



CRYSTAL ORDER FORM

R. L. DRAKE COMPANY
 540 Richard Street
 Miamisburg, Ohio 45342

Fixed Frequency Operation with:

- T-4** For operation below 10 MHz, Xtal Freq. = Oper. Freq. + 5.645.
- T-4B** For operation above 10 MHz, Xtal Freq. = $\frac{\text{Oper. Freq.} + 5.645}{2}$
- T-4X***
- T-4XB***
- T-4XC**
- R-4A**
- R-4B**

*Modified for fixed frequency operation

UNIT PRICE: \$7.50

Fixed Frequency Operation with:

- R-4** Xtal Freq. = Oper. Freq. + 11.1. A 5.455 MHz lock Xtal is required for R-4 F.F. Operation

UNIT PRICE: \$7.50

Variable Frequency Operation with:

- T-4X** Xtal Freq. = low end of Oper. Band in MHz + 11.1
- T-4XB**
- T-4XC**
- R-4**
- R-4A**
- R-4B**
- R-4C**
- SW-4**

UNIT PRICE: \$5.00

Variable Frequency Operation with:

- SW-4A** Xtal Freq. = low end of Oper. Band in MHz + 11.090

UNIT PRICE: \$5.00

Range Crystals for:

- 2-B** Crystals for 2-B are not available. Order 2-C crystals for appropriate range. (Tuning range is in increments of 500 kHz.)

UNIT PRICE: \$5.00

Range Crystals for:

- 2-C** Up to 24.0 MHz operation only: Xtal Freq. = low end of Oper. Band plus 4.0.
 Over 24.0 MHz: Xtal Freq. = high end of Oper. Band minus 4.0.

UNIT PRICE: \$5.00

Crystals for:

2-NT

FREQUENCY IN MHz		
Band	Xtal Range	Oper. Freq.
80 M	3.5-3.8	Xtal x 1
40 M	7.0-7.2	Xtal x 1
20 M	7.0-7.125	Xtal x 2
15 M	7.0-7.083	Xtal x 3
10 M	7.0-7.125	Xtal x 4

UNIT PRICE: \$5.00

Crystals for:

ML-2

Specify Transmit or Receive and Frequency

UNIT PRICE: \$5.00

Crystals for:

TR-22 and TR-22C

Specify Transmit or Receive and Frequency

UNIT PRICE: \$7.50

Crystals for:

TR-72

Specify Transmit or Receive and Frequency

UNIT PRICE: \$6.00



CRYSTAL FREQUENCIES FOR EQUIPMENT WORKING THROUGH REPEATERS

The R. L. Drake Company stocks ML-2, TR-72 and TR-22 crystals for the following frequencies which are normally available for immediate shipment. Crystals for other frequencies usually require approximately four weeks for delivery.

HALF DUPLEX FREQUENCIES

Frequency in MHz	
Transmit	Receive
146.01	146.61
146.04	146.64
146.07	146.67
146.10	146.70
146.13	146.73
146.16	146.76
146.19	146.79
146.22	146.82
146.25	146.85
146.28	146.88
146.31	146.91
146.34	146.94
146.37	146.97

SIMPLEX FREQUENCIES

Frequency in MHz	
Transmit	Receive
146.40	146.40
146.43	146.43
146.46	146.46
146.49	146.49
146.52	146.52
146.55	146.55
146.58	146.58

NOTE: Orders for crystals outside the 2 Meter Band will not be accepted.

SPR-4 CRYSTALS

Operating Frequency in MHz	Crystal Frequency in MHz
.15 - .5*	None Required
.5 - 1.0*	11.59
1.0 - 1.5*	12.09
1.5 - 2.0	12.59
2.0 - 2.5	13.09
2.5 - 3.0	13.59
3.0 - 3.5	14.09
3.5 - 4.0	14.59
4.0 - 4.5	15.09
4.5 - 5.0	15.59
5.0 - 5.5	16.09
5.5 - 6.0	16.59
6.0 - 6.5*	17.09
6.5 - 7.0	17.59
7.0 - 7.5*	18.09
7.5 - 8.0	18.59
8.0 - 8.5	19.09
8.5 - 9.0	19.59
9.0 - 9.5	20.09
9.5 - 10.0*	20.59
10.0 - 10.5	21.09
10.5 - 11.0	21.59
11.0 - 11.5	22.09
11.5 - 12.0*	22.59
12.0 - 12.5	23.09
12.5 - 13.0	23.59
13.0 - 13.5	24.09
13.5 - 14.0	24.59
14.0 - 14.5	25.09
14.5 - 15.0	25.59

Operating Frequency in MHz	Crystal Frequency in MHz
15.0 - 15.5*	26.09
15.5 - 16.0	26.59
16.0 - 16.5	27.09
16.5 - 17.0	27.59
17.0 - 17.5	28.09
17.5 - 18.0*	28.59
18.0 - 18.5	29.09
18.5 - 19.0	29.59
19.0 - 19.5	30.09
19.5 - 20.0	30.59
20.0 - 20.5	31.09
20.5 - 21.0	31.59
21.0 - 21.5	32.09
21.5 - 22.0*	32.59
22.0 - 22.5	33.09
22.5 - 23.0	33.59
23.0 - 23.5	34.09
23.5 - 24.0	34.59
24.0 - 24.5	35.09
24.5 - 25.0	35.59
25.0 - 25.5	36.09
25.5 - 26.0	36.59
26.0 - 26.5	37.09
26.5 - 27.0	37.59
27.0 - 27.5	38.09
27.5 - 28.0	38.59
28.0 - 28.5	39.09
28.5 - 29.0	39.59
29.0 - 29.5	40.09
29.5 - 30.0	40.59

*SPR-4 normally supplied with these operating frequencies.



CRYSTAL KITS (SPR-4 ONLY)

AMATEUR BANDS – 160 M, 80M, 20 M, 15 M and 10 M ranges. Six crystals cover:

1.5 – 2.0 MHz	21.0 – 21.5 MHz
3.5 – 4.0	28.0 – 28.5
14.0 – 14.5	28.5 – 29.0

PRICE
\$27.00

MARINE BANDS – Eleven crystals cover:

2.0 – 2.5 MHz	8.5 – 9.0 MHz	17.0 – 17.5 MHz
2.5 – 3.0	12.0 – 12.5	22.0 – 22.5
4.0 – 4.5	13.0 – 13.5	22.5 – 23.0
8.0 – 8.5	16.5 – 17.0	

PRICE
\$49.00

AERONAUTICAL OVERSEAS – Seven crystals cover:

2.5 – 3.0 MHz	6.5 – 7.0 MHz
3.0 – 3.5	8.5 – 9.0
4.5 – 5.0	13.0 – 13.5
5.5 – 6.0	

PRICE
\$32.00

TIME & FREQUENCY STANDARD, WWV – Five crystals cover:

2.5 – 3.0 MHz	15.0 – 15.5 MHz (original equipment)
5.0 – 5.5	20.0 – 20.5
10.0 – 10.5	25.0 – 25.5

PRICE
\$22.00

CITIZENS BAND – One crystal and Frequency chart: \$ 5.00

27.0 – 27.5 MHz* (*Generous overtravel gives additional 50 kHz or more off ends of each range.)

TROPICAL BROADCAST – Three crystals cover: \$13.50

2.0 – 2.5 MHz	3.0 – 3.5 MHz	4.5 – 5.0 MHz
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MARS – Five crystals cover: \$22.00

2.0 – 2.5 MHz	4.0 – 4.5 MHz	18.0 – 18.5 MHz
3.0 – 3.5	5.0 – 5.5	

TELETYPE COMMERCIAL – UPI, AP, STOCK MARKET, WEATHER, ETC. – Four crystals cover: \$18.00

7.5 – 8.0 MHz	13.5 – 14.0 MHz
9.0 – 9.5	15.5 – 16.0

SPR-4 ACCESSORIES

MATCHING SPEAKER – Same as SPR-4, has 5 x 7 speaker.
Model MS-4 \$22.00

CALIBRATOR – Plug-in 100 kHz crystal oscillator with harmonics that occur at 100 kHz intervals throughout range of SPR-4.
Model SCC-4 \$20.00

NOISE BLANKER – Plug-in II' type noise blanker mutes receiver for duration of each noise pulse. 18 transistors, 2 diodes.
Model 5-NB \$65.00

LOOP ANTENNA – Directional antenna nulls out undesired stations, plugs into receptacle through top of the cabinet. Works from 150 kHz to 1600 kHz only.
Model AL-4 \$29.00

ANTENNA KIT – Consists of wire, insulators, lead-in, and instructions.
Model AN-5 \$ 8.80

DC POWER CORD – Plugs into cigarette lighter in an automobile, allows SPR-4 to be used on 12 Volts DC supply.
Model DC-PC \$ 5.00

TRANSCIVEIVE ADAPTOR – Allows SPR-4 to transceive with T-4B or T-4XB Transmitters. Consists of printed circuit board and connectors. Must be wired into SPR-4 by technician.
Model TA-4 \$35.00

TELETYPE ADAPTOR – Allows reception of standard teletype tones 2125/2975 Hz and 2125/2295 Hz by remote shifting BFO.
Model RY-4 \$13.00

MMK-3, Mobile Mount Kit \$ 7.00
DIAL, Crystal Selector, Plain \$ 2.75
WORLD RADIO & TV HANDBOOK \$ 8.00
TECHNICAL MANUAL (SPR-4) \$ 4.00

