70-2187 EQUIPMENT SPECIFICATIONS

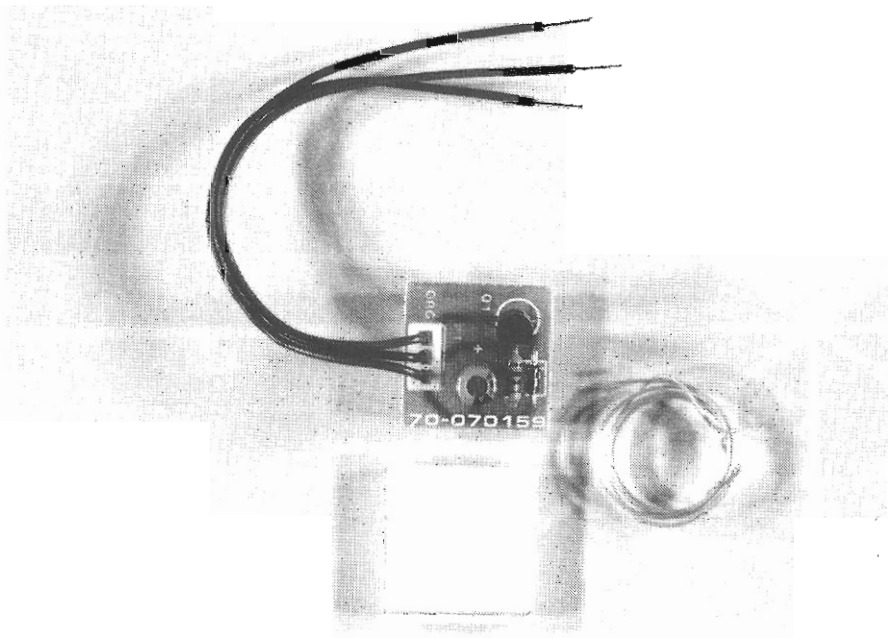
REVISED WIDE BAND KIT

GENERAL DESCRIPTION

The 70-2187 revised wide band kit is designed to increase the transmitter-receiver performance bandwidth of Midland Syn-Tech transceivers. The wide band kits will not increase the upper and lower tuning limits of the radio.

SPECIFICATIONS

Syn-Tech Model	Receive	Transmitter
70-050/052/055/056/058	2 MHz	2 MHz
70-060/066/076	3 MHz	8 MHz
70-340/380/440/480/840	6 MHz	7 MHz
70-530/565/630/665/930	8 MHz	15 MHz



The performance bandwidth (maximum spread of channel frequencies) of certain SYN-TECH transceivers can be improved by the 70-2187 option kit. This kit is an additional voltage regulator which, when wired into the transceiver as instructed below, sources both VCO steering voltage driver stages in the synthesizer with 11 Volts instead of 8 Volts. Performance bandwidth will be improved as follows:

TRANSCEIVER MODEL NUMBER	RX BANDWIDTH		TX BANDWIDTH	
	BEFORE	AFTER	BEFORE	AFTER
70-050/052/055/056/058	1 MHz	2 MHz	1 MHz	2 MHz
70-060/066/076	2 MHz	3 MHz	2 MHz	8 MHz
70-340/380/385/440/480/485/840	4.5 MHz	6 MHz	4.5 MHz	7 MHz
70-530/565/630/665/930	5 MHz	10 MHz	8 MHz	15 MHz

CONTENTS OF 70-2187 KIT

DESCRIPTION	QUANTITY	PART NUMBER
Wideband Option PC Board Assembly	1	70-075069
30 AWG Hook-up Wire, 250mm	1	------
Adhesive Foam Pad, 20mm x 20mm	1	------

INSTALLATION

1. Remove the top and bottom covers from the transceiver. Disconnect all plugs to the Synthesizer/Transmitter Board and remove its securing screws. Lift the PC board out of the transceiver.

2. Remove C127 and Q105 from the top side of the Synthesizer/ Transmitter Board.

3. Remove any solder from the three holes shown on the following Top View diagram.

   NOTE: The diagrams attached show a VHF Synthesizer/Transmitter Board. The UHF PC board patterns are different, but areas relevant to positions specified herein are exactly as shown.

4. Secure the Wideband Option Board in the position shown on the Top View diagram with the adhesive foam pad.

5. Solder the brown (ground) and red (B+) wires into the respective holes shown on the Top View diagram.

6. Remove R128 and R718 from the bottom side of the Synthesizer/ Transmitter Board.

7. Cut the plating runner leading to the feed-through hole as shown on the following Bottom View diagram.

8. Using the hook-up wire provided, cut two jumper wires to connect between the R128 and R718 pads and into the feed-through hole isolated in the previous step. Solder the jumpers only to the resistor pads.

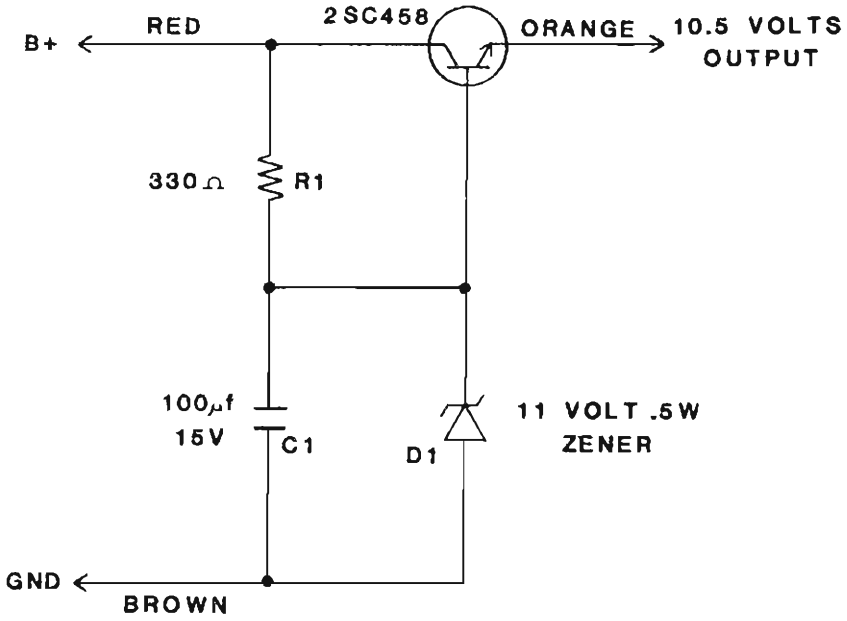
9. Feed the orange wire from the Wideband Option Board through the feed-through hole from the top side of the Synthesizer/ Transmitter Board as shown on the Synthesizer/Transmitter Board Top View diagram. Then solder this wire, and the two jumper wires into the hole.

10. Reassemble the modified Synthesizer/Transmitter Board and connections into the transceiver.

11. Proceed with the Alignment Procedures exactly as described in the transceiver service manual except for the following changes:

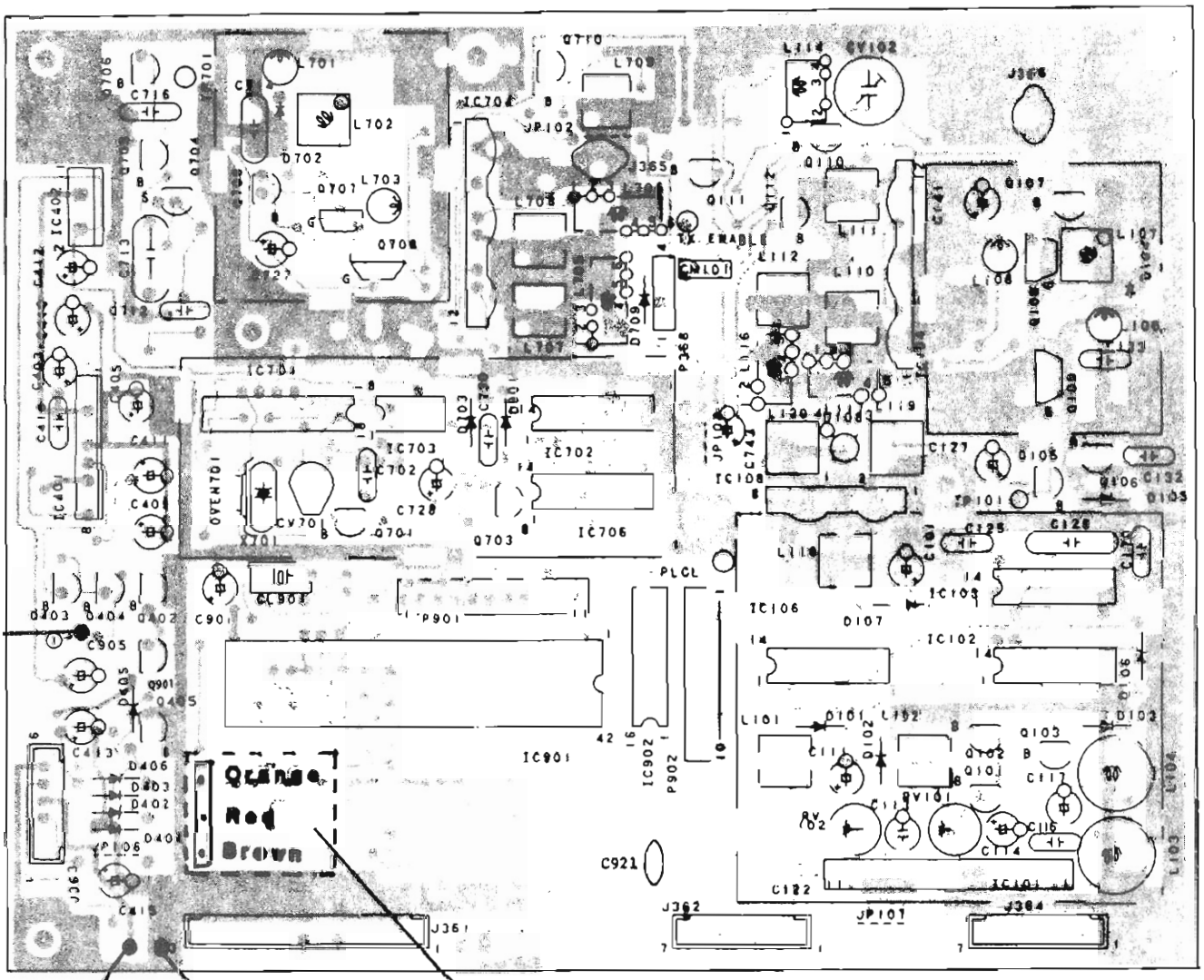
    A. In the Main VCO Alignment step; adjust for 7.50 Volts DC on TP701 instead of 4.50 Volts.
    B. In the Transmit VCO Alignment step; adjust for 7.50 Volts DC on TP101 instead of 4.50 Volts.

12. Reassemble the transceiver covers.



WIDEBAND OPTION BOARD SCHEMATIC

TRANSMITTER PC BOARD (TOP VIEW)



OI GE
WIRE

RED WIRE

BROWN WIRE

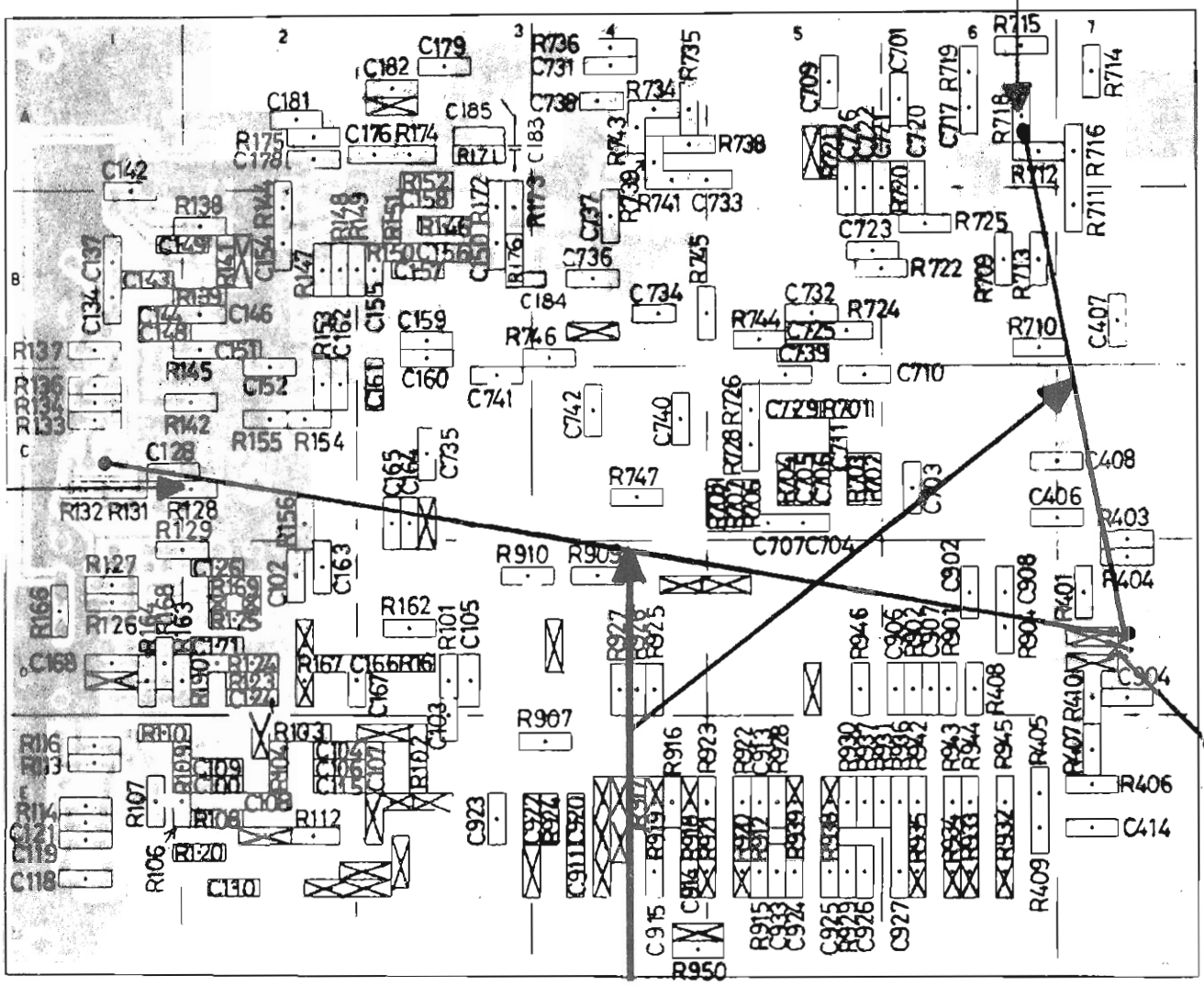
70-2187 PCB

TRANSMITTER PC BOARD (BOTTOM VIEW)

5/1/86

REMOVE R718

REMOVE R128



ADD JUMPERS

CUT PATH

70-2187/9
REVISED