

# P.M. ELECTRONIC SERVICES

PRICES SHOWN EXCLUDE VAT  
UK CUSTOMERS PLEASE ADD 15%

2 ALEXANDER DRIVE, HESWALL  
WIRRAL, MERSEYSIDE, L61 6XT

Tel: 051 342 4443. Cables: CRYSTAL BIRKENHEAD  
627371 (PMES G)

## CRYSTALS MANUFACTURED TO ORDER

AMATEUR SPECIFICATION  
COMMERCIAL & PROFESSION  
CRYSTALS

Prices shown are for "one off", to our standard amateur specs., closer tolerances are available. Please send us details of your requirements.

### A Low frequency fundamentals in HC13/U or HC6/U

Total tolerance $\pm 100$ ppm, 0° to 70°C.	
6.0 to 9.99 kHz HC13/U	£32.80
10 to 19.99 kHz HC13/U	£31.00
20 to 29.99 kHz HC13/U	£23.06
30 to 59.99 kHz HC13/U	£21.73
60 to 79.99 kHz HC13/U	£15.69
80 to 99.99 kHz HC13/U	£13.08
100 to 159.99 kHz HC13+6/U	£11.32
160 to 399.99 kHz HC6/U	£7.83
400 to 499.99 kHz HC6/U	£7.00
500 to 799.99 kHz HC6/U	£7.83

### B High frequency fundamentals/overtones

Adj. tol.  $\pm 20$  ppm. Temp. tol.  $\pm 30$  ppm - 10° to +60°C.

800 to 999.99 kHz (fund) HC6/U	£11.01
1.0 to 1.499 MHz (fund) HC6/U	£11.25
1.5 to 2.59 MHz (fund) HC6/U	£5.36
2.6 to 20.99 MHz (fund) HC6/U	£4.87
3.4 to 3.99 MHz (fund) HC18/25/U	£6.75
4.0 to 5.99 MHz (fund) HC18/25/U	£5.36
6.0 to 21 MHz (fund) All holders	£4.87
21 to 25 MHz (fund)	£7.31
25 to 30 MHz (fund)	£9.00
18 to 63 MHz (30/T)	£4.87
60 to 106 MHz (50/T)	£5.61
106 to 125 MHz (50/T)	£8.44
125 to 180 MHz (70/T)	£11.25
149 to 180 MHz (90/T)	£12.66
180 to 250 MHz (90/T)	£13.60

Delivery — Mid range 1 MHz to 105 MHz normally 4/6 weeks. Other frequencies 6/8 weeks.

Holders: Low Frequencies 6 to 150 kHz HC13/U, 150 kHz to 3.4 MHz HC6/U, 3.4 MHz to 105 MHz HC6/U, HC18/U or HC25/U, over 105 MHz — HC18/U and HC25/U. HC33/U (wire end HC6/U) is available on request as per HC6/U.

HC17/U (Replacement for FT243) available as per HC6/U at 35p surcharge on the HC6/U price. Unless otherwise specified, fundamentals will be supplied to 30pf circuit conditions and overtones to series resonance.

## COMMERCIAL AND PROFESSIONAL CRYSTALS NEW FASTER SERVICE

We are now supplying crystals to most commercial and MIL specifications in the range 1MHz to 60MHz ordered in small quantities in 2 1/2 weeks AT NO EXTRA CHARGE. We also have even faster EXPRESS SERVICES available for that VERY URGENT order.

We can also supply crystals for commercial applications e.g. Microprocessor, TV, etc., at very competitive prices. Let us know your needs and we will send you a quote by return, alternatively telephone or telex our Sales Engineer Mr. Norcliffe who is normally available in the office for technical enquiries between 4.30 and 6.30 p.m.

TERMS: CASH WITH ORDER — MAIL ORDER ONLY. PRICES INCLUDE P. & P. (BRITISH ISLES) EXCEPT WHERE STATED — OVERSEAS CHARGED AT COST.

## TWO METRE CRYSTALS

CRYSTAL FREQUENCY RANGE USE (TX or RX) and HOLDER	OUTPUT FREQUENCY	4MHz-TX-HC6/U	6MHz-TX-HC25/U	8MHz-TX-HC6/U	10MHz-RX-HC6/U	11MHz-RX-HC6/U	12MHz-TX-HC25/U	14MHz-RX-HC25/U	18MHz-TX-HC25/U	44MHz-RX-HC6/U	52MHz-RX-HC25/U
144.4 (433.2)		b	e	b	e	e	b	e	e	e	e
144.800		e	e	e	e	e	e	e	e	e	e
144.825		e	e	e	e	e	e	e	e	e	e
144.850		e	e	e	e	e	e	e	e	e	e
145.000/ROT		a	c	a	c	c	b	e	b	e	e
145.025/R1T		a	c	a	e	e	b	e	b	e	e
145.050/R2T		a	c	a	e	e	b	e	b	e	e
145.075/R3T		a	c	a	e	e	b	e	b	e	e
145.100/R4T		a	c	a	e	e	b	e	b	e	e
145.125/R5T		a	c	a	e	e	b	e	b	e	e
145.150/R6T		a	c	a	e	e	b	e	b	e	e
145.175/R7T		a	c	a	e	e	b	e	b	e	e
145.200/R8R		a	c	a	e	e	b	e	b	e	e
145.300/S12		e	e	e	e	e	e	e	e	e	e
145.350/S14		e	e	e	e	e	e	e	e	e	e
145.400/S16		e	e	e	e	e	e	e	e	e	e
145.425/S17		e	e	e	e	e	e	e	e	e	e
145.450/S18		e	e	e	e	e	e	e	e	e	e
145.475/S19		e	e	e	e	e	e	e	e	e	e
145.500/S20		a	c	a	c	c	b	b	b	a	c
145.525/S21		a	c	a	c	c	b	b	b	a	c
145.550/S22		a	c	a	c	c	b	b	b	a	c
145.575/S23		a	c	a	c	c	b	b	b	a	c
145.600/R0R		a	c	a	c	c	e	b	e	a	c
145.625/R1R		e	e	e	e	e	e	e	e	e	e
145.650/R2R		e	e	e	e	e	e	e	e	e	e
145.675/R3R		e	e	e	e	e	e	e	e	e	e
145.700/R4R		e	e	e	e	e	e	e	e	e	e
145.725/R5R		e	e	e	e	e	e	e	e	e	e
145.750/R6R		e	e	e	e	e	e	e	e	e	e
145.775/R7R		a	c	a	c	c	b	b	b	a	c
145.800/R8R		a	c	a	c	c	b	b	b	a	c
145.950/S38		e	e	e	e	e	e	e	e	e	e

PRICES: (a) £2.15, (b) £2.55, (c) £2.80, and (e) £4.87.

AVAILABILITY: (a), (b), (c) stock items, normally available by return (we have over 5000 items in stock). (e) 4/6 weeks normally but it is quite possible we could be able to supply from stock. N.B. Frequencies as listed above but in alternative holders and/or non stock loads are available as per code (e).

ORDERING: When ordering please quote (1) Channel, (2) Crystal frequency, (3) Holder, (4) Circuit conditions (load in pf). If you cannot give these, please give make and model of equipment and channel or output frequency required and we will advise if we have details.

## EXPRESS SERVICE

Many types of made to order crystals are available on our "EXPRESS SERVICE" — with delivery of three days on our class "A" service. Telephone for details.

## 70 cm CRYSTALS

Due to the much higher multiplication involved compared with 2 metres all our stock 70cm crystals are to much higher tolerances than our standard amateur spec. crystals.

We are stocking the following channels: RB0, RB2, RB4, RB6, SU8, RB10, RB11, RB13, RB14, RB15, SU18, and SU20, TX & RX for use with: — PYE UHF Westminster (W15U), UHF Cambridge (U10B), Pocketfone (PF1) and UHF PF70 Range, and STORNO CQL/COM 662 all at £2.55.

For other channels and/or equipments crystals can be made to order to the same closer tolerances as our stock range at a cost of £5.72 for frequencies up to 63 MHz and £6.58 for 63-105 MHz, or to our standard Amateur specifications see "CRYSTALS MANUFACTURED TO ORDER" prices opposite.

4m CRYSTALS FOR 70.28MHz — HC6/U  
TX.8.7825MHz and RX.6.7468MHz or 29.7800MHz £2.55

10.245MHz "ALTERNATIVE" I.F. CRYSTALS — £2.55.  
For use in Pye and other equipment with 10.7MHz and 455kHz I.F.s to get rid of the "birdy" just above 145.0MHz. In HC6/U, HC18/U and HC25/U.

CRYSTAL SOCKETS (LOW LOSS)  
HC6/U and HC13/U 25p each, HC25/U 20p each plus 20p p. & p. per order (p. & p. free if ordered with crystals).

CONVERTER/TRANSVERTER CRYSTALS — HC18/U  
All at £3.00, 38.6666MHz (144/28), 42MHz (70/28), 58MHz (144/28), 70MHz (144/4), 71MHz (144/2), 96MHz (1,296/432/144), 101MHz (432/28), 101.50MHz (434/28), 105.6666MHz (1,296/28) and 116MHz (144/28).

TEST EQUIPMENT FREQUENCY STANDARD CRYSTALS  
200kHz and 455MHz in HC6/U £3.50  
100kHz in HC13/U and 1MHz in HC6/U £2.95  
5MHz in HC6/U and 10MHz and 10.7MHz in HC6/U and HC25/U £2.80.

## CRYSTALS FOR MICROPROCESSORS

Please let us know your requirements e.g. 4MHz HC18/U 1 off £2.00; 100 off £1.10; 1000 off 95p; 2500 off 50p.

## AERIALS

### THE ARAKI RANGE OF AERIALS

10 metre whip only 1.3 metre long with magnet	£18.00 p. & p. £3.00
10 metre whip only 1.3 metre long with guttermount	£15.20 p. & p. £3.00
2 metre 1/4 λ whip with magmount	£12.50 p. & p. £2.50
2 metre 1/4 λ whip with guttermount	£9.70 p. & p. £2.50

Base Station Aerials  
2m 1/4 λ groundplane 3.5dB gain £18.95 p. & p. £3.50  
The Araki Range are handmade of top quality anti-corrosion treated aluminium or stainless steel.

## DOUBLE BALANCED MIXER

We are now stocking two new double balanced mixers which are pin compatible with both the MD108 we used to stock and also the SBL1, but have much superior specifications covering 500 kHz. to 500 MHz. The M18 is non hermetically sealed @ £6.00. The M8 is hermetically sealed @ £7.83.

PLEASE ENCLOSE S.A.E. WITH ALL ENQUIRIES

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