

GBPPR 'Zine



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"... and just in case you were wondering – I'm an American, born and raised, who is unhappy... I'm unhappy with how things are going."

--- July 17, 2010 quote at The Next HOPE conference during the WikiLeaks keynote speech given by Jacob Appelbaum, a shady Jew *sayan*.

No. No you are *not* an American! America was founded by hard-working White Europeans who wanted to rid themselves of tyranny. There were no gooks, chinks, spics, niggers, faggots, Muslims, savage indians and, most importantly, no Jews involved in the founding of the United States of America. Oh, another thing, isn't it just a little ironic that a filthy gay kike is complaining about how things in America are going? He must think it's all those "evil White people" in the Federal Reserve, in Congress, in public schools, or in the media manipulating our minds and destroying our country!

Instead of shunning Adrian Lamo, whose only real hang-ups are not understanding the Declaration of Independence and milking his 15 minutes of fame for too long, the hacker community would be better off ramming a can of Zyklon B down Jake's throat...

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SLC-96 Fault Locating and Order Wire Panel Installation – Part 1

Turnup & Tests

BELL SYSTEM PRACTICES
AT&T Co Standard

SECTION 363-202-216
Issue 2, May 1981

"SLC"-96 SUBSCRIBER LOOP CARRIER SYSTEM ACTIVE FAULT-LOCATING AND ORDER WIRE SYSTEMS FAULT-LOCATING AND ORDER WIRE PANEL INSTALLATION, TURNUP AND TESTS

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1. GENERAL

1.01 This section contains the turnup tests for the SLC-96 Fault-Locating (FL) and Order Wire (OW) panel (J1C141AC-L1) and the (J1C141AC-L1, L2), preinstallation test of the 1114 and 1115 (active) type fault-locating filters and initial fault-locating line and system test. This section also contains a system description, the initial test requirements, maintenance considerations, and utilization techniques of the order wire facility associated with the SLC-96 carrier system.

1.02 This section is reissued to revise the Initial Fault-Locating Tests (IFLT) form, the Fault-Locating Record (FLR) form, and to include the J1C141AC-L1, L2 FL and OW panel. Since this reissue is a general revision, arrows ordinarily used to denote changes have been omitted. This section affects the Equipment Test List (ETL).†

1.03 The procedures of this section will be used to test all new SLC-96 Fault-Locating and Order Wire panels.

1.04 Several SLC-96 systems using the same route may share the same FL pair. The FL pair must always be terminated. This is accomplished by maintaining a 262C plug in the FL jack of the remote ter-

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†This ETL has not been issued as of this date. Consult future indices to determine when this section becomes available.

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minal (RT) most distant from the central office terminal (COT).

1.05 If the FL pair is bridged to more than one RT, the FL pair **will** be terminated with 262C plugs (900 ohms) at each RT (Fig. 11). If 1115-type filters are used, the FL line **may** be terminated in the last apparatus case in some installations (Fig. 11).

1.06 The complete FL and OW panel (Fig. 1 or 2) consists of an ED2C374-31 Fault-Locate Control Unit (FLCU), one of two order wire plug-in units (ED3C557-30G1) or (ED3C556-30G3) (see Fig. 18). It also contains a 25 dB pad to satisfy the input requirements of the older type of test sets, and also provides a filter test (FLT TST) position for preinstallation testing of the 1114- and 1115-type plug-in fault-locating filters.

1.07 The FL and OW panel provides powering and control of a selected FL pair and access to the pair for reception of the return test tones. It also provides talk battery and access to the OW pair.

1.08 The J1C141AC-L1 FL and OW panel must have +130V and -48V supplied from the CO battery. The J1C141AC-L1, L2 FL and OW panel is designed to be used in an office that has no +130V supply. The J1C141AC-L1, L2 panel contains a dc-to-dc converter that uses a -48V input to supply a +130V output.

1.09 The order wire is a two-wire voice-frequency system that parallels the SLC-96 system route. The order wire uses an H88 loaded pair in the cable facility with provisions in the 475- and 800-type apparatus cases for building out cable lengths as required. A terminal appearance that will accept the cord test clips of a type 1014A handset is provided on the outside of the apparatus case, making the order wire accessible without opening the apparatus case. The 1A Power and Jack Panel at the remote terminal (RT) is also provided with an order wire terminal appearance (Fig. 12).

2. OPERATION

A. Fault Locate

2.01 Chart 1 provides procedures for turnup and testing of the Active Fault-Locating Circuit. The procedures include selection of options, making cross-connections, and performing limited tests.

Chart 2 provides procedures for testing the 1114/1115-type filters prior to their installation in the apparatus cases. These procedures verify that each filter peak output level is proper and that adjacent channel selectivity is acceptable.

2.02 Chart 3 is used to test the cable pair used for fault-locating before the pair is approved for fault-locating SLC-96 digital lines. This chart is used to perform dc resistance tests to ensure proper installation and construction and to ensure tip and ring integrity of the FL pair.

2.03 The digital line must be powered when performing the procedures of Charts 4, 5, and 6. At least part of the digital line is always powered from the central office terminal (COT). On longer lines, power may also be supplied from the remote terminal (RT) or remote power feed terminal (RPFT).

2.04 Chart 4 is used to check the noise level of the FL pair. These procedures are used to guarantee an acceptable received signal level of the fault-locating tones used in fault-locating SLC-96 digital lines. A broadband and narrowband noise level measurement is performed in this chart. If the noise level is higher than the requirements of Chart 4, a different cable pair must be used for the FL pair, or corrective action taken to bring the pair within acceptable limits. In some instances, engineering may specify "special case" situations, in which the noise level may exceed the requirements of the chart. Under these circumstances, the minimum received signal level will be raised to compensate for the noise level, and engineering will note these conditions.

2.05 Charts 5 and 6 are used to ensure that the levels of the returned FL signals are within required limits and to record them for future reference. These charts are used in conjunction with the procedures of this section and Section 363-202-516 to guarantee an acceptable and operational fault-locating system.

2.06 The Initial Fault Line Tests (IFLT) form (Fig. 3) is completed during the tests of this section to record the test data. This form should be supplied by engineering and contain calculated values as noted on the form. If the form is not available from engineering, it can be reproduced locally and the test data recorded when the procedures of this section are performed. The IFLT form is used to provide a record

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of the condition of the FL line during initial tests. The IFLT form and the Fault-Locating Record (FLR) form (Fig. 4) provide a record of each SLC-96 system and each FL line. The information recorded on these forms will be used for future reference and trouble analysis.

2.07 Charts 7 and 8 provide procedures for turnup and testing of the order-wire portion of the J1C141AC FL and OW panel.

2.08 The J1C141AC FL and OW panel provides flexibility of the order-wire system configuration by accepting interchangeable plug-in units (Fig. 18) to satisfy specific system requirements.

(a) The **order wire and telephone set circuit** contains all the equipment necessary to establish a call through the central office switching system, to power the line, and to provide a quiet termination mode for communication between repeater locations or repeater locations to the COT and RT.

(b) The **multiple circuit** provides the equipment necessary to communicate over any order-wire pair by gaining access to another order wire panel with an OW and TEL SET plug-in unit in the same office.

2.09 The plug-in units provide the circuitry for:

- (a) Powering the order-wire line
- (b) Obtaining access to the central office switching equipment
- (c) Providing system supervisory lamps and alarms
- (d) Providing office access to the order-wire line.

The 52-type headset (Fig. 20) is used in conjunction with the plug-in units to respond to audible and visual alarms initiated at a repeater location.

2.10 Standard H88 loaded cable pairs are used for the order wire. Two or more cable pairs can be connected to the same order wire by using 1574-type bridge lifters. The maximum length of the order-wire line is 23 miles when it is powered with 96-volts and using 22-gauge cable.

2.11 Visual inspection of the wiring and panel installation should be performed prior to performing the procedures of this section. Office records must be available to ensure proper completion of the procedures of this section. All tests on the FL panel should be performed first, so that proper operation of the panel is ensured, before filter testing or FL line tests are performed. Charts 2 through 8 should be performed in order.

CHART 1

ACTIVE FAULT-LOCATING PANEL TURNUP

The FL and OW panel (Fig. 1 or 2) provides power to the active filters connected to the FL pair. The FL panel provides a termination for the FL pair and access to the pair for fault-locating. At the rear of the FL panel, on TS2, up to 6 FL pairs may be connected to terminals 1 through 12. In the FL panel, the FL signal from the filters is transformer coupled from the pair to provide a normal fault-locate output at the

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CHART 1 (Contd)

FL LINE OUT jack. Office records must be available to determine which pair(s) (1 through 6) is to be selected for testing the desired section of T1 line.

This chart gives procedures for selecting options, making cross-connections, and performing initial tests. The filter testing capability can also be checked using these procedures.

APPARATUS:

1—KS-14510 Volt-Ohm-Milliammeter (VOM) or equivalent

1—900-Ohm Resistor

1—1 μ f (or greater), 200 Vdc Capacitor

1—Sierra 315B or 415A-2 T1 Span and Repeater Test Set (315B) (Fig. 5), or (415A) (Fig. 6), or J98725AD T1C/T1 Fault-Locating Set (25AD) (Fig. 7) (Section 103-494-106). See note.

2—P3-Type Patch Cords, equipped with 310 plugs. (P3BH cords are recommended.)

2—Dummy Plugs

Note: The procedures of this chart use the 315B. Use the control settings of Table A if the 25AD is used.

STEP

PROCEDURE

- 1 Remove the +130V and -48V fuses for the FL panel. These fuses (FL/OW PNL) located in the COT fuse and alarm panel **also** serve the order wire portion of the FL and OW panel (J1C141AC-L1).
Note: If office is equipped with a J1C141AC-L1, L2 FL and OW panel, remove the -48V fuse located in the CO fuse and alarm panel (no +130V fuse).
- 2 Remove the Fault-Locate Control Unit (FLCU) (Fig. 8) and verify that Option X (terminate) is installed.
Note: Clips (straps) installed on CLIP POS TERM pins determine Option X. These clips are normally provided.
- 3 Insert the FLCU plug-in into the FL panel. Ensure that the FLCU plug-in is seated properly.

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CHART 1 (Contd)

STEP	PROCEDURE
4	Determine from office records the required FL cross-connections and obtain the required IFLT form (Fig. 3). Note: Cross-connections will be required at the MDF.
5	At the rear of the FL panel, use the VOM to measure voltage between each FL LINE tip (T) and ring (R) terminal to ground on terminal strip 2 (TS2) (Fig. 8) that have connections made to them. Requirement: 0 Volts Note 1: If the requirement is met and cross-connections have been made at the MDF, record the meter indication on the IFLT form in the space marked FOREIGN VOLTAGE T-GRD and R-GRD. Note 2: If the requirement is not met and cross-connections have not been made at the MDF, clear foreign voltage from the TS2 before proceeding. If cross-connections have been made at the MDF, open the pair at the MDF and repeat Step 5. If the requirement is met, notify outside repair personnel of problem on the FL pair. Note 3: Ensure that there is not a T and R reversal at this cross-connect.
6	Verify that it is safe for the FL pair to be powered. Notify outside plant personnel before powering the FL pair. If the FL pair can be powered, proceed to Step 8.
7	If the FL pair may not be powered, open the FL pair at the MDF. Using the 900-ohm resistor in series with the 1 μ F (or greater) capacitor, bridge a test termination across the selected FL pair on the office side of the MDF. Proceed to Step 10.
8	At the MDF, if cross-connections have been made, proceed to Step 10. At the MDF, if cross-connections have not been made, use VOM to check for foreign voltage between T and R to ground of the outside FL pair. Requirement: 0 volts Note 1: Record the meter indication on the IFLT form in the space marked FOREIGN VOLTAGE T-GRD and R-GRD. Note 2: A different form will be used for each FL pair. Note 3: If the requirement is not met, clear foreign voltage from the pair before proceeding.
9	At the MDF, make the necessary cross-connections from the outside FL cable pairs to pairs from the FL panel FL LINE pins. Ensure that T and R integrity is maintained.

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CHART 1 (Contd)

STEP	PROCEDURE
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10 Ensure that no test cords or plugs are connected to the FLCU.

11 At the fuse and alarm panel, locate the FL/OW PNL fuse holders and install the following fuses:

FUSE	CODE
-48 volt	70B Orange (2.0 amp)
+130 volt (if provided)	70E Yellow (0.18 amp)

Requirement: Fuses do not blow.

Note: If the requirement is failed, ensure that the proper type fuse was installed. If the proper fuse was installed, install a new fuse. If the new fuse blows, perform the procedures of Chart 9, Part 3, of this section.

12 On the FLCU, rotate the FL LINE switch through each of the six (6) positions, momentarily stopping at each position.

Requirement: The BUSY, READY, and FLT TST lamps remain extinguished for each position.

Note 1: If the requirement is not met, replace the FLCU plug-in. Repeat Steps 1, 2, 3, 10, and 11.

Note 2: If the FL pairs are cross-connected at the MDF and the BUSY lamp lights on only one switch position, determine if FL procedures are being performed at another location using this FL line. If FL procedures are being performed from another location, delay testing until BUSY lamp extinguishes.

Note 3: The READY lamp may flicker, when the FL LINE switch is repositioned. Any operation of the BUSY lamp may inhibit the READY lamp from lighting for several seconds.

13 On the FLCU, insert a dummy plug into the FL LINE OUT jack.

14 Rotate the FL LINE switch and observe the READY lamp at each position of switch.

Requirement: The READY lamp lights for each position and the BUSY and FLT TST lamps remain extinguished.

Note: If the requirement is not met, replace the FLCU. Repeat Steps 1, 2, 3, and 10 through 14. If a fuse blows, see Chart 9.

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CHART 1 (Contd)

STEP	PROCEDURE
15	<p>Insert a dummy plug into the FLCU FLT TST IN-1 jack (dummy plug still in FL LINE OUT jack).</p> <p>Requirement: The FLT TST lamp lights. The READY lamp is extinguished.</p> <p>Note: If the requirement is not met, replace the FLCU. Repeat Steps 1, 2, 3, and 10 through 15.</p>
16	<p>Remove the plug from the FLT TST IN-1 jack and insert it into the FLT TST IN-2 jack.</p> <p>Requirement: The FLT TST lamp extinguishes when the plug is removed and lights when the plug is reinserted into the FLT TST IN-2 jack.</p> <p>Note: If the requirement is not met, replace the FLCU and repeat Steps 1, 2, 3, and 10 through 16.</p>
17	<p>Set the VOM to the 300 DC VOLTS scale. Connect + lead of the VOM to the +V_L test point on the FLCU and – lead of the VOM to the –V_L test point. Record the value measured on the IFLT form in the space marked FL LINE VOLTAGE MEAS.</p> <p>Requirement: 116- to 135-volts dc.</p> <p>Note 1: If the requirement is not met, remove the plug from the FL LINE OUT jack and repeat the voltage measurement. If the requirement is not met, perform the procedures of Chart 10, Part 3, of this section.</p> <p>Note 2: If the requirement is now met, the trouble is on the outside cable pair. Refer the trouble to the proper work group. Chart 3 of this section contains tests to be made on the FL cable pair.</p>
18	<p>Insert an 1114- or 1115-type filter into the filter test (FLT TST) slot on the FL and OW panel (Fig. 1 or 2).</p>
19	<p>Remove the dummy plug from the FL LINE OUT and FLT TST IN-2 jack, and using P3-type patch cords, connect the 315B as follows:</p> <p>From: 315B GEN XMT jack</p> <p>To: FLCU FLT TST IN-2 jack</p> <p>From: 315B FAULT LOC LINE IN jack</p> <p>To: FLCU FL LINE OUT jack</p>

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CHART 1 (Contd)

STEP	PROCEDURE										
20	Connect the 315B power cord to a 117-Vac utility outlet, and set the POWER/LAMP TEST switch to the POWER position. Requirement: The 315B POWER lamp lights.										
21	Set the controls of the 315B as follows: <table border="1"><thead><tr><th>CONTROL</th><th>POSITION</th></tr></thead><tbody><tr><td>RCV LEVEL</td><td>-20</td></tr><tr><td>FUNCTION</td><td>MEAS 1</td></tr><tr><td>PULSE PERIOD</td><td>REF 11</td></tr><tr><td>LINE FILTER</td><td>Set to letter code of filter in FLT TST slot</td></tr></tbody></table>	CONTROL	POSITION	RCV LEVEL	-20	FUNCTION	MEAS 1	PULSE PERIOD	REF 11	LINE FILTER	Set to letter code of filter in FLT TST slot
CONTROL	POSITION										
RCV LEVEL	-20										
FUNCTION	MEAS 1										
PULSE PERIOD	REF 11										
LINE FILTER	Set to letter code of filter in FLT TST slot										
22	Set the red vernier knob on the 315B REC LEVEL switch to the fully clockwise position.										
23	On the FLCU, set the POLARITY switch to 2.										
24	Set the 315B REC LEVEL control for an on-scale meter reading and note meter indication. Requirement: -21 to -31 dBm (59 to 69 dBm) Note: If the requirement is not met, replace the filter in FLT TST slot. If the requirement is still not met, replace the FLCU and repeat the procedures of this chart for the replacement FLCU.										
25	Set the POLARITY switch to 1. Requirement: The meter reading drops at least 50 dB from that of Step 24, eg, from -31 dBm to -81 dBm. Note: If the requirement is not met, replace the filter in FLT TST slot.										
26	If an 1114-type filter is installed in FLT TST slot, proceed to Step 28. If an 1115-type filter is installed, remove patch plug from the FLT TST IN-2 jack and insert it into the FLT TST IN-1 jack. Read 315B meter indication. Requirement: ± 1 dB from reading obtained in Step 24. Note: If the requirement is not met, replace the filter and repeat the tests. If the requirement is still failed, replace FLCU and repeat the applicable steps of this chart.										

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CHART 1 (Contd)

STEP

PROCEDURE

27 Set the POLARITY switch to 2.

Requirement: The meter reading drops at least 50 dB from that of Step 26, eg, from -31 dBm to -81 dBm.

Note: If the requirement is not met, replace the filter in FLT TST slot.

28 Remove the test connections. If a test termination was installed at the MDF in Step 7, remove the termination and restore the MDF to normal.

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CHART 2

ACTIVE FILTER (1114/1115-TYPE) PREINSTALLATION TESTS

The 1114/1115-type active FL filters must be tested at the FL panel prior to their installation in the apparatus cases. The filter is installed into the FLT TST slot on the FL panel and accepts test inputs at FLT TST IN-1 and 2 and has its output at FL LINE OUT. Figure 9 is a simplified diagram of the test circuitry of the FL panel.

APPARATUS:

1—Sierra 315B or 415A-2 T1 Span and Repeater Test Set (315B), or (415A), or J98725AD T1C/T1 Fault-Locating Set (25AD) (Section 103-494-106). See Note.

2—P3-Type Patch Cords, equipped with 310 plugs. (P3BH cords are recommended.)

Note: For this chart the 315B is used. Use the control settings of Table A if the 25AD is used.

STEP	PROCEDURE
	Prerequisite: The procedures of Chart 1 must be performed first to ensure proper operation of the FL panel.
1	Obtain the filters to be tested.
2	Set the POLARITY switch to 2.
3	Using the P3-type patch cords, connect the 315B as follows. Observe the lamps on FLCU. From: 315B FAULT LOC LINE IN jack To: FLCU FL LINE OUT jack Requirement: The READY lamp lights and the BUSY lamp is extinguished. Note 1: If the BUSY lamp is lighted, determine if FL procedures are being performed from another location using this FL line. If FL procedures are not being performed, replace the FLCU and perform the procedures of Chart 1. Note 2: The BUSY lamp may inhibit the READY lamp from lighting for several seconds.
4	Using a P3-type patch cord, connect the 315B GEN XMT jack to the FLCU FLT TST IN-2 jack (Fig. 10). Requirement: The FLT TST lamp lights.

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CHART 2 (Contd)

STEP	PROCEDURE								
	Note: If the requirement is not met, replace the FLCU and perform the procedures of Chart 1.								
5	Connect the 315B power cord to a 117-Vac utility outlet, and set the POWER/LAMP TEST switch to the POWER position. Requirement: The 315B POWER lamp lights.								
6	Insert the filter to be tested into the FLT TST slot of the FL panel.								
7	Set the 315B controls as follows: <table border="1"><thead><tr><th>CONTROL</th><th>POSITION</th></tr></thead><tbody><tr><td>FUNCTION</td><td>MEAS 1</td></tr><tr><td>PULSE PERIOD</td><td>REF 11</td></tr><tr><td>LINE FILTER</td><td>Set to letter code of filter in FLT TST slot</td></tr></tbody></table>	CONTROL	POSITION	FUNCTION	MEAS 1	PULSE PERIOD	REF 11	LINE FILTER	Set to letter code of filter in FLT TST slot
CONTROL	POSITION								
FUNCTION	MEAS 1								
PULSE PERIOD	REF 11								
LINE FILTER	Set to letter code of filter in FLT TST slot								
8	Set the red vernier knob on the 315B REC LEVEL switch to the fully clockwise position.								
9	Set the FLCU POLARITY switch to 2.								
10	Set the 315B REC LEVEL control for an on-scale meter reading and note the meter indication. Requirement: -21 to -31 dBm (59 to 69 dBrn) Note: If the requirement is not met, replace the filter and repeat this step.								
11	Set the POLARITY switch to 1 and note the meter indication. Requirement: The meter indication drops at least 50 dB from that of Step 10, eg, from -31 dBm to -81 dBm.								
12	If 1114-type filters are being tested, proceed to Step 17.								
13	For the 1115-type filters, remove the patch cord plug from the FLT TST IN-2 jack and insert it into the FLT TST IN-1 jack.								
14	Note the 315B meter indication. Requirement: ±1 dB from reading obtained in Step 10.								

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CHART 2 (Contd)

STEP

PROCEDURE

Note: If the requirement is not met, replace the filter in the FLT TST slot and repeat the procedures from Step 4.

15 Set the POLARITY switch to 2 and note the 315B meter indication.

Requirement: The meter indication drops at least 50 dB from that of Step 14, eg, from -31 dBm to -81 dBm.

Note: If the requirement is not met, replace the filter in the FLT TST slot and repeat the procedures from Step 4.

16 Remove the patch cord plug from the FLT TST IN-1 jack and insert it into the FLT TST IN-2.

17 If an 1114A or 1115A is being tested in the FLT TST slot, proceed to Step 21.

18 For the 1114B (1115B) through 1114M (1115M) filter codes, set the 315B LINE FILTER switch to the next lower filter code than the filter installed in the FLT TST slot (see note).

Note: The next lower code for an 1114B filter would be A, for an 1114C would be B, etc.

19 Adjust the 315B REC LEVEL control for an on-scale meter reading. Add the meter reading to the REC LEVEL switch setting.

Requirement: At least 27 dB less than the reading obtained in Step 10:

Note 1: -58 dBm is 27 dB less than -31 dBm.

Note 2: If the requirement is not met, replace the filter being tested and repeat the procedure from Step 4.

20 If an 1114M or 1115M filter is being tested in the FLT TST slot, proceed to Step 23.

21 For the 1114A (1115A) through 1114L (1115L) filter codes, set the 315B LINE FILTER switch to the next higher filter code than the filter installed in the FLT TST slot (see note).

Note: The next higher filter code for an 1115A filter would be B, for B would be C, etc.

22 Set the POLARITY switch to 2 and adjust the 315B REC LEVEL control for an on-scale meter reading. Read the meter indication and combine with the REC LEVEL switch setting.

Requirement: At least 27 dB less than reading obtained in Step 10.

Note: If the requirement is not met, replace the filter and repeat this procedure from Step 4.

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CHART 2 (Contd)

STEP	PROCEDURE
23	Remove the filter from the FLT TST slot. If more filters are to be tested, repeat this procedure from Step 6.
24	If all the filters have been tested, remove all the test equipment connections.

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CHART 3

FAULT-LOCATING CABLE PAIR TESTS

Note: Failure to meet the requirements of this chart indicates trouble on the FL cable pair. The trouble on this pair must be corrected or another pair selected for use before the pair can be approved for use in fault-locating SLC-96 digital lines. The tests in this chart are designed to ensure that proper installation (construction) has been achieved.

The following procedures require cooperation between COT and RT personnel.

APPARATUS:

- 1—KS-14510 Volt-Ohm-Milliammeter (VOM) or equivalent
- 1—262C Terminating Plug (900-ohm)
- 1—P3-Type Patch Cord

STEP	PROCEDURE
1	Obtain the required IFLT form (Fig. 3). Note: For some installations this form may be provided by engineering and contain engineering calculated data for use when performing the following tests. If calculated data is not available, the forms can be reproduced locally and the test results recorded for future reference.
2	Verify that the FL panel has been turned up per Chart 1. Ensure that no plug is installed in the FL panel FL LINE OUT jack.
3	Determine that the pairs associated with the FL system are available and ready for testing. Note: All outside plant work should be completed on the pairs used for fault-locating and the proper personnel notified before testing is begun. The FL filters should have been tested and installed.
4	At the MDF, if the FL pair cross-connections have been made, proceed to Step 7. If the cross-connections have not been made, proceed to Step 5.
5	At the MDF, use the VOM to measure the voltage between the T and R terminal to ground of the FL pair being tested. Requirement: 0 volts Note 1: Record the meter indication on the IFLT form in the space marked FOREIGN VOLTAGE T-GRD and R-GRD.

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CHART 3 (Contd)

STEP	PROCEDURE
	<p>Note 2: If the requirement is failed, notify outside plant personnel of the problem on the FL pair.</p>
6	<p>At the MDF, make the necessary cross-connections of the FL pair(s) as determined from office records. Ensure that T and R integrity is maintained in the FL pair.</p> <p>DC Tests (Resistance)</p>
7	<p>At the COT, remove the FLCU from the FL control panel.</p>
8	<p>Determine the test locations.</p> <p>Note: The tests will be conducted from the COT to the last RT associated with the far end of the FL pair. In installations that have branches on the FL pair (see Fig. 11), each branch will be tested separately. If the FL pair has branches to other locations, ensure that the FL pairs at those locations are terminated with 262C terminating plugs.</p> <p>Danger: The 467A electron tube (protector) may have up to 124 volts dc on the tube socket.</p>
9	<p>At the RT, remove the 467A electron tube from its socket (on the front of the 1A Power and Jack Panel) for the fault line that is to be tested (FL1 or FL2) (see Fig. 12). Remove the 262C terminating plug from the FL jack.</p>
10	<p>At the rear of the COT Fault-Locate Control Panel, connect the VOM to measure resistance between the T and R terminals of the associated FL LINE terminals on TS2.</p>
11	<p>At the RT, connect a temporary strap between the T and R of the protector tube socket associated with the FL under test (see Fig. 13).</p>
12	<p>At the COT, measure the loop resistance of the FL under test.</p> <p>Requirement: This reading should be within ± 20 percent of the specified resistance.</p> <p>Note: Record the meter indication on the IFLT form in the space marked PAIR MAKE-UP.</p>
13	<p>At the RT, remove the temporary strap that was installed in Step 11.</p>
14	<p>At the COT, use the VOM on the X 100 scale to measure the resistance between tip and ground and then the ring and ground of the FL pair.</p> <p>Requirement: Infinite resistance (open circuit). Indicate this reading on the IFLT form in the DC TESTS block, LEAKAGE RES, T-GRD and R-GRD.</p>

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CHART 3 (Contd)

STEP	PROCEDURE
15	<p>From the work print, determine if there is an intentional T and R reversal placed on the FL pair.</p> <p>Note: If 1114-type filters are being used and more than 12 filters are on the FL line, then a T and R reversal is made at some point on the FL pair to separate the filter groups. If 1115-type filters are used, a T and R reversal should not be present on the FL pair. Steps 16 through 18 check the T and R integrity of the FL pair.</p>
16	<p>At the RT, ground the tip side of the FL pair.</p> <p>Note: To ground the tip side of the line, one end of a test cord is connected to the T pin of the protector socket associated with the FL pair under test. The other end of the test cord is connected to ground.</p>
17	<p>At the COT, connect the VOM, on the X 100 scale, to measure the resistance between tip and ground of the FL pair.</p> <p>Requirement: If there is a T and R reversal on the FL pair, the meter indicates infinite resistance. If there is not a T and R reversal, the resistance should be less than that of Step 12.</p>
18	<p>Repeat Steps 16 and 17 for the ring side of the FL pair.</p> <p>Note: If there is an unintentional reversal in the FL pair, it must be corrected at the point of the reversal.</p>
19	<p>Remove the VOM at the COT and the ground (test cord) at the RT. Install a terminating plug into the RT FL jack (FL1 or FL2). Replace 467A protectors removed in Step 9.</p> <p>Note: If any requirement is not met, open the FL pair at the MDF and repeat the tests to isolate the trouble between the CO and the outside pair. If the trouble is in the CO, use office drawings and procedures to locate and correct the trouble. If the trouble is on the outside pair, refer to the proper work group and engineering for correction.</p>
20	<p>Repeat the DC TESTS on all branches of the FL line. When these tests are completed, ensure that a 262C terminating plug is installed in the FL jack of the last RT on each branch of the FL line.</p>

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CHART 4

NOISE TESTS

APPARATUS:

1—Sierra 315B or 415A-2 T1 Span and Repeater Test Set (315B), (or 415A) or J98725AD T1C/T1 Fault-Locating Set (25AD) (Section 103-494-106). See note.

1—J94003A (3A) or J94003C (3C) Noise Measuring Set (NMS) (Section 103-611-100 or 103-611-101).

2—P3-Type Patch Cords equipped with 310 plugs.

1—ED-3C841 LIU Test Cord (Fig. 19).

Note: The procedures of this section use the 315B. Use Table A to determine the corresponding settings for the 25AD.

STEP

PROCEDURE

- 1 Determine the following from office records:
 - (a) Determine the FL filter type (1114 or 1115) used on the FL line being tested.
 - (b) Determine the test locations. See note.
 - (c) Select a digital line (system) which is **not** in service but is monitored by the filter group (branch of fault line) selected. The digital line must be powered in accordance with Section 363-202-215. Check to determine that the proper line fuse and LIU plug-in are installed.
 - (d) Determine the FL LINE designation (1, 2, 3, 4, 5, or 6) on the FL panel that will access the filter group to be tested.
 - (e) Determine the FL panel POLARITY switch setting that will activate the filter group(s).

Note: The tests will be conducted from the COT to the last RT associated with the far end of the FL pair. In installations that have branches on the FL pair, each branch will be tested separately.

Broadband Noise Test

- 2 Verify that the FL pair is properly terminated at the RT with a 262C terminating plug (900 ohms).

Note: If the FL pair is bridged to more than one RT, verify that the FL pairs are properly terminated with 262C plugs (900-ohms) at each RT (Fig. 11).
- 3 At the COT, install the FLCU plug-in into the FL panel if not already installed.

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CHART 4 (Contd)

STEP	PROCEDURE
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4 Set the FL LINE switch to the number of the FL line being tested.

5 Connect the NMS IN jack to the FL panel FL LINE OUT jack.

6 Set the NMS controls as follows:

DBRN *to* 10

FUNCTION *to* NM900

DAMP/NORM *to* NORM

WTG *to* C Message (497A Network)

7 Measure the noise level on the FL pair.

Requirement: 16 dBrc or less. Record this reading on the IFLT form in the space marked NOISE BROADBAND.

Note 1: If the requirement is failed, perform the procedures of Chart 11.

Note 2: If the requirement is met, perform the NARROWBAND NOISE TESTS.

Narrowband Noise Tests Using the 315B

Caution: Connect the ED-3C841 LIU test cord to the jack panel before connecting the other end to the LIU plug-in unit. Remove connections in reverse order.

8 At the COT, using the LIU test cord, connect between an LIU location on the COT jack panel **first** and the LIU plug-in unit associated with the digital line to be tested.

9 At the COT, connect the 315B test set as follows (Fig. 14):

From: 315B GEN XMT jack

To: TRMTG LINE jack on the COT jack panel

From: 315B FAULT LOC LINE IN jack

To: FL Panel FL LINE OUT jack (remove NMS connection)

Monitoring headphone **To:** 315B PHONE jack

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CHART 4 (Contd)

STEP	PROCEDURE
	<p>Requirement: The READY lamp lights on the FL panel when a plug is inserted into the FL LINE OUT jack.</p> <p>Note: The BUSY lamp may inhibit the READY lamp from lighting for several seconds.</p>
10	<p>Connect the 315B power cord to a 117-Vac utility outlet, and set the POWER/LAMP TEST switch to the POWER position.</p> <p>Requirement: The 315B POWER lamp lights.</p>
11	<p>Set the 315B controls as follows:</p> <p style="padding-left: 40px;">FUNCTION <i>to</i> QRW GEN</p> <p style="padding-left: 40px;">NORM <i>to</i> NORM</p>
12	<p>Set the FL panel FL LINE switch to the required position as determined in Step 1(d).</p> <p>Note: The READY lamp may flicker when the FL LINE switch is repositioned.</p>
13	<p>If 1114-type filters are installed, set the FL panel POLARITY switch to 2 to activate the first filter group out from the COT.</p> <p>If 1115-type filters are installed, set the FL panel POLARITY switch to 1 to activate the first filter group out from the COT.</p>
14	<p>Set the 315B LINE FILTER switch to the first filter code provided (A) and adjust the 315B REC LEVEL control knob for an on-scale reading.</p> <p>Requirement: Less than -90 dBm (0 dBrn). Record the meter reading on the IFLT form in the column heading NARROWBAND NOISE for each FL filter code (A through M). If the requirement is not met, perform the procedures of Chart 11, and refer the results to engineering and supervision.</p> <p>Note: -92 dBm is less than -90 dBm.</p>
15	<p>Repeat Step 14 for all filter codes provided (A through M).</p>
16	<p>If 1114-type filters are installed and more than 12 filters are on the FL line, set the FL panel POLARITY switch to 1 to activate the second filter group. Repeat Step 14 for all filter codes in the second group.</p> <p>If 1115-type filters are installed, set the FL panel POLARITY switch to 2 to activate the filter group out from the RT.</p>

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CHART 4 (Contd)

STEP	PROCEDURE
17	Insert a KS-19531-L1 pin plug into the F END LP (Far End Loop) jack on the LIU plug-in unit associated with the digital line being used. This will initiate a digital line loopback at the RT or apply QRSS at the RT. Repeat Step 14 for all filter codes.
18	If the filters are 1115-type, proceed to Chart 5.
19	If the filters are 1114-type, continue to Step 20.
	Caution: Connect the ED-3C841 LIU test cord to the jack panel before connecting the other end to the LIU plug-in unit. Remove connections in reverse order.
20	At the RT, using the LIU test cord, connect between an LIU location on the RT jack panel <i>first</i> and the LIU plug-in unit associated with the digital line to be tested.
21	Using P3BH patch cords, connect the 315B as follows (Fig. 15): From: 315B FAULT LOC LINE IN jack To: FL Panel FL LINE OUT jack From: 315B GEN XMT jack To: TRMTG LINE jack on the RT jack panel Monitoring headphone To: 315B PHONE jack
22	Connect the 315B power cord to a 117-Vac utility outlet, and set the POWER/LAMP TEST switch to the POWER position. Requirement: The 315B POWER lamp lights.
23	Set the 315B controls as follows: FUNCTION <i>to</i> QRW GEN NORM <i>to</i> NORM
24	At the COT, ensure the FL panel FL LINE switch is set to the required position as determined in Step 1(d).
25	If more than 12 filters are installed on the FL line, ensure that the FL panel POLARITY switch is set to position 1 to activate the filters closest to the RT. If less than 12 filters are installed, set the POLARITY switch to position 2.

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CHART 4 (Contd)

STEP	PROCEDURE
26	<p>Set the 315B LINE FILTER switch to the first filter code (second filter, third, etc) out from the RT and adjust the 315B REC LEVEL control knob for an on-scale reading.</p> <p>Requirement: Less than -90 dBm (0 dBrn)</p> <p>Note 1: Record this reading on the IFLT form in the column heading NARROWBAND NOISE for each FL filter code provided (A through M). If the requirement is not met, refer the results to engineering and supervision.</p> <p>Note 2: A separate IFLT form may have to be used to record test results from the RT.</p>
27	<p>Repeat Step 26 for all filter codes provided (A through M).</p>
28	<p>If more than 12 filters are installed, set the FL panel POLARITY switch to position 2 to activate the filter group closest to the COT. Repeat Step 26 for all filter codes provided (A through M) in this group.</p>
29	<p>At the RT, remove test cord from the LIU plug-in unit <i>first</i> and then the RT jack panel, remove the patch cords connecting the 315B test set to the RT jack panel. Install a 262C terminating plug into the FL jack. Continue to Chart 6.</p>

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CHART 5

FAULT-LOCATING SIGNAL (TONE) LEVEL TESTS FOR 1115-TYPE FILTERS

Note: The purpose of this test is to ensure that the levels of the returned FL signals are within required limits, and to record them for future reference. This test also ensures that the output level of a deactivated filter is low enough not to interfere with other signals.

STEP	PROCEDURE
	<p>Prerequisite: The procedures of Chart 4 must have been performed prior to entering this chart. All of the repeaters must be set to the OS option.</p> <p>Caution: <i>Connect the ED-3C841 LIU test cord to the jack panel before connecting the other end to the LIU plug-in unit. Remove connections in reverse order.</i></p>
1	At the COT, using the LIU test cord, connect between an LIU location on the COT jack panel first and the LIU plug-in unit associated with the digital line to be tested.
2	Using P3-type patch cords, connect the 315B as follows: From: 315B GEN XMT jack To: TRMTG LINE jack on the COT jack panel From: 315B FAULT LOC LINE IN jack To: FLT LINE OUT jack on the Fault-Locate (FL) panel
3	Set the FL panel FL LINE switch to the designation (1, 2, 3, 4, 5, or 6) corresponding to the fault-locate line to be used.
4	At the COT, set the 315B controls as follows: FUNCTION to MEAS 1 PULSE PERIOD to REF 11 LINE FILTER to same as code letter of filter to be tested. Start with first filter out from COT.
5	Set the red vernier knob on the 315B REC LEVEL switch to the fully clockwise position.
6	Determine from office records (or the applicable FL panel designation card, Fig. 16) the required FL panel POLARITY switch position for fault-locating out from the COT. Note: POLARITY 1 will activate the 1115 filters transmitting out from the COT and POLARITY 2 will activate the 1115 filters in the receiving direction.

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CHART 5 (Contd)

STEP	PROCEDURE
7	Set the POLARITY switch to the POLARITY 1 position for fault-locating OUT from the COT.
8	<p>Set the 315B REC LEVEL control for an on-scale reading.</p> <p>Requirement 1: Greater than -74 dBm (16 dBm) and within ± 10 dB of that recorded for the previous filter. See Note 1. If engineering has provided calculated tone levels on the IFLT form, the meter indication shall be ± 6 dB of the value provided. Record the measured values on the IFLT form in the column labeled TONE LEVEL POLARITY 1 or 2 MEAS and on the applicable FL LINE label. Also, record the value on the fault-locating record (FLR) form in the space marked TRANSMISSION TEST MEAS 1.</p> <p>Note 1: -72 dBm is greater than -74 dBm.</p> <p>Requirement 2: The fault-locating audio tone can be clearly heard at the monitoring headphone.</p> <p>Note 2: Failure to meet these requirements may be caused by one or more of the following:</p> <ul style="list-style-type: none">(a) Test equipment or connections faulty.(b) Filter missing, defective, or not connected to the FL pair.(c) Defective repeater.(d) Defective apparatus case FL filter switch (located behind, and operated by, a plugged-in FL-filter).(e) FL pair defective.(f) Digital line cable trouble.(g) Tip and Ring reversal. At the point in which no fault tones are received, set POLARITY switch to other polarity. If fault tones are now received, the pair is reversed in the line section ahead (closer to COT) of this filter location.(h) Check for proper repeater options (OS).
9	Repeat Step 8 for all filter codes (A through M) installed.
10	At the COT, return the 315B LINE FILTER switch to the letter code of the first filter out from the RT.
11	Insert a KS-19531-L1 pin plug into the F END LP (Far End Loop) jack on the LIU plug-in unit associated with the digital line being used. This will loop the digital line back at the RT.

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CHART 5 (Contd)

STEP	PROCEDURE
12	<p>At the COT, set the FL panel POLARITY switch to the POLARITY 2 position (for fault-locating transmission from the RT) and set the 315B REC LEVEL control for an on-scale reading. See Note 1.</p> <p>Requirement: The same as that recorded in Step 8.</p> <p>Note 1: POLARITY 2 will activate the filters out from the RT.</p> <p>Note 2: If the requirements in Step 8 were <i>not</i> met, and the meter reading now indicates greater than -74 dBm (16 dBm), a tip and ring reversal exists in the FL pair between the filter location under test and the preceding filter. This <i>unintentional</i> reversal <i>must</i> be corrected at the <i>point</i> of the reversal. Then repeat this procedure from Step 7.</p>
13	<p>Repeat Steps 10, 11, and 12 for all filter codes (A through M) installed.</p> <p>Note: Record the measured values on the IFLT form in the column labeled TONE LEVEL POLARITY 1 or 2 MEAS. Also, record this value on the FLR form in the space marked TRANSMISSION TEST MEAS 1. If the requirement is not met, see Note 2 in Step 8.</p>
14	<p>If the FL pair being tested has branches to other locations, repeat the tests of Charts 4 and 5 on all branches.</p>
15	<p>When the tests of this section have been completed, perform the fault-locating procedures of Section 363-202-516.</p> <p>Note: Fault-locating records must be kept for all SLC-96 systems and FL pairs for future reference and trouble analysis. The test connections made in this chart will be the same as for the procedures in Section 363-202-516.</p>

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CHART 6

FAULT-LOCATING SIGNAL (TONE) LEVEL TESTS FOR 1114-TYPE FILTERS

Note: The purpose of this test is to ensure that the levels of the returned FL signals are within required limits, and to record them for future reference. This test also ensures that the output level of a deactivated filter is low enough not to interfere with other signals and that there are no unauthorized T and R reversals on the FL pair.

STEP

PROCEDURE

Prerequisite: The procedures of Chart 4 must have been performed prior to entering this chart. All of the repeaters must be set to the STD option.

1 Determine from office records or work prints the location of the authorized T and R reversal (if required) on the FL pair. If no T and R reversal is required (12 or less filters), proceed to Step 3.

2 At the last apparatus case **out from COT before** the authorized T and R reversal, terminate the repeater output of the digital line being used for testing.

Note: To terminate the repeater output, remove the correct repeater from its slot and insert it into the J98725AB set or equivalent. Insert the correct probe of the 25AB into the repeater slot and terminate the output with the 100 Ω TERM/LINE switch (Fig. 17).

Caution: **Connect the ED-3C841 LIU test cord to the jack panel before connecting the other end to the LIU plug-in unit. Remove connections in reverse order.**

3 At the COT, using the LIU test cord, connect between an LIU location on the COT jack panel **first** and the LIU plug-in unit associated with the digital line to be tested.

4 At the COT, ensure the 315B is connected as follows (Fig. 14):

From: 315B GEN XMT jack

To: TRMTG LINE jack on the COT jack panel

From: 315B FAULT LOC LINE IN jack

To: FL Panel FL LINE OUT jack

5 Ensure the 315B controls are set as follows:

FUNCTION **to** MEAS 1

PULSE PERIOD **to** REF 11

LINE FILTER **to** same as code letter of filter to be tested. Start with first filter in a group out from COT.

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CHART 6 (Contd)

STEP

PROCEDURE

- 6 Set the red vernier knob on the 315B REC LEVEL switch to the fully clockwise position.
- 7 Determine from the applicable FL panel designation card (Fig. 16) or office records, the POLARITY switch position to activate the filter selected for test.
- Note:** POLARITY 2 will activate the 1114 filter group closest to the COT and POLARITY 1 will activate the filter group beyond the **authorized** T and R reversal.
- 8 Set the POLARITY switch to the correct position to activate the filter selected for test.
- 9 Set the 315B REC LEVEL control for an on-scale reading. Record the measured values on the IFLT form in the column labeled TONE LEVEL POLARITY 1 or 2 MEAS and on the applicable FL panel designation card (Fig. 16). Also, record this value on the FLR form in the space marked TRANSMISSION TEST MEAS 1 (Fig. 4).
- Requirement 1:** Greater than -74 dBm (16 dBrn) and within ± 10 dB of that recorded for the previous filter. See note. If engineering has provided calculated tone levels on the IFLT form, the meter indication shall be ± 6 dB of the value provided.
- Note 1:** -72 dBm is greater than -74 dBm. The meter indication from the filter at the terminated repeater will be approximately 2 dB below normal due to the loading effect of the transformer in the 25AB.
- Requirement 2:** The audio tone can be clearly heard at the monitoring headphone.
- Note 2:** If the requirement of Step 9 is **not** met, change the POLARITY switch to the opposite polarity. If the tone level now meets the requirement, an unintentional tip and ring reversal exists in the fault line between the filter under test and the preceding filter. This **unintentional** reversal **must** be corrected at the **point** of the reversal. Then repeat this procedure from Step 9.
- Note 3:** Failure to meet these requirements may be caused by one or more of the following:
- Test equipment or connections faulty
 - Filter missing, defective, or not connected to the FL pair
 - Defective repeater
 - Defective apparatus case FL filter switch (located behind and operated by, a plugged-in FL filter)
 - FL pair defective or an unauthorized tip and ring reversal

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CHART 6 (Contd)

STEP	PROCEDURE
	(f) Digital line cable trouble
	(g) Tip and Ring reversal
	(h) Check for proper repeater options (STD).
10	On the FLCU, set the POLARITY switch to deactivate the selected filter (change polarity).
11	Set the 315B REC LEVEL control for an on-scale reading. Requirement: The meter indication drops at least 30 dB from that of Step 8 (eg, from -40 dBm to -70 dBm). Note: If the requirement is not met, see Note 3 in Step 9.
12	If all filters in this group have not been tested, set the 315B LINE FILTER switch to the next filter out (second filter, third, etc) and repeat Steps 8 through 11. If no unauthorized T and R reversal is on the FL pair, proceed to Step 18 after all filters have been tested. Note: Any trouble found in the first filter group should be cleared before testing the second filter group.
13	At the terminated repeater location, remove the 25AB and restore the repeater to its normal operating condition.
14	At the FL panel, ensure the POLARITY switch is set to activate the filters between the authorized T and R reversal and the RT.
15	Set the 315B LINE FILTER switch to the code letter of the filter to be tested and repeat Step 9 for each filter, in order, from the authorized T and R reversal to the RT.
16	At the last apparatus case out from the RT before the authorized T and R reversal, terminate the repeater output of the digital line being used for testing. See note in Step 2. Caution: Connect the ED-3C841 LIU test cord to the jack panel before connecting the other end to the LIU plug-in unit. Remove connections in reverse order.
17	At the RT, using the LIU test cord, connect between an LIU location on the RT jack panel first and the LIU plug-in unit associated with the digital line to be tested.
18	Using P3-type patch cords, connect the 315B as follows (Fig. 15): From: 315B GEN XMT jack

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CHART 6 (Contd)

STEP

PROCEDURE

To: RT jack panel TRANSMITTING LINE jack

From: 315B FAULT LOC LINE IN jack

To: FL() jack on RT jack panel. () = FL1 or FL2

Connect the monitoring headphone to the 315B PHONE jack.

Connect the 315B power cord to the 117-Vac utility outlet located at the RT, and place the POWER/LAMP TEST switch to the POWER position.

Requirement: The 315B POWER lamp lights.

19 At the COT, remove all patch cords from the FL panel.

20 At the RT, set the 315B controls as follows:

FUNCTION *to* MEAS 1

PULSE PERIOD *to* REF 11

LINE FILTER *to* same as code letter of filter to be tested. Start with filter closest to RT.

21 Set the red vernier knob on the 315B REC LEVEL switch to the fully clockwise position.

22 At the COT, ensure the FLCU POLARITY switch is set to the position to activate the group of filters between the authorized T and R reversal and the RT. If no T and R reversal is required, set the POLARITY switch to the same as in Steps 7 and 8 to activate the filters being tested. Insert a 262C terminating plug into the FL LINE OUT jack on the fault locate panel.

23 At the RT, set the 315B LINE FILTER switch to the code letter of the filter to be tested from the RT.

24 Set the 315B REC LEVEL control for an on-scale reading.

Requirement 1: Greater than -74 dBm (16 dBrn). See Notes 2 and 4. If engineering has provided calculated tone levels on the IFLT form, the meter indication shall be ± 6 dB of value provided.

Note 1: -72 dBm is greater than -74 dBm.

Requirement 2: The audio tone can be clearly heard at the monitoring headphone.

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CHART 6 (Contd)

STEP	PROCEDURE
	<p>Note 2: If the requirements in Step 24 were <i>not</i> met, and the meter reading now indicates greater than -74 dBm (16 dBm), a tip and ring reversal exists in the FL pair between the filter location under test and the preceding filter. This <i>unintentional</i> reversal <i>must</i> be corrected at the <i>point</i> of the reversal. Then repeat this procedure from Step 24.</p> <p>Note 3: Record the measured values on the IFLT form (Fig. 3) in the column labeled TONE LEVEL POLARITY 1 or 2 MEAS and on the applicable FL LINE label, if provided. Also record this value on the FLR form in the space marked TRANSMISSION TEST MEAS 1.</p> <p>Note 4: Failure to meet these requirements may be caused by one or more of the following:</p> <ul style="list-style-type: none">(a) Test equipment or connections faulty(b) Defective repeater(c) Defective apparatus case wiring(d) Digital line cable trouble(e) Tip and Ring reversal(f) Check for proper repeater options (STD).
25	On the FLCU, set the POLARITY switch to deactivate the selected filter.
26	Set the 315B REC LEVEL control for an on-scale reading. Requirement: The meter indication drops at least 30 dB from that of Step 24 (eg, from -40 dBm to -70 dBm). Note: If the requirement is not met, see Notes 2 and 4 in Step 24.
27	If all filters in this group have not been tested, set the 315B LINE FILTER switch to the next filter out from the RT (second filter, third, etc) and repeat Steps 24 through 26. If <i>no</i> T and R reversal is on the FL pair, proceed to Step 31.
28	At the terminated repeater location, remove the 25AB and restore the repeater to its normal operating condition.
29	At the COT, set the FLCU POLARITY switch to activate the group of filters between the COT and the authorized T and R reversal.
30	At the RT, repeat Step 24 for all filters between the COT and the authorized T and R reversal.

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SLC-96 Fault Locating and Order Wire Panel Installation – Part 1

Turnup & Tests

SECTION 363-202-216

CHART 6 (Contd)

STEP	PROCEDURE
31	If the FL pair being tested has branches to other locations, repeat the tests of this chart on all branches.
32	When the tests of this chart have been completed, perform the fault-locating procedures of Section 363-202-516.
Note: Fault-Locating Records must be kept for all SLC-96 systems and FL pairs for future reference and trouble analysis. The test connections made in this chart will be the same for the procedures in Section 363-202-516.	

SLC-96 Fault Locating and Order Wire Panel Installation – Part 1

Turnup & Tests

ISS 2, SECTION 363-202-216

B. Order Wire

CHART 7

ORDER WIRE PANEL TURNUP

This chart gives procedures for turning up the order-wire portion of the J1C141AC FL and OW panel or for making an addition to an existing FL and OW panel. This involves option selections, cross-connections, fusing, and operation tests. Fig. 18 shows the order-wire plug-ins.

The OW and TEL SET plug-in [ED-3C556-() GP3] is normally provided in the SLC-96 FL and OW panel for communicating over an order wire between the COT and RT(s) and each intermediate repeater location. However, if the SLC-96 system follows the same route as another system which is already served by an order wire, both systems may share this order wire. The SLC-96 COT FL and OW panel will in this case, require a MULTIPLE CIRCUIT plug-in unit [ED-3C557-() GP1] with office wiring between it and the existing OW panel (equipped with an OW and TEL SET plug-in).

APPARATUS:

- 1—KS-14510 Volt-Ohm-Milliammeter (VOM) or equivalent
- 1—1014A Handset Equipped with 2W37A Cord or 1013A Handset
- 2—52-Type Headsets (Fig. 20)

STEP

PROCEDURE

Preparation

- 1 Determine from the office records the OW PNL position(s) to be equipped and the code(s) of the OW plug-in(s) required.
- 2 Determine that the required order-wire lines are connected to the FL and OW PNL. Also determine that the required lines are ready for powering or service.
- 3 Remove the OW/FL PNL fuses from the fuse and alarm panel.
- 4 Determine the required OW cross-connections, if any. Check the points to be cross-connected for presence of voltage; clear voltage if present. Make the required cross-connections.

Option Selection

- 5a For OW & TEL SET plug-ins only, determine from the office records the OW power required for the OW PNL. Option W is for 48 volts, and option U is for 96 volts.
- 5b For MULTIPLE CIRCUIT plug-ins, go to Step 9.

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SLC-96 Fault Locating and Order Wire Panel Installation – Part 1

Turnup & Tests

SECTION 363-202-216

CHART 7 (Contd)

STEP	PROCEDURE
6a	For 48-volt OW powering (option W normally provided), ensure that a strap is in place on TS3 between terminals 1 and 2, at the rear of the FL and OW panel.
6b	For 96-volt OW powering (option U), remove strap between terminals 1 and 2, on TS3 and place a strap between terminals 1 and 3, at the rear of the FL and OW panel.
7	Determine if option V for office service alarms not accepting loop closures is needed.
8a	If option V is necessary, install straps between the TS1-16, -18, and -19 terminals at rear of the FL and OW PNL.
8b	If option V is not needed, ensure that no straps are in place between the TS1-16, -18, and -19 terminals at the rear of the FL and OW PNL.
	Plug-In Installation
9	Install the plug-in in the proper FL and OW PNL slot (J1).
	Fusing
10	Insert type 70B (2.0 amp) fuses into the OW/FL PNL fuse block(s) on the fuse and alarm panel. Requirement: Fuses must not operate (blow). If the requirement is not met, refer to the OW fusing trouble chart (Chart 12).
11a	Use the 60-volt dc scale on the VOM to measure the OW PNL input voltage between the TS1-20 (-48V) and -19 (GRD) terminals. Requirement: Normal voltage range, 45 to 50 volts.
11b	For 96-volt powering, use the 300-volt dc scale on the VOM to measure the OW PNL input voltage between the TS2-20 (+130 volts) and the TS2-18 (GRD) terminals. Requirement: Normal voltage range, 125 to 135 volts. Note: The 96-volt OW powering is developed from +130 volts and ground by the use of diodes CR1 and CR2 in the +130 volt lead (see SD-3C423-01).
12	Applicable steps for testing each plug-in are listed below. See note.

GBPPR Remote Telephone Surveillance Experiments

The Beginning

The summer of 2010 saw yet another HOPE "hacker" conference take place. *Yawn*. The hubbub this year was surrounding the WikiLeaks website. Apparently, after milking Kevin Mitnick for 15 years, Eric Corley has yet *another* project to scam money out of his little kiddie following. In order to whip the teenage boys into a frenzy, Eric Corley released fraudulent information that the filthy Ashkenazi Julian Assange was "wanted" by the boogeyman and is in imminent danger. While anyone with an I.Q. over 40 knows WikiLeaks is just a scam for releasing their pro-Zionist/Marxist/Globalist propaganda, there still appears to be some people within the "hacker" community that have fallen for this blatant disinformation. Let's start from the beginning:

Eric Corley (Emmanuel Goldstein): Rich, gay pedophile who exploits the hacker community to further his own interests. Editor-in-Chief of *\$2600 Magazine* who also operates a broadcast radio program about how "suppressed" his life is – from New York City! Really! He tries to play the "non-profit" angle, but WBAI receives funding from several of George Soros' anti-West, anti-U.S., "progressive" front organizations. Corley often falls for fake or planted information, then attacks anyone who doesn't agree with him and will censor (or edit) anyone pointing this out.

Mark Tabry (RedHackt): One of Corley's boy toys and now Associate Editor at *\$2600 Magazine*. Wants to destroy the Electoral College – the foundation of our republic – just because a bunch of clueless New York'ers living in filth can't admit the fact they are wrong.

Ed Cummings (Bernie S. [Spindel]): Probably the only one associated with *\$2600 Magazine* who has a clue, but is an asshole in real-life. Helps to ban people from the HOPE conferences who expose Eric Corley's little "secrets." Spouted pro-Obama propaganda from a "non-profit" radio station, but that's not his worst crime. This is the guy who posts crap all the time on James Atkinson's TSCM mailing list!

Steve Rombom (Steve Rambam): Loony JDL domestic terrorist who once threatened a 14-year-old boy. Routinely gives speeches at the HOPE conferences and is also believed to be a pedophile. He's a private detective who scares people that there are Nazis out to get 'em, but ignores all those Jewish Bolshevik/Marxist/Communist murderers and war criminals.

Richard Osband (Cheshire Catalyst): Former editor of the *YIPL/TAP* newsletter, which was probably the first true hacker magazine. Doesn't want you to know his bat-shit insane *YIPL/TAP* Jew buddies Abbie Hoffman and Ira Einhorn helped murder Holly Maddux in 1977.

Jennifer Grannick: Rich, loony lawyer (and Democrat) at the EFF who screams about "rights & privacy" but doesn't want people to show any valid identification to vote! Security, apparently, is only good for EFF offices and this kike cunt's bank account. Think about this one for a minute... *Hint:* She wants illegal aliens to be able to vote as genetically inferior and low-I.Q. people tend to support Democrats. She doesn't care about *your* rights – she wants power.

And that's just to name a few! I could go on and on... The hacker community, which once consisted of the brightest minds on the planet, now mostly consists of a bunch of sheep, charlatans, and snake oil peddlers. Thankfully, the "election" of O-bummer has brought about the most corrupt, and just plain disastrous, presidential administration in U.S. history. This, combined with the population's dissatisfaction with the overwhelmingly Jewish media and the rise of *true* grassroots Tea Party movements, hopefully means one thing. Are Americans finally starting to see the big picture?

To understand where all these nutcases are coming from, you'll have to study the "progressive" ideology from the early 1900s and the anti-Western, anti-White "political correctness" or "cultural Marxism" teachings at the Frankfurt School in Germany and Columbia University in the U.S. today. Yes, the "progressive" movement consists of nothing more than rehashed Jewish Marxist and Bolshevik propaganda from over 100 years ago! They can't say this outright, as that would never get you elected in the U.S. or other Western countries. Progressives fundamentally believe that you're too stupid to make your own decisions and that only government can make the correct choices. For example, progressives won't come right out and ban books or speech, they'll just try to shut you down for expounding "hate speech" or for not being "politically correct." They'll also use things like "diversity" and "multiculturalism" in an effort to force their one-party dictatorship onto you. You'll see this style of brainwashing in our public schools today as they teach homosexuality and living off welfare are O.K., while being a hard-working farmer, hunter, or business man is evil.

There is a great book to counter these types of brain-dead liberals. It's called *The Decline of the Progressive Movement in Wisconsin 1890-1920* by Herbert F. Margulies. The best thing about his book is that it was written in 1968! I guess "progressive" really means "regressive" in newspeak. Just don't plan on hearing any of this from your college professors or on MSNBC!



Wake up White man! *Your* ancestors fought tyranny – *theirs* created it. As these assholes slowly lose power, their attacks against *you* will only increase. Remember, people like Rahm Emanuel's daddy murdered the innocent when he helped blow up the King David Hotel in the name of Jewish supremacism. They won't think twice of killing you, or your entire family, in order to stay in power. Just try to walk through Democrat-run Chicago, Detroit, Milwaukee, or New York City at night if you don't believe me... Fighting this tribe of parasites and nation wreckers will require determination – and a whole new form of open-source unconventional warfare. Described next will be one type of remote audio surveillance which is ripe for further exploration.

Overview

It is possible to remotely intercept telephone audio by flooding the speaker/microphone circuitry in a target phone with microwave energy. The electronics inside the telephone modulate this microwave energy and the reflected microwave signal will contain this new modulated signal. The equipment to begin experiments with this type of surveillance can be found in Decatur RM-715 or MV-715 Range Master X-band police radars from the late 1970s. One reason for using this older model of Doppler radar is the fact they use a pseudo-quadrature receiver architecture to increase the radar's performance. Another reason is that Range Master radars utilize a M/A-Com MA86651 10.525 GHz Gunn diode oscillator which has a RF output power of +16 dBm (40 mW) into a circular horn antenna with approximately 20 dB of gain and 3 dB beamwidth of around 15°. The Effective Radiated Power (ERP) of this radar gun is around +36 dBm or 4 watts. This is fairly high RF power for a 10 GHz operation, when you compare it to those wimpy little 5 mW Gunn oscillators which are common today. Now you can see why they created RF exposure laws...

For just experimenting, the receive audio can be taken straight off the Range Master's speaker. You may wish to pass the audio through further band-pass or high-pass filtering to remove the significant amount of low-frequency "rumble" which will be on the received audio signal.

Operation

Using a device of this type in a remote surveillance operation can be quite tricky. The horn antenna's beamwidth will be very narrow and you'll need to be able to position the antenna in any direction as the "sweet spot" for receiving audio from a telephone will be quite small. The idea is to aim at the circuitry which contains an audio amplifier or microphone pre-amplifier in the phone. The problem is that every phone will be different. This is where experimenting will be the key.

Older phones with long component leads, wires, and PC board traces are ideal as they all act as little antennas. Really old phones with only passive carbon microphones and speakers are actually quite immune to this type of RF flooding attack. Something to keep in mind... Private Branch Exchange (PBX) systems which convert the audio signal into a digital stream can also be intercepted, as long as you can intercept the audio signal before it reaches the analog-to-digital conversion stage. There are even some older PBX systems which pass audio signals while the phone is still on hook! On systems like this, attacking the PBX's backplane circuitry could provide audio interception throughout an entire building.

Note that not just telephones are vulnerable to this type of attack. Pretty much *anything* containing an electronic audio amplifier or microphone could potentially be intercepted. This technique is also a good way to intercept encrypted two-way radio or digital cellular phone transmissions, as long as your target is fairly stationary or easily followed. It's even possible to intercept a key exchange between two cryptographic devices using a RF flooding technique like this, but pulling the actual key out the noise is a project for someone else...

To extend the operating range of this device, you'll need to increase the output RF power, narrow the antenna's beamwidth, and lower the phase noise of any oscillator stages. A common 18-inch DSS satellite receiving dish has a gain of around 30 dB at 10 GHz and 3 dB beamwidth of 5°. Refer to *GBPPR Zine Issue #63* for more info on how to modify these satellite dishes.

An easy way to lower the phase noise of a Gunn oscillator is to replace the stock regulated power supply with a modern lower-noise equivalent. The M/A-Com MA8665 Gunn diode oscillator in the Range Master uses a LM723 voltage regulator to provide the +10 VDC Gunn diode bias and there are newer voltage regulators which can be dropped in.

Another method to improve overall performance is to modulate the DC bias on the Gunn diode with an ultrasonic carrier so the received signal is occupying a "sideband" of this modulating signal. This gets you away from the close-in phase noise of the main oscillator carrier and allows the received signal to be demodulated using a higher-performance synchronous detector.

You can see a real-world application of this technique in William McGrath's U.S. Patent Application 2005/0220310 for "Technique and Device for Through-the-Wall Audio Surveillance." His device modulates the transmitting microwave signal with a 1 kHz tone and the received signal is further downconverted and AM demodulated using a diode detector. This audio signal then passes through a lock-in amplifier which tracks the phase of the input 1 kHz tone and tries to follow that same tone on the received signal. This allows one to extract a signal which is down significantly (100 dB or more) in the noise. This method of remote audio surveillance by using microwaves is a little more complicated than just using a stock radar gun, but should be doable by the dedicated experimenter. Government-level microwave surveillance devices of this type (supposedly – *hehe...*) use a special range-gating modulation which allows one to tune in on a particular range "cell" in which to receive the remote audio. This helps to eliminate any background clutter or noise and the final result will let you listen to a human heartbeat at 300 feet. Still trying to figure this device out, though...

Pictures & Construction Notes

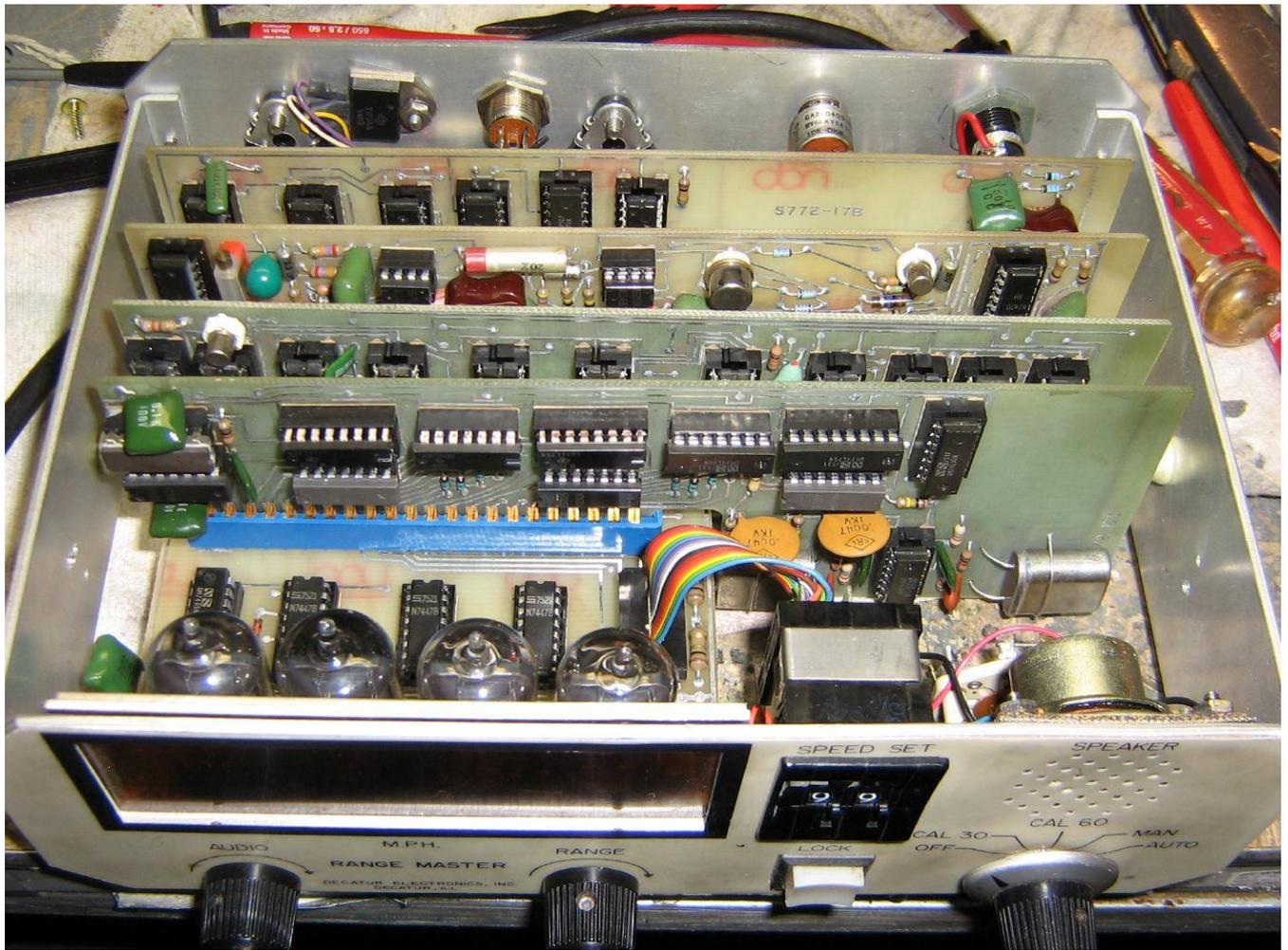


A stock Decatur RM-715 Range Master X-band (10.525 GHz) Doppler radar used for this experiment.



A stock Decatur MV-715 Range Master X-band (10.525 GHz) Doppler radar will also work.

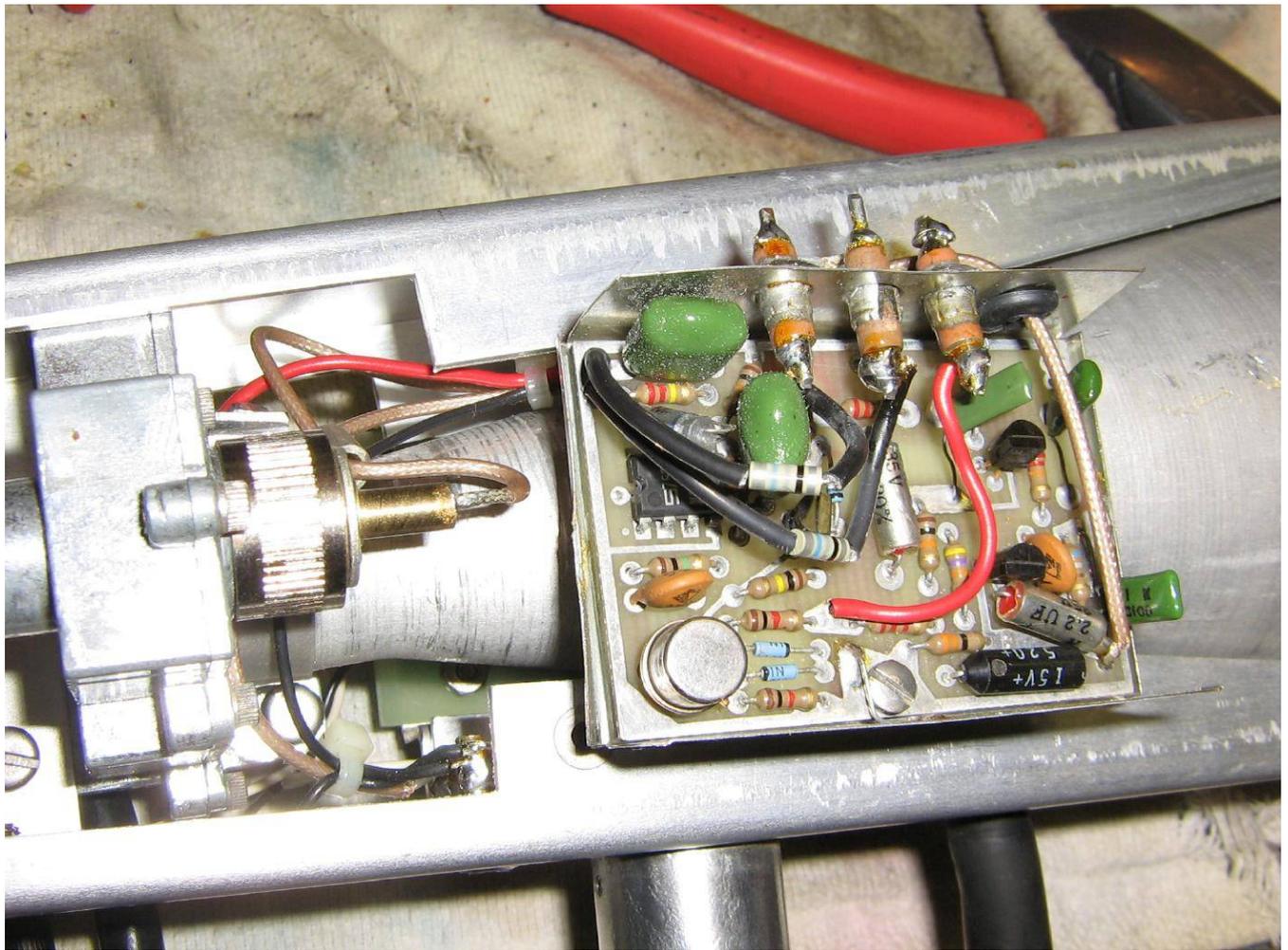
Note that K-band (24 GHz) radars give fairly poor performance when used in this type of application. This is most likely due to the poor penetration of the higher operating frequency. There are probably certain applications where a 24 GHz signal will be ideal, as it's possible to get the 3 dB beamwidth down to 2° or lower.



Overview of the display and control electronics inside a Decatur RM-715 Range Master radar.

Yes, those are Nixie tubes for the speed display!

The main counter and display circuitry is based around standard 7400-series logic and most are socketed for easy repair. If you find a "dead" Range Master radar, you can most likely get it operating again by reseating all the logic chips in their sockets.

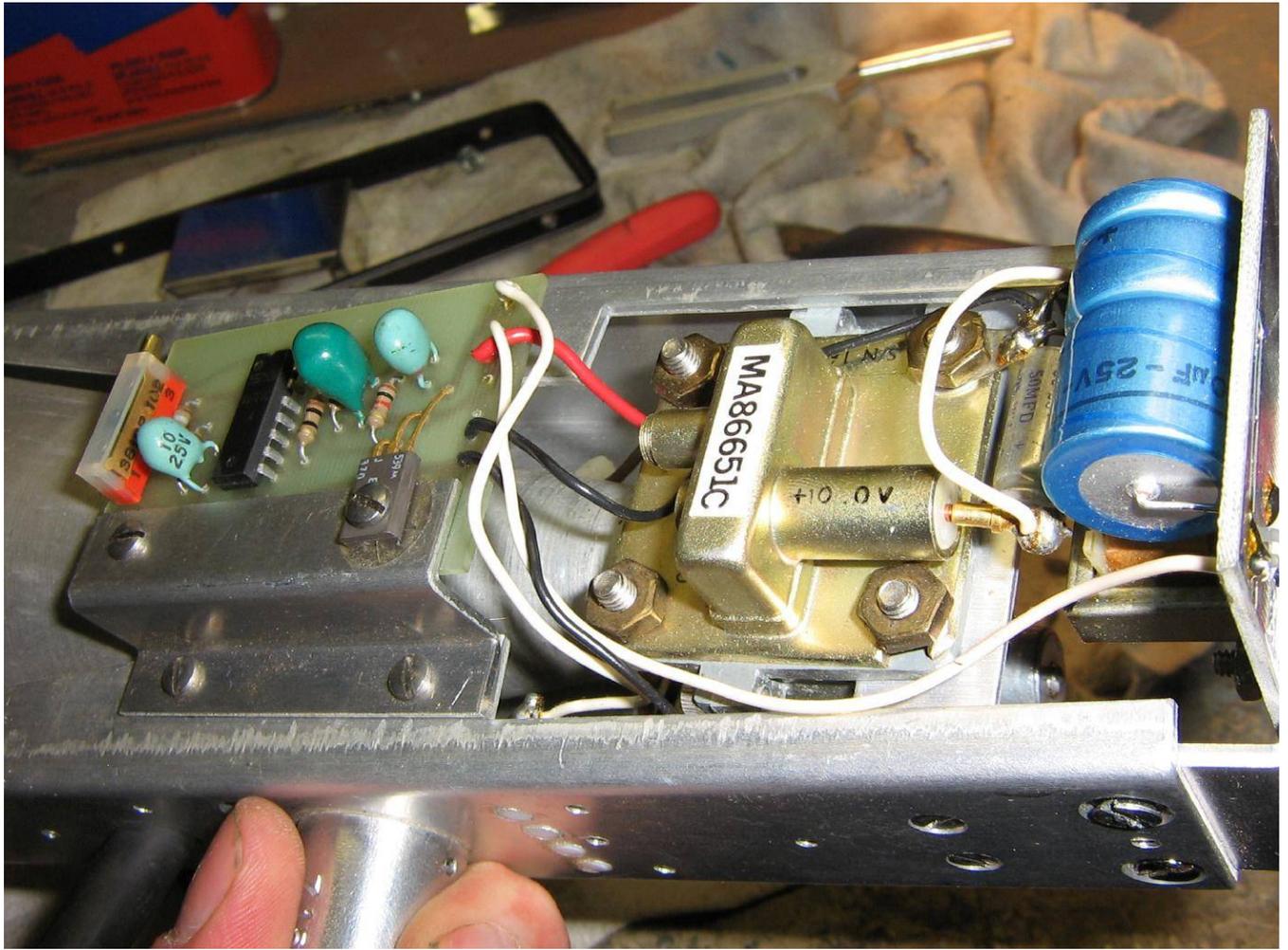


Overview of the radar's 1N23B mixer diode assembly and post-mixer amplifier circuits.

A 1N23B point-contact diode is under the large screw cap on the left.

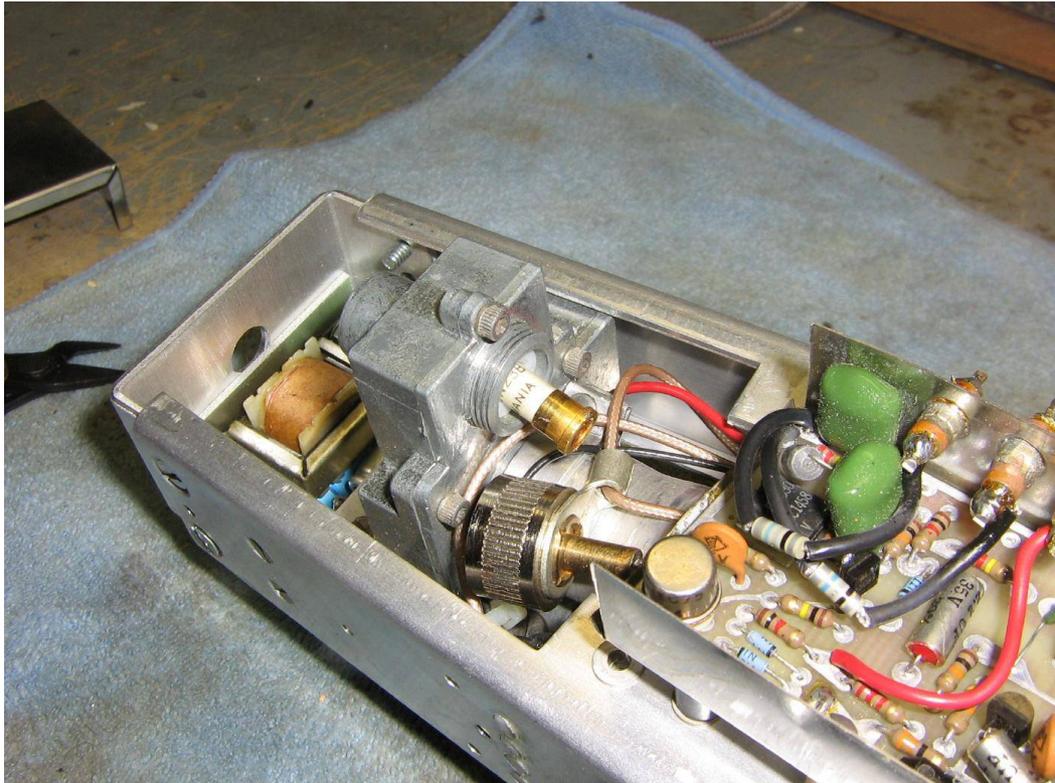
The post-mixer amplifier appears to just be a common-emitter (low-impedance) 2N5089 transistor and LM358 op-amp with a gain cell to act as some type of level control.

Needless to say, this amplifier circuit is ripe for experimentation and updating for higher gain and lower noise.



Overview of the M/A-Com MA86651 10.525 GHz Gunn diode assembly and its LM723-based +10 VDC voltage regulator.

This is just a Gunn diode mount and doesn't contain a varactor diode.



Replacing the 1N23B mixer diode with one with a lower noise figure.

1N23-series diodes are classified by their noise figure. Noise figure is a measure of the degradation to a system's overall Signal-to-Noise Ratio (SNR) caused by actual components in the RF signal chain. Simply put, the lower the noise figure, the better.

An easy trick to *slightly* improve the range and/or signal quality of a microwave surveillance device of this type is to replace the stock 1N23B with one having a better noise figure. The noise figure for a 1N23B diode is usually around 10 dB. I replaced it with a 1N23D diode, having a noise figure of around 8.5 dB. 1N23C (9.0 dB), 1N23E (7.5 dB), 1N23F (7.0 dB), 1N23G (6.5 dB), and 1N23H (6.0 dB) all have respective lower noise figures, but these diodes are getting to be difficult to find. You'll have to scrounge hamfests for older X-band microwave receiving converters for a good source of 1N23-series diodes.

Note that 1N21-series diodes are only designed for operation up to around 3 GHz.



1N23D Point-Contact Diode



Intercepting the audio from an old telephone test set connected to a regular POTS line.

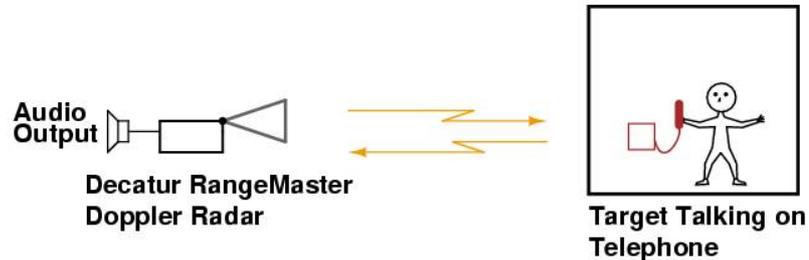
The sample audio is straight from the Range Master's speaker with no additional filtering.

Audio is the dial tone then the standard *"If you'd like to make a call..."* message. After that is the off-hook alert tone, which really gave good interception results, but that's because the tone leaves the central office at a fairly high power level.

Note that the range of this test was only a few feet. Range can be significantly increased by taking the time to aim at just the right spot in the target phone. You can also use metal ducting, and other structures like hallways, as a makeshift waveguide to direct your illuminating RF signal.

There will be several short videos containing intercepted audio samples at the following URLs and on the GBPPR YouTube channel at [youtube.com/GBPPR2](https://www.youtube.com/GBPPR2) – provided they are not deleted or marked "offensive" by you-know-who:

1. http://zine.gbppr.org/GBPPR_Tele_Surv_Audio-1.wmv
2. http://zine.gbppr.org/GBPPR_Tele_Surv_Audio-2.wmv





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 McGrath (43) **Pub. Date: Oct. 6, 2005**

(54) **TECHNIQUE AND DEVICE FOR THROUGH-THE-WALL AUDIO SURVEILLANCE**

Publication Classification

(51) **Int. Cl.⁷** **H04R 29/00**
 (52) **U.S. Cl.** **381/56**

(76) **Inventor: William R. McGrath, Monrovia, CA (US)**

(57) **ABSTRACT**

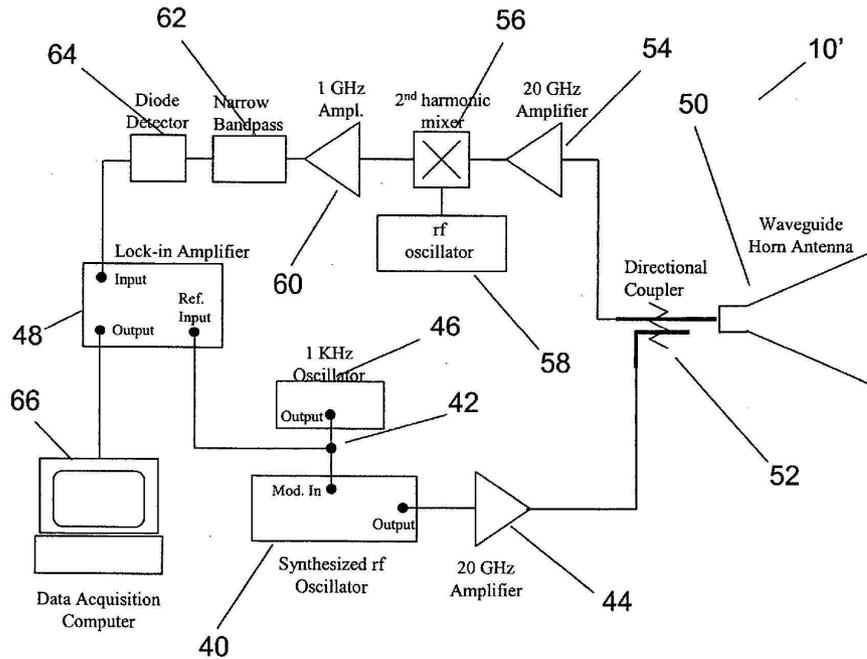
Correspondence Address:
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PO BOX 7068
PASADENA, CA 91109-7068 (US)

Systems and methods are disclosed for detecting audible sound and/or the vibration of objects. Embodiments of the present invention are able to detect sound and other vibrations through barriers. One embodiment of the invention includes an RF transmitter configured to generate an RF signal having a frequency of at least 100 MHz and an unmodulated amplitude, an RF receiver configured to receive a reflected RF signal comprising an RF carrier having the same frequency as the generated RF signal that is amplitude modulated by an information signal and a signal processor configured to extract audio frequency information from the amplitude of the reflected RF signal.

(21) **Appl. No.:** 11/095,122
 (22) **Filed:** Mar. 30, 2005

Related U.S. Application Data

(60) **Provisional application No. 60/557,542, filed on Mar. 30, 2004.**



High-Performance X-Band Quadrature Mixer

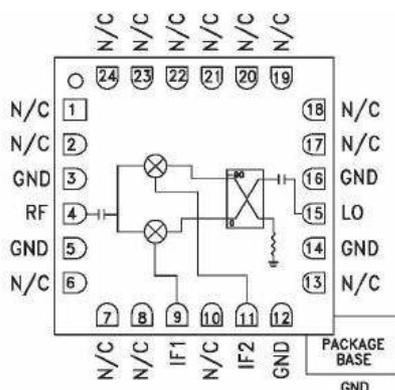
Overview

Single-sideband converters, Doppler radar, and interferometric microwave audio surveillance devices often require the use of a RF mixer that has its Local Oscillator (LO) feed in "quadrature." What this means is that the incoming local oscillator RF signal is split in two, with one of the LO signals undergoing a 90 degree phase-shift. The incoming RF port signal is also split in two, but these two signals remain in phase. The new RF and LO signals are then sent to two separate double-balanced mixers. The IF output signal from the phase-shifted LO mixer is referred to as the *quadrature* (Q) output. The IF output from the other mixer is referred to as the *in-phase* output (I).

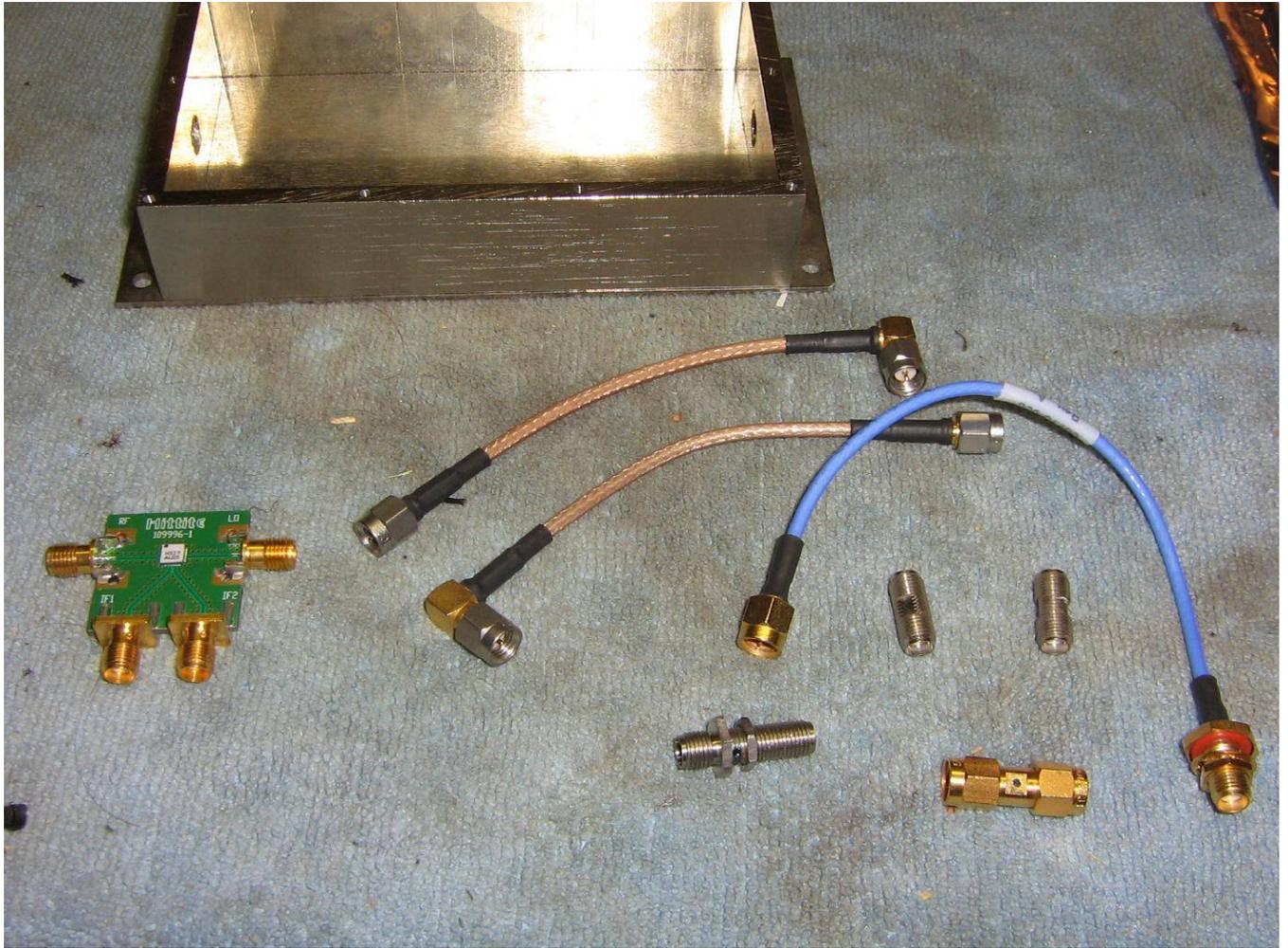
In Single-Sideband (SSB) up or down converters, quadrature mixers are used to reject the image product of the mixer to allow the use of just the upper- or lower-sideband. In Doppler radar applications, quadrature mixers are used to determine both the target's speed and direction (moving toward or away from the radiating antenna), as compared to a regular police radar which can only determine speed. In interferometric microwave audio surveillance devices, using a quadrature mixer allows the elimination of "range deadspots" in your target beamwidth. If the quadrature IF output has a poor signal, you can try switching to the in-phase output and *vice-versa*. Another remote surveillance application of quadrature mixers is the ability to perform direct phase demodulation by comparing the slight phase differences between the two I & Q IF signals. For example, this demodulation method should allow you to detect a sub-millimeter vibration in a remote target by comparing the phase differences between the transmitted and received RF carrier. The phase of the demodulated signal(s) varies with the motion of the target. The I & Q outputs therefore occupy a frequency band related to that of the motion being detected.

Normally, to construct a quadrature mixer at microwave frequencies, you would require the use of some external RF splitters, a 3 dB hybrid to provide the 90° phase shift, and two mixers. Individually, these parts are difficult to find and can be quite expensive. Thankfully, Hittite Microwave Corp. has the HMC527 I/Q mixer which covers 8 to 14 GHz with an IF output that works from DC to 2 GHz. The HMC527 is completely passive, requiring no external voltage, but it does require a fairly high LO power between +17 to +21 dBm (50–125 mW). RF power into the RF and IF ports should not exceed +20 dBm (100 mW). Another thing to watch out for is that the HMC527's IF outputs can only source/sink around 3 mA of current. You'll need to take this into consideration when using the IF outputs in DC or low-frequency applications.

HMC527 Application Circuit



Pictures & Construction Notes



Mixer parts overview.

The HMC527 evaluation board is off to the left.

SMA connectors and cables were salvaged from various hamfests. I only had one bulkhead-mount SMA jack so I had to improvise using two SMA female-to-female adapters which, believe it or not, are available at Radio Shack.

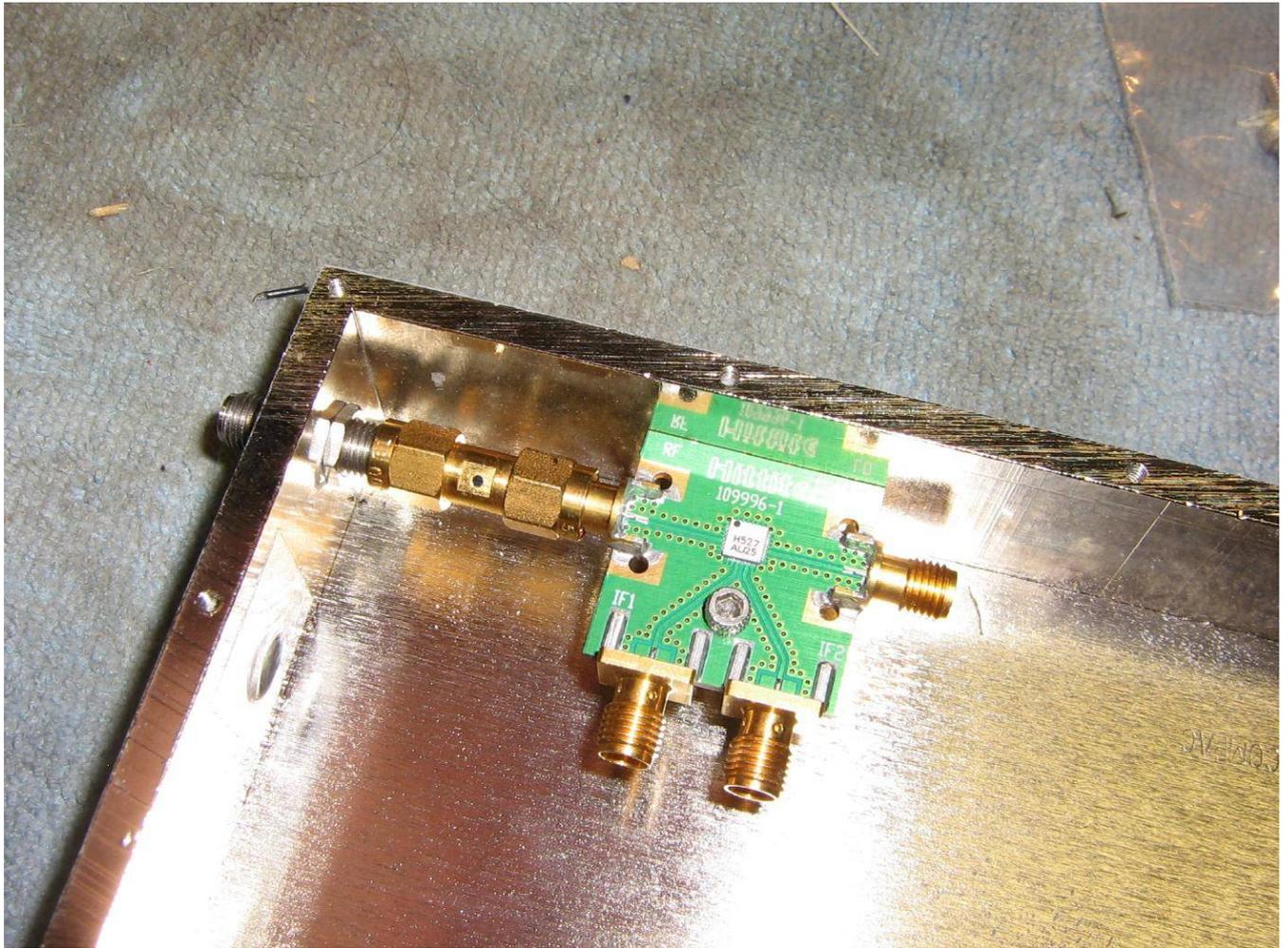
The RF input to the HMC527 will be via the SMA bulkhead and connects to the evaluation board using a SMA male-to-male adapter.

The use of the HMC527 evaluation board is highly recommended for this project. Proper microwave construction techniques need to be used with the HMC527 in order to help maintain the high RF/LO isolation of the mixer.



Adding a standoff the HMC527 evaluation board.

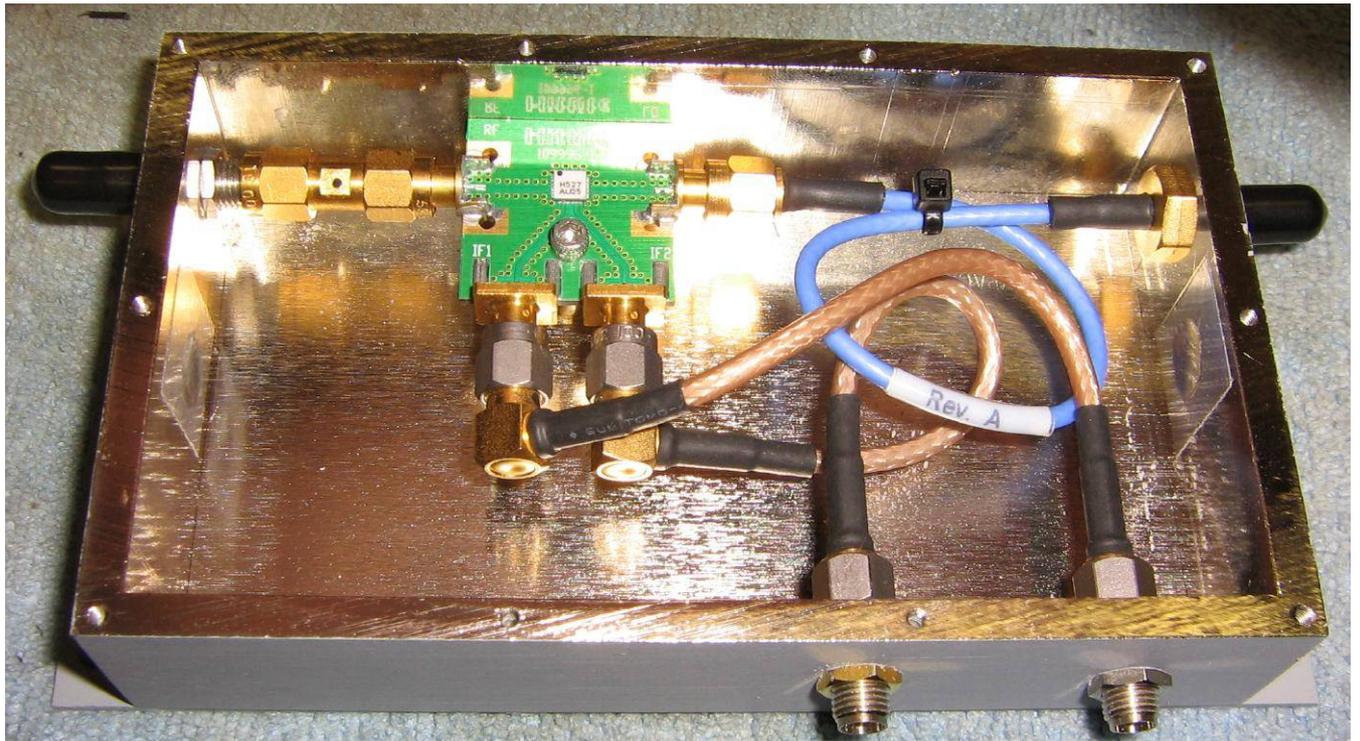
A small hole was drilled in the evaluation board for a #4 screw to attach the board to a small threaded standoff.



Mounting the HMC527 evaluation board in the project case.

Align the board properly so you can route the LO connection and two IF outputs.

The HMC527's RF input is via the SMA bulkhead.



Finished LO and IF connections.

The holes for the SMA adapters on the IF outputs should be counter-sunk slightly to allow the male SMA connector to be tightened properly.



Final case overview.

The HMC527's RF input is on the left, LO input is on the right.

The two IF outputs are on the bottom, with the "Q" output on the left and the "I" output on the right.

Nortel DMS-100 Remote Access Configuration Table (RMCONFIG)

Table Name

Remote Access Configuration Table

Functional Description of Table RMCONFIG

Table RMCONFIG configures the number of available telnet connections on a DMS. Each telnet connection requires a Remote Maintenance and Administration Position (RMAP). The RMAP operates on the Computing Module (CM) of the DMS core. Each telnet connection requires a telnet process that operates on an Ethernet Interface Unit (EIU). This table specifies the maximum number of RMAP processes on the CM and the maximum number of telnet processes on each EIU that connects to the system.

The RMAP server and the telnet server have a one-to-one relationship. Each active telnet session requires one telnet server that operates on the EIU. Each active telnet session requires one RMAP server that operates on the CM. A single EIU cannot support as many telnet servers as the CM can support RMAP servers. If this condition occurs, you need multiple EIUs to match the number of telnet and RMAP servers. Another method to match the number of servers is to limit the maximum number of RMAP servers on the CM.

The tuples that you must add to internal table CUSTFLDS:

TABFLD	FLDNAME	FSPEC	PRTPOS	AREAREF
RMCONFIG 1	INDEX	L_KEY	1	N
RMCONFIG 2	NODE	L_DATA\$NODE	1 0	S
RMCONFIG 3	SESSIONS	L_DATA	1 6	R

The tuples that you must add to internal table CUSTAREA:

REFAREA	FLDNAME	FSPEC	PRTPOS	DISPLAY
RMTC_CM_DATA 1	RMAPCONN	NUM_RMAPSERVERS	2 0	TRUE N
RMTC_EIU_DATA 2	EIUINDEX	EIU_NUM	1 5	TRUE N
RMTC_EIU_DATA 3	TELNCONN	NUM_RMAPCLIENTS	2 0	TRUE N

You do not need to enter data in other tables before you enter data into table RMCONFIG. The table size is 0 to 32 tuples

Datafill

The following describes datafill for table RMCONFIG:

Table RMCONFIG Field Descriptions

Field	Subfield	Entry	Explanation and Action
INDEX		See Subfield	<i>Index</i> This field contains subfield TABLE_KEY.
	TABLE_KEY	0 to 31	<i>Table Key</i> This field is the key field of the table. Enter the index to the table.
NODE		CM or EIU	<i>Node</i> Enter the name of the node, CM (Computing Module) or EIU (Ethernet Interface Unit). Note: If the entry in field NODE is CM, the entry in field TABLE_KEY must be 0.
SESSIONS		See Subfield	<i>Sessions</i> This field contains subfield NODE_NAME.
	NODE_NAME	See Refinements	<i>Node Name</i> This subfield contains refinements for field NODE. If the entry in field NODE is CM, enter data in refinement RMAPCONN. If the entry in field NODE is EIU, enter data in refinements EIUINDEX and TELNCONN.
	RMAPCONN	0 to 32	<i>Remote MAP Connections</i> If the entry in field NODE is CM, enter data in this refinement. Enter a value to specify the maximum number of remote MAP processes.
	EIUINDEX	0 to 4,095	<i>Ethernet Interface Unit Index</i> If the entry in field NODE is EIU, enter data in this refinement. Enter a value to specify the EIU number.
	TELNCONN	0 to 32	<i>Telnet Connections</i> If the entry in field NODE is EIU, enter data in this refinement. Enter a value to specify the maximum number of telnet processes.

 -End-

Datafill Example

The following example MAP display shows sample datafill for table RMCONFIG.

INDEX	NODE	SESSIONS
0	CM	32
1	EIU	107 20

Bonus



Yes... It's real!

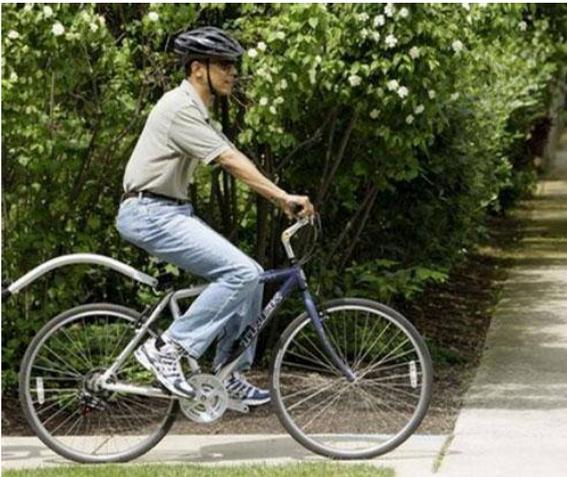
I can't imagine why Detroit, Michigan is now a third-world shithole!

End of Issue #77



Any Questions?

Editorial and Rants



Dear Russia,

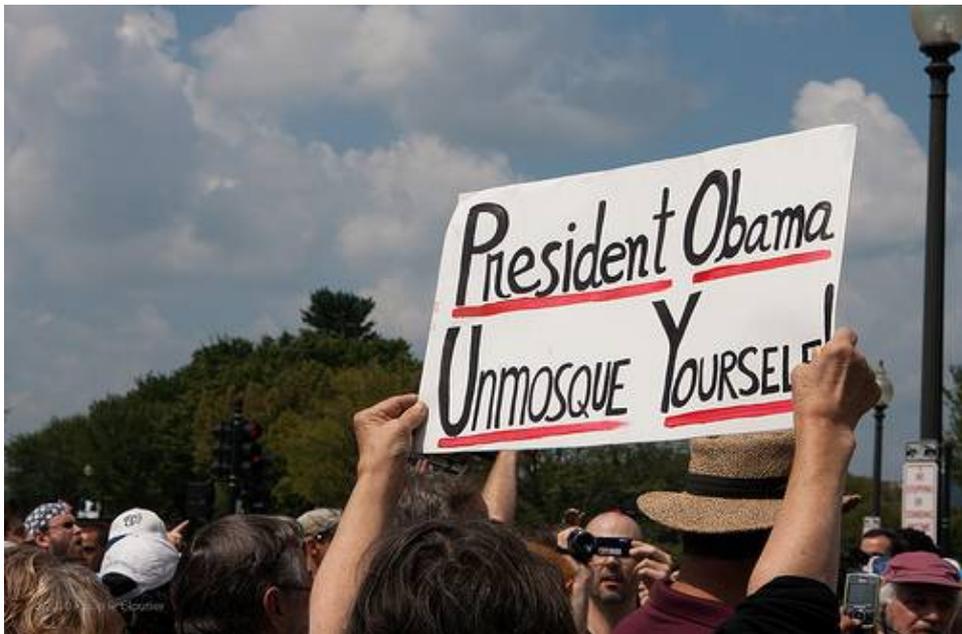
Please nuke Washington D.C.

Thanks!



Obama's Union Thugs FAIL!

D'oh!



Juden Raus!

"Change" comes to FindGold, and other corrupt Democrats, as they bail on their Magic Negro. LOL!

Wisconsin is not "progressive." It was built by hard-working and honest Aryans, Nordics, and Scandinavians – not filthy, lying, traitorous Jews!

Feingold to Skip Obama Rally in Wisconsin

September 3, 2010 – From: news.yahoo.com

By Holly Bailey

President Obama heads to Milwaukee on Monday, where he'll mark Labor Day at a statewide union event with other local Democratic candidates -- except for one. Sen. Russ Feingold, who is facing a tougher-than-expected re-election campaign, is too busy to meet up with Obama this weekend.

It's the second time this summer that Feingold has dodged an Obama event, though in fairness, the Wisconsin senator did make an appearance at the president's most recent stop in the state last month.

Yet Feingold's decision to skip the Obama labor union rally is unusual, particularly since it's Labor Day weekend -- the traditional kickoff of the fall campaign season-- and unions have been Feingold's biggest boosters in the state. Feingold's disappearing act will be doubly conspicuous, since gubernatorial hopeful Tom Barrett, the other statewide Democratic candidate, is scheduled to be there.

In a historically progressive state, a photo-op with Obama would seem to be a good thing -- though with the president's approval numbers sliding, the campaign payoff would be much diminished from what it might have been a year ago.

It's true that Obama remains generally popular in the state, but his approval rating has dipped to 49 percent, according to the most recent University of Wisconsin Badger poll -- a drop of 11 points since last winter. That's a higher approval rating than in other key battleground states this fall, but it's unclear at this point whether Obama's standing would hurt or help Feingold, who is virtually tied in the polls with his GOP opponent, businessman Ron Johnson.

Johnson has gained in the polls by trashing Feingold's votes on Obama-led agenda items like health care reform and last year's federal stimulus bill. And he has proved to be a serious financial challenger. In July and most of August, Johnson outraised Feingold, reporting \$1.2 million in contributions, compared with the incumbent Dem's \$900,000. Feingold had more cash in the bank earlier this summer -- but Johnson has readily dipped into his own cash reserves to bridge that gap, loaning his campaign more than \$4.4 million, according to the *Milwaukee Journal-Sentinel's* Craig Gilbert.

The race will be a major target for special interest spending this fall. Presumably, labor unions and Democratic groups will come to Feingold's defense. Meanwhile, outside conservative groups have named Feingold as one of their biggest targets this fall. Already, the American Action Network, a conservative group linked to former Sen. Norm Coleman (R-Minn.), has spent nearly \$400,000 on ads trashing Feingold on federal spending.

Socialism works – as long as you have U.S. taxpayers to bail you out all the time...

Watchdog Panel Cites Global Impact of U.S. Bailout

August 12, 2010 – From: apnews.myway.com

By Marcy Gordon

WASHINGTON (AP) – The \$700 billion U.S. bailout program launched in response to the global economic meltdown had a far greater impact overseas than other countries' financial rescue plans did on the U.S., according to a new report from a congressional watchdog.

Billions of dollars in U.S. rescue funds wound up in big banks in France, Germany and other nations. That was probably inevitable because of the structure of the Treasury Department's program, the Congressional Oversight Panel says in a new report issued Thursday.

The U.S. program aimed to stabilize the financial system by injecting money into as many banks as possible, including those with substantial operations overseas. Most other countries, by contrast, focused their efforts more narrowly on banks in their nations that usually lacked major U.S. operations.

But the report says that if the U.S. had gotten more data on which foreign banks would benefit the most, the government might have been able to ask those countries to share some of the cost.

"There were no data about where this money was going," panel chair Elizabeth Warren said in a conference call with reporters on Wednesday. "The American people have a right to know where the money went."

An example: Major French and German banks were among the biggest beneficiaries of the U.S. rescue of American International Group Inc., yet the American government shouldered the entire \$70 billion risk of pumping capital into the crippled insurance titan. The report compares that with the \$35 billion that France spent on its overall financial rescue program and the \$133 billion that Germany spent.

Much of the \$182 billion in federal aid to AIG – the biggest of the government rescues – went to meet the company's obligations to its Wall Street trading partners on credit default swaps, a form of insurance against default of securities. The partners included French banks Societe Generale, which received \$11.9 billion in AIG money, and BNP Paribas, which got \$4.9 billion, and Germany's Deutsche Bank, \$11.8 billion.

Of the 87 banks and financial entities that indirectly benefited from the U.S. aid to AIG, 43 are foreign, according to the report. In addition to France and Germany, they include banks based in Canada, Britain and Switzerland.

In addition to AIG, many of the U.S. banks and automakers that received billions in bailout aid derive a large proportion of their revenue from operations outside the U.S., the report noted.

The watchdog panel was created by Congress to oversee the Treasury Department rescue program that came in at the peak of the financial crisis in the fall of 2008. It has said it's unclear whether U.S. taxpayers will ever fully recoup the cost of the AIG bailout. The Congressional Budget Office estimates that taxpayers will lose \$36 billion.

Although the law creating the U.S. rescue program called for Treasury to coordinate its actions with similar efforts by foreign governments, "the global response to the financial crisis unfolded on an ... informal, country-by-country basis," the new report says. "Each individual government made its own decisions based on its evaluation of what was best for its own banking sector and for its own domestic economy."

The U.S. program wound up injecting capital into around 700 banks, while all other governments combined aided fewer than 50, according to the oversight panel.

At the same time, the report suggests that the Treasury program, known as the Troubled Asset Relief Program, or TARP, may have played a constructive role.

"It appears that the existence of the TARP might have served to enhance the negotiating position of the U.S. government (at least in a limited way), as it demonstrated the willingness of U.S. officials to be aggressive and forceful in committing a significant amount of resources to confront a deepening crisis," the report says.

Treasury Department spokesman Mark Paustenbach said the report "shows that Treasury worked effectively with its overseas partners in a number of ways to address the global financial crisis."

The report says the financial crisis revealed the need for an international plan "to handle the collapse of major, globally significant financial institutions."



U.S. National Mall: After the Kenyan Muslim's Inauguration



U.S. National Mall: After Glenn Beck's 'Restoring Honor' Rally

What?!? Illegal spics didn't set up an aerospace manufacturing firm or build a semiconductor plant? I'm shocked!

This is what "multiculturalism" and "diversity" bring...

Hidden in Wisconsin National Forest: Marijuana Megafarm

August 12, 2010 – From: cbs2chicago.com

By Todd Richmond

GREEN BAY, Wis. (AP) – Northern Wisconsin's Chequamegon–Nicolet National Forest is a vast, verdant getaway for hundreds of thousands of campers, hikers and anglers every year. But hidden within was a marijuana megafarm.

Investigators say a band of Hispanic men turned the forest's southeastern tip into a giant pot farm, growing thousands of plants on remote plots, moving supplies along forgotten logging roads and buying supplies and ammunition at local stores. Nobody in law enforcement has said it publicly, but the style matches that of Mexican cartels that have been using public land in the United States to grow vast amounts of marijuana and avoid the risk and expense of smuggling the drugs across the border.

"There certainly is an element to this that leads one to believe there is a Hispanic connection here," Wisconsin Attorney General J.B. Van Hollen said. He declined to elaborate.

According to court documents, investigators discovered nine plots of plants in the southeastern tip of the Nicolet section after a person noticed two Hispanic men preparing a grow site in the forest. Federal, state and local police spent June and July tailing suspected growers, following pickup trucks down abandoned logging roads and watching Hispanic men appear in the trees and toss nylon sacks resembling grain feed bags into the beds.

They followed one suspect to a Fleet Farm in Green Bay, where he purchased six pairs of pruning shears. They watched another man purchase 9 mm ammunition at a nearby Wal-Mart, documents said. The suspected growers eventually led investigators to a house in Seymour, about 15 miles southwest of Green Bay. According to court documents, the house was a marijuana processing factory.

According to the U.S. Drug Enforcement Administration, drug agents around the country seized about a million plants a year between 2004 and 2008. In 2008 alone, agents seized or destroyed 7.6 million marijuana plants from about 20,000 illicit plots.

In Wisconsin, the number of seized plants in grew six-fold between 2003 and 2008, a year when more than 32,000 plants were seized. Authorities eradicated \$2.5 million worth of marijuana plants in the national forest system alone, said Richard Glodowski, special agent in charge of the U.S. Forest Service's investigations in the eastern half of the U.S.

Drug investigators believe Mexican cartels are largely responsible for the spike. Growing the drug here helps them get it to major American markets more quickly. They often import unskilled laborers from Mexico to help find the best land and tend their crops.

The Chequamegon–Nicolet National Forest covers about 1.5 million acres across northern Wisconsin and is divided into two sections – the 860,000–acre Chequamegon in far northwestern Wisconsin and the 660,000–acre Nicolet portion in northeastern Wisconsin.

The southeastern edge of the Nicolet portion lies about 50 miles from Green Bay and hosts about three–quarters of the 700,000 visitors who travel to both sections each year, said Tony Erba, the forest's deputy supervisor. Featuring dense woods, streams and lakes, the forest is a veritable playground for campers, hikers, ATV enthusiasts and hunters – and a perfect haven for growing marijuana.

About 163,000 people use the southeastern tip of the Nicolet where the farms were established each year. Most of the plots were in secluded areas, forest supervisor Paul Strong said. But investigators realized bear hunting season and fall leaves would soon bring more people into the woods and decided to take down the operation on Tuesday.

Investigators discovered at least nine different plots in the forest as well as at least 1,000 plants on the adjacent Menominee Indian Reservation.

Oconto County Sheriff Mike Jansen estimated they seized about 50,000 plants, but Van Hollen cautioned that authorities were still counting and the number currently stood closer to 10,000. The attorney general estimated that each plant might yield a pound of marijuana worth about \$1,000.

"This amount of marijuana in northern Wisconsin is a big, big deal," Van Hollen said.

A search of the Seymour house found marijuana drying throughout it and a stash of firearms, including an AK–47 assault rifle. Officers said the smell of pot permeated the entire house. They also raided a storage unit, where they discovered a wire transfer of \$2,500 to a man in Modesto, Calif., about \$6,000 in cash and 72 pounds worth of processed marijuana in cardboard boxes and garbage bags – yet another cartel grow operation standby.

Eight men were arrested and arraigned Wednesday in federal court on charges of conspiring to manufacture and distribute more than 1,000 marijuana plants and possession with intent to deliver more than 100 marijuana plants. Four more men were arraigned on Thursday. Three were charged with the same counts. The fourth, Bernabe J. Nunez–Guzman, was charged only with conspiracy, but court documents indicate he was the ring leader.

An unnamed informant arrested at the Seymour house told detectives on Wednesday he was in San Jose, Calif., several months ago when he was approached by a man who asked him if he wanted to work at a ranch. This person arranged for the man to travel to Green Bay, where he met Nunez–Guzman.

The informant said he helped dry marijuana at the house and Nunez–Guzman, also known as "Green Bay," was the boss. He came to the house every 15 days to check on the operation and sent a runner into the woods every three days to check the crop.

Federal defender Krista Halla–Valdes, who represents the four men charged Thursday, said she hasn't seen any evidence in the case and it's too early to comment.

Cartel grow recruiters often look for people with family in Mexico so they can use them as leverage to keep the farmers working and quiet. If anyone betrays the farm, they go after the worker's family, intelligence experts say.

