Chassis Parts Pictorial (Cont'd.)

CERTIFICATION OF COMPLIANCE WITH FEDERAL COMMUNICATIONS COMMISSION REGULATIONS, PART 15.
The Heath Company certifies that this Receiver can be expected to comply with the requirements of Part 15 Subpart C of the Subject regulations when assembled in strict accordance with the instructions contained in the applicable Heath Company Construction Manual, using only components and materials supplied with the kit or the Heath Maintenance Kit.

MOOH NO.__

I hereby certify that I have constructed this receiver in accordance with the above mentioned instructions.

Date Signature

MODEL: SERIES NO.

I hereby certify that I have constructed this receiver in accordance with the above mentioned instructions.

Date Signature

PICTORIAL 1-3

- 5-32 x 1/2 SCREW
- #6 EXTERNAL TOOTH LOCK WASHER
- #6 SOLDER LUG
- FLAT HEAD SCREW
- #6 NUT

- CUT IN HALF

PICTORIAL 1-5
VCO CIRCUIT BOARD PARTS PICTORIAL

PICTORIAL 2-6

PICTORIAL 2-7
NOTE: HEATH PART NUMBERS ARE STAMPED ON MOST DEVICES.
PICTORIAL 4-10

PICTORIAL 4-11
NOTE: HEATH PART NUMBERS ARE STAMPED ON MOST DIODES.
PICTORIAL 5-11
POWER AMPLIFIER CIRCUIT BOARD PARTS PICTORIAL

NOTE: HEATH PART NUMBERS ARE STAMPED ON MOST DIODES.

PICTORIAL 6-10

PICTORIAL 6-11
1/8" FORMED INTO SMALL HOOK AND SOLDERED

1/8" SLEEVING

SOLDER BOTH LEADS

SOLDER AND CUT OFF EXCESS LEAD LENGTH

METAL BLADE

PICTORIAL 9-5

PICTORIAL 9-6

BONDED END (56-26)

A-LUG TERMINAL STRIP

22KD

PICTORIAL 9-6

DISCARD CUT SAVE

Detail 9-6A

Detail 9-6B

PICTORIAL 9-7

PICTORIAL 9-8

METAL BLADE

PICTORIAL 9-10

PICTORIAL 9-9

4-LUG TERMINAL STRIP

4-LUG TERMINAL STRIP

Detail 9-6B

PICTORIAL 9-11

PICTORIAL 9-12

PICTORIAL 9-13

METAL PART

INSET

INSET

TRANSMITTER CIRCUIT BOARD

RECEIVER CIRCUIT BOARD

Page 13
SYNTHESIZER PROBLEMS

A. Synthesizer will not lock

1. Check for 11 volts at CS15 and synthesizer circuit board pin E.
   - YES
   - NO

2. Check for 5 volts at CS14 and synthesizer circuit board pin F.
   - YES
   - NO

3. Check the voltage at TP401 and slowly adjust coil L501 through its range. The voltage at TP401 changes between 4.9 and .9 volts at two slug positions.
   - YES
   - NO

4. Carefully adjust coil L501 through the uppermost position of the slug where the voltage at TP401 varies. You should be able to adjust the coil to any voltage between .9 and 4.9 volts.
   - YES
   - NO

5. Does the synthesizer lamp go out when you perform the above check?
   - YES
   - NO

Proceed to "VCO ADJUSTMENTS" on Page 115.

B. Synthesizer locks in receive but not in transmit.

1. Frequency selector switches wired incorrectly.
2. Check 0501, 0502.
3. Transmit offset crystal defective.
4. Check 0410, 0411, 0412.
5. VCO not adjusted properly.
6. Check 0404, 0407.

C. Synthesizer will not stay locked over your 4 MHz range.

1. IC401, IC402, IC403
2. Check for 10 KHz at IC106 pin 11.
3. Check for 1 MHz at TP108.
4. Check for 10 MHz at IC103 pin 3.
5. Adjust coil L501 to the center of the slug's travel. The slug should be adjusted parallel to the chassis.
**BLOCK DIAGRAM**

**RECEIVER CIRCUIT BOARD**
- RF Amplifier Q201
- Crystal Filter Y201-Y204
- 10.7 MHz I.F. Amplifier IC201
- 30.245 MHz Oscillator Q208
- Squelch Noise Amplifier Q209
- Detector Q202, Q203
- Squelch Control
- Audio Preamp and Mute Q204, IC202
- Audio Amplifier IC103
- Volume Control
- MIXER Q2
- VOLUME CONTROL FROM P.A.
- EXT. SPKR.
- To CHANNEL ACTIVITY LAMP

**VCO CIRCUIT BOARD**
- Low Pass Filter Q503, Q504
- SVOLT REGULATOR (IC501)
- V.C.O. IC502
- Modulator Q501

**SYNTHESIZER CIRCUIT BOARD**
- Synthesizer Circuit Board
- Offset Clock/Band Frequency
- Loop Filter Q404
- Frequency Switch 6, 9, 4
- Programmable Divider (IC401-IC403)
- Dual Divider by 2 IC404
- T-R Switching
- OUT OF LOCK/BAND
- Dual Oscillator Switching
- Out ALL Logic
- LOCK/BAND Switch
- Frequency Switch

**TRANSMITTER CIRCUIT BOARD**
- Mode Switch
- From Relay
- To Synth.
- Lock Lamp
- 5 Vols Regulated
- From T.R.
- To ALL Logic
- 11 Vols Regulated
- 5 VOLT REGULATOR (IC5)
- ON OFF Switch
- 5 AMP Fuse
- 13.8 VDC IN

**P.A. CIRCUIT BOARD**
- Power Amplifier Q301, Q302
- Relay K302
- To Receiver R.F. Amp

**NOTE:** REMOVE THIS JUMPER TO ALLOW OUT-OF-BAND TRANSMISSION.