

PERFORMANCE REQUIREMENTS
J68392A TD-3 RADIO TRANSMITTER-RECEIVER TEST SET
GENERAL EQUIPMENT REQUIREMENTS
TOLL SYSTEMS

1. GENERAL

1.01 This section covers the performance requirements which the J68392A test set shall meet before turnover to the telephone company.

1.02 It is expected that these tests will be made after installation is completed.

1.03 The tests shall be performed in the order prescribed.

1.04 The requirements are based on the use of the following test equipment or equivalent:

KS-14510, List 1 Volt-ohm-milliammeter (VOM)

Note: Other test equipment required are contained in the test set itself.

2. J87296A POWER SUPPLY

2.01 Apply 117-volt ± 10 percent 60-cycle power to the transmitter-receiver test set and allow a 15-minute warmup.

2.02 Cautions

(a) High voltages are present in this power supply.

(b) When removing a plug-in unit from the chassis, place the AC INPUT circuit breaker in the OFF position.

(c) *Do not* operate this power supply without CP1 plug-in unit being inserted into the chassis.

(d) *Do not* touch the ADJ VOLTS controls located in CP2, CP3, and CP4 plug-in units unless following the procedure outlined in Section 104-415-502.

2.03 Connect the VOM to the CP unit under test. The voltage obtained shall be as follows. If the voltage is within the range specified, the unit is operating satisfactorily and no adjustments should be made. If the voltage is not within the range specified, the voltage should be adjusted per Section 104-415-502.

TEST POINTS LOCATED ON	KS-14510 VOLTAGE READING	KS-14510 METER SCALE
	volts	volts ac
CP2	-150 ± 6	300
CP3	-40 ± 1.2	60
CP4	$+300 \pm 6$	300*
CP4 (option)	$+300 \pm 12$	600

*If the CP4 voltage cannot be measured on the 300-volt dc scale, then switch to the 600-volt dc scale. The requirement is given opposite the CP4 (option).

2.04 The 6.4-volt ac and the -24 volt dc outputs do not have any means for adjustment of their output voltages. If the voltages are not within the following requirements, then the power supply is defective and shall be replaced or repaired.

TEST POINTS	KS-14510 VOLTAGE READING	KS-14510 METER SCALE
TP7 & TP8	-21.3 to -27.1 volts dc	60 volts dc
TP4 & TP5	5.0 to 7.8 volts ac	12 volts ac
TP4 & TP6	2.5 to 3.9 volts ac	12 volts ac
TP5 & TP6	2.5 to 3.9 volts ac	12 volts ac

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2.05 Connect the VOM to the DC OUTPUT jacks of the J87279A regulator and adjust, if necessary, the ADJ VOLTS control for a reading of -19 volts.

3. IF SWEEP OSCILLATOR

3.01 *Checking the Adjustment of the 31-CPS FREQ and SHAPE Controls*

- (a) Set the controls on the test set as shown in Table A.
- (b) Disconnect the patch plug to the HORIZ INPUT of the oscilloscope and connect

the SCOPE HOR jack on the front panel to the CTR jack.

(c) Connect the 31-CPS OUT jack of the RF and IF sweep control circuit located in the rear of the test set to the +INPUT jack on the oscilloscope.

(d) Set the 31-CPS FREQ control for a reading of 31 ± 0.5 cps, if necessary, on the counter, adjusting the 31-CPS SHAPE control for maximum undistorted sine wave on the oscilloscope.

(e) Restore the connections to normal.

TABLE A		
UNIT	CONTROL	POSITION
CONTROL PANEL	FUNCTION	IF-IF
	IF SWEEP WIDTH	max cw
	COUNTER	EXT
SCOPE TIME BASE	POSITION	midrange
	TRIGGER SOURCE	INT+
	LEVEL	AUTO
	MAGNIFIER	X 1
	SWEEP TIME	10 msec/cm
	VERNIER	CAL
	SINGLE-NORMAL	NORMAL
SCOPE DIFFERENTIAL AMPLIFIER	POSITION	midrange
	BANDWIDTH	4
	AMPLIFIER	DC
	VERNIER	CAL
	SENSITIVITY	2 v/cm
	AC-DC-OFF (+INPUT)	AC
	AC-DC-OFF (-INPUT)	OFF

3.02 Check of Adjustment of IF TRACE START and IF TRACE STOP Controls

- (a) Set the controls on the test set as shown in Table B.
- (b) Connect a 372A patch plug between the IF OUT and ATTEN 2 IN jacks.
- (c) Connect a 372A patch plug between the ATTEN 2 OUT and IF DET IN jacks.
- (d) Adjust the TEST TRACE and REF TRACE controls to display the traces

on the oscilloscope, then separate the traces by approximately 0.5 centimeter (cm).

- (e) Adjust the SWEEP TIME VERNIER control on the TIME BASE UNIT for approximately a 10-cm horizontal deflection.

- (f) The two traces should be of equal length, and aligned one above the other. If not, adjust the IF TRACE START and IF TRACE STOP controls to obtain these conditions. The IF TRACE START control is used to align the left ends of the traces and the IF TRACE STOP control is used to align the right ends of the traces.

TABLE B		
UNIT	CONTROL	POSITION
CONTROL PANEL	FUNCTION	IF-IF
	IF SWEEP WIDTH	max ccw
	IF CENTER FREQ	midrange
	IF MKR AM	max ccw
	COUNTER	MRK FREQ
SCOPE TIME BASE	POSITION	midrange
	MAGNIFIER	X 10
	SWEEP TIME	EXT
	VERNIER	midrange
	SINGLE-NORMAL	NORMAL
SCOPE DIFFERENTIAL AMPLIFIER	POSITION	midrange
	BANDWIDTH	4
	AMPLIFIER	DC
	VERNIER	midrange
	SENSITIVITY	2 mv/cm
	AC-DC-OFF (+INPUT)	DC
	AC-DC-OFF (-INPUT)	OFF
ATTEN 2	IF ATTENUATOR	17 db

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3.03 Check of Adjustment of the IF TRACE LIN Control

- (a) Set the IF SWEEP WIDTH control to midrange and adjust the IF MKR AM control for convenient marker amplitude on the test trace.
- (b) Adjust the IF MKR FREQ control for a reading of 70 mc on the counter.
- (c) Adjust the IF CENTER FREQ control to center the 70-mc frequency marker and adjust the VAR MKR AM control on the control panel for the same amplitude as the 64- or 76-mc markers.
- (d) Adjust the IF SWEEP WIDTH and IF CENTER FREQ controls to produce a swept output of approximately 64 to 76 mc.
- (e) If necessary, adjust the IF DET SLOPE control on the control panel for a flat test trace.
- (f) If necessary, adjust the IF TRACE LIN control so that the 70-mc marker on the test trace is equidistant from the 64- and 76-mc markers.

3.04 Adjustment of IF Level

- (a) On the power meter, set the INPUT control to IF and the POWER range to 0 dbm.
- (b) Remove the 372A patch plug connected between the ATTEN 2 OUT and the IF DET IN jacks.
- (c) Using a short patch cord, connect between the IF PWR MTR and the ATTEN 2 OUT jacks.
- (d) Set ATTEN 2 to 10 db. Turn the IF SWEEP WIDTH control to 0 (maximum counterclockwise). If necessary, adjust the OUTPUT control of the IF sweep oscillator to obtain a reading of 0 dbm on the power meter.

3.05 Test of IF Sweep Frequency Characteristic

- (a) Set the COUNTER switch on the control panel to EXT and, using a patch cord, connect the IF SAMPLE OUT jack to the CTR jack.

- (b) Set the IF SWEEP WIDTH control to 0 (maximum counterclockwise), then adjust the IF CENTER FREQ control for a reading of 70 ± 0.2 mc on the counter.
- (c) On the power meter, set the INPUT control to IF and the POWER range to 0 dbm.
- (d) Using a P-49Q680 cord (8 feet long), connect between the ATTEN 2 OUT and the IF PWR MTR jacks.

Requirement: The power meter shall read approximately 0 dbm.

- (e) Connect the TEST cord (P-49Q682) between the recorder output of the power meter located in the rear of the test set and the -INPUT jack of the DIFFERENTIAL AMPLIFIER on the oscilloscope.
- (f) On the DIFFERENTIAL AMPLIFIER, set the AC-DC-OFF (-INPUT) switch to DC.
- (g) Set the FUNCTION switch on the control panel to RF-RF and set the SWEEP SELECTOR switch on the RF sweep oscillator to CW.
- (h) Using the REF TRACE control, set the test dot on the oscilloscope to a convenient point. If necessary, increase the attenuation in ATTEN 2 to locate the dot on the oscilloscope.
 - (i) Calibrate the oscilloscope for 0.05-db per cm sensitivity by means of the ATTEN 2 and DIFFERENTIAL AMPLIFIER sensitivity controls.
- (j) Vary the IF CENTER FREQ control between 55 and 85 mc and 60 to 80 mc and, in this way, measure the frequency characteristic. Note the difference between the 60- and 80-mc readings and the direction of any slope.

Requirement: The power output at 60 and 80 mc shall be equal within 0.01 db and the power output at 55 and 85 mc shall be equal within 0.05 db.

Note: When the IF CENTER FREQ control is varied from one frequency to another, the test dot will drift for approximately 30 seconds.

3.06 If the limits of the requirement in 3.05(j) are exceeded, perform the following adjustments.

- (a) Connect the VOM to the CUR BAL TEST jacks on the IF sweep oscillator. Set the meter to its most sensitive current range and adjust the CUR BAL control for zero current.
- (b) Set the counter switch on the control panel to MKR FREQ, disconnect the patch cord from the IF SAMPLE OUT jack, and, on the differential amplifier, set the AC-DC-OFF (-INPUT) switch to OFF. Set the FUNCTION switch to IF-IF.
- (c) Set ATTEN 2 to 17 db and connect a P-49Q680 cord (8 feet long) between the ATTEN 2 OUT and the IF DET IN jacks.
- (d) Adjust the TEST TRACE and REF TRACE controls to display the traces on the oscilloscope.
- (e) Calibrate the oscilloscope for 0.05-db per cm sensitivity by means of the ATTEN 2

and DIFFERENTIAL AMPLIFIER sensitivity controls.

- (f) Adjust the IF SWEEP WIDTH and IF CENTER FREQ controls to produce a swept output of approximately 58 to 82 mc.
- (g) Adjust the IF DET SLOPE control on the front panel for a flat test trace.
- (h) Bring the reference trace into coincidence with the test trace by means of the REF TRACE control.
- (i) Adjust the SLOPE capacitor C14 of the IF sweep oscillator for the slope obtained in 3.05(j) keeping the two traces in coincidence at 70 mc with the OUTPUT control on the IF sweep oscillator.
- (j) Repeat 3.05.

4. TESTS OF IF DETECTOR

- 4.01** Set the controls on the test set as shown in Table C.

TABLE C		
UNIT	CONTROL	POSITION
CONTROL PANEL	FUNCTION	IF-IF
	IF SWEEP WIDTH	midrange
	IF CENTER FREQ	midrange
	IF MKR AM	midrange
	COUNTER	MKR FREQ
SCOPE TIME BASE	POSITION	midrange
	MAGNIFIER	X 10
	SWEEP TIME	EXT
	VERNIER	midrange
	SINGLE-NORMAL	NORMAL
SCOPE DIFFERENTIAL AMPLIFIER	POSITION	midrange
	BANDWIDTH	4
	AMPLIFIER	DC
	VERNIER	midrange
	SENSITIVITY	2 mv/cm
	AC-DC-OFF (+INPUT)	DC
	AC-DC-OFF (-INPUT)	OFF
ATTEN 2	IF ATTENUATOR	17 db

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4.02 Connect a 372A patch plug between the IF OUT and the ATTEN 2 IN jacks.

4.03 Connect a P-49Q680 cord (8 feet long) into the ATTEN 2 OUT jack, connect another P-49Q680 cord (8 feet long) into the IF DET IN jack, and connect a P-49Q681 5-inch cable between the ends of the two cords.

4.04 Adjust the TEST TRACE and REF TRACE controls to display the traces on the oscilloscope.

4.05 Adjust the VERNIER control on the TIME BASE unit for approximately a 10-cm horizontal deflection.

4.06 Calibrate the oscilloscope for 0.05-db per cm sensitivity by means of the ATTEN 2 and DIFFERENTIAL AMPLIFIER sensitivity controls.

4.07 Adjust the IF CENTER FREQ and IF SWEEP WIDTH controls to produce a swept output of 60 to 80 mc.

4.08 Bring the reference trace into coincidence with the test trace at 70 mc by means of the REF TRACE control.

4.09 Adjust the IF DET SLOPE control on the control panel for a flat test trace.

Requirement: The test trace shall be flat within 0.01 db between 60 and 80 mc.

5. TEST OF 60 CYCLES AND NOISE

5.01 On the oscilloscope, set the SENSITIVITY VERNIER control to CAL and the SENSITIVITY control to 0.1 millivolt per cm.

5.02 Set the IF SWEEP WIDTH control to 0 (maximum counterclockwise) and the IF MKR AM control to maximum counterclockwise.

Requirement: The noise and 60-cycle amplitude shall be less than 0.3-millivolt peak-to-peak.

6. TEST OF IF RETURN LOSS BRIDGE

6.01 Set the controls on the test set as shown in Table D.

6.02 Connect a 372A patch plug between the IF OUT and ATTEN 1 IN jacks.

6.03 Connect a P-49Q680 cord (8 feet long) between the ATTEN 1 OUT and return loss bridge INPUT jacks. Leave the unknown jack open-circuited.

6.04 Connect a P-49Q680 cord (8 feet long) between the return loss bridge OUTPUT and ATTEN 2 IN jacks.

6.05 Connect a 372A patch plug between the ATTEN 2 OUT and AMPL IN jacks.

6.06 Connect a 372A patch plug between the AMPL OUT and IF PWR MTR jacks.

6.07 Adjust the AMPL GAIN control on the front panel for a reading of -7 dbm on the power meter.

6.08 Remove the 372A patch plug connected between the AMPL OUT and IF PWR MTR jacks and connect it between the AMPL OUT and the IF DET IN jacks.

6.09 Calibrate the oscilloscope for 0.5-db per cm sensitivity by means of the ATTEN 2 and DIFFERENTIAL AMPLIFIER sensitivity controls.

6.10 Adjust the IF CENTER FREQ and IF SWEEP WIDTH controls to produce a swept output of 60 to 80 mc.

6.11 Bring the reference trace into coincidence with the test trace by means of the REF TRACE control.

TABLE D		
UNIT	CONTROL	POSITION
CONTROL PANEL	FUNCTION	IF-IF
	IF SWEEP WIDTH	midrange
	IF CENTER FREQ	midrange
	IF MKR AM	midrange
	COUNTER	MKR FREQ
SCOPE TIME BASE	POSITION	midrange
	MAGNIFIER	X 10
	SWEEP TIME	EXT
	VERNIER	for approx 10-cm deflection
	SINGLE-NORMAL	NORMAL
SCOPE DIFFERENTIAL AMPLIFIER	POSITION	midrange
	BANDWIDTH	4
	AMPLIFIER	DC
	VERNIER	midrange
	SENSITIVITY	10 mv/cm
	AC-DC-OFF (+INPUT)	DC
	AC-DC-OFF (-INPUT)	OFF
ATTEN 2	IF ATTENUATOR	50 db
ATTEN 1	IF ATTENUATOR	14 db
POWER METER	INPUT	IF
	POWER RANGE	-5 dbm

6.12 Connect the return loss bridge termination to the unknown plug of the return loss bridge.

6.13 Set ATTEN 2 to 0 db.

Requirement: The test trace shall be below the reference trace between 60 and 80 mc.

7. RF SWEEP OSCILLATOR

7.01 *Test of RF Sweep Oscillator Sweep Waveform*

(a) Set the controls on the test set as shown in Table E.

TABLE E		
UNIT	CONTROL	POSITION
IF and RF SWEEP CONTROL CIRCUIT	RF TRACE WIDTH	max cw
	FUNCTION	RF-RF'
SCOPE TIME BASE	POSITION	midrange
	TRIGGER SOURCE	INT+
	LEVEL	AUTO
	MAGNIFIER	X 1
	SWEEP TIME	5 msec/cm
	VERNIER	CAL
	SINGLE-NORMAL	NORMAL
SCOPE DIFFERENTIAL AMPLIFIER	POSITION	midrange
	BANDWIDTH	4
	AMPLIFIER	DC
	VERNIER	CAL
	SENSITIVITY	0.5 v/cm
	AC-DC-OFF (+INPUT)	DC
	AC-DC-OFF (-INPUT)	OFF
RF SWEEP OSCILLATOR	SWEEP SELECTOR	AUTO (SWEEP ON, above dial lights)

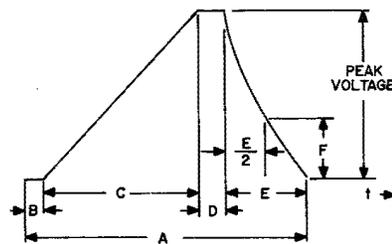
(b) Disconnect the patch plug to the HORIZ INPUT of the oscilloscope and connect the SCOPE HOR jack on the front panel to the +INPUT jack on the oscilloscope. The sweep waveform shall be as shown in Fig. 1.

(c) Restore the connections to normal.

7.02 Check of Adjustment of RF TRACE START, RF TRACE STOP, and RF TRACE WIDTH Controls

(a) Set the controls on the test set as shown in Table F.

(b) Adjust the TEST TRACE and REF TRACE controls to display the traces on the oscilloscope, then separate the traces by approximately 0.5 cm.



- TEST:
1. ADJUST "31 CPS ADJ" CONTROL UNTIL TIME "A" IS 32.3 MS
 2. MEASURE TIME "B" AND TIME "D"
REQUIREMENT: TIME "B" AND TIME "D" SHALL BE 3 ± 2 MS EACH
 3. MEASURE TIME "C" AND TIME "E"
REQUIREMENT: TIME "C" SHALL BE NO MORE THAN 3 TIMES TIME "E"
 4. MEASURE THE VOLTAGE "F" AT POINT E/2 MS FROM THE BEGINNING OF TRACE "E"
REQUIREMENT: VOLTAGE "F" SHALL BE 1/4 OR MORE OF THE PEAK VOLTAGE

Fig. 1 - RF Sweep Voltage

TABLE F		
UNIT	CONTROL	POSITION
IF and RF SWEEP CONTROL CIRCUIT	FUNCTION	RF-RF
	RF MKR AM	max ccw
SCOPE TIME BASE	VERNIER	midrange
	POSITION	midrange
	MAGNIFIER	X 10
	SWEEP TIME	EXT
	SINGLE-NORMAL	NORMAL
SCOPE DIFFERENTIAL AMPLIFIER	POSITION	midrange
	BANDWIDTH	4
	AMPLIFIER	DC
	VERNIER	midrange
	SENSITIVITY	2 mv/cm
	AC-DC-OFF (+INPUT)	DC
	AC-DC-OFF (-INPUT)	OFF

(c) Set the FUNCTION switch on the control panel to IF-IF and adjust the VERNIER control on the TIME BASE UNIT for a 10-cm horizontal deflection on the reference trace.

(d) Set the FUNCTION switch to RF-RF. If necessary, adjust the RF TRACE WIDTH control for a 10-cm horizontal deflection.

(e) The two traces should be of equal length, and aligned one above the other. If not,

adjust the RF TRACE START and RF TRACE STOP controls to obtain these conditions. The RF TRACE START control is used to align the left ends of the traces and the RF TRACE STOP control is used to align the right ends of the traces.

7.03 Check of RF POWER MON

(a) Set the controls on the test set as shown in Table G.

TABLE G		
UNIT	CONTROL	POSITION
POWER METER	INPUT	RF
	POWER RANGE	0 dbm
RF SWEEP OSCILLATOR	POWER LEVEL LINE	max ccw RF (RF indicator lights)
	SWEEP SELECTOR	AUTO (SWEEP ON, above dial lights)
	FUNCTION	(Press) START STOP (START and STOP, on dial light)
	ALC	(Press) ALC

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- (b) Adjust the START/CW control to approximately 3.65 gigacycles (gc) and the STOP/ Δ F control to approximately 4.25 gc.
- (c) Connect the RF OUT jack on the sweep oscillator to the IN jack of the RF leveling coupler and detector by means of the coupler cable.
- (d) Connect the XTAL jack on the sweep oscillator to the RF leveling coupler and detector.
- (e) Connect the OUT jack of the RF leveling coupler and detector through a 20-db pad to the RF PWR MTR jack.
- (f) Adjust the POWER LEVEL control on the sweep oscillator to give a reading of 0 dbm on the power meter.

Note: It may be necessary to adjust the GAIN control to obtain the above reading.

- (g) Set the INPUT control on the power meter to RF MON.
- (h) If necessary, adjust the Weinschel Engineering attenuator, located in the rear of the test set, for a reading of 0 dbm on the power meter.

7.04 Test of RF Sweep Frequency Characteristic

- (a) Set the controls on the test set per Tables F and G.
- (b) Set the BANDWIDTH control on the differential amplifier to 400 kc.
- (c) Set the SENSITIVITY control on the differential amplifier to 10 millivolts per cm.
- (d) Adjust the START/CW control to approximately 3.65 gc and the STOP/ Δ F control to approximately 4.25 gc.
- (e) Make connections on the test set per Fig. 2.
- (f) Adjust the TEST TRACE and REF TRACE controls to display the traces on the oscilloscope.

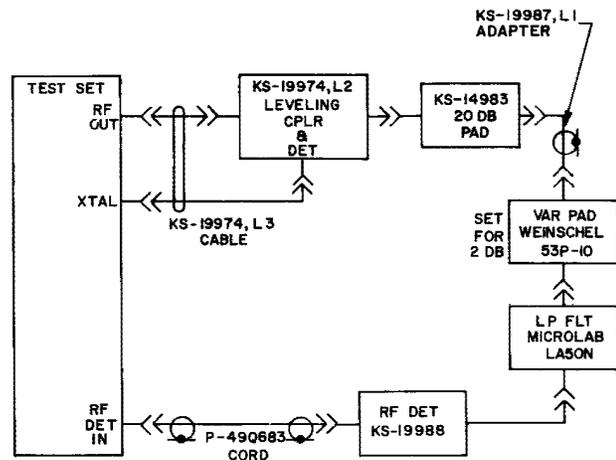


Fig. 2 – RF Transmission Setup

- (g) Adjust the RF MKR AM on the control panel for a convenient marker amplitude.
- (h) Press the MARK 1 pushbutton and adjust the MARKER 1 control for a reading of 3.7 gc on the adjacent marker counter.
- (i) Press the MARK 2 pushbutton and adjust the MARKER 2 control for a reading of 4.2 gc on the adjacent marker counter.
- (j) Adjust the MARKER AMPLITUDE control on the sweep oscillator for a convenient marker amplitude and calibrate MARKER 1 and MARKER 2 at the above frequencies with the RF MARKER FREQ control.
- (k) Set the INPUT control on the power meter to RF MON.
- (l) Adjust the GAIN control on the sweep oscillator to obtain optimum leveling without causing oscillation within the leveling loop.
- (m) Adjust the POWER LEVEL control to maximum. Rotate the POWER LEVEL screwdriver adjustment to obtain a reading of 0 dbm on the power meter.
- (n) Observing the test trace on the oscilloscope, vary the POWER LEVEL control over the range from 0 to -10 dbm as indicated on the power meter.

Requirement: The output shall be leveled between 3.7 and 4.2 gc without evidence of oscillation in the leveling loop.

- (o) Adjust the POWER LEVEL control for a reading of 0 dbm on the power meter.
- (p) Calibrate the oscilloscope for 0.05-db per cm sensitivity by means of the variable pad and the DIFFERENTIAL AMPLIFIER sensitivity controls.
- (q) Set the BANDWIDTH control on the differential amplifier to 4 kc. Bring the reference trace into coincidence with the test trace by means of the REF TRACE control. Measure the frequency characteristic over the range from 3.7 to 4.2 gc.

Requirement: The output power shall be flat within 0.3 db from 3.7 to 4.2 gc.

- (r) Press the ΔF pushbutton on the sweep oscillator.

Requirement: The CW and ΔF indicator (on dial) shall light.

- (s) Adjust the START/CW control for a center frequency of 3.71 gc on the scale.
- (t) Adjust the STOP/ ΔF control for approximately 25-mc deviation on the MC scale.
- (u) Using the RF FREQ MTR, check that the swept output is at least between 3.7 and 3.72 gc. It may be necessary to readjust the START/CW control to center the swept output.
- (v) Adjust the MARKER 1 START/CW control for a reading of 3.7 gc on the adjacent marker counter.
- (w) Adjust the MARKER 2/STOP control for a reading of 3.72 gc on the adjacent marker counter.
- (x) Calibrate MARKER 1 and MARKER 2 at the above frequencies with the RF FREQ MTR.
- (y) Measure the frequency characteristic over the range from 3.7 to 3.72 gc.

Requirement: The output power shall be flat within 0.02 db from 3.70 to 3.72 gc.

- (z) Repeat (s) through (y), using center frequencies of 3.8, 3.9, 4.0, 4.1, and 4.19 gc.
- (aa) Repeat (o) through (z) with the output level set to +10 dbm. Replace the 20-db pad in Fig. 2 with a 10-db pad for this test.

8. RF RETURN LOSS

- 8.01 Set the controls on the test set per Tables F and G.
- 8.02 Make connections on the test set per Fig. 3.
- 8.03 On the RF sweep oscillator, adjust the START/CW control to approximately 3.7 gc and the STOP/ ΔF control to approximately 4.2 gc.
- 8.04 Set the INPUT control on the power meter to RF MON and the POWER RANGE to -5 dbm.
- 8.05 Adjust the POWER LEVEL control on the RF sweep oscillator for a reading of -5 dbm on the power meter.
- 8.06 Adjust the TEST TRACE control to center the traces on the oscilloscope.
- 8.07 Calibrate the oscilloscope for 0.5-db per cm sensitivity by means of the variable pad and the DIFFERENTIAL AMPLIFIER sensitivity controls.

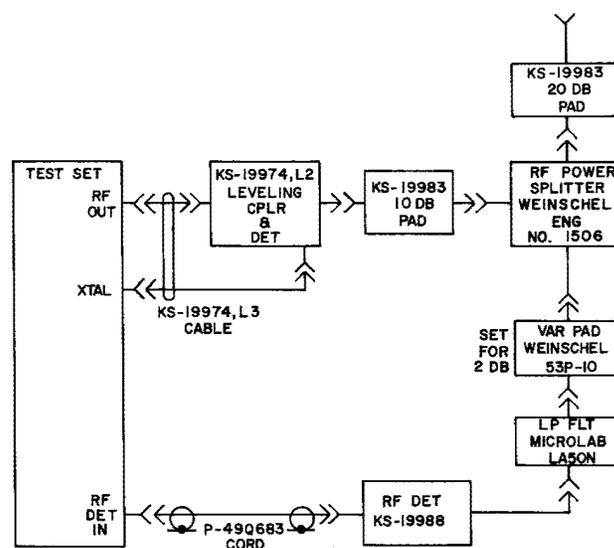


Fig. 3 - RF Return Loss Setup

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8.08 Bring the reference trace into coincidence with the test trace by means of the REF TRACE control.

Requirement: The test trace shall be flat within 0.5 db between 3.7 and 4.2 gc.

9. TEST OF NOISE GENERATOR

9.01 Press the NOISE LAMP switch.

Requirement: The lamp shall light within 2 seconds.

9.02 Connect the VOM to the test point jacks on the noise lamp power supply and adjust the CURRENT ADJUST control for a reading of 1.75 volts.

9.03 Disconnect jack J3 from the NOISE LAMP.

Requirement: The NOISE LAMP shall extinguish or flicker.