Teaberry Stalker IV and VIII Service Manual

STALKERS

Service Manual

$5.00

Table of Contents

Specifications

Power Source	13.8V DC
Size	5½" x 8" x 1½"

Receiver Section

Sensitivity	0.5 uV
Squelch Threshold	0.5 uV
Squelch Deepest Point	1000 uV
"S" Meter S-9	100 uV
Maximum AF Output Power	5.0 W
AF Output Power/10% Distortion	4.0 W
Selectivity BW @ 6 dB Down	± 6 KHz
Adjacent Channel Rejection	– 60 dB
Image Rejection	– 70 dB
Speaker Impedance	8 Ohm

Transmitter Section

Modulation (Peak)	100%
Power Output	4.0 W
Emission Type AM	6A3
Hum and Noise (Better than)	– 60 dB
Frequency Tolerance	0.003%
Antenna Impedance	50 Ohm
Frequency Determining Method	PLL

Public Address

Output Power @ 10% Distortion	4.0 W

Alignment of P.L.L. Portion

1. Test Equipment Required
   a. Oscilloscope (0-50MHz)
   b. Frequency Counter (0-50MHz)
   c. DC Volt Meter (10 Volts maximum, 100K ohm/Volt)

2. Alignment Procedure

Step	Preset To	Connections	Adjustment	Remarks
1.	Receiver mode Channel 19	DC Volt Meter to Pin No. 7 of IC3 (TP1)	L19	Adjust L9 to obtain approx. 3.0V reading
2.	same as step 1	Oscilloscope to secondary of L3	L3	Adjust L3 to obtain 15.360MHz indication.

Alignment of Transmitter Portion

1. Equipment Required
   a. VTVM (full scale: 5V DC with RF Probe)
   b. RF Output Power Meter
   c. Tunable Field Intensity Meter (Wave Meter)
   d. Frequency Counter (0-30 MHz)
   e. DC Power Supply (13.8V/2-Amp.)
   f. 50 ohm load and Attenuator
   g. Oscilloscope (0-30 MHz)
   h. AF Oscillator

2. Procedure

Step	Preset To	Conditions	Alignment	Remarks
1.	TX Mode No Modulation Channel 19	RF Output Power Meter to ANT. Jack J1. VTVM to TP2	L10, L11	Adjust for a maximum indication on VTVM
2.	same as step 1	RF Output Power Meter to ANT. Jack J1.	L12, L15	Adjust for a maximum indication on RF Output Power Meter
3.	same as step 1	same as step 2	L15	Adjust to obtain Nominal 3.8W of RF Output Power
4.	same as step 1	2nd Harmonics Meter to Ant. Jack J1 through a suitable load and attenuator	L18	Adjust for a minimum 2nd Harmonics Output
5.	Repeat the above adjustments, in order to confirm if the adjustments were made correctly.			
6.	TX Mode, Ch 19 1 KHz, 30 mV applied to Mic Input for MOD.	Audio Generator to Microphone Jack J2 Oscilloscope to ANT. Jack J1 through a suitable load and attenuator	VR 6	Adjust for 95% Modulation
7.	same as step 1	RF Output Power Meter to Ant. Jack J1	VR 5	Check that RF Output Power Meter reads 3.8W then adjust VR4 so that the Meter pointer of the transceiver just approaches – 3 to 4 mark.
8.	TX Mode No Modulation All channels	Frequency Counter to Ant. Jack J1 through a suitable load and attenuator		Check Frequency of all channels

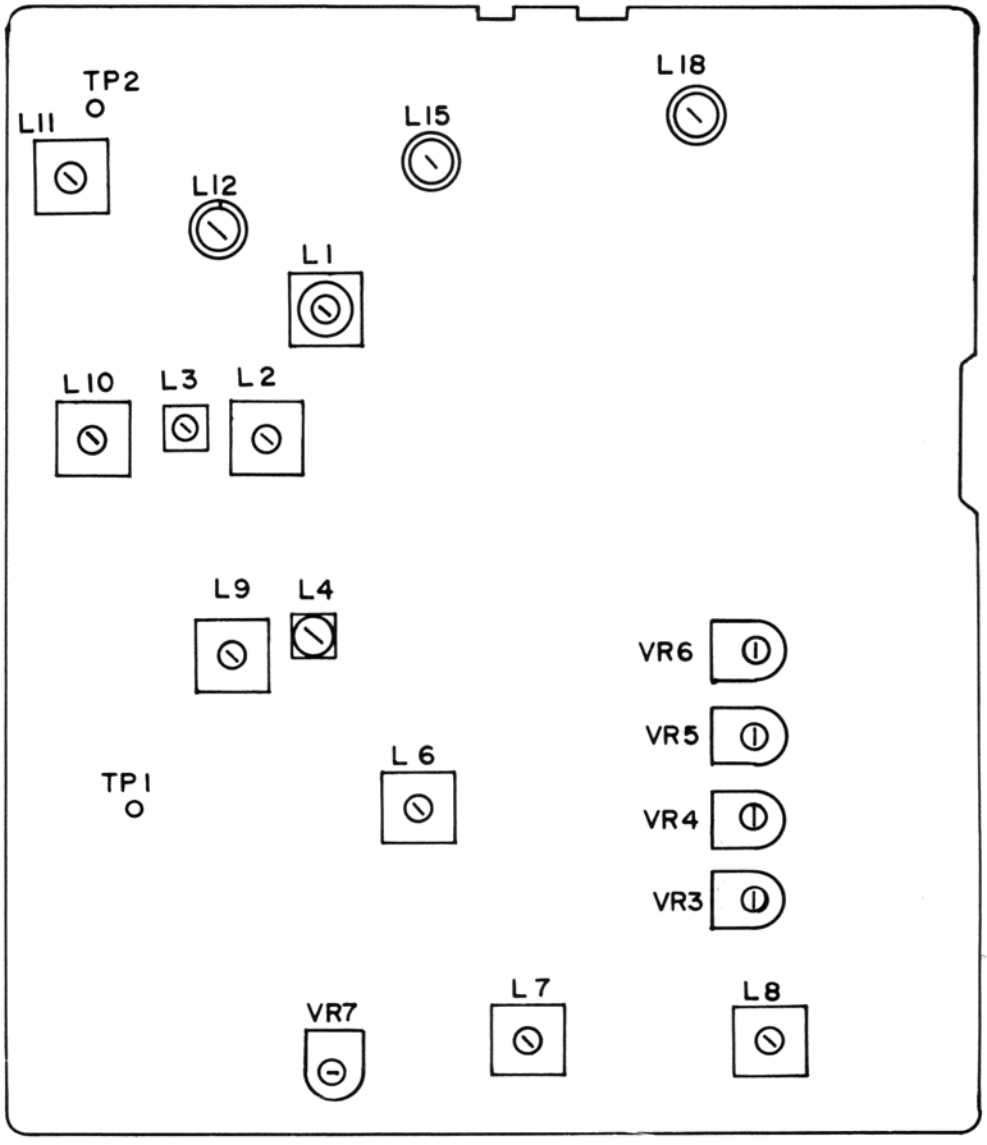
Alignment of Receiver Portion

1. Test Equipment Required
   a. Signal Generator (27 MHz Band, 1000 Hz, 30% AM Modulation & Output Impedance 50 ohm)
   b. Audio VTVM
   c. Oscilloscope
   d. Dummy Load (8 ohm, 5 watts, resistive)
   e. DC Power Supply (13.8V, 2 Amp.)

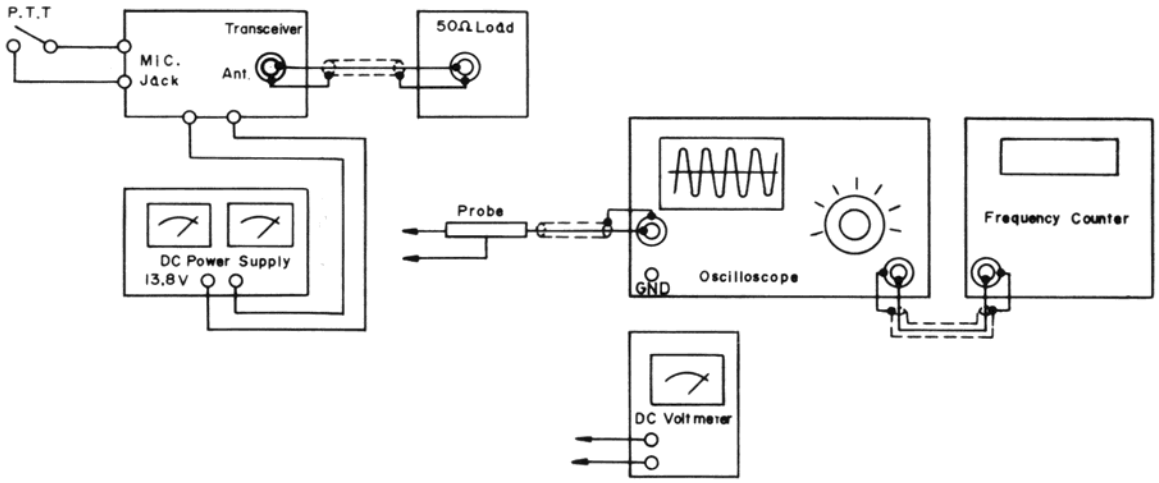
2. Alignment Procedure

Step	SG Connection Frequency	Preset To	Audio VTVM	Adjustment	Remarks
1.	To Ant. Connector J1. Freq: 27.185 MHz	Volume: Max. Squelch: Min. RF Gain: Max.	To EXT. SPK. Jack J4	L1, 2, 4, 6, 7, 8	Adjust for a max. Audio Output
2.	same as step 1	same as step 1	same as step 1	VR 7	Adjust for 2V output with SG output level of 700 uV
3.	same as step 1	Volume: Max. Squelch: Max. RF Gain: Max.	same as step 1	VR 3 (Squelch)	Adjust for 2V output with SG output level of 1000 uV
4.	same as step 1	same as step 1	same as step 1	VR 4	Adjust for a reading of S-9 on the S-meter of the Transceiver with SG output level of 100 uV

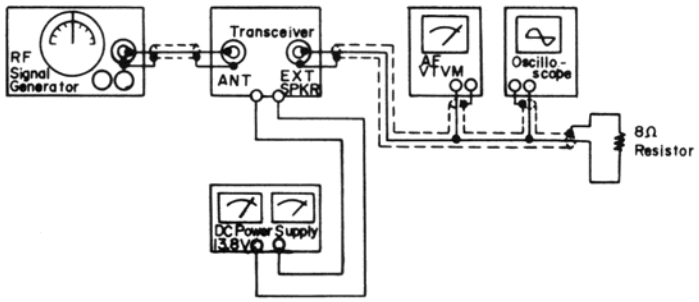
Alignment Points



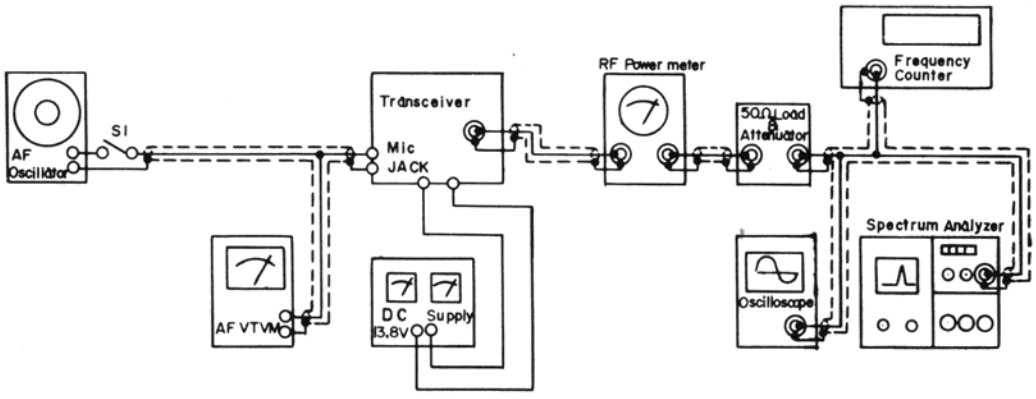
PLL Test Setup

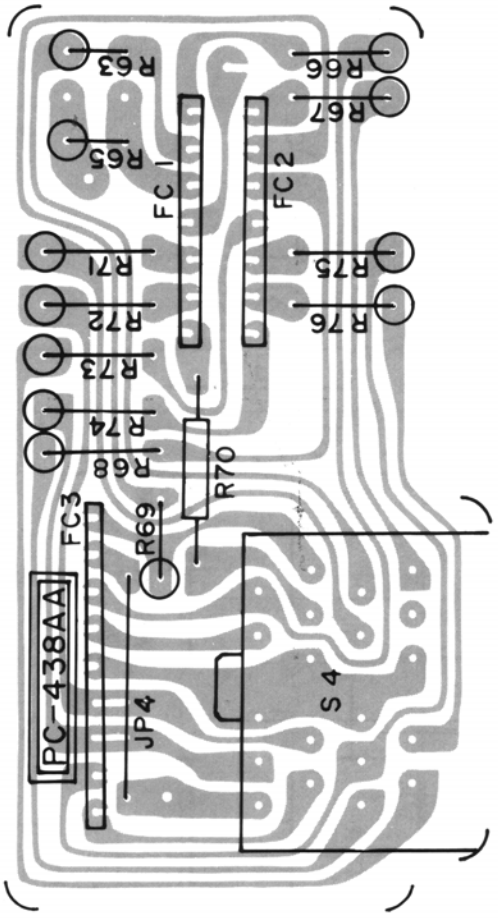


Receiver Test Setup

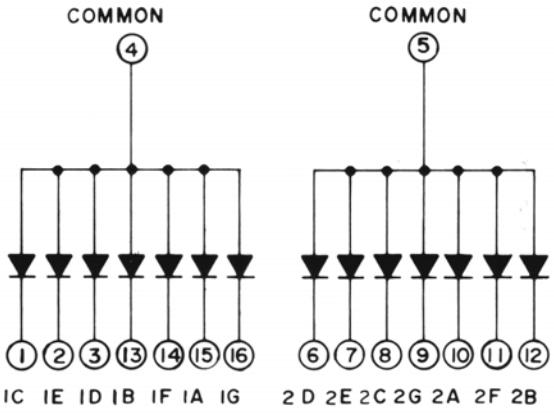


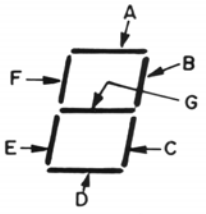
Transmitter Test Setup

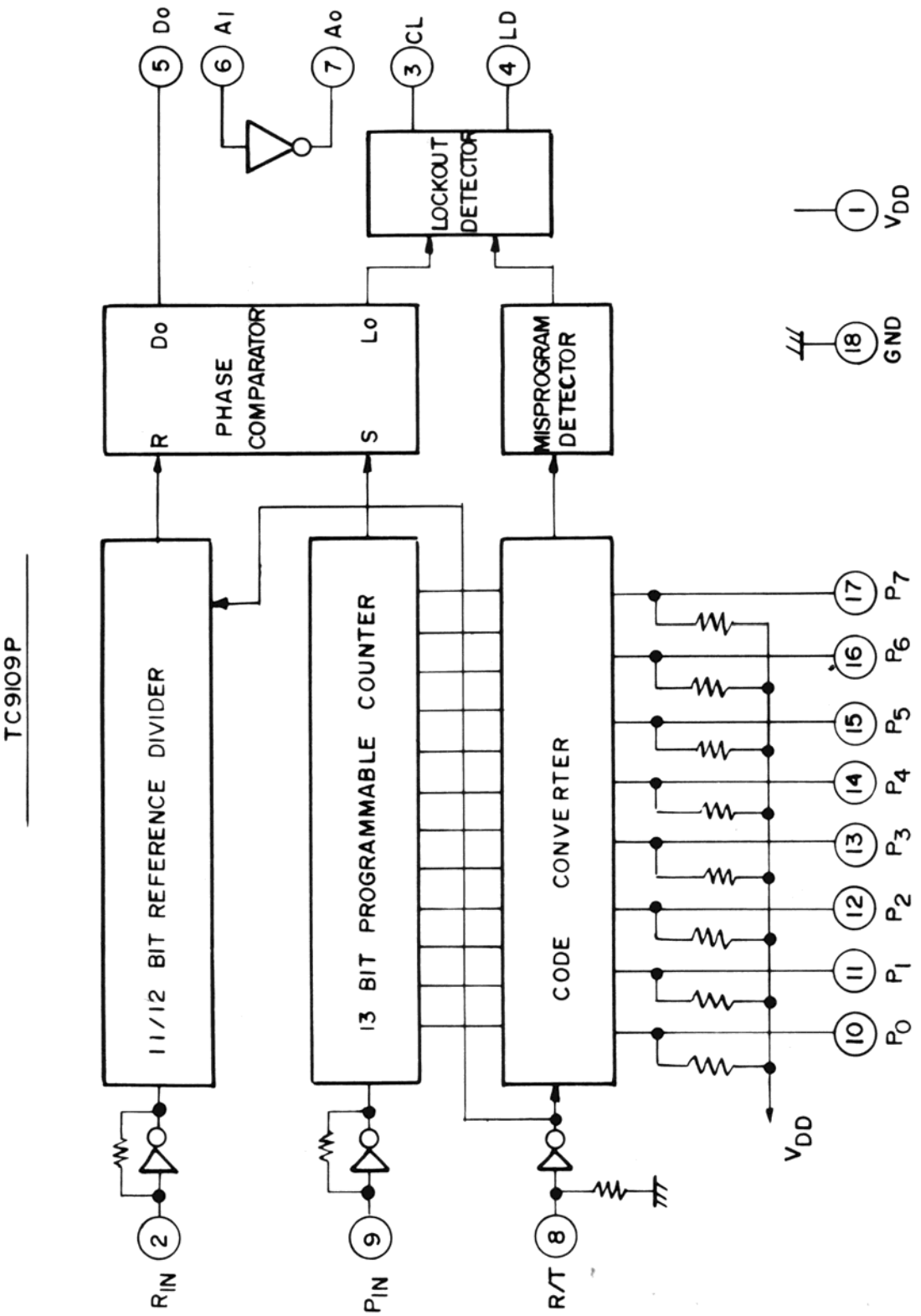



R63
R65
R71
R72
R73
R74
R68
R69
R70
R66
R67
R75
R76
FC 1
FC 2
FC3
PC-438AA
JP4
S 4

TLR 321


COMMON
4
COMMON
5
1 2 3 13 14 15 16
6 7 8 9 10 11 12
IC IE ID IB IF IA IG
2D 2E 2C 2G 2A 2F 2B


A
B
C
D
E
F
G


TC9109P
11/12 BIT REFERENCE DIVIDER
13 BIT PROGRAMMABLE COUNTER
CODE CONVERTER
PHASE COMPARATOR
R
Do
S
Lo
LOCKOUT DETECTOR
MISPROGRAM DETECTOR
5 Do
6 A1
7 Ao
3 CL
4 LD
1 VDD
18 GND
2 RIN
9 PIN
8 R/T
17 P7
16 P6
15 P5
14 P4
13 P3
12 P2
11 P1
10 P0
VDD

MB3712