

Addendum



The following section is added to the HF SSB Transceiver X2 Technical Service Manual, Codan part number 15-02047 Issue 2, December 1993.

This addendum provides information on changes to the Crystal Oven.

The Crystal Oven information is provided in addition to that existing in Chapter 4, *Local Oscillators*. It describes how the oven maintains a constant temperature.

Drawings associated with the crystal oven information are:

- Crystal Oven Circuit Diagram 04-03095
- Crystal Oven Final Assembly 08-05235

The corresponding parts list is:

- Crystal Oven Parts List 08-05235-001

Local Oscillators

Introduction

Each synthesizer is locked to the reference oscillator. This consists of a 7.304 MHz crystal (Z3) held at a constant temperature by an oven, which is one of the following:

- a PTC thermistor (E1) at 60°C
- a high stability oven where the R3 NTC (Negative Temperature Coefficient) resistor measures the temperature of the crystal and causes the op-amp comparator IC1 to vary the current in the heating element V2 to maintain the temperature of 65°C to within $\pm 1^\circ\text{C}$

The temperature of the high stability oven is set by R4. V1, R12 and R13 limit the maximum current through V2 to approximately 400 mA.