PERFORMANCE REQUIREMENTS
TYPE LD-R1 RADIO RECEIVER
GENERAL EQUIPMENT REQUIREMENTS
RADIO SYSTEMS

1. GENERAL

1.01 This section covers the performance requirements which Type LD-R1 Radio Receivers shall meet before turnover to the Telephone Company. It is expected that the tests will be made by the Telephone Company.

1.02 This section is reissued to revise frequency characteristic and signal-to-noise ratio requirements.

1.03 Reference shall be made to Section 800-630-180 covering General Requirements and Definitions for additional information necessary for the proper application of the requirements.

1.04 ***Test Equipment:*** The requirements are based on the use of the following test equipment, or its equivalent:

1—Generator, Standard Signal—For operation on 115 volts, 40 to 60 cycles with standard accessories, plus one type 774M cable jack—also one flexible coaxial cable, W.E. Type 724, eight feet long, with a W.E. 337A plug on one end and the above 774M cable jack on the other end—General Radio Company Type 805C—or

Generator, Standard Signal—For operation on 115 volts, 50 or 60 cycles as required, plus one output pad to match at one end an amphenol 83-ISPN (Navy #49195) coaxial plug and containing a 62-ohm $\pm$5% non-inductive resistor—also, one flexible coaxial cable, W.E. Type 724, eight feet long, with a W.E. 337A plug on one end and an amphenol 83-ISPN coaxial plug on the other end—Measurements Corporation No. 65B—or

Generator, Standard Signal—For operation on 115 volts, 50 or 60 cycles as required, with accessories, plus one dummy antenna containing a 22-ohm non-inductive resistor and one dummy antenna containing a 62-ohm non-inductive resistor, and one type 187-58 jack—also, one flexible coaxial cable, W.E. type 724, eight feet long, with a W.E. 337A plug on one end and the above type 187-58 jack on the other end—Federal Manufacturing and Engineering Corporation No. 605-CS or General Radio No. 605B—or

Generator, Signal—For operation on 115 volts, 50 or 60 cycles as required, equipped with amphenol 83-1R coaxial connector, one dummy antenna model 440A containing a 62-ohm $\pm$5% non-inductive resistor, one standard cable for high voltage output, and one 30-ohm cable with output box containing a 30-ohm termination and equipped with an amphenol 83-1R output jack. Also, one flexible coaxial cable, W.E. type 724, eight feet long, with a W.E. 337A plug on one end and an amphenol 83-ISPN coaxial plug on the other end—Ferris Instrument Company No. 22D

1—Matching resistor, if required, to make signal generator impedance 72 ohms.

1—13A Oscillator

1—Special 1002C Handset, consisting of:

2—509 Receivers

1—1B Headband

1—R2FG Cord, 3 feet 6 inches long

1—289B Plug

1—Screwdriver, 3-1/2 inch x 3/16 inch blade, Yankee No. 95

2—600-ohm Resistance Units

1—A-c voltmeter, accurate to within ±0.12 volt at 6.3 volts. Suggest Weston Model 433 with 15-volt scale.

2. REQUIREMENTS

A. General

2.01 A check should be made to insure that parts shipped separately are installed and connected, that all vacuum tubes are installed in their sockets, and that the a-c power and cabinet grounds are connected.

B. Preliminary Adjustments

2.02 ***Plate and Filament Voltages***

(1) Operate the PWR ON-OFF switch of the 130-volt rectifier to OFF, the 250V PWR switch to OFF, and the MAIN POWER switch to ON. Check the a-c voltages across terminals 3 and 5, 6 and 7 of T202, across 3 and 5, 6 and 7 of T307, across 3 and 5, 6 and 7 of T401, and across 3 and 4 of T501. The readings should lie between 6.1 and 6.8 volts.

(2) Operate the PWR ON-OFF switch of the 130-volt rectifier to OFF, and the MAIN POWER switch to ON. Operate the 250V PWR switch to ON. Observe the DC METERING meter M103 for the PANEL 7 (+250V) position of the PANEL SELECTOR switch D103. Adjust the ADJ VOLTS control for a DC METERING reading of +250.

(3) Operate the PWR ON-OFF switch of the 130V rectifier to ON; observe the DC METERING meter for the PANEL 6 (+130V) position of the PANEL SELECTOR switch. Adjust the +130V ADJ VOLTS control for DC METERING reading of +130.

(4) Observe the DC METERING meter for the PANEL 6 (−130V) position of the PANEL SELECTOR switch. Adjust the −130V ADJ VOLTS control for a DC METERING reading of −130.

2.03 ***Testing of Safety Switches and Alarms***

(1) Operate the MAIN POWER and RECTIFIERS switches to ON. Remove each mat cover, in turn, from the HF panel to the 250V rectifier panel. The DC METERING meter reading for the −130V, +130V and +250V positions of the PANEL SELECTOR switch should go to 0 for each panel mat removed.

(2) Replace all mats. Operate the PWR switch of the 250V rectifier panel to OFF. With the DC METERING set to indicate, in turn, −130V and +130V, the DC METERING meter should go to 0 in each case.

(3) Operate the AFC ZERO ADJ control in turn to red 4-3/4 and black 4-3/4 on the dial. The buzzer should sound, and the AFC alarm lamp should light.

(4) Remove tube V405 CAR AMP from its socket; the normally lighted VF alarm lamp should go out.

2.04 ***DC METERING of Tube Currents***

(1) Set the receiver controls as follows:

PWR switch of 250V Rectifier to ON.

MAIN POWER switch to ON.

VOLUME CONTROL to MAN.

MAN VOL CONTROL to 10 on the dial.

AFC switch to ON.

CARRIER SUPPLY switch to LOCAL.

(2) Operate the PANEL SELECTOR and PANEL VT CURRENTS switches to positions listed in Table I and observe the DC METERING indication. The tube currents as indicated on the DC METERING meter should lie within the limits listed. All controls should be kept at the positions listed unless otherwise noted under "Remark."

C. Frequency Characteristics

2.05 ***Requirements***

TABLE I

PANEL SELECTOR SWITCH	PANEL VT CURRENTS SWITCH	TUBE NO.	NAME	LIMIT OF DC METERING INDICATION	REMARKS
2	Panel 2	V201	HF AMP	120-180	
2	Panel 2	V201	HF AMP	10-20	P305 MVC at Max. CCW
2	Panel 2	V202	DEMOD 1	120-190	
2	Panel 2	V203	2.8 MC AMP	120-180	
2	Panel 2	V203	2.8 MC AMP	0-5	P305 MVC at Max. CCW
2	Panel 2	V204-V205	DEMOD 2	120-190	
2	Panel 2	V206	B01 XTAL	15-40	(D207 CRYSTAL SELECTOR Switch on 0, and (D209 1st BEAT OSCILLATOR on VARIABLE
2	Panel 2	V207	B01 VAR	70-110	D209 1st BEAT OSCILLATOR on VARIABLE
2	Panel 2	V207	B01 VAR	30-60	D209 1st BEAT OSCILLATOR on CRYSTAL
2	Panel 2	V208	B02	10-40	
3	Panel 3	V301	IF AMP 1	120-180	
3	Panel 3	V301	IF AMP 1	0-5	P305 MVC on ZERO
3	Panel 3	V302	IF AMP 2	120-180	
3	Panel 3	V302	IF AMP 2	0-5	P305 MVC on ZERO
3	Panel 3	V303	IF AMP 3	120-180	
3	Panel 3	V303	IF AMP 3	0-20	P305 MVC on ZERO
3	Panel 3	V304	IF AMP 4	70-110	
3	Panel 3	V305	CAR AMP 1	15-50	P305 MVC on ZERO
3	Panel 3	V306	CAR AMP 2	70-115	P305 MVC on ZERO
3	Panel 3	V310	LIMITER 1	65-100	P305 MVC on ZERO
3	Panel 3	V311	LIMITER 2	65-100	P305 MVC on ZERO
4	Panel 4	V401B	GRP B AMP 1	70-110	
4	Panel 4	V402	GRP B AMP 2	80-120	
4	Panel 4	V403B	GRP A AMP 1	70-110	
4	Panel 4	V404	GRP A AMP 2	80-120	
4	Panel 4	V405	CAR AMP	60-110	
4	Panel 4	V401A	SB VOLT HYB	0-10	P305 MVC on ZERO
4	Panel 4	V403A	CAR VOLT D3	85 Min.	P402 DEM CAR GAIN at Max. CW
4	Panel 4	V403A	CAR VOLT D3	0-25	D403 CARRIER SUPPLY to RECON P301 CARRIER BRANCH GAIN at Max. CCW
5	Panel 5	V501	100 KC AMP	80-120	
5	Panel 5	V502	CAR AMP	65-110	D303 AFC on ON
5	Panel 5	V502	CAR AMP	0	D303 AFC on OFF

TABLE I (Cont)

PANEL SELECTOR SWITCH	PANEL VT CURRENTS SWITCH	TUBE NO.	NAME	LIMIT OF DC METERING INDICATION	REMARKS
5	Panel 5	V503	AFC AMP	80-120	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V504	AFC AMP	80-120	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V505	AFC AMP	80-120	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V506	AFC AMP	80-120	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V507	AFC RECT	0-10	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V508	AFC RECT	0-10	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V509	AFC RECT	0-10	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V510	AFC RECT	0-10	P501 AFC OSC GAIN & P502 AFC CARRIER GAIN at Max. CCW
5	Panel 5	V511	100 KC OSC 1	80-120	
5	Panel 5	V512	100 KC OSC 2	80-120	
5	Panel 5	V513	CAR ALM SLOW	75-130	D303 AFC to ON
5	Panel 5	V513	CAR ALM SLOW	0	D303 AFC to OFF

(1) Connect a 600-ohm resistor across terminals 17 and 18, and another 600-ohm resistor across terminals 21 and 22, of TS803.

(2) Insert the signal generator using matching resistor, if necessary, for 72-ohm input, into the IF AMP INPUT jack. Set the frequency of the signal generator to 99 kc with an input to the receiver of 5000 μv. Operate the AFC switch to OFF. Turn the CARRIER BRANCH GAIN control to 5 on the dial. Operate the VOLUME CONTROL switch to MAN, and the CARRIER SUPPLY switch to LOCAL. Read the DC METERING on V403A, and obtain 1.6 volts (80 μa) by adjusting the DEM CAR GAIN control.

(3) Read the DC METERING on 401A. Adjust the frequency of the signal generator to obtain a peak on the CARRIER RECT CURRENT SB VOLT HYB, and obtain 3.0 volts (30 μa) by adjusting the MAN VOLUME CONTROL. (Do not disturb this adjustment for remainder of this test.)

(4) Operate the MONITOR TRANSFER switch to B, the VU METER TRANSFER to B, and the VF LINE TRANSFER to N. Insert the headset plug in the MONITOR jacks. Obtain an approximate 1000-cycle tone by readjustment of the signal generator.

(5) Adjust the VF GAIN B control to give −3 vu on the VOLUME INDICATOR meter. Turn off the signal generator. Do not change this setting for the remainder of the test.

(6) Connect the output of a 13A Oscillator across terminals 21 and 22 of TS803 and set in turn at each frequency in the table below. Adjust the 13A Oscillator output to obtain 0 vu on volume indicator.

(7) Turn on the signal generator and adjust its frequency by producing beats on the VU meter.

(8) Disconnect the 13A Oscillator. The readings of the VOLUME INDICATOR meter should be within the following limits:

VF FREQUENCY	VOLUME INDICATOR METER READING
100	0 ± 1.5
300	0 ± 1.0
500	0 ± 1.0
1000	0
2000	0 ± 1.0
3000	0 ± 1.0
4000	0 ± 1.0
5000	0 ± 1.2
6000	-1.0 ± 2.0

(9) Set the signal generator frequency to 101 kc. Operate the MONITOR TRANSFER switch to A, the VU METER TRANSFER switch to A, and the LINE TRANSFER to R.

(10) Adjust the VF GAIN A control for −3 vu reading on the VOLUME INDICATOR. Repeat steps (6) to (8), substituting terminals 17 and 18 for 21 and 22 in (6). The VOLUME INDICATOR meter readings should fall within the same limits as in table in (8).

D. Setting of Controls and Functioning of Circuits

2.06 *Setting of 2nd Beat Oscillator to 2700 KC*

(1) Set the CARRIER BRANCH GAIN to 5 on the dial. Set the CARRIER SUPPLY switch to LOCAL, the VOLUME CONTROL to MAN, and the MAN VOL CONTROL to a position approximately three-quarters clockwise. Set 2nd BEAT OSCILLATOR TUNING to 0, and the AFC OSC GAIN control to mid-position. Turn the VU METER TRANSFER and the MONITOR TRANSFER switches to B. Insert the headset in the MONITOR jacks.

(2) Depress the 2nd BEAT OSC ZERO ADJ button and adjust the 2nd BEAT OSCILLATOR ZERO ADJ control until a tone is heard in the headset.

(3) Readjust the MAN VOL CONTROL for 0 vu on the VOLUME INDICATOR.

(4) Readjust the 2nd BEAT OSCILLATOR ZERO ADJ control for maximum deflection on the CARRIER RECT CURRENT meter.

Note: It may be necessary to decrease the gain of the receiver by means of the MAN VOL CONTROL when performing (4), otherwise there will be a beat note produced at more than one setting of the 2nd BEAT OSCILLATOR ZERO ADJ control.

2.07 *Carrier Branch Gain*

(1) Insert the signal generator, using matching resistor, if necessary, for 72-ohm input, into the IF AMP INPUT jack J301. Operate the VOLUME CONTROL switch to MAN. Adjust the frequency (at 100 kc) for a maximum indication on the CARRIER RECT CURRENT meter, changing the setting of the MAN VOL CONTROL, if necessary, to hold the meter on scale.

(2) Set the signal generator level for an input to the receiver of 50,000 μv. Adjust the MAN VOL CONTROL to obtain a reading of 3.0 volts (30 μa) on the V401A SB VOLT HYB setting.

(3) Adjust the CARRIER BRANCH GAIN control for a reading of 130 μa on the CARRIER RECT CURRENT meter. Record the setting of the CARRIER BRANCH GAIN control.

(4) Set the signal generator input to the receiver at 5,000 μv. Adjust the CARRIER BRANCH GAIN control to give a 130-μa reading on the CARRIER RECT CURRENT meter. This reading is the setting for 20-db suppression, and should be between 9 and 9.5 on the dial.

2.08 *Adjustment of AFC Carrier Gain, AFC OSC Gain and DEM CAR Gain*

(1) Insert the signal generator, through matching resistor, into the IF AMP INPUT jack. Set the frequency of the signal generator to 100 kc. Set the input level to the receiver at 5000 μv. Set the VOLUME CONTROL switch to MAN, and adjust the MAN VOL CONTROL so that the V401A SB VOLT HYB setting gives a reading of 30 μa.

(2) Set the CARRIER BRANCH GAIN for 5 on the dial. Adjust the frequency of the signal generator for a maximum reading on the CARRIER RECT CURRENT meter. Maintain this frequency for the remainder of the test.

(3) Adjust the MAN VOL CONTROL to make the CARRIER RECT CURRENT meter read approximately mid-scale. Set the AFC OSC GAIN control to its maximum counterclockwise position. Operate the AFC switch to ON, and adjust the AFC CAR GAIN control for a reading of 70 μa on the V507 AFC RECT setting.

(4) Operate the AFC switch to OFF. Adjust the AFC OSC GAIN control for a DC METERING reading of 70 μa on the V507 AFC RECT setting.

(5) Read the currents in V508, V509 and V510. The readings should be between 65 and 75 μa.

(6) Turn the AFC switch to ON and observe that the V507 AFC RECT current varies between approximately 10 and 100 μa when the frequency of the signal generator is adjusted to give a slow beat.

2.09 ***Adjustment of Carrier to 3rd Demod***

(1) Set DC METERING to the CAR VOLTS D3 V403A setting. Operate the CARRIER SUPPLY switch to LOCAL. Adjust the DEM CAR GAIN control for 1.6 volts (80 μa) on the DC METERING meter.

(2) Operate the CARRIER SUPPLY switch to RECON. The DC METERING meter should read between 65 and 95 μa.

2.10 ***Measurement of AVC Action and Sensitivity***

(1) Insert the signal generator, with matching resistor to make the generator impedance 72 ohms, into the REC INPUT jack. Adjust the signal generator to give 5000 μv at 4.8 mc.

(2) Turn the INPUT ATTENUATION to 20 db, and the AFC switch to ON. Turn the VOLUME CONTROL switch to MAN. Tune the receiver, using calibration curves for initial settings and making final adjustment of HF AMPLIFIER TUNING and INPUT TUNING to give maximum output.

(3) Adjust the MAN VOL CONTROL to give a reading of 30 μa on the SB VOLT HYB V401A setting.

(4) Adjust the CARRIER BRANCH GAIN control for 130 μa on the CARRIER RECT CURRENT meter.

(5) Turn the signal generator to OFF. Turn the VOLUME CONTROL switch to AUTO, and the AVC DELAY control to its maximum clockwise position. Adjust the AVC MAX GAIN control to make the noise reading on the VOLUME INDICATOR −5 vu.

(6) Turn the AVC DELAY control to mid-position. Turn the signal generator to ON. Set the receiver input at 50,000 μv, and readjust the AFC ZERO ADJ control to put the receiver in control.

(7) Adjust the AVC DELAY control to make the CARRIER RECT CURRENT meter read 130 μa, allowing time for the reading to reach a steady value.

(8) Reduce the input to the receiver in steps as indicated in the following table, and read the CARRIER RECT CURRENT and VOLUME INDICATOR noise on each step. The CARRIER RECT CURRENT reading should rise to approximately the value given in the table. Noise readings should not exceed those given. Observe the reading of the V507 AFC RECT setting after each reduction of receiver input. A steady reading with occasional slow swings, together with noise readings no greater than given in the table, indicate that the receiver is in control.

RECEIVER INPUT μV	CARRIER RECT CURRENT, μA	VOLUME INDICATOR NOISE, VU
50 000	130	-20 ± 2
5,000	115	-20 ± 2
500	100	-20 ± 2
50	85	-20 ± 2
5	70	-19 ± 2
2	60	-13 ± 2
1.0	55	- 8 ± 2

2.11 ***Measurement of Signal-to-Noise Ratio With the Setup Used in 2.10***

(1) Turn the signal generator OFF. Set the VOLUME CONTROL to MAN, and adjust the MAN VOL CONTROL for −10 vu noise on the VOLUME INDICATOR meter.

(2) Turn the signal generator ON, and adjust the signal generator frequency for a 1000-cycle tone in the headset.

(3) Adjust the input to the receiver for 0 vu on the VOLUME INDICATOR meter. Record the input.

(4) Repeat for each of the following frequencies. The input should not exceed that specified for each frequency.

SIGNAL GENERATOR FREQUENCY, MC	RANGE SWITCH POSITION	RECEIVER INPUT μV
4.8	4.0 — 10.3	3.0
7.2	4.0 — 10.3	3.0
10.4	10.3 — 28.0	5.0
22.8	10.3 — 28.0	5.0
28.4	10.3 — 28.0	6.0

2.12 ***Measurement of AFC Action***

(1) Patch the signal generator set at 4.8 mc into the REC INPUT jack. Turn the AFC switch to OFF, and set the AFC ZERO ADJ control to zero. Tune the receiver using VARIABLE 1ST BEAT OSCILLATOR, using 2ND BEAT OSCILLATOR TUNING as a fine adjustment to give maximum deflection on the CARRIER RECT CURRENT meter.

(2) Turn the AFC ZERO ADJ control from zero to 5 on the red side of the dial and determine the frequency of tone produced in channel A.

(3) Reset AFC ZERO ADJ to zero and note that the CARRIER RECT CURRENT rises to maximum.

(4) Turn the AFC ZERO ADJ control to 5 on the black side of the dial, and determine the frequecy produced in channel B. The frequency produced in steps (2) and (4) should be between 900 and 2000 cycles.

(5) Repeat steps (1) to (4) except that in step (1) use the CRYSTAL 1ST BEAT OSCILLATOR. The frequency produced in steps (2) and (4) should be between 1100 and 2000 cycles.

2.13 ***Testing of Squelch Controls***

(1) Operate the MAIN POWER and RECTIFIERS switches to ON. Set the AFC switch to SQUELCH, the VOLUME CONTROL switch to MAN, and the MAN VOL CONTROL to its maximum counterclockwise position. Set the CARRIER BRANCH GAIN control to its maximum clockwise position. Set the PANEL 5 VT CURRENTS switch to V502, and the PANEL SELECTOR switch to PANEL 5. The DC METERING of V502 should read 0 with the SQUELCH CONTROL CAR GAIN control at its maximum counterclockwise position.

(2) The DC METERING of V502 should remain at 0 for 1/8 turn clockwise of the SQUELCH CONTROL CAR GAIN control, and then increase to about 85 μa within the next half-turn clockwise.

(3) When the DC METERING of V502 is raised to 80 μa by turning the SQUELCH CONTROL CAR GAIN control, both CARRIER OFF alarm lamps SLOW and FAST should go out immediately.

(4) When the current is reduced to 25 μa, both lamps should light, and the DC METERING reading of V513 should be 0.

(5) When the meter reading of V502 is reduced from maximum of 0, by operating the AFC switch to OFF, the CARRIER OFF FAST alarm lamp should light in less than one-half second, and the SLOW alarm should light in about two seconds.

(6) Set the signal generator to 4.8 mc, insert through a matching resistor into the REC INPUT jack, and tune the receiver. Turn the signal generator to OFF. Set the AFC switch to SQUELCH, the VOLUME CONTROL switch to MAN, and set the CARRIER BRANCH GAIN control to −20 db carrier suppression.

(7) Set the MAN VOL CONTROL so the VOLUME INDICATOR meter reads −10 vu.

(8) Set the SQUELCH CONTROL CAR GAIN control to its maximum clockwise position, and the SQUELCH CONTROL NOISE GAIN control to its maximum counterclockwise position. The DC METERING reading of V502 should be at least 85 μa.

(9) The DC METERING reading of V502 should decrease to 0 when the SQUELCH CONTROL NOISE GAIN control is turned about one-quarter turn clockwise.

2.14 ***Adjustment of Squelch Circuit Controls and Measurement of Squelch Action***

(1) Set the VOL CONTROL to MAN. Set the AUTO VOL CONTROL MAX GAIN, AUTO VOL CONTROL DELAY and CARRIER BRANCH GAIN controls as outlined in 2.10. Insert the signal generator, using matching resistor, into the IF AMP INPUT jack. Set the signal generator to a frequency of 100 kc, with 500 microvolts into the receiver. Adjust the signal generator frequency so that the reading of the CARRIER RECT CURRENT meter is a maximum, adjusting the MAN VOL CONTROL as required to keep the meter on scale.

(2) Adjust the MAN VOL CONTROL to make the CARRIER RECT CURRENT meter read 70. Reduce the signal generator input to the receiver to 50 microvolts. Turn the SQUELCH CONTROL NOISE GAIN control to its maximum counterclockwise position. Turn the SQUELCH CONTROL CAR GAIN control to its maximum counterclockwise position, and observe on the DC METERING meter that the current of V502 goes to zero.

(3) Adjust the SQUELCH CONTROL CAR GAIN control to make the V502 DC METERING read 20.

(4) Increase the signal generator input to the receiver to 150 microvolts. The current of V502 should rise to at least 70 and the CARRIER OFF FAST-SLOW lamps should go out.

(5) Insert the signal generator, through matching resistor, into the REC INPUT jack. Set the signal generator to a frequency of 4.8 mc, 5 microvolts input, and tune the receiver.

(6) Set the input attenuator to 0. Operate the VOLUME CONTROL switch to AUTO and observe the CARRIER RECT CURRENT meter. The meter should read between 50 and 100.

(7) Turn off the signal generator. Readjust the SQUELCH CONTROL NOISE GAIN control to make the DC METERING reading of V502 rise to 30 on noise peaks.

(8) Operate the INPUT ATTENUATION DB switch to 30 db. Turn the signal generator ON and adjust to 1.5 microvolts. Read the DC METERING of V503. The current of V503 should read at least 70 and be fairly steady.

(9) Reduce the signal generator output to 0.5 microvolt, and observe the reading of V502. The current of V502 should fluctuate from 0 to 70.

(10) Turn the signal generator OFF. The DC METERING reading of V502 should stay at 0 except for occasional deflections due to noise.

3. TEST REPORTS AND RECORDS

3.1 The required record of these tests shall be entered on the proper form.