

CTA Replacement Crystals

For the CTA (All Serial Numbers)

Use fundamental series resonant in HC-25 holders for plug-in crystals and HC-18 holders for solder-in wire lead crystals. To determine the crystal frequency, divide the operating frequency of your CTA transmitter by 2. Order this frequency in megahertz.

Example: Operating frequency is 26.15 MHz. $26.15 / 2 = 13.075$. Crystal frequency is 13.075 MHz.

To order from Sentry MFG.: The holder is SCM-25 Sentry part 1669 for plug-in and SCM-18 Sentry part 2030 for wire lead.

For the LPQRA (S/N 1063 thru 1636)

1st oscillator crystal is a 3rd overtone anti-resonant with a 5 picofarad load in an HC-25 holder. To determine the crystal frequency, add 10.7 MHz to the operating frequency of the LPQRA receiver.

Example: If your LPQRA receiver operates on 26.15 MHz, the crystal frequency should be 36.850 MHz. ($26.15 + 10.7 = 36.85$)

To order from Sentry MFG.: The case is SCM-25 Sentry part 1850

The 2nd oscillator crystal for LPQRAs S/N 1063-1636 is an 11.155 MHz fundamental anti-resonant for a 32 picofarad load in an HC-25 holder.

To order from Sentry MFG.: The case is SGP-25 Sentry part # 2002.

For the LPQRA (S/N 1-1062 and 1637 to the present)

1st oscillator crystal is a 3rd overtone anti-resonant crystal with a 5 picofarad load in an HC-18 holder. To determine the crystal frequency, add 10.7 MHz to the operating frequency of the LPQRA receiver.

Example: If your LPQRA receiver operates on 26.15 MHz, the crystal frequency should be 36.850 MHz. ($26.15 + 10.7 = 36.85$)

To order from Sentry MFG.: The case is SCM-18 Sentry type 2492

The 2nd oscillator crystal for LPQRAs S/N 1-1062 and 1636 and higher is an 11.155 MHz fundamental anti-resonant for a 20 picofarad load in an HC-18 holder.

To order from Sentry MFG.: The case is SCM-18 Sentry part 2108.



1st and 2nd oscillator crystals are available from:

International Crystal Manufacturing

10 North Lee St

Oklahoma City, OK 73102

800.725.1426

e-mail: info@icmfg.com

Note: If you are in a rush, crystals may be ordered on an emergency basis for twice the price.

For the CRA in TV VHF Channels (S/N 884 and higher - black cases)

Note: All crystals are 5th Overtone Series Resonant in a HC-25 holder.

Note: Crystal Frequency covers high or low offsets.

CHANNEL	AURAL FREQUENCY	CRYSTAL FREQUENCY
2	59.75 MHz	70.45000 MHz
3	65.75 MHz	76.45000 MHz
4	71.75 MHz	82.45000 MHz
5	81.75 MHz	71.05000 MHz
6	87.75 MHz	77.05000 MHz
7	179.75 MHz	63.48333 MHz
8	185.75 MHz	65.48333 MHz
9	191.75 MHz	67.48333 MHz
10	197.75 MHz	69.48333 MHz
11	203.75 MHz	71.48333 MHz
12	209.75 MHz	73.48333 MHz
13	215.75 MHz	75.48333 MHz

2nd OSCILLATOR: HC-25 FUNDAMENTAL ANTI-RESONANT FOR A 32 PF LOAD AT 11.155 MHz.

For the CRA in TV VHF Channels (S/N 1-883 - grey or beige cases)

Note: If your crystal has solder-in leads, order HC-18 holders rather than HC-25.

CHANNEL	OVERTONE SERIES	FREQUENCY
Channel 2	HC-25 5th overtone series resonant	81.15000 MHz
Channel 3	HC-25 5th overtone series resonant	87.15000 MHz
Channel 4	HC-25 3rd overtone series resonant	50.35000 MHz
Channel 5	HC-25 3rd overtone series resonant	60.35000 MHz
Channel 6	HC-25 5th overtone series resonant	66.35000 MHz
Channel 7	HC-25 3rd overtone series resonant	52.78333 MHz
Channel 8	HC-25 3rd overtone series resonant	54.78333 MHz
Channel 9	HC-25 3rd overtone series resonant	56.78333 MHz
Channel 10	HC-25 3rd overtone series resonant	58.78333 MHz
Channel 11	HC-25 3rd overtone series resonant	60.78333 MHz
Channel 12	HC-25 5th overtone series resonant	77.05000 MHz
Channel 13	HC-25 5th overtone series resonant	79.05000 MHz

2nd OSCILLATOR: HC-18 FUNDAMENTAL ANTI-RESONANT FOR A 20 PF LOAD AT 21.855 MHz.