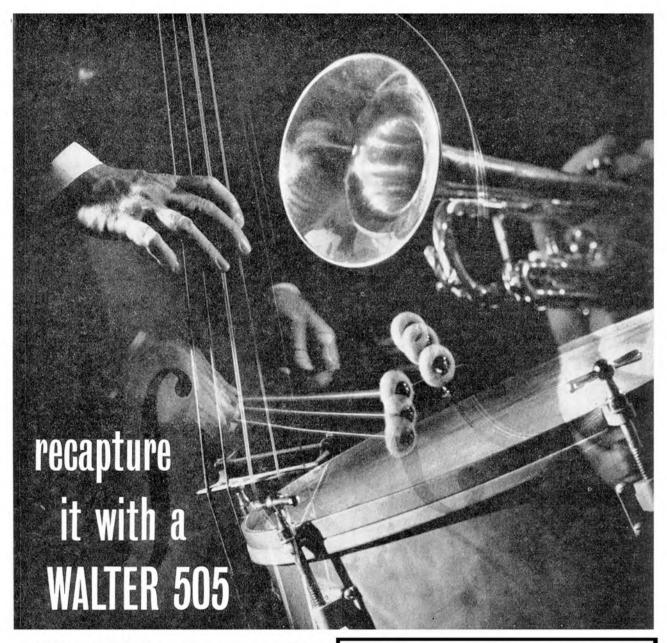


And so it goes on. The whole thing seems to be snow-balling fast. Further contacts have been made with Kenya, Malaya, the Falkland Islands and South Africa. Other schools in England are joining our Commonwealth Network and soon, we hope, tapes will be flying thick and fast all over the place. It's excellent training for the children, it's very educational but, above all, it's jolly good fun!

Try it out yourselves and see!

RECORDING MUSIC

Owing to heavy pressure on space in this issue, we have had to hold over the second in our new series of articles by Michael Woodhouse entitled "From Solos to Symphonies." The series will be completed in our January and February issues.



High Fidelity tape recorder

The Walter 505 gives you an orchestra in your hand—all the extra features you've been hoping for, and it's light enough to be really portable into the bargain. You'll be as thrilled with its superb quality as with its handsome modern

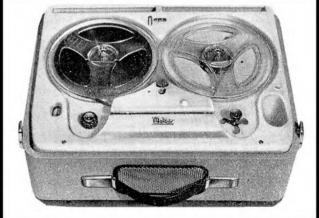
styling. It has the new Walter Mark II Deck; 2 speeds, 2 speakers, 2 inputs, 2 outputs. **57 gns.** Write now for free folders describing the

505 and the other Walter models.

WALTER 303 DE LUXE, with the 2 speed Walter Mark II Deck
and many other attractive features. 42 gns.

WALTER 101—a full-size tape recorder with

a first class performance. 29 gns.
All models complete with microphone, tape, radio/gram
recording lead, instruction manual and 12 months guarantee.



WALTER INSTRUMENTS LIMITED · MORDEN · SURREY · TELEPHONE: DERwent 4421



Cyril Fletcher-seen here with his Grundig-is one among the growing host of stage and film stars who make good regular use of recorders. He travelled to Newhaven last month to present the pupils of the Meeching Junior School with the prize they won in the Schools Section of the British Amateur Tape Recording Contest. A full report appears on page 23

URING a recent television inter-DURING a recent television interview Aldous Huxley—who has an impressive collection of fulfilled prophecies to his credit already—suggested that the written novel might have to give way, for economic reasons, to a form of novel recorded in sound.

He mentioned the gramophone record as a medium by which this might be accomplished, but there can be little doubt that the tape recorder was embraced by his intention and that he would agree that it would be the more suitable in the long run.

He said he was sure that this trans-He said he was sure that this transference to the realm of sound would bring." profound changes "in the character of the novel, and pointed out that the novel had already undergone many modifications to meet changing conditions. For one thing, he thought that the sound novel would be shorter.

Can the novel really survive as a novel in terms of sound, or would it lose its identity within the wide orbit of the sound play? The success of some of the novels that have been adapted for radio is a clue, but a risky one. How long would the type of thinking imposed by print operate when the sheer necessity for observing the rules of that craft has

Everything seems to depend on the exact nature of the distinctive contribution of the novel and whether this special something can function happily in the

Is the sound novel on its way?

world of sound. The Concise Oxford Dictionary describes the novel as a "fictitious prose narrative of sufficient length to fill one or more volumes portraying characters and actions representative of real life in continuous plot."

in continuous plot.

My feeling is that the word "narra-tive" is the vital one, and I would say that the human voice is at least as good as the printed word when it comes to narration. Note, however, that the printed word is impersonal and the spoken one personal. Most novels in sound will probably be in the first per-son, and they will be in simpler language, with much explanatory emphasis left to the voice, as it is in drama.

Behind the scenes

I HAVE noticed one piece of technique that seems to belong as perfectly to the true novel as to the realm of sound, and that is the trick of "thinking aloud." HAVE noticed one piece of technique and that is the trick of thinking aloud. It does not ring true in print and it is often clumsy in plays, but it can be superbly effective in the sound novel—or the short story in sound. This technique was used grippingly in the B.B.C.'s broadcast of Samuel Beckett's "Malone Dies," and the technique turned up, significantly, among many of the entries in the Tape Recording Contest this year. It is a wonderful way of exploring behind the scenes of the action—one of the characteristic functions of the novel.

One way and another I imagine that the novel should thrive on tape, losing nothing that is vital to its existence and possibly gaining much, including the elimination of a lot of phoney dialogue that can get by on the page but curdles the blood when it is heard.

All this is without considering the aid available from music and other sound effects. The sound novel should provide scope for collaboration between two creative people, one concentrating on the body of the work, and the other looking after its expression in terms of sound.

If you feel like doing the sound only, why not contact a local author and suggest getting together on an experimental project?

Recording villages

OMBINE an enthusiasm for tape recording with a deep interest in villages and you have a lifetime of rich and varied activity. Mr. G. M. Carson, of Dronfield, Derbyshire, has discovered an absorbing occupation in recording the life of Derbyshire villages, with which he is particularly concerned.

He began with the village of Ashford and took fourteen weeks to complete an account of its past and present life-recording the church and its bell, the ringers, choirs, streets, mills, colleges, public houses, notable characters and various other inhabitants of the village. Truvox equipment was used, and the recording is now public property.

Next on Mr. Carson's list is the village

of Holmesfield and this time a neighbour is taking still photographs to accompany the tape. A third partner in the under-taking is Mr. Gordon Cooke, of Sheffield, who is responsible for the editing. Mr. Carson and his co-workers begin by getting around the district and introducing themselves to people. During this part of the proceedings they select suitable people and subjects to record, and generally plan the actual operation. Recordings are all the better for this advance preparation.

Mr. Carson expects to have Holmesfield on the tape early in December; and the total cost of production, he estimates, will not exceed £6. The recordings and the photographs will be kept in the Parish Church.

This is a valuable, as well as highly rewarding work, and anyone who tapes the life of villages in any part of the country with insight and understanding will be helping to build up a record that must eventually come to be recognised as one of the most important of our

Tapes to come?

A NOTHER play has turned up in London with a tape recorder in a leading role—in fact it is practically the play itself. Krapp's Last Tape, by Samuel Beckett is running at the time of going to Press at the Royal Court Theatre together with the same author's End Game. The one character in the play is Patrick Magee, who acts the part of an old man listening to the love affairs of his past by means of a tape which recorded his thoughts. He obviously had a one-track mind.

Life and tape recording would cer-

Life and tape recording would cer-tainly take a sensational turn if somebody invented a machine that could record thoughts automatically. Many beautiful friendships would come to a sticky end, and fortunes would be won and lost at the turn of a spool.

My secret counter-weapon is a longrange, guided bulk eraser that goes into action automatically whenever anyone thinks they've got something on me,

INTERNATIONAL RECORDING CONTEST

BERNE **1958**

LIFE in a Mediæval Town, winning entry in the schools section of the British Amateur Tape Recording Contest has been awarded second prize—a bronze work of sculpture entitled "L'Oiseau"-in the same section of the International Amateur Recording Contest,

Britain's entries, winners of the second British Amateur Tape Recording Contest, were heard in the studios of Radio Berne on Monday and Tuesday, October 20 and 21.

This is the seventh year that the International Contest has been held. It began through the efforts of Swiss and French sound recording enthusiasts who persuaded their national broadcasting organisations that tapes made by amateurs were

well worthy of broadcasting to wider audiences.

Now many employees of Swiss radio stations have graduated through the amateur ranks. Radiodiffusion Television Française has had nearly ten years experience of broadcasting amateur

M. Arno Charles Brun, a director of the service and a member of the International jury, told us that they would like to develop even more amateur participation in radio pro-

Subsequently Dutch, German, Danish, Belgian and Austrian sound recording associations have backed the Contest.

This was the first year that British entries had been organised through Tape Recording Magazine, a task, as our readers know, we have assumed from the British Sound Recording Associa-

Chairman of the International Jury was Herr Friedrich

Braward, chief reporter of Radio Berne.

Among the observers present were representatives from German and Italian radio stations, the Swiss short wave service and, through the courtesy of E.M.I. Sales and Service Limited, our own British "Tape of the Year" prize winners, Mr. and Mrs. Basil Harley. Ian Arnison, Associate Editor, Tape Recording Magazine was also present.

Tape Recording Magazine International Shield was won by Herr Wilhelm Gluckert of Mainz with his own vigorous march Unter dem 4 Farben-Banner. This entry, in the music section, gained the highest overall number of points of any individual entry in the Contest.

The Grand Prix of 1,000 Swiss francs went to Ru van Wessel's

The Grand Prix of 1,000 Swiss francs went to Ru van Wessel's Limelight submitted through the Dutch Sound Hunters Federation. This delightful recording of a light, happy student revue held the high spirits, the sheer vivacity of its youthful participants. Ru van Wessel is himself only twenty two.

In the Compositions section a Swiss recording Symphonietta (one of eighty-six adjudicated upon by the Swiss national jury) gained first place and a prize of 100,000 French francs. This brilliant recording captured the movements and moods of a symphony using human voices alone, in groups or chorus speaking. speaking.

Holland gained second place with Aart van Maaren's Embryo. The documentary section prize of 10,000 Belgian francs was won by Derek Worman of South Africa with Golden City. (This was one of several individual entries received direct from countries where retired agreements and countries where retired agreements are several individual entries. countries where national organisations are not participating. Enthusiasts in Chile, Mexico and Sweden were among others

who submitted tapes.)

Golden City tells by narrative and unusual sound passages the story of Johannesburg, its history, the peoples who live there and the present day cultural background.

Austria won second prize with Susan Keler's The Wheels of

Switzerland carried off the actuality prize of 50,000 French francs with Edwin Spiess lovely recording of the organ of Toggenburg. This is a family organ built more than one hun-







Top: Wilhelm Gluckert of Mainz seen with the Tape Recording Magazine International Shield; Fredy Weber, one of the organisers of this year's Contest and a member of the International jury, seen in the studio at Radio Berne; Dr. Jan Mees, leader of the Dutch delegation (left) with Britain's "Tape of the Year" winner Basil Harley



Mr. John Weston, producer of the winning Schools entry in this year's British Amateur Tape Recording Contest and a second prize winner in the International Recording Contest receives his International prize—a bronze work of sculpture awarded by the Suisse Association des Chasseurs du Son—from Ian Arnison, Associate Editor of Tape Recording Magazine at a ceremony at Meeching of Tape Recording Magazine at a ceremony at Meeching Junior School, Newhaven. On the left is Miss Brenda Marriott of Grundig (Great Britain) Ltd., who sponsored the function, and Mr. Douglas Gardner—one of the judges. Famous comedian Cyril Fletcher presented the Grundig shield to be held by the school for all time. The Grundig Challenge Cup was also on display. The following day. Computing day of the property in the computing day. following day Grundig's organised a tea party in Brighton for all the children who took part and concluded the proceedings with a grand firework display.

dred and fifty years ago. The music played on it for the recording was Bach's Fugue in C minor. Edwin Spiess is a Swiss commercial employee, aged thirty-two, who lives in Zurich.

commercial employee, aged thirty-two, who lives in Zurich. Second Prize in this category went to Jean Evenou of France with his recording of a gypsy pilgrimage to St. Gregoire. This breathed the real meaning of "actuality."

The Schools section was won by a French School from St. Savin Aube with a recording incorporating the voices of children and their songs in many lands. There was a Maya song rendered by a children's choir in Vera Cruz; "Cadet Roussell" sung by children in a Moscow school and "The Merry Pupils" from a school music club in Yugoslavia. It is a lively, varied record which really "discovers the world" in sound. sound.

France won the humorous prize of an equally humorous statuette with Charles Bodin's N'est pas speaker qui veut. The humorous idea behind this record is based on the fact that in France professional radio interviewers frequently ring people inviting them to participate in telephone-games. Here the amateur reverses the procedure at the expense of the radio

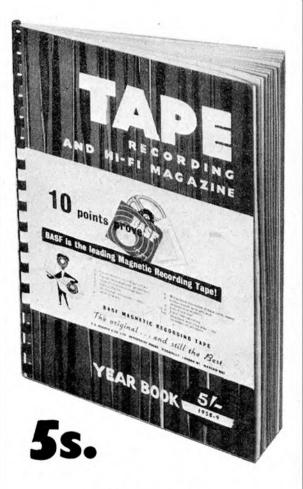
Belgium won the prize for the most technically able production with Jan Bruyndonck's Railles. This is a musical and sound composition built of real and musical sound effects of railway rails. In the opinion of at least one delegate this was quite the outstanding record of the whole Contest. More than one hundred and fifty hours of work went into the com-

than one hundred and firty hours of work went into the com-pletion of this seven minute tape.

The prizes were presented by the chairman of the jury at a civic function held in the presence of the President of Berne. Each country which took part is now hoping to persuade its national broadcasting organisation to play a selection of the winning tapes. Already several continental stations have done so on their short wave services. Ian Arnison

THIRD REPRINT

NOW AVAILABLE



or 5/9d. post free direct from

Tape Recording Hi-Fi Magazine 426, Camden Road, London, N.7



BASF is the leading Magnetic Recording Tape!



- Extra-smooth recording surface
- 2 Exceptional magnetic properties
- 3 Superb frequency response
- 4 Extra-long life
- 5 No background noise even after long use
- 6 Withstands extremes of heat, cold, damp
- Great tensile strength and dimensional stability
- 8 Free from curl
- 9 First-class spooling
- Standard and long play for recorders of all types

BASE MAGNETIC RECORDING TAPE

The original ... and still the Best

P. A. HUGHES & CO LTD DEVONSHIRE HOUSE PICCADILLY LONDON W1 MAYFAIR 8867

TAPE MAGAZINE IN 1959 AN EXCITING PROGRAMME

New features more pages bold plans

BY THE EDITORS

As we approach the New Year, TAPE RECORDING AND HI-FI MAGAZINE is able to announce ambitious plans for another big step forward. In 1959 this magazine will be bigger and better in every way, with a whole series of exciting new features.

Some of them are announced in the panels on the right. Most important is the introduction of a regular STEREO SOUND MAGAZINE section in the parent publication. Next month, to mark this innovation, it will take the form of a 16-page supplement—a separate FREE magazine. Editor of the new stereo section will be Douglas Gardner, a well-known contributor to our pages.

Our reviews of tape records and of hi-fi equipment are being improved and enlarged and they will appear as distinctive sections in the magazine.

We shall recognise that tape enthusiasts are interested also in the wider field by introducing a personal diary feature, "Beat and Off-Beat." This will not seek to compete with any existing publication, but will provide a distinctly-flavoured digest including disc developments.

There will be other new features, besides those announced on this page. New contributors, too, many of them famous names in their field. And, always, new ideas and a bright and lively approach to

subjects.

TAPE RECORDING AND HI-FI MAGAZINE has grown steadily in size, from its early 24-page issues. We have tried not to stint on our service to readers and to the industry.

But costs have risen all round and, though we have done everything possible to hold our claim to be the lowest-priced magazine in this field in the world, some adjustment now becomes inevitable.

Regretfully, we have decided that, if we are to maintain and improve our standards, we must put up the price to 2s. from the January 1959 issue.

We hope our readers will understand and will continue to give us that enthusiastic support which has contributed so much to our progress in the past.

S T E R E O SOUND MAGAZINE

Latest, fullest and most authoritative news of all stereo developments in a

FREE 16-PAGE SUPPLEMENT

SOUND EFFECTS

A new regular series explaining how you can produce any sound effects you require . . .

"A.B.C. of Sound Effects"

Programmes

worth

recording

Regular advance information about radio programmes you may like to preserve for your family's library

> A new, distinctive and highly personal review of the wider field . . .

"BEAT AND OFF-BEAT"

A digest of news of recorded pops music

BY DON WEDGE

of "New Musical Express"

ENLARGED SPECIAL SECTIONS

WILL BE INTRODUCED, CONTAINING THE BEST REVIEWS OF TAPE RECORDS AND THE MOST RELIABLE REPORTS ON ALL NEW TAPE AND HI-FI EQUIPMENT



for the finest resultsrecord on ...

Emitape

Record on Emitape - the magnetic tape made in the largest tape factory in Europe and used by the world's leading recording and broadcasting authorities, by industry and science . . . Exacting technical standards and a rigid system of testing ensure that consistently high quality of recording for which Emitape is world-famous.

Emitape's outstanding technical features

- High Sensitivity . Low noise level
- Low ' print through ' factor . Anti-static
- Freedom from curl and stretch

"77" "Pen-tested"
"88" General Purpose
"99" Long Play
giving 50% increased playing time

Type No.	Title	Size	Length approx.	Price in EMICASE	Price without EMICASE
88/3		3" dia.	175*	-	7 6
99/3		3" dia.	250'	-	9 6
88/3N	''Message''	31" dia.	175'	-	7 6
99/3N	J	3½" dia.	250'		9 6
88/6	3 "Junior"	5" dia.	600'	£1 3 6	£1 1 0
99/9	S dullior	5" dia.	850"	£1 10 6	£1 8 0
88/9	"Continental"	5₹ dia.	850"	£1 10 6	£1 8 0
99/12	Continental	53" dia.	1200'	£1 17 6	£1 15 0
88/12	3 "Standard"	7" dia.	1200'	£1 17 6	£1 15 0
99/18	Standard	7" dia.	1800'	£2 12 6	£2 10 0
88/18	"Professional"	8½" dia.	1750'		£2 17 6
99/24	Professional	81" dia.	2400'	- 0.00	£3 12 6

E.M.I. SALES & SERVICE LTD (Recording Equipment Division) HAYES · MIDDLESEX · ENGLAND



Emicase

available separately!

Protect your recordings

- Emicase gives easy identification of leader tapes.
- Has visible index.
- Solves your storage problem.

EMICASES:

5"-3/6 each · 5\\\ 3"-3/6 each · 7"-4/- each

— the maker's choice!

WYNDSOR VISCOUNT

Frequency response:— 50 c/s to 12 kc/s 3db at 7½ ips. 50 c/s to 9 kc/s 3db at 3½ ips.

Three speeds, twin track, push-button change-over. Low and High impedance outputs corrected to international standards. 10° x 6° elliptical speaker in lid, detachable from operating unit. Luminous-target record-level indication. Automatic switching for monitoring facilities. Resettable tape-position indicator. Takes up to 7° spool. Attractive cabinet covered in coffee and cream colour PVC leathercloth. Storage space for leads and microphone.



WYNDSOR DAUPHIN

Frequency response:— 50 c/s to 14 kc/s 3db at $7\frac{1}{2}$ ips. 50 c/s to 8 kc/s 3db at $3\frac{1}{4}$ ips.

Four push-buttons and stop bar for control of tape deck. Separate heads for Record/erase, Playback and Monitoring. Counter type position indicator. Separate controls for Record and Playback volume. Separate Bass and Treble controls. 'Luminous target' record level indication, Three matched speakers - 10° bass unit, 9° x 5° middle unit, and 4° treble unit - mounted in reflex enclosure. High quality crystal microphone with storage compartment. Precision built drive motor for capstan and tape reels. Takes up to 7° spool. Contemporary design console cabinet with oak-framed speaker fret.

Emitape is chosen and recommended by the makers of Wyndsor Recorders.

THE WYNDSOR RECORDING COMPANY LIMITED, 2, Bellevue Road, Friern Barnet, London, N.11.



E.M.I. SALES & SERVICE LTD (Recording Equipment Division)

HAYES · MIDDLESEX · ENGLAND

Readers of Tape Recording Magazine may perform this tape-play without royalty. It can be recorded privately after some rehearsal or sprung on spontaneous performers at a party. Sound-effects should be intentionally "corny" and the cast are advised to act the fairy-story lines and to speak the interruptions and asides in their natural voices. The sound-effects part may be taken by someone of either sex, adult or child. "Tweeter" may be played by a child of either sex or an adult who can mimic a child's voice. A good pace should be maintained throughout and suitable introductory and finale music would round-off the dialogue neatly. Have fun; that's the main idea.

GOLDENTONE AND THE THREE SPEEDS

A Christmas fairy-play for tape recorder and six voices . . .

... by ROY RUSSELL of the Wyndsor Recording Co. Ltd.

CAST

Mr. (Elliptical) Speaker
Princess Goldentone
Father—Mike Speed
Mother—Meg Speed
Youngster—Tweeter Speed
Sound effects operator

Speaker: Ladies and gents, boys and girls, and all you lot what don't come in them categories. As 'ow as I'm the only one what speaks proper B.B.C. English, I've got the announcing bits. So here goes. Presenting our stupendous! colossal! death-defying! scintillating!—well, it's not bad, anyway—the wonderful fairy story of . . .

Effects: Ta-dah!

Speaker: "Goldentone and the Three Speeds," or "She was poor—because she was honest." To start at the start; the scene is the home of the Speed family—Mike, Meg and young Tweeter. It is a well-built semi-detached, with three bass and three treble and all mod. con. This desirable residence is owned by Mike Speed . . .

Father: Apart from the chunk still mortgaged to the Building Society.

Speaker: That's Mike. Always a happy soul. And here's his good lady, Meg Speed. You'll always find Meg 'ome.

Mother: That's me.

Speaker: Then there's that delightful little offspring, Tweeter.

Tweeter: Cor. He can't mean me? Speaker: (aside). The little horror.

Tweeter: He does mean me.

Speaker: When our story begins the three Speeds have gone off to the Audio Fair to see what they can hear. All of a sudden who should come freewheeling down the hill on her brand new kilocycle but Princess Goldentone.

Effects: (sound of bicycle bell).

Princess: What a lovely house; much more inviting than Powerpack Hall, that ancient place we shiver in. And what a good idea to have a front door instead of a drawbridge. Much easier to draughtproof. Perhaps someone can tell me where I can get one as a present for my father, King Monitor.

Effects: (sound of doorknocker).

Princess: That's funny, there seems to be no response. I will increase the frequency of my knocks.

Effects: (sound of faster knocking and creaking of the door).

Princess: Oh, it isn't locked. (Calls)—Anybody home?

(Pause)—Anybody home?

Tweeter: Don't be a clot; you must have heard him say we are at the Audio Fair.

Speaker: Don't interrupt, Tweeter, or I'll have you edited out of the tape.

Princess: What a lovely room. It's a wow; enough to make anyone's heart flutter. And goodness, they've left their breakfast. Oh, my favourite cereal.

Tweeter: Blimey, is this tripe going on for several instalments? Father: Shh, Tweeter.

Effects: (sound of eating cereal, where appropriate).

Princess: (Crunch) That's too hot. (Crunch) That's too cold. (Crunch) Oh, goody this is scrumptious (Crunch).

Tweeter: What a revolting noise.

Effects: If you can do better, take over.

Speaker: No squabbling, please, it's Christmas.

Princess: What super, imposing chairs. I'll try them all. No, the big one's too soft. The middle one's too loud (a horrible colour). That leaves the smallest; I'll try that.

Princess: Whoops!

Tweeter: Ha! Ha! Fancy falling for the old trick cushion. It's older than me, but it never fails. I knew she'd sit there; I've read this story before. It's soppy. She says she feels tired next.

Father: If you don't keep quiet, you'll feel my foot.

Princess: (yawning) Oh dear, I feel so tired.

Tweeter: See?

Effects: (sound of walking upstairs). Tweeter: Staircase has dry rot, Dad. Princess: Oh, what lovely beds.

Tweeter: Here we go again.

Princess: Would you mind not interrupting. I'm a highsensitivity actress. It's very difficult to play a dramatic scene with all this low comedy impedance. Be quiet! Or my father will send the Head of his staff to erase you.

Father: See? You'd better stop oscillating or else.

Effects: (sound of creaking).

Princess: Oh dear, this bed isn't a bit coercive.

Effects: (more creaks).

Princess: And this one has too much surface noise.

Effects: (more creaks).

Princess: Ah, this is for me. It has a perfectly flat response.

Effects: (sound of snoring)

Tweeter: How anyone could leap from bed to bed as fast as that and then fall dead asleep, I'll never know.

Effects: (sound of a hard slap).

Tweeter: Ow! That hurts.

Effects: The others have to answer you in dialogue. I can take the appropriate action. And next time the noise will be amplified.

Speaker: And so Goldentone falls asleep in Tweeter Speed's bed and is still there when the three Speeds return from the Audio Fair some hours later.

Tweeter: What a distortion. Everybody knows we've been here all the time

Mother: Never mind dear, it's only a play. Don't take it seriously.

Speaker: Please. This is supposed to be a fairy story, not a domestic farce. Go on, Mike, it's you.

Father: Who's been eating my cereal?

Tweeter: Now we're back to Robin Hood again.

Mother: Tweeter, be quiet.

Tweeter: You're biased Mum. Dad's cut a bit out. We're not inside the house yet.

Father: Sorry. Hello, the door's open.

Mother: Perhaps we've had burglars.

Father: I hope so, we're fully insured.

Effects: (sound of creaking door).

Tweeter: Don't be a clot, it's already open. Honestly, I've got to monitor the whole thing.

Effects: I'll get you, if it's the last thing I record.

Father: Good gracious, someone's been eating my cereal.

Baby: And if anyone says it's the Archers, I'll kick their shins.

Mother: And somebody's been eating mine.

Tweeter: That's nothing. Someone's scoffed all mine—said he, pretending he hasn't a clue who the filthy little hog is.

Mother: Tweeter, if you don't do your part properly, you'll go straight to bed.

Tweeter: Don't forget Princess Goldentone's already there, will you, Ma?

Speaker: (aside). Didn't I tell you he was a little horror.

Father: And someone's been sitting in my chair. How the dickens I can tell, I don't know. But that's what it says in the script.

Mother: Well, I know someone's been sitting in mine, because the cushion's been disarranged.

Tweeter: And someone sat in mine, because I heard the lovely noise she made when she sat on my cushion.

Father: Obviously a stranger has been in the house.

Tweeter: (aside) Proper little Dan Matthews, isn't he?

Mother: Mike, I'm frightened. They might still be upstairs.

I daren't go up on my own. I'm scared. It might be anything. Come with me.

Tweeter: Blimey. Another one doing her nut. Anyone want to join the Drama School? Come on; where's the dry-rot noise. Late again,

Effects: Sorry (noise of staircase followed by noise of door opening).

Father: No-one in the back bedroom.

Effects: (sound of door opening).

Father: No-one in our bedroom.

Effects: (noise of door opening).

Tweeter: (with echo-chamber effect) No-one in there.

Effects: (noise of door opening).

Father: Good gracious, this is a remarkable twist in the plot.

Who's been sleeping in my bed?

Mother: And who's been sleeping in mine?

Tweeter: And by a process of elimination, the lazy goodfor-nothing who's fast asleep in my bed must have been in your bed and your bed.

Effects: (sound of alarm clock ringing).

Father: What's that?

Effects: Just an up-to-date way of waking up the Princess.

Princess: Oh! Where am I?

Tweeter: Slap bang in the middle of a corny fairy story especially written for Tape Recording Magazine's Christmas edition. Get your copy now. Published every month, price . . .

Speaker: Heh, no commercials.

Tweeter: You let them get away with all that cereal muck.

Princess: Oh dear, I'm terribly sorry to intrude.

Mother: Oh, that's quite all right, dear.

Father: Do make yourself at home.

Tweeter: Huh. Walks into someone else's home, eats their food, sits in their chairs, sleeps in their beds, and it's quite all right, dear. Doesn't it make you want to choke? Has no-one any resistance in this house?

Effects: You've asked for it, Maximum decibels (sound of gun),

Tweeter: Oh! I'm reeling.

Effects: (thud of body).

Speaker: Now you're turning it into a thriller.

Effects: Always the right noise for the right occasion. Parties catered for. Inputs and outputs to order. Fully modulated or pre-recorded.

Father: Poor little Tweeter, we shall never hear that dear little voice again.

Mother: My poor Baby. Died and never called me—what was it he used to call me?

Princess: And I was hoping that Tweeter would lead me to my Fairy Prince. You know, like the Ugly Duckling.

Tweeter: Well, you've only to rewind the whole damn thing, play it through again, and re-record the ending. What's the matter with you lot? Come on, let's finish this lot off, and put 'em out of their misery. Merry Christmas everyone from Tweeter . . .

Father: Mike . . .

Mother: Meg . . .

Princess: Goldentone . . .

Speaker: . . . and Mr. Elliptical Speaker.

All: Merry Christmas, everybody.

(Fade in Finale Music)

(Additional copies of this play are available free from the Wyndsor Recording Co. Ltd., 2, Bellevue Road, London, N.11.) (S.A.E. please.)

+ADD IT UP FOR YOURSELF



COMPLETE WITH

CRYSTAL MICROPHONE

AND 1,200ft OF EMITAPE

49 guineas

- first class electronic design giving brilliant reproduction
- + attractive styling in coffee and cream with gold-coloured fittings
- detachable 10" × 6" elliptical speaker
- + three speeds—15", $7\frac{1}{2}$ " and $3\frac{3}{4}$ " per second
- frequency response of 50 to 12,000 cps \pm 3 db at $7\frac{1}{2}$ ips
- push button track change
- 7" spools
- high and low sensitivity input sockets
- independent high-impedance output socket (to C.C.I.R. Standards)
- ___ tone control
- + independent gain control for monitoring
- luminous target recording level indicator
- digital tape-position locator
- facility for using solely as an amplifier
- pause control
- strong carrying case covered in P.V.C. leathercloth
- twelve months' guarantee

The Wyndsor "Viscount"

WYNDSOR RECORDING COMPANY LTD., Wyndsor Works, Bellevue Road, Friern Barnet, London, N.II

Telephone: ENTerprise 2226/7

Telegrams: Wyndreco

FIRST FOUR-TRACK STEREO IS SHOWN IN BRITAIN

THE arrival of four-track recording was one of the most important of many notable features of the Northern Audio Fair at Harrogate. A new version of the Tandberg tape recorder, named the Stereo Quadruple and priced at 124 gns., introduces the four-track principle to this country.

This machine using tape of standard width, permits monaural recording and playback on four tracks and stereo recording and playback on two twin-tracks—giving double the amount of recording at the selected speed compared with a dual-track recorder.

In view of the fact that the RCA Victor four-track tape cartridge is being offered to British manufacturers for production here under licence, it is important that the new Tandberg has provision for its use, by means of an extra fitting known as the Adaptorplate.

The machine has three speeds $(1\frac{7}{8}, 3\frac{1}{4})$ and $7\frac{1}{2}$ ips) and thus sixteen hours' monaural playing is possible at the slowest speed. The general specification is the same as that of the dual-track Tandberg.

Demonstrations of the four-track model played through moderately priced loudspeakers produced no detectable loss of quality compared with what might be expected in similar conditions from half-track heads. Arrangements have been made for a full-scale technical test for Tape Recording and Hi-Fi Magazine in the near future.

Technical Suppliers Ltd. (Harting-Tandberg-TSL Group), who supply the Tandberg in this country, were also demonstrating a modified version of the Harting HM5 tape recorder, with pause control, improved frequency response and other new features. The price remains at 82 guineas, without microphone.

Telefunken deserve special acknowledgement for demonstrating an all-inone tape-hi-fi unit costing over £1,000. It incorporates the "table" version of the KL85 (stereo) tape recorder, stereodisc equipment and radio, and its multiple speaker assemblies gave an account of themselves which suggested that purchasers of this audio leviathan will be getting value for their 960 guineas.

getting value for their 960 guineas. Telefunken were also showing a new semi-professional tape recorder, the Magnetophon M23, with three motors, four-channel mixing facilities and full monitoring. The speeds are 3½ and 7½ ips, with a claimed frequency response of 40-16,000 cps ± 2 dB at the higher speed. The chassis model costs £140, a cabinet model £150 and a portable with four speeds is £180.

Continuing their tradition of contributing to top-quality stereo reproduction, the General Electric Company

demonstrated a new loudspeaker, known as the "Octagonal Periphonic," particularly suitable for stereo use. The cabinet, a development by Hugh Brittain of the well-known octagonal design, incorporates two low-distortion metal-cone speakers. The second speaker, mounted inside a rectangular pipe in the cabinet, operates in push-pull with the first, and this is claimed to reduce the second-harmonic distortion at 80 cps (with 5-watts applied), from 3 to 1½ per cent. The fully equipped unit costs approximately £44, and without the second speaker (which can be fitted later), the cost is about £31.

Whiteley Electrical Radio Co. Ltd. also demonstrated a new loudspeaker for stereo, known as the Stentereo. Each unit is a corner enclosure, 22 ins. in height, containing two speakers, and the one dealing with the higher frequencies is designed to rotate inside the cabinet so that the most favourable directional effect can be achieved. The price is £14 12s. 3d. per speaker.

Fane Acoustics Ltd, were showing a three-speaker version (£17 10s.) of their Quartet speaker. It is named the Trio, and it is claimed that the cabinet design achieves a wide angle dispersion of the high frequencies. A new 12-inch H.D. loudspeaker unit, primarily for use in the four-speaker Quartet, was also introduced, priced at £9.

The Fair revealed continued activity in the field of amplifiers, pre-amplifiers and tuners, and among those showing new equipment of this type were Rogers Developments (Electronics) Ltd., with a Cadet stereo control unit, and an RD Junior switched FM unit (as well as a small, column 3-way speaker system); The Dulci Company Ltd., with the Stereo Eight and Stereo Two preamplifiers (£23 2s, and £9 9s. respectively) and the SP44 Stereo Power Amplifier, providing 4 watts for each channel, at £12 12s.; Dynatron Radio Ltd., with the TC16 preamplifier (£27), and the LF15 and LF16 power amplifiers (£20 5s. and £17 10s.); and C. T. Chapman (Reproducers) Ltd., with the 305 stereo control unit and 305 stereo amplifier (eighteen and twenty guineas respectively), and the FM95 AM/FM tuner at £28 10s.

Pilot Radio were showing their recently introduced Model SHF15 stereo amplifier and control unit (32 guineas), and announced price reductions for the HFA12 amplifier and HFC12 preampliunit (from 30 to 24 guineas), and for the HFA12 amplifier and HFC12 preamplifier (from 36 to 28 guineas for the complete system.

Associated Electronic Engineers Ltd. introduced a 6-way mixer (A.1446) costing £58 10s., and a 20-watt Hi-fi amplifier (A.1440) costing £37 16s.

Simon Sound Service Ltd, were demonstrating a new remote control unit with their SP/4 recorder.

Tape Services

TAPE TO DISC RECORDING

Microgroove L.P. (30 mins.) 27/6, 78 rpm. 13/6

S.a.e. for leaflet: Deroy Sound Service (A.D. Marsh), Little Place, Moss Delph Lane, Aughton, Ormskirk, Lancs.

TAPE TO DISC SERVICE

78's or L.P.

QUEENSWAY RECORDING STUDIOS 123, Queensway, London, W.2. Tel.: BAYswater 4992

TAPE RECORDERS FOR HIRE

TAPE RECORDER HIRE

TAPE TO DISC 78-LP RECORDING STUDIO SALES—EXCHANGES

MAGNEGRAPH

1 Hanway Place, London, W.1. s.a.e. for leaflet or telephone LAN 2156

RAPID RECORDING SERVICE

21, Bishops Close, Walthamstow, E.17. LAR 3889

Recording Studio equipped with new Steinway Grand. Mobile Recording Van. 78s. and L.P.s. from your own tapes. Commentaries and music on Synchronised L.P.s for cine enthusiasts.

RENDEZVOUS RECORDS

(T. H. ADKINS) 19, Blackfriars St. Manchester 3, offer a Comprehensive TAPE TO DISC SERVICE — 33 — 45 — 78 r.p.m.

S.A.E. for latest leaflet.

TAPE RECORDER SERVICE ENGINEERS

THE BRUCE-MILLER COMPANY

65 Fortess Road, London, N.W.5 GUL 2468

from minor repairs to complete overhauls



Designed and built by REGENTONE

Professional or amateur, if you're looking for out-of-the-ordinary sound recording the Regentone RT50 gives you facilities comparable to those of a modern record-

ing studio.

If you want to record music—orchestral or vocal— If you want to record music—orchestral or vocal—then you'll find nothing at a similar price to equal the Regentone RT50. If you want to arrange a commentary, to add musical background or sound effects, to be able to edit your tape with the greatest of ease, then the Regentone RT50 offers professional recording standards for an unusually low cost.

Every recording it makes has the full richness and true character of the original sound. Its authenticity is superb

is superb.

Three speeds 13", 32" and 71" p.s. Six hours playing time Pause lever to simplify editing Printed circuit with all its reliability Separate bass and treble tone controls Large elliptical speaker Microphone and radio or gram inputs can be mixed

Minimum noise three motor operation

You'd better get a

Regentone

by the sound of it

REGENTONE RADIO & TELEVISION LTD . ROMFORD . ESSEX

NEW AND USED TAPE RECORDER SPECIALISTS

BEST PART **EXCHANGE**



VERDIK 45 gns. dep. £4 10 0 9 Pays. £4 15 0

ALLOWANCE ON YOUR RECORDER

- ★ No Interest Terms
- * Your Recorder Taken as a Down Payment
- ★ Free Maintenance
- ★ Delivered Free British

40 Models on Display

Large Selection of Used Recorders at Bargain

Best Cash Offers for Good Quality Recorders

Ask for a list of New and Used Machines

R. E. W. EARLSFIELD Ltd.

545. GARRATT LANE, S.W.18. WIM. 0709 Bus stop outside, 100 yds. from EARLSFIELD Stn.



THE RECORDER Co.

A great many enthusiasts visit us each week, inspecting, testing, comparing the unrivalled selection of Tape Recorders we have on display. We give advice and make a point here and there, but there is no salesman-ship—indeed we are but enthusiasts together. Perhaps this, together with the best possible terms such as monthly instalments free of interest, free insurance and free delivery, etc., accounts for the fact that more and more people are finding that the one place to go to for Tape Recorders and equipment is

THE RECORDER Co. (Dept. T.)
188, West End Lane, West Hampstead, London, N.W.6. Telephone : SWI 4977

We are mail-order specialists—free catalogues and full information sent on request. Open all day Saturday

THREE NEW CONTINENTAL MODELS



GRUNDIG TK 25

THE newest Grundig—the TK 25 priced at 62 guineas, excluding microphone—provides speeds of $3\frac{3}{4}$ and $1\frac{7}{8}$ ips. And the claimed frequency response is 60 to 15,000 at the higher speed and 60 to 8,000 at the lower.

Grundig attribute the quality of reproduction to a special recording head.

Another special feature is the single

input fading control, allowing a smooth and easy change-over from microphone to diode, or microphone to radio (there are three input sockets).

There are outputs for extension speaker or to feed an external amplifier, superimposition facilities, and a $3\frac{5}{8} \times 5\frac{1}{2}$ ins. moving coil speaker.

The distinctive Grundig blue-grey case

is used and the weight is 25 lbs.

Grundig also announce an increase in the price of the TK 20 from 50 to 52 guineas.

Grundig (Gt. Britain) Ltd., 39/41, New Oxford Street, London, W.C.1.

ECORD HOUSING are marketing a new tape storage cabinet devised by a woman tape enthusiast and known as "Stortape." It consists of an attractive box containing slotted compartments for 15 7 in. tape reels.

Inside the lid is a special index card on which the title of each record can be noted; but these can easily be erased and new titles written in when rerecording is done.

"Stortape" will be made in a variety

of finishes. Record Housing, Brook Road, London,

BUILD-IT-YOURSELF kit has A appeared for an A.F. Power Output Meter suitable for checking hi-fi equipment in general, including recorders. Using printed circuit, quick and simple assembly is possible. The price is £7 17s. 6d.

Two ranges are incorporated, covering 1 watt F.S.D. and 10 watts F.S.D. Accurate measurements are possible down to 25 m/ws. A built-in load is



PHILIPS EL 3527

NEW Philips recorder offers excep-Ational facilities for a machine costing only 39 guineas and weighing only 21 lbs. (excluding the microphone and reels). It is the EL. 3527, illustrated here, which supersedes the A.G. 8109.

A printed circuit is used; there are mixing facilities for the two inputs with separate controls; monitoring during recording can be done through the built-in 4-inch speaker; there are sockets for extension speaker; and the machine can be used as a straight-through amplifier for a record player or microphone.

The cabinet is covered with two-tone grey plastic and overall dimensions are $14 \times 13 \times 7\frac{1}{2}$ inches. The machine takes 5-inch reels and is supplied with a reel of standard type and a crystal mic.

Recording is at 33 ips and a frequency response of 50-10,000 cps is claimed.

Philips Electrical Ltd., Century House, Shaftesbury Avenue, London, W.C.2.



The Saba recorder, described in our last issue, which has just arrived on the British market. It costs 110 guineas.

UNIQUE service scheme for A Reflectograph recorders has just been announced. It aims to provide pur-chasers with free servicing within 24 hours during the first year a machine is in use, and a comprehensive maintenance service for 20 years thereafter.

Multimusic Ltd. hope to introduce the scheme within the next few weeks.

Every Reflectograph will be unconditionally guaranteed until one year from purchase date and, providing there is no misuse or neglect, no charge will be made for parts, valves or labour in any necessary servicing during this period.

After the first year. a comprehensive maintenance contract will be offered (including valve replacement). Initi-

ally, the cost will be three guineas a year, though economic conditions may, of course, affect this at some future date.

MANUFACTURERS NEWS ROUNDUP

incorporated and three values may be selected by switching: 3 ohms, 15 ohms and 600 ohms. The instrument—which measures $4 \times 6 \times 2\frac{1}{4}$ ins. and incorporates a 3 in, meter is claimed to be sensibly flat over the 20 to 25,000 cps band.

U.T.M. Ltd., P.O. Box 11, Cambridge.



The UTM unit described on this page

DISTRIBUTION of Magnafon recorders has now been taken over by Record Housing and first of the new range are the "Courier" at 49 guineas, which uses the Motek deck, and the "Diplomat" at 57 guineas, using the Collaro deck. Both prices include tape and microphone. and microphone.

The "Courier" has speeds of $7\frac{1}{2}$, $3\frac{1}{4}$ and $1\frac{7}{8}$ ips, takes 7 in. spools and weighs 26 lbs. It has twin 7×4 in. speakers and an output socket to feed an external hi-fi system. There are separate base and treble controls and a magic eye level indicator.

"Courier S" is a stereo version at 59 guineas. By addition of stacked heads and an extra amplifier output from the second track, it will play stereo tapes.



have to look attractive, be light enought to carry, tomfoolery proof and capable of giving true sound reproduction, all qualities which are found in a Sonomag Continental. Remember Sonomag give you SOUND value.



SONOMAG LIMITED

2 St. Michael's Road, Stockwell, London, S.W.9

Sole wholesale distributors: Ballas & Sons, Ltd., Clifton Street, London, E.C.2. Telephone: BIShopsgate 9981

Introduction to **Electronic Circuits**

R. FEINBERG, Dr-Ing., M.Sc.

Here is presented in logical and concise development of thought, the fundamental principles of design and operation of the whole basic range of technically important electronic devices of the vacuum and the gas-filled type, and their application in practical electronic circuits. It has been written primarily for the student who wants an introduction to the subject, and will be of value to the research worker who requires to refresh his memory. It has been designed to meet an urgent need, for the field of electronic circuits and their practical application in research, tele-communication, navigation and industry has been growing rapidly in recent years, and existing textbooks are of too advanced a nature to be suitable for this purpose.

With diagrams 21s. net

LONGMANS

OUTSTANDING TAPE RECORDER VALUE!

A small neat Recorder offering two speeds $3\frac{1}{4}$ in, and $7\frac{1}{2}$ in, 5in. reels giving up to $1\frac{1}{2}$ hours recording time, outstanding "live" recording facilities as well as top quality Radio and Gram-recording of all your favourite music, etc. Monitoring facilities through crystal earpiece. Dimensions Ilins. \times 9ins. \times 6ins. Weight only 17lbs.



Deposit and 9 monthly payments £3 13s. 3d. (includes mike, tape, crystal ear piece and recording lead.)

Never before

such value at

29 Gns.

Specially

matched high

grade moving

coil mike. 3gns.

YOURS FOR

£3 13 3

Available only from:

E. C. KINGSLEY & CO.

(Dept. T.R.), I32, TOTTENHAM COURT ROAD (Corner of Warren Street), LONDON, W.I. EUSton 6500



'STEREOMIC' IS TWO MICROHPONES IN ONE

Designed for stereo recording

USTRAPHONE LTD., in the vanguard with consideration of stereo recording needs, have produced a Stereomic" model VR/65 which is, in effect, two microphones in one.

The unit consists of two identical ribbon velocity mics, mounted vertically in line (see photograph). The top half. containing one mic, can be rotated through an angle of about 100° from the "in-line" position. The lower half, with the other mic, is in a fixed position.

There is a specially-designed three-position switch: (i) off. (ii) stereo connection, and (iii) connecting the two ribbon units in series to produce a straightforward ribbon velocity mic of

high sensitivity and a figure 8 polar characteristic.

The mic is connected to the switch unit by a four-way screw-type connector, so that the sensitive microphone head can be instantly detached and stored without disturbing the set-up and connections to the main equipment.

There is a phase reversing switch to give instantaneous change-over to achieve correct phasing on any equipment. When the two ribbon units are connected in series to form a single mic, operation of the phase reversing switch changes it into a noise-eliminating mic responding only to a sound source at close distance.

The impedance of each unit in the standard model is 20 ohms and overall impedance when connected in series 40 ohms.

Frequency response is claimed as substantially flat between 50 and 13,000 cps. The microphone measures 91 inches in length and has a maximum diameter of 14 inches. is 17 ozs.

A special leaflet (No. 1459/A) is available from the manufacturers.

Lustraphone have also produced a new transistor audio frequency amplifier, model TPA/557, based on the design of earlier models, but with a number of improvements. Power output is 15 watts, with 12 volts DC supply. Overall size is $3\frac{1}{8} \times 4\frac{1}{8} \times 4\frac{1}{8}$ inches and weight 3 lbs.

Lustraphone Ltd., St. George's Works, Regent's Park Road, London, N.W.1.

PEOPLE

in the tape world

MR. SYDNEY ELFORD has been appointed Sales Manager of Walter Instruments Ltd., Tape Recorder Division. He joined the company last April, after being General Sales Manager of Vidor Ltd. Vidor Ltd. *

A re-arrangement of the Sales Department at Cosmocord is announced. MR. A. C. CLARK, previously Assistant Sales Manager, has been appointed Home Sales Manager; MR. R. H. FISHER becomes Export Manager; and MR. F. H. KNIGHT assumes responsibility for publicity, advertising and exhibitions, but also remains in charge of the Service Department.*

MR. G. C. SCHINDLER, of Goodmans Industries Ltd, has just completed a series of trade demonstrations and lectures along the south coast on "A new listening experience.

The photograph in our last issue of a section of the new Grundig factory showed a view of the main test bench.



The well-equipped listening room at Largs of Holborn



TWO NEW **MIXERS**

NEW mixer unit is announced by A Penco Products, of King's Langley. It is the "Epigram" transistor pre-amplifier mixer, supplied in two standard models at 19 guineas and 25 guineas. The cheaper model employs three transistors and will feed into the high-impedance input of most recorders or amplifiers, the other has five transistors, giving extra stage gain for use where a greater signal

is required.

The "Epigram" provides studio-type control and fading facilities. It is designed to work with low impedance mics with moderately long lines, but a high impedance input from a gram. pick-up, microphone or other source can be mixed in.

There are three inputs in the standard model, which is illustrated above. Two are for low impedance, 15/30 ohms, and the other for high impedance. There are three gain controls and an on/off switch. The output signal, normally high impedance, goes direct by co-axial cable to the recorder.

The power supply is direct from a small four-volt mercury cell. On the low impedance inputs the transistors are used as matching devices, thus avoiding need for matching transformers.

Control panel measures approximately 14×41 inches and the case is finished in biscuit hammer stove enamel, with large cream control knobs.

Penco Products, 36, Conston Road,

King's Langley, Herts.

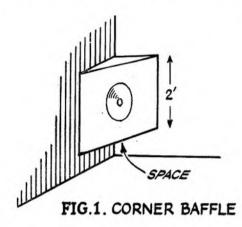
SPECTO LTD., have recently introduced a new electronic mixer, in two models—the 142 at 17 guineas for use where HT and LT are available from associated equipment, and the 142A at 21 guineas for connection to AC mains

supply.

This mixer has three inputs: One for radio or tuner, one for microphone, and one for high or low output gramophone pick-up. There is a selector switch controlling the gramophone input, providing equalisation for LP and 78 rpm records, plus a third F.R. position in which the input assumes the same characteristics as that for microphone, so that two microphones are used simultaneously. There are separate gain controls for

Specto Ltd., Vale Road, Windsor,

MORE ABOUT SPEAKERS



★ The seventh article in the seriesTape in a hi-fi system

Although convenient for carrying about, a portable recorder suffers the recognised drawback of having to make do with a relatively small loudspeaker system. When used in the home, there is no reason for this to be tolerated, for a good quality loudspeaker system may be substituted for the internal loudspeaker quite easily, thereby doing full justice to the replay amplifier. All portable recorders may be considerably improved in this way.

For a good bass response the loudspeaker cone should preferably be 10 in. or more in diameter. Also, and even more important, the baffle or front surface area of the cabinet should be as large as practicable. A 3 ft. x 3 ft. board made of 1 in. thick soft wood or soft board will make an excellent baffle. Sides may be fitted, but the back must be left open and not placed too close to the wall if unwanted resonances are to be minimised.

If the above dimensions are considered too large to fit in with the furnishings, a very neat appearance can be obtained using a corner-baffle. The baffle can be approximately 2 ft. x 2 ft. and positioned in a convenient corner as shown in fig. 1. The top may be closed by a triangular shaped board, and a heavy curtain or blanket suspended from each of the two rear edges of the triangle so as to

cover the portion of the room walls hidden by the baffle. This will help to minimise sound reflections. The underside of the arrangement should be left open, and sometimes best results are obtained with the baffle raised a few inches off the ground, as shown in the diagram.

This is not intended to be a substitute for a well-designed

corner enclosure, but is well worth trying if economy and simplicity are the first considerations. It is most important that the construction of any baffle or enclosure should be solid and not rattle or sound hollow when thumped with the fist.

For the best results, of course, a really good loudspeaker system should be purchased. The ultimate choice will depend upon the degree of quality required and intended outlay. As the subject of loudspeaker systems has already been discussed in last month's issue, it will not be necessary to go into further details here.

Connecting the extension loudspeaker presents no difficulty. It is only necessary to disconnect the internal speaker by removing the plug or one of the wires, and connecting the extension leads in place, as shown in fig. 2.

Make sure the original wire is disconnected from the speaker itself, i.e., in the low impedance circuit, and never break the the primary side of the output transformer. Almost all available loudspeakers have a low impedance of 2 to 33 ohms, and will provide a good match for the majority of recorders. It is very important that the loudspeaker, internal or external, should *not* be switched off or disconnected during replay.

If it is essential to do this, first turn the volume control

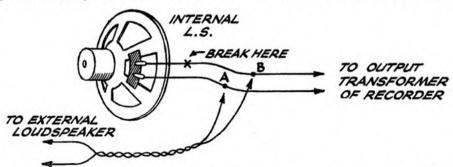


FIG. 2. EXTERNAL L.S. CONNECTED TO WIRES A & B AS SHOWN

down to zero, otherwise the output valve and/or output transformer may be damaged.

The enthusiast who intends to commence his high fidelity installation by purchasing a portable recorder would do well to see that the instrument was equipped with a socket marked "Output," "Low-Level Output," or "Output to Power Amplifier." This socket is wired to the output of the internal tape pre-amplifier and the signal may be monitored at that point on the headphones, during record or replay. As the signal has not yet reached the internal power amplifier, distortion is extremely low at this point, and it may be used to feed the input of an external high-fidelity amplifier.

Thus at a later date such an amplifier may be purchased, along with a suitable loudspeaker system, and the enthusiast is then in a position to reproduce high fidelity tape recording in a manner which will do them justice. Screened leads should be used to connect the above socket to the P.A. input, making sure that the screening (braiding) is earthed to the chassis at both ends, the inner cable joining the "live" points together.

This connecting lead should be as short as possible, and not more than two or three feet at the outside, otherwise its capacitance may cause a loss in high note response. The recorder and P.A. should therefore be mounted near to one another, although no harm will be done if the loudspeaker has to be situated some distance away. In fact it is better for the speaker to be mounted in a separate cabinet altogether, thereby removing all risks of vibration playing tricks with the recording mechanism. The leads to the speaker may be several yards long if necessary, and twin plastic covered flex is excellent for the job.

Needless to say, it will be necessary to silence the internal loudspeaker when the whole system is in operation and the method of doing this will depend upon the particular recorder in use. If there is a loudspeaker switch on the instrument, there is no problem. If not, try turning down the replay volume control. This may turn down the internal speaker without affecting the output to the P.A., so once again there is no problem. Failing this the internal speaker may be unplugged only if an artificial load is connected in its place. This may be constructed quite simply using a two ohm wire wound resistor, the ends of which are soldered to an appropriate loudspeaker plug which may be inserted into the sockets vacated by

internal loudspeaker (fig. 3) Do not silence the speaker by simply unplugging. This will cause damage as explained earlier.

If when all the above has been carried out, the output is dead although everything seems to

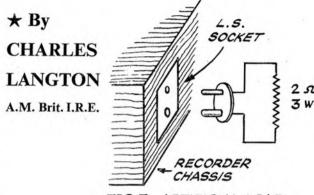
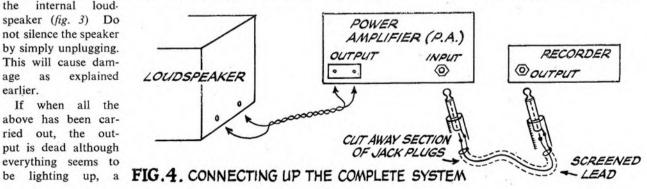


FIG 3. ARTIFICIAL LOAD

systematic check will soon localise the fault. The rule is to start by testing the loudspeaker circuit and always work back from that point; in this way the faulty stage is bound to be located. Test the loudspeaker by connecting a 1.5 volt torch battery to its terminals or sockets.

A loud click should be heard each time the battery is connected and disconnected. (Make sure the battery is a good one; many a frustrated hour has been wasted by taking these "obvious" things for granted). Next, connect the extension lead to the speaker and carry out the same test from the amplifier end of the lead. If the clicks are heard, connect the lead to the amplifier output, and disconnect the P.A. input lead. Now touch the "live" input socket of the P.A. with the finger (not the live mains lead!) and a loud buzz should be heard in the speaker. Reconnect the P.A. input screened lead, and unplug from the recorder end, when the same test may be made from this end of the lead.

Up to now we have tested the loudspeaker, extension lead, amplifier, and input screened lead, and had there been any fault in any of those sections it would have shown up by this process of elimination. Finally the recorder itself may be checked by putting its own internal speaker back in circuit. Likely causes of a dead output are: Volume control turned down; plugs in wrong sockets (e.g. L.S. into input sockets, etc.); jack plugs, if used, not making proper contact (try pulling out a fraction of an inch); or screened lead between recorder and P.A. incorrectly wired to plugs. This last fault is very likely tocause a loud hum which may be superimposed upon the music. Reference to fig. 4 should assist in fault finding.



AMPLIFIERS

Charles Langton concludes the review of new models begun in October



The compact Audiomaster tape adaptor

THE day of the rather drab looking audio amplifier, more suited to the workshop than the lounge, is on the way out. The clean lines and artistic appearance of the latest models give pleasure to the eye, a fact in keeping with their aural quality.

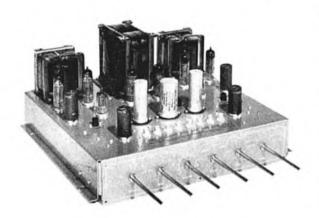
The Jason high-fidelity equipment is an excellent example of this, all units of which are fitted in standard matching cabinets as well as matching each other electronically. The J-10 power amplifier, taken from their range has an output of 10 watts with less than 0.1 per cent distortion, a wide frequency range of 25-65,000 c/s at the 3 db power points being obtained. Two EL84 valves are used in an ultra-linear push-pull output stage.

This amplifier is suitable for connecting to the "low level" output socket of an existing tape recorder, but as an input voltage of 0.25 volts to the tape socket is required, a tape pre-amplifier is necessary when taking the tape output from the playback head. Inputs are also provided for P.U., radio, and microphone. The price is £24.

Above: The B.T.H. 20 watt amp and

Below: Another newcomer to domestic hi-fi—the Airmec stereo unit





The same firm produce a matching tape pre-amplifier and oscillator unit suitable for recording and replay, including erasing and biasing facilities. This is the JSM/1 Tape Unit, with self contained power pack priced at £37. For the stereo enthusiast, the J.2-10 stereo power amplifier combines two J-10 amplifiers in the one cabinet, whilst the JSM/2 pre-amplifier is available for driving this.

If higher power is required, Scientific and Technical Developments include in their range a 25 watt power amplifier, the STD/373, an input of 0.16 volts being required for maximum output. The output will match either 4, 8, or 16 ohm loud-speakers, and a mains outlet fitted for auxiliary apparatus. An additional outlet of 450 volts at 10 mA and 6.3 volts at 0.6 amps is provided for a pre-amplifier.

Whiteley Electrical, manufacturers of the well-known W.B. Stentorian products, obtain a five valve performance although only three valves (plus rectifier) are used in their W.B. 6 amplifier.

The three valves are EF86 (1st amplifier) and two ECL82 triode pentodes. The triode section of one ECL82 is used as a second voltage amplifier, feeding into the triode section of the other ECL82, which acts as a phase splitter to drive both pentode sections in push-pull. The ultra-linear output stage gives an output of 6 watts. The input sensitivity is 60 mV, and may be driven from the low level socket of a tape recorder. in addition to gramophone pickup and radio. Auxiliary supply sockets of 240 volts at 50 mA and 6.3 volts at 2.5 A are fitted.

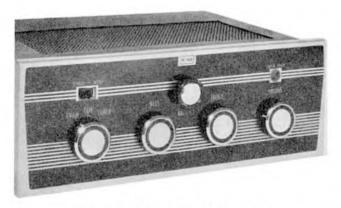
A frequency response extending one octave above the normal limit of audibility is claimed by Dynatron for their LF10A power amplifier. The response is level to \pm 1 db over the range 30-30,000 c/s, while distortion is less than 0.1 per cent at full output. An input signal of 0.75 volts is required, and therefore a tape pre-amplifier is necessary for use with a tape deck. The price of the LF10A is £25.

When used in conjunction with the tone control unit TC10A, however, high fidelity reproduction is possible from the low level socket of a tape recorder. High and low tension supplies for the TC10A are taken from the power amplifier, the price of the unit being £12 17s. 6d.

Lowther offer a very interesting range of amplifiers, notable amongst them being the L.L.26 and L.L.10, 26 and 10 watt output respectively. In each case, 0.75 volts input will produce full power output, into a 15 ohm loudspeaker. The extremely wide frequency range of 20 to 70,000 c/s ± 1 db is claimed for the L.L.26. High and low tension supplies are provided for auxiliary apparatus in both cases. Prices: L.L.26, £47: L.L.10, £25.

The Lowther Master Control Mk II differs from the Mk I in that CCIR correction is incorporated to enable the Mk II to be used as a tape pre-amplifier, and may be connected directly to the replay head. Features of the circuit include a cascode (?) input amplifier and cathode follower output. Power requirements are 350 volts at 8 mA, and 6.3 volts at 1 amp, and the price is £24.

Attention should be drawn to the Lowther range of transistor pre-amplifiers, an example of which is Unit No. 1, which gives an output of about 0.2 volts for an input of 4 mV. Input impedance between 5 and 60 ohms without use of input transformer, output impedance 25 ohms. Price, £9 9s. No mains supply is needed as the amplifier is operated from a small battery. This firm also manufactures a tape recording unit



The new C.O. stereo twin four amp

R.P.B. Mk I, comprising bias oscillator and amplifier for record or replay, price £25.

A further indication of the impetus of high fidelity on the community can be noted when an industrial manufacturer such as the B.T.H. returns to the domestic field of audio. Printed circuit technique is the basis of the B.T.H. 20 wat high fidelity amplifier and pre-amplifier. The overall sensitivity is high, and will allow direct connection to the replay head. A new filter circuit with infinitely variable cut-off frequency and constant gradient is employed. This will permit great flexibility of control. The price of the amplifier and preamplifier complete is £42.

It has been the policy of Brenell to encourage the tape enthusiast by supplying tape decks, amplifiers, etc., which can be easily combined with existing equipment. The T.P.2 tape pre-amplifier is in keeping with this policy, and has been designed mainly for use with Brenell tape decks. It may be used for record or replay, the output of one volt being sufficient to drive any high quality power amplifier. An oscillator is incorporated to provide bias and erase facilities, and frequency correction is applied for 15, $7\frac{1}{2}$, and $3\frac{3}{4}$ ips. Price, 17 gns.

C.Q. Audio Ltd. have improved the appearance and performance of the twin 4 watt amplifier for stereophonic reproduction which was shown at the Radio Show. Production is being increased and the price is now 21 guineas.



This amplifier has facilities for pickup, tape and radio input and it should appeal to those keen on stereo, yet not intending to invest in the more lavish and powerful equipment. It is complete with bass and treble controls and balancing control, and has a frequency response of 20-25,000 cps within 1 db at one watt.

A tape pre-amplifier is necessary if the output is to be taken directly from the replay head. A new 10 watt monaural power amplifier is also being marketed and this, too, has been restyled.

Distortion is better than 0.1 per cent at full power. 0.5 volts input is required for 10 watts output. Spare supply sockets of 250 volts at 15 mA, and 6.3 volts at 1 amp are available. The price is now 21 guineas.

The contemporary appearance combined with an impressive technical specification will attract many towards the "Tranquillo" 105 combined amplifier and control unit, made by Chapman. A tape input signal of 0.1 volts will produce the maximum power output of 10 watts, distortion being less than 0.1 per cent at 1,000 c/s. A three position loudness control is fitted so that optimum frequency response may be enjoyed at all volume levels. A tape outlet is provided to supply up to 0.5 volts for recording purposes, although a separate bias oscillator would be required, of course. A 250 volt 30mA H.T. and 6.3 volt 2.5 amp L.T. supply socket is available, whilst the output will suit either a 3 or 15 ohm loudspeaker. Price £29 18s.

The Pamphonic model 3,000 stereo amplifier has provision for tape, radio, and pickup, and gives an output of 7.5 watts per channel. When used for monaural reproduction an output of 15 watts is available, the response in either case being



The Jason J-10 amp

flat from 50 c/s to 50 kc/s. A stereophonic tape pre-amplifier is required for tape, the input to the tape socket being 0.5 volts. The output circuit is designed for 15 ohm loudspeakers for each channel. The ganged tape controls provide a ± 15 db variation in bass response at 50 c/s, the treble control allowing a similar variation at 10 kc/s. The price of this amplifier is 30 gns.

A tape adaptor is always a source of interest to the home constructor. The Audiomaster tape adaptor from W.N. Electronics is likely to stimulate this interest. It is a complete pre-amplifier suitable for record or replay, in addition to containing an erase and bias oscillator. On the recording channel, an input of between 100 and 500 millivolts is required to produce a recording head current of up to 400 microamps. Treble boost is adjustable for each tape speed. When playing back, an input of 2 mV is sufficient to give an output of half a volt. CCIR equalisation is incorporated. A novel arrangement is the use of a miniature cathode ray tube to monitor the bias voltage and modulation level. The price is £26 14s.

A flexible range of amplifiers by Soundrite include 12, 25, and 50 watt models. The A12 has a 12 watt output with less than 1 per cent total harmonic distortion, requiring an input of about 40 mV. The push-pull output stage uses two EL84 valves. When greater power is required, the A25 with its low distortion figure of 0.05 per cent will be worthy of consideration. Both amplifiers will match up to any loudspeaker on the market. A feature of Soundrite products is the unit system upon which they are based, enabling the owner to build up his equipment gradually. The prices of the amplifiers are: A12, 19 gns., A25, 30 gns.; A50 to be announced later.

Specto subscribe to the view that a power amplifier can be decorative as well as efficient. This is well brought out in the Spectone "Bray" and "Clewer" models, designed to match the Spectone tape recorder in appearance, although they may be used with most other makes of recorders. Electronically, they are based on the Mullard 10 watt circuit, which has attained high popularity. The "Bray" is self contained with all controls on the main amplifier, an input of 500 mV is required for full output. The "Clewer" includes a separate pre-amplifier control unit, increasing the sensitivity to 40 mV. The respective prices are "Bray" £25 10s., "Clewer" £30 10s.

Another manufacturer to take advantage of the Mullard high quality 10 watt amplifier is Altobass. This amplifier is supplied with an attractive pre-amplifier control unit and the main amplifier may be installed in a cabinet up to four feet away. Printed circuits are used, and the price of the amplifier complete is 23 gns.

Serious enthusiasts intent upon increasing their knowlege of electronics whilst at the same time building up a high-fidelity system would do well to investigate the range of amplifiers offered by E.M.I. Institutes. The Emistructor kits supplied by this organisation include all components and full details for the home construction of various complete high-fidelity installations. Pre-amplifiers and stereo-amplifiers are included in their range of units.

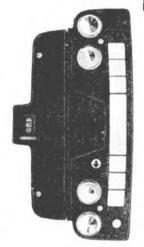
Airmec have entered into the stereo field with a complete pair of matched amplifiers and pre-amplifiers on the same chassis, self contained with control panel, Ultra-linear output stages are used, giving 10 watts output per channel. Separate tone controls are fitted for each channel, and inputs are provided for pickup, tape, and radio. Power supplies are available for tape pre-amplifier. A front escutcheon is supplied to assist in obtaining a good finish when mounted in the owners' cabinet. Distortion is very low, and hum and noise negligible with this amplifier.





high fidelity TAPE RECORDER

incorporating the new Simon fully automatic tape deck



SIMON AUTOMATIC DECK fully 'push-button-controlled'



BASS AND TREBLE LIFT AND CUT

with independent controls

AUTOMATIC TAPE REVERSAL

without button pressing
or spool transposing



ACCIDENTAL ERASURE PREVENTION

by special record 'safety button'

3-WAY MIXING FACILITIES on both record and playback

PUSH-PULL OSCILLATOR



SYNCHRONOUS MOTOR

mains frequency controlled for accurate speed

10 WATTS OUTPUT from ultra-linear push-pull amplifier

reduces noise and hum to minimum



ACCURATE TAPE POSITION INDICATOR based on linear tape scale

una-iniear push-puil amplifier — based on iniear



CATHODE RAY MAGIC EYE for 'pin-point' modulation



To Simon Sound Service Ltd

46-50 George Street, Portman Square, London W.1

Please send me literature on the Simon SP.4

NAME

ADDRESS

ADDRESS

Cadenza

ribbon microphone

... to do justice to the excellence of the SP.4.

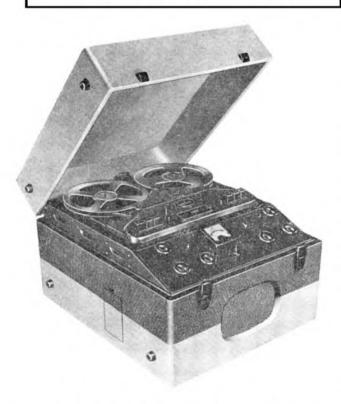
Dual impedance head: output sensibly flat between

50—12000 cps.

In handsome
presentation case:
head only 8½ gns
with tripod
desk stand 10 gns

Styling: Peter Bell, M.S.I.A.

Tested in the lab.



HIS machine may be regarded as one of the finest domestic tape recorders, with several facilities that bring it well above other machines at the same price or even higher.

The recorder was first tried out recording from f.m. radio, and performed excellently, especially at $7\frac{1}{2}$ ips. I liked the meter, which I found to be set up absolutely correctly, so that I could see clearly how much signal could be put on the tape without distortion. I listened to the recording on a large studio speaker and it sounded very like the original f.m. signal. The 15 ips speed seemed even more realistic, and completely

The 15 ips speed seemed even more realistic, and completely free of distortion of any kind.

At 3½ ips music came over surprisingly well. I noticed a rather heavy peak around 8 kc/s which could have the psychological effect of making one believe that the recorder had more range than it really has at that speed. On speech, however, this slow speed was really excellent.

The facilities have obviously been very carefully thought out. I liked the provision for using low or high impedance microphones, and also the cathode follower output. This means that a long lead can be used between the machine and an

that a long lead can be used between the machine and an external amplifier, without any loss of high frequencies.

It is also useful to be able to listen to the input of the

recorder, while the machine is recording, at a pre-set level separately controlled on its own loudspeaker or on an external one at any volume.

The recorder was very free from wow, although some slight flutter could be detected at its slow speed, which, after all, is to be expected. The manufacturers have checked the deck and lined the heads up carefully because performance was so amazingly fine during laboratory tests which I carried

The machine can be left switched on for long periods without any overheating, which is more than can be said for many

others, including certain professional models.

I would have preferred the tone control to be cut at a higher frequency, because I found it very fierce on the middle frequencies when at its minimum position. This could be easily altered, if required, by inserting a lower value condenser in the tone control circuit. The hum level on this machine was

Our reviewer, ANGUS McKENZIE describes the Spectone recorder as

ONE OF THE FINEST

also a little higher than I would have liked, but this was improved by carefully adjusting the hum functioning coils inside the deck, and by rotating the mains transformer.

The Collaro microphone supplied is very good and is most suitable for all home recordings. Indeed it compared favour-

ably with microphones costing a good deal more.

One warning: to get the most out of the machine, the tape recommended by the manufacturers should be used if possible, because on certain other makes of tape the recording is apt to be very top-heavy due to insufficient bias, which usually tends to have this effect. Having been impressed by the excellent electronic performance, I lifted the deck out of the wooden case to have a look at the workmanship of the interior. So often we hear of continental workmanship being superior to our own, that it gives me great pleasure to say that the wiring layout is really well carried out. For ease of servicing, most condensers and resistors are on tag strips, and I noticed that each section of the entire circuit (viz., recording amplifiers, oscillators, monitor loudspeaking and meter amplifiers, play-back amplifiers) are on separate chassis easily accessible.

I should like to make the following suggestions:-

To extend the usefulness and quality of performance, the low impedance microphone input be made balanced instead of at present having one side earthed, and with the screen of the microphone cable attached to a wander plug fitting into a special earth socket; in addition, the "line" output should not be controlled by the internal power amplifier control.

I feel that the condenser coupling with the line out should be a little larger to give a lower output impedance to the lower frequencies. Also, that the peak frequencies for recording and play-back at 3½ ips could be made a little higher to give extended response at this speed. On experimenting with this modification, I found that the response at $3\frac{1}{2}$ ips could be extended to 9 kc/s \pm 3 db, an amazing result on an all British machine. The weight is 50 lb., and this is reasonably

TECHNICAL REPORT

The hum level was found to be $-47 \, db$ on one channel and $-46 \, db$ on the other track, thus well within the manufacturers specification. This was inaudible after a fully modulated tape was played back over a large monitor loudspeaker at suitable level, and the tape stopped with the pause control, leaving the motors on, and the heads "live."

The frequency response on play-back was easily within the CCIR curve, and overall the response was found to be flat to over 17 kc/s. Yes, 17 kc/s. This response at 7½ ips was over 17 kc/s. checked by monitoring on a cathode ray tube which showed a clear trace at the high frequency. I found that distortion came in when the output stage delivered any more than 2 watts.

Frequency response at the three speeds:—
15 ips: ± 2 db from 30 cs. to 18 kc/s with a slow fall off from 18 kc/s, except for a 5 db peak at 40 c/s, which possibly is an advantage.

7½ ips: ± 3 db from 30 cycles to 17 kc/s except for a 6 db peak at 60 cycles.

3½ ips: ± 2 db 30 cps to 4 kc/s, 3 db 4 kc/s to 9 kc/s.

All figures ref zero at 1 kc.

Wow and flutter were well within the specification of Collaro, manufacturer of the deck.

It is noticeable that the Collaro deck has considerably improved, the heads being standard heads as used on all new Collaro decks (Mark IV).

All the above frequency response tests were measured with a sensitive AC milli-volt meter, and also all frequencies were continually monitored aurally and visually on a cathode ray tube to ensure no spurious readings.

(We have much pleasure in reporting that all the modifications suggested above are, in fact, being made by Messrs. Specto in the near future.-Editor.)

"ELIZABETHAN 56"

(This article is the last in the present series)



HE "Elizabethan 56" is a portable recorder, using bottom track recording operating from right to left, equivalent to British and U.S. Standards. The machine is dual speed, operating at 7.5 ips and 4.8 ips giving recording-playback time of approximately 30 and 45 minutes per track.

A three-motor mechanism is used, and the capstan is of heavy construction with a substantial flywheel pivoted between precision ground bearings and driven by a Collaro Type AC49 motor.

Speed change is effected by means of switching the windings of the capstan motor.

The amplifier chassis consists of a combined Record and Playback amplifier supplying the H.F. bias for recording and erasing. Recording level indicator is a valve of the magic eye type.

In addition to the microphone and gram/radio sockets, there are outputs for headphone monitoring, for hi-fi, for feeding to extend amplifiers, and for use of extension speaker.

DISMANTLING

To remove the chassis unscrew the four chromium plated screws which retain the main top deck, carefully lift up deck, and it will be seen that the deck and amplifier chassis form one unit. By tilting it, it is possible to reach every part for servicing.

Should it be necessary to remove the unit completely, unplug power pack, unsolder mains and L.S. leads. The unit can then be completely removed. The power pack is retained by means of four Phillips Type screws, held through the bottom of the cabinet.

ELECTRICAL TESTS

VALVE VOLTAGES

All measurements have been carried out with an AVO model 8 on the D.C. 250v, 10v and 2.5v ranges. A.C. 250 voltrange. H.T.: Unsmoothed, 250 volts; Smoothed, 240 volts; Heater voltage, 6.3v. A.C.

Valve	Anode	Screen	Cathodo
EF86	125v	70v	1.6v
ECC83/1	135v	_	1.3v
ECC83/2	180v	_	1.5v
EL84 P/Back	220v	240v	8.5v
EL84 Record	230v	230v	6v

Erase Voltage measured with AVO 8, 250v range A.C. across the erase head, 200-250v.

Bias Voltage measured across record head with no input and selector switch in record position, 50-60v.

Under no circumstances should the D.C. resistance of the heads be measured with an Ohm-meter.

MODULATION LEVEL

To check that the magic eye is closing at the correct recording level, feed into the mic socket a signal of 2m/v at 1 kc and adjust V/C until the two halves of the M.E. begin to touch. With a valve volt-meter, measure the voltage at the junction of head feed resistor (47K) and the .luF from the ECC83/2. This voltage should be 6v A.C.

This test should be carried out with the grid of the EL84 shorted to earth.

Should the M.E. close at a lower vol-

tage, then the series resistor (100-220K) should be increased. If a greater voltage is required to close the gap, the EM34 and WX6 diode should be checked.

FREQUENCY RESPONSE

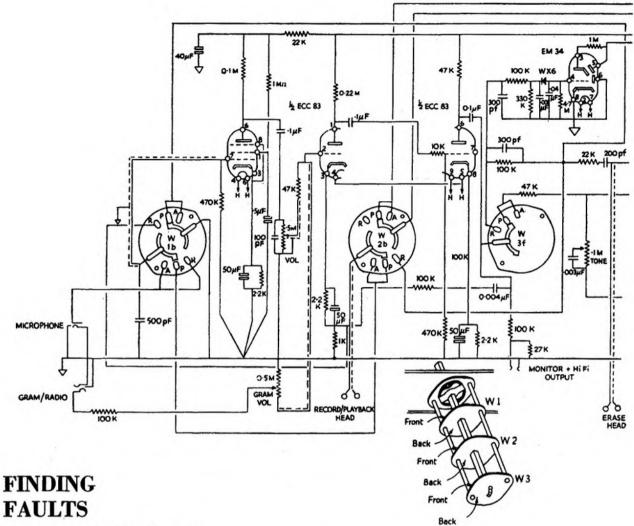
Feed a signal of 2m/v into mic input socket and connect AVO 8 on the 2.5v A.C. range across L.S. terminals. Set V/C until M.E. just closes, then reduce by 1/3. Record signals on tape at 1k/cs, 7k/cs, 10k/cs and 100 cps. Play back recording and note output level on D.B. scale of AVO. Readings should be within ±3 DB (referred to 1k/cs) over complete frequency range. Should the frequency response drop at the high frequency end of the scale, check tension of pressure pads and record/playback head.

WOW AND FLUTTER

Should a Wow meter be available the reading should not exceed ±.2 per cent at 7.5 ips. Alternatively, a signal of 1k/cs should show no change in pitch when recorded and played back.

HUM LEVEL

Connect an oscilloscope across the L.S. terminals, with the amplifier in the playback position. Set all V/Cs at maximum and tone control for maximum bass. Switch deck mechanism to the reproduce position with the unit in the cabinet, The hum should not exceed 1/200th of a 1k/cs recording made and played back at full level. Should the hum exceed this level, check the position of Mu metal ring around the record/playback head.



Distorted recording, low volume, or no recording bias: Check EL84 valve, Oscillator coil and components, and record head

No erasure: Check EL84 valve, oscillator circuit, erase head, shorts between head and earth.

Partial Erasure: Check pressure pad assembly and head alignment, and repeat procedure as for no erasure test.

Low record/playback gain, and working satisfactory in amplifier position: Check all valve voltages, heads for dirt or foreign matter across gap, pressure pad assembly, low recording bias.

Unit distorting with selector switch in amplifier position: Check all valve voltages, faulty output transformer, faulty speaker, low H.T.

Poor H.F. response: Check record head alignment, gap worn or dirty, H.F. bias incorrect.

No playback: Check record/playback head, selector switch, pressure pad assembly.

Magic eye not functioning: Check EM34 and WX6 valves and associated circuits, monitor socket.

MAKING ADJUSTMENTS

Hum level excessive: Check smoothing condensers, valves for heater cathode S/c, O/c record/playback head, displacement of Mu metal strip around record/play-back head.

Microphony: Check EF86 valve.

Brakes: One end of each brake band is connected to an anchor bush. The other end is connected to a bracket which swivels on a mounting strip. Each mounting strip is screwed to the deck at one end and affixed at the other end by transverse locking arm. The nearer the swivel point is to the brake drum the sharper is the braking action.

To adjust brakes, press the Stop button and ensure adjusting screws are well clear of the brake band brackets. Slightly slacken nuts securing mounting strips to deck and remove transverse locking arm.

Now adjust one brake at a time. Grip the appropriate spool holder and brake drum in one hand and rotate. At the same time move the end of the mounting strip (near where the transverse locking arm was) slightly to the left or right. It will be found that the braking action of the band on the drum will become weaker or stronger. Leave strip at position desired. Repeat action for other brake. Tighten screws securing mounting strip to deck and replace transverse locking arm.

It will be observed that the rotation of the spool holder and brake drum in one direction will be virtually unaffected by the action of the brake band. This is due to the servo design of the brake, to avoid tape spillage. The brake drum must therefore be rotated in the direction that is affected by the brake band. Check that the adjusting screws are approximately 1/16th in. clear of the brake band brackets.

If it is desired to remove a brake band assembly at any time, do not remove

(Continued on page 45)

SEX

ESCORT A beautiful console version of



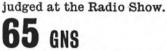
the Essex, incorporating all its technical features. The Mayfair has an exquisitely designed contemporary cabinet of Bubinga and Sycamore woods, made to the highest standards of craftsmanship, and detachable legs enable it to be used either freestanding or as a table model. The EAP F.M. Tuner Unit can easily be fitted to form a complete hi-fi radio/tape installation.



An outstanding achievement of British design and technical skill, the famous Essex has led the field since its first appearance. 3 speeds and 3 speakers ensure the finest possible sound reproduction for any subject. Amazingly versatile, the Essex can be used as recorder, reproducer and independent amplifier. Incidentally, an Essex will be the first prize in the National Tape Recording Contest, to be

GNS

including tape and accessories Optional microphones: Cadenza ribbon-10 gns. High-quality crystal-5 gns.



including tape and accessories Optional microphones: Cadenza ribbon-10 gns. High-quality crystal-5 gns.



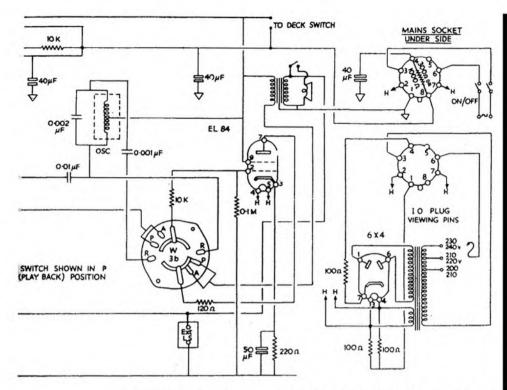
The sensational new Escort is the most talked - about recorder of the day. Neat, light and good-looking, it has every possible recording facility, including 3 speeds, 6 hours playing time, mixing, super-imposition and monitoring. Simple push-button controls make it a joy to use, and it has the superb hi-fi sound that one expects from the Elizabethan range.

including microphone, tape and all accessories.

See and hear the Elizabethan models at the Radio Show, Earls Court — Stand No. 416

EAP (Tape Recorders) Ltd Oldchurch Road Romford Essex

Tel: Romford 62366/7



(Continued from page 43)

motor. Unscrew the appropriate anchor bush by the screw on the deck top surface, remove nut securing mounting strip to deck, remove transverse locking arm, and unhook spring. The assembly is now free.

Flywheel and capstan: With band slipped off, flywheel should rotate freely when spun. At the same time there should be no perceptible side play when the flywheel is gripped firmly between finger and thumb. If adjustment is required, slacken retaining nut and adjust bolt. Tighten retaining nut. Return band to flywheel. It is important to ensure that no grease touches the band. If this does occur, wipe off immediately and coat with french chalk.

Pressure pads: Should it be necessary to re-adjust the felt pad setting, recording tape should be looped round the record head and Fast button depressed (without mains connected to deck). The pressure the pad is applying to the tape and record head can then be easily felt by moving the tape with the fingers. The pad should have the minimum pressure consistent with maintaining intimate contact of the tape against the head GAP. Adjust pad as necessary. It is essential the pressure of the pad be not excessive, else "wow" may result. Remove tape from record head and loop round erase head. Repeat procedure as for record head.

Spool carriers: Should it be desired to raise or lower these, adjustment can be effected by slackening the grab screw at the side of each carrier, adjusting to height and then tightening.

Pulley: If it is desired to operate the deck at other than the standard speeds or at a different mains frequency than 50 cycles, a different pulley than our standard is required. Alternatives are available. The existing pulley can be removed by slackening the grub screw.

Heads: The record head is balanced on two precision diameter balls and by suitably screwing the two mounting screws, the gap line can be adjusted to a very fine degree of accuracy to enable the best possible results to be obtoined from pre-recorded tape. If it is desired to deliberately mis-align the head (possibly to obtain good playback reproduction from a tape recorded on another machine with a mis-aligned head), the record head can be tilted by slackening one of the mounting screws a little and tightening the other until the desired result is obtained. Take care not to overtighten both screws.

UNDER NO CIRCUMSTANCES MAY THE TWO SCREWS JOINING THE HEAD CASTINGS BE TURNED. NO RESPONSIBILITY WILL BE ACCEPTED FOR A DEFECTIVE HEAD THROUGH THIS CAUSE.

The head surfaces must be kept clean and carbon tetrachloride can be used sparingly, if necessary. Ensure the head surface is not scratched and only polished with a fine brush or very soft cloth.

Take care no permanent magnet is placed close to the head of any D.C. passed through it (even from a meter).

THE IDEAS POOL

DUBBING DIFFERENT SPEEDS

THE problem may arise of a tape recorded at a speed other than that on one's own machine. I solved this recently in the following way:—

The tape I received was recorded via a microphone at $1\frac{7}{8}$ (a programme of Italian pop music). Both my machines only have the speeds of $3\frac{3}{4}$ and $7\frac{1}{2}$. I played the tape at $3\frac{3}{4}$, simultaneously dubbing it at $7\frac{1}{2}$. On playing back the dubbed copy at $3\frac{3}{4}$ I was able to listen to it with very acceptable results.

As the tape was dubbed at 4 times the speed of its original recording, the process is not as long as it may sound.

FRANK X. MICALLEF.

York.

MORE TAPE PER SPOOL

I WAS most interested in Ian Gibson's idea (October issue) for getting more tape on a 3 in. spool by reducing the hub diameter.

One of the disadvantages of this method, apart from the trouble involved, was mentioned by a correspondent in November, and perhaps your readers will be interested in my solution to the problem.

I use Geloso spools, which have a very small hub. They take approximately 430 feet of Geloso L.P. tape or an average 375 feet of other brands—thus giving me at least 8 minutes more playing time per track at $1\frac{7}{8}$ ips than any of the normally available 3 inch spools.

Anyone whose recorder will take only 3 inch spools will know how valuable those extra minutes are.

MICHAEL ROSE.

Manchester 20.



REGARDING the article and correspondence on the "more tape per spool."

Another method of obtaining longer recording time and tape is to fit "outrigger" arms and provide for larger spools.

With 8 mm. cine projector spools for 800 ft. of film one can provide for up to 3,600 ft. long-play tape which should be enough for most people. It is possible to record/playback for 12 hours at 1½ ips, if my maths. are correct!

This idea is not mine; I saw it demonstrated on TV in "Inventors' Club" (B.B.C.).

The idea, presumably patented, was that you had two arms extending from the recorder with spring bell-drive from the normal spindles to spindles on the extension arms. This scheme would work on most types of recorders.

F. W. HOLMES.

Bexleyheath.



In this feature every month you can check

OUR LOCAL DEALER

who gives special attention to tape

LONDON

Hi-Fi Consultants and Dealers

STUDIO RECORDING & DUBBING FACILITIES

Studio A, 40 ft. × 40 ft.

TAPE to DISC professional standards

OLYMPIC SOUND STUDIOS

Carton Hall, Carton Street, London, W.I. Tel. HUN. 1635

**** LEE ELECTRONICS ****

(The Tape and Hi-Fi Specialists) 400, EDGWARE ROAD, LONDON, W.2

present their - * Five-Star Special * available on all Tape Recorders:-

Free Insurance and Delivery.

Free Home Demonstrations.

Free Maintenance whilst under guarantee.

Free of Interest Charges.

All Machines demonstrated for performance on Record and Playback

All leading makes of Hi-Fi equipment from stock PADDINGTON 5521 **** ****

LEWORTHY'S LTD.

Largest local stockists-Tape and all accessories. All deliveries S.E.4, S.E.6, S.E.12, S.E.13, same day. Postal tape orders free per return. We specialise for the builder with Parts-Pieces -Valves. Ring your query-we will be delighted to help.

407, 411 & 413, Hither Green Lane, S.E.13 Telephone: HITher Green 4212

NEWS FROM THE CLUBS

The Federation

M ORE and more requests are being received by the Federation to help in the formation of local Tape Recording Clubs. Requests for advice are steadily coming in from all over the country. Established Clubs can obtain assistance in the planning and carrying out of programmes. The legal and technical department is at the disposal of any Member-Club that wishes to use it. If any Club is not yet a Member of the Federation it is urged to apply now in order to enjoy full the Federation it is urged to apply now in order to enjoy full benefits of membership.

Great interest is being shown in the Tape Recording Week to be held in Leicester from Monday, 24th November. This project is receiving the support and co-operation of many retailers in the city and it is hoped to round off the week with a meeting of all tape enthusiasts who are interested in the formation of a Tape Recording Club. Secretary: Roy Penfold, 48,

Holbrook Lane, Coventry.

Bournemouth

HE club has been contacted by the Dansk Magnettone Klub, THE club has been contacted by the Dansk Magnetione Rido, Copenhagen, and an exchange of tapes is being arranged. The Secretary, Mr. F. T. Gaymer, 67, Old Christchurch Road, is keen to get in touch with any Danish people living in the Bournemouth area.

Members have been busy lately making outside recordings of amateur dramas; a brass band and a choral society. They have also arranged a Hospital Message Service for Poole

General Hospital.

At a recent meeting members saw a programme of colour slides with tape commentary.

BTRS

THE Society has issued a house journal entitled *The Recordist*. It will be available bi-monthly from their H.Q., 210, Stamford Road, Blacon, Chester, free to members.

Their Hospital Service is mentioned, and anyone interested in forming a local service in the London area is invited to write to Mr. G. Chandler, 33, Deacon Street, S.E.17, for further information. further information.

Coventry

A T the last meeting there was a stimulating debate on the draft Constitution.

Twenty members, wives and friends recently spent an interest-They saw the control rooms, the tape library, the recording machines and various microphones used in broadcasts. They were joined by the "Tape of the Year" winners, Basil Harley and Mrs. Harley.

Club Secretary, Roy Penfold, informs us that membership has risen to thirty and there are signs of a still greater increase. His address is 48, Holbrook Lane, Coventry.

Denmark

HE President of Dansk Magnettone Klub, Mr. K. Galle, THE President of Dansk Magnetione Kind, Mr. A. Construction of Informs us that their new address is: Vesterbrogade 19, Copenhagen, V. Denmark.

East London

A N East London Club is also in the making. Inquiries to Alan Stableford at 9, Normandy Terrace, E.16.

Edinburgh

A T its last meeting Bill Young gave a talk on "Tape Recording for Beginners," explaining how he started with a recorder and gradually added a record player, mixing unit, F.M. Tuner and finally a second recorder.

Talks have also been given on microphones by Bill Cowe

an on mixer units by Jimmy Sime.

Members are being encouraged to take along their own recorders for demonstration purposes.

Glasgow

A T its first annual meeting members re-elected the Committee and enrolled Mr. L. Marshall, a Scots television star, as a

They heard that permission has been granted them to put record programmes on tape for the entertainment of hospital patients and blind institutes. The Club now has 18 members.

Jarrow

MEETING has been held to consider formation of a club A MEETING has been held to consider formation of a club in this area. Readers interested should contact John Rippington, 30, Breamish Street, Jarrow, for information.

Kettering

THE first meeting of this club was held on November 4th. Fourteen members were enrolled.

After the election of officials, members arranged a lecture

The session closed with a discussion on "The Public Performance of Recordings."

Maurice White will give a talk on microphones at the next

All future meetings will commence at 8 p.m. on Tuesdays. Those interested should contact the secretary, Mr. A. M. Webb, 93, Regent Street, Kettering, Northants.

London

THE Club has celebrated its first anniversary, marking the occasion in the traditional way with a birthday cake sporting one candle.

Members heard from the Secretary on the events of the first

year, and the Chairman spoke of the future of the club.

Later in the evening the finished recording for the South Goodwin Lightship crew was heard.

A stereo demonstration was given by John Amphlett using a Tandberg machine and two G.E.C. eight-inch speakers.

Leicester

A LEICESTER Club is soon to be formed in conjunction with the Tape Recording Week. Those interested should write to Peter Starie at 56, Minehead Street, Leicester.

Luton

SECRETARY Maurice Nichols has written to Windhoek Tape Recorder Club in South-West Africa and arranged for tape exchanges.

Norwich

A BOUT sixty people attended the first open night of the Club which was held at the Assembly House, Theatre Street. Demonstrations of hi-fi recordings and recorded messages from various parts of the world were played. Included in the proceedings were a colour film and a sound-guessing competition, with prizes.

Many new members are expected as a result of the "open night." Future activities and correspondence with other clubs will be attended to at the next meeting.

A reply is being prepared to the tape on microphone tests received from the Rugby Club.

Reading

READING Cine Club has extended its activities to include tape recording. They feel the two hobbies are complementary to one another. Their new name will be Reading Cine and Tape Recording Society.

The Society will be run in two sections, each with its own committee. Membership fee of £1 per member, or £1 10s. for husband and wife, covers both sections.

Details from Secretary L. C. Beilby, 104, Whitley Wood Lane, Reading. (S.a.e. please.)



In this feature every month you can check

OUR LOCAL DEALER

who gives special attention to tape

ONDO

CABINETS AND EQUIPMENT BY STAMFORD



GP 60. Price £19 19s. or £3 deposit and 9 payments of 40/7d. monthly. S.37. £11 19s. 6d. or £1 16s. deposit and 9 payments of 24/4d. monthly.

EQUIPMENT CABINET GP 60 (will house Ferrograph) Sizes: 46" wide, 20" deep

(will nouse rerrograph)
Sizes: 46" wide, 20" deep
CORNER
ENCLOSURES FOR
GOODMAN'S
AXIETTE
Sizes: 31" high, 28" wide
Cabinets c. n be supplied individually in
choice of veneers and
fitted with the equipment required. No
fitting charge. Write
for new catalogue with
dozens of illustrations,
sizes, etc. to:
A. L. STAMFORD

A. L. STAMFORD (Dept. Z/3) 84,86 & 98 Weymouth Terrace, off Hackney Road, London, E.2 Phone: SLO 2003 Phone.: SHO 5003

THE SOUTH

TAPE RECORDERS

(Bournemouth) LTD.

specialists in

ALL TAPE RECORDERS

main area dealers for

Grundig • Philips • Stuzzi Authorised Telefunken Service Agents

Tapes and Accessories by return

Terms available on New or Reconditioned Sets (Largest stockists in Southern Counties)

Write or phone: Seamoor Road, Westbourne 64292

HAMPSHIRE

Elizabethan, Gramdeck, Minifon, Sonomag, Spectone, Truvox, Verdik, Walters etc.

Demonstrations of sound effects with home movies.

J. H. WOOD

Tape Recorder Studio: 117, Ringwood Rd. Tel:- 2040 Highcliffe-on-Sea, Hants.



In this feature every month you can check

OUR LOCAL DEALER

who gives special attention to tape

THE MIDLANDS

R-E-S OF COVENTRY

SPECIALISTS IN HIGH FIDELITY and all makes of Tape Recorders

- * Stocks of Stereophonic and Pre-Recorded Tapes.
- * Demonstrations always available by fully qualified staff
- * The Best Selection—Terms or After Sales Service in

R-E-S (COVENTRY) LTD. 128 FAR GOSFORD ST, Coventry 60913

TAPE RECORDERS

"NO-INTEREST" Terms!

Buy your new Tape Recorder without touching CAPITAL! NO EXTRA CHARGES -Nine Months to pay the Retail Price Only. All Leading Makes Stocked-Grundig Philips, etc.

JEWKES & CO. LTD.

The Midlands Tape Recorder Specialists 285, BROAD STREET, BIRMINGHAM MID 4829/20

NORTH

"TAPE RECORDERS ONLY"

ALL POPULAR MAKES, CASH OR TERMS

Specialists in GRUNDIG and Service and Guarantee implemented without return to the manufacturers.

> TAPES Service spares

DIXON'S ELECTRONICS

227 OXFORD ROAD, MANCHESTER 13 (Telephone: ARDwick 4269)

NEWS FROM THE CLUBS

Rugby

AT their last meeting members heard a quiz tape, a message from Norwich Recording Society and they took part in a forum on Education. Questions were put to a panel consisting of two headmasters, a headmistress and a Borough Councillor. Outside interest was shown by the presence of three members of Nottingham Audio Society and a member of Coventry Tape Club. A stereo demonstration was given.

The Society now has twenty members. Posters showing Emitape being made, supplied by E.M.I. Sales and Service Ltd., will be used to decorate its new H.Q. when the opening "Social

December should see the start of their Hospital Recording Service.

Sidcup

AT the first organised meeting of the Club it was decided future meetings would be held on the third Tuesday of the month at 8 p.m. It was also decided that there should be a "family subscription" rate of one guinea.

Temporary membership, at a reduced fee, has been extended to all people in Kent who own recorders, pending the formation of a club in their own district. The Chairman of the local Borough Council has accepted the invitation to be President. Affiliation to World Tape Pals and Tape Respondents International is being sought.

The Secretary is Mr. J. B. A. Braidwood of 104, Belmont Lane, Chislehurst, Kent.

Tape Organ Club

THIS Club has been formed for those interested in organ music. A directory is supplied showing members' interests. One aim of the Club is to record the big "theatre pipe organs," many of which are going out of existence.

More British members are needed for this work. interested should write direct to Carl Williams, Secretary for Organ Music Enthusiasts, at 19, Van Deveer Street, Amsterdam, New York, U.S.A.

It is hoped to present tape recordings made during a recital sponsored by the "American Theatre Organ Association" to the members of the British section during the winter months. Secretary: Stanley R. White, of 61, Stanley Street, Rothwell, Kettering, Northants.

Warwick and Leamington

THE Society's first tape competion has been held. This development in the Society's activities is open to all its members and tapes were submitted for the competition and judged on their "originality." The duration of the recording was restricted to five minutes.

Mr. Graham Harris of Warwick was the winner and received a reel of Scotch Boy magnetic tape for his recording which was entitled "Portrait of a Day."

So that an unbiased decision could be made on this competition, two new members to the Society were chosen as the judges.

The competition will in future be held each month.

The Society's first annual dinner has been announced and this will be held at the Regent Hotel, Leamington Spa, on Sateurday eveing, the 20th December, 1958.

West Middlesex

T its last meeting Secretary Saunders gave a short demon-A stration of editing, dubbing and splicing.

Chairman Copinger sent a tape message. Address: 2, Sea-

ford Street, Kilmarnock, Ayreshire, Scotland.

Don't forget the Magazine: Editor Fred Grazeley wants as many contributions as possible. These entries should preferably be at 7½ ips and on good quality tape. Send to 265, High Street, Uxbridge, Middlesex.

Tape Mag. Writers produce

A BOOK FOR XMAS

BOOKS on tape recording are beginning now to come thick and fast but, no matter how many appear, we shouldn't expect anyone to do better than two such well-known writers in the field as Douglas Gardner and Ian Arnison.

These two Tape Recording and Hi-Fi Magazine writers are the joint authors of "Tape Recording as a Pastime," just published by the Souvenir Press at 15s. It will make an ideal Christmas gift for anyone with a budding interest in the subject.

Another expert well known to readers of this magazine, Mr. Tony Gibson, contributes a foreword, in which he declares: "This is an exceptional book, for at least two reasons. In the first place, it tackles this involved and highly technical subject with a clarity and assurance that I've not seen elsewhere. What's more, it communicates the zest and excitement to be experienced by pioneer work in a comparatively new field."

Well, I can think of no better summary of the book's qualities. Just as Tape Recording and Hi-Fi Magazine itself has scored because it has gone for the wide, general appeal—rather than overloading itself with technicalities for the specialist—so this new book is deliberately aimed at the mass of novice recorder owners.

It gives them the fullest information I have found anywhere about the development and present potentialities of tape, taking them subtly by the hand and guiding their first footsteps, then leading them to increasing confidence in tackling more complex problems.

It is a goldmine of basic information about every aspect of the subject and I cannot imagine any enthusiast who has flicked through the pages in a bookshop, going home happily without it.

RUDOLPH DYNER

British Sound Recording Association

A BUSY season lies ahead for members of the Association. Demonstration meetings, with manufacturers giving talks on their equipment, exhibitions and events of special interest are all planned for the next few months. Talks include: "Microphone Balance Techniques" (December 19), "Further Developments in Loudspeakers" (January 16), and "The Quest for Quality" (April 17).

Meetings are held on Fridays at 7.15 p.m. at the Royal Society of Arts, John Adam Street, London, W.C.2.

All general BSRA correspondence should be addressed to 3, Coombe Gardens, New Malden, Surrey.

A LECTURE DEMONSTRATION

A LECTURE demonstration on "Stereo Sound" will be given by Mr. Angus McKenzie at the Olympic Sound Studios, Carton Hall, Carton Street, London, W.1, on Saturday, December 6, at 4 p.m. Admission free, refreshments provided, tickets obtainable from Olympic Sound Studios or Tape Recording and Hi-Fi Magazine. (S.A.E. please.)



In this feature every month you can check

OUR LOCAL DEALER

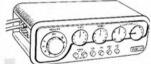
who gives special attention to tape

THE NORTH-WEST

TAPE RECORDERS AND HI-FI

Large selection, including Ferrograph, Grundig, Philips, Simon, Telefunken, Elizabethan, Truvox, etc.

Hi-Fi units by Quad, Leak, Goodmans, etc. Daily Demonstrations,



HOLDINGS

OF BLACKBURN LTD. 39-41, MINCING LANE, BLACKBURN.

JOHN SHINN & SONS LTD. Electronic Engineers

TOWN CENTRE, LEIGH, LANCS.

Also at MELODY HOUSE, 109 HIGH STREET, BANGOR, N. WALES.

and MELODY HOUSE, 43, HALLGATE, TOWN CENTRE, WIGAN, LANCS.

Pioneers in Tape Recorders since 1946
ALL MAKES STOCKED - TERMS AVAILABLE

All customers are made honorary members of the John Shinn Recording Club, with its attendant benefits

SCOTLAND

for SOUND value SEE US

Hear and test the latest Philips, Simon Vortexion, Elizabethan, Grundig, etc. You're safer with the specialists (fully equipped service department). Terms arranged.

M°CORMACK'S

7 COWCADDENS ST.

(Opp. Buchanan St. Railway Stn.)

GLASGOW C.2 Phone: DOUglas 2846



EX STOCK

THE DULCI-HARTING

TAPE UNIT AT 55 GNS

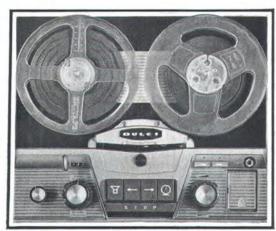
Use it with the DULCI DPA 10 amplifier and control unit 19 gns. complete.

CREDIT TERMS

HIRE PURCHASE ORDER TODAY

EX STOCK

QUAD II instruments; ALTOBASS 510 amplifier and 2000 speaker—also available in cabinet to maker's strict specification at 39½ gns. AURIOL; BRENELL'S latest deck, pre-amplifier and tape



recorders; Burne-Jones; Chapman; G-Plan Furniture; HEAL Cabinets fitted with QUAD II or THERMIONIC instruments; Garrard & Collaro units with EXPERT P-U Arms; JASON Kits and latest Tuners/Amplifiers; Leak; Lowther; Rogers JUNIOR, Cadet and SENIOR; GOODSELL & Ortofon; BLACK SHADOW Pic-Up. Lustraphone, etc., etc.

OFFICIAL DISTRIBUTORS FOR EXPERT GRAMOPHONES LTD.

Tape Recorders by Sound, 777, Dauphin, Truvox, etc. Latest Type V by Veritone at only 52 gns. complete. "At the Audio Fair, Manchester, it met with phenomenal success."

ALL THE LATEST INSTRUMENTS DIRECT FROM THE AUDIO FAIR, LONDON

ORDER NOW and avoid disappointment



ELECTRONIC & MAGNETIC STEREOPHONIC DIVISION

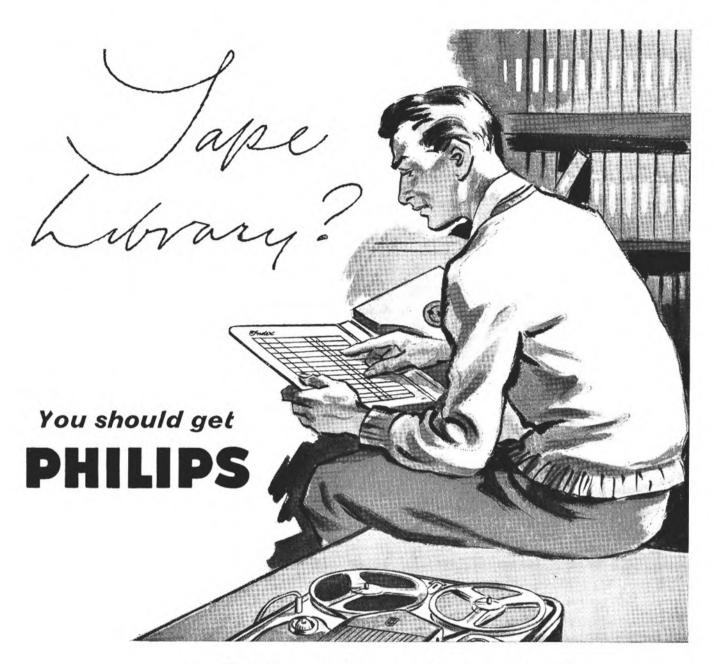


(E.M. Office and Factory Equipment Co.)

29 JUBILEE AVENUE, CREWE, CHESHIRE

TRADE SUPPLIED

ENQUIRIES FREE



...it fits all Tape Recorders!



(Made In Holland)

Philips tape will fit your tape recorder — and give you really superlative reproduction, even of music in High Fidelity. Also, if you're building up a library of tape, there's another reason for choosing Philips — the way it's packed. The Philips 7" reels are packed in durable books with an index page ready for your notes. Philips tape is also available in 5" reels packed in plastic containers and 4" reels. It offers you high sensitivity, wide frequency range, low noise level — all at a competitive price. All good reasons why you should stock your tape library with Philips tape!



PHILIPS ELECTRICAL LIMITED . CENTURY HOUSE . SHAFTESBURY AVENUE . LONDON . W. C. 2