

**L MULTIPLEX TERMINALS
COMMON EQUIPMENT
CARRIER TRANSMISSION MAINTENANCE SYSTEM (CTMS)
104.08-kHz PILOT BUS MEASUREMENTS (PLPB)**

CONTENTS	PAGE
1. GENERAL	1
2. ACCESS CIRCUITS	1
3. SCHEDULING PROGRAM	1
4. PRINTOUT	2
5. CORRECTIVE ACTION	2

1. GENERAL

1.01 This section describes the pilot bus levels program (PLPB) of CTMS and corrective action to take when measurements exceed allowable limits. PLPB is normally run by clock control to measure pilot levels at the 104.08-kHz group pilot secondary distribution buses, but may be run as a demand measurement with parameter control.

1.02 This section is reissued to reflect printout modifications, add a new PB access circuit, and revise corrective action suggestions. Since this issue constitutes a general revision, arrows ordinarily used to indicate changes are omitted.

2. ACCESS CIRCUITS

2.01 There are two circuits used to access 104.08-kHz pilot bus signals for CTMS measurement. The first, shown in Fig. 1, is a U600 configuration in which the PB signal is combined with the MG signal in a hybrid arrangement, then fed to the CTMS control center via the switch access network. Isolation between sources is provided by hybrids, pads, and amplifiers as required. The second arrangement, for L600

configurations and group bank only bays, is shown in Fig. 2. This access circuit requires a separate appearance on the switch access network.

2.02 Table A shows the pilot bus levels for various types of LMX equipment and the nominal level of the signal fed to CTMS for measurements.

3. SCHEDULING PROGRAM

3.01 PLPB in a magnetic tape storage system is controlled by BOS commands IT (to establish an execution time), ON (to initialize the program for routine running), and ON,PLPB,NOW... (for demand execution). In a disc storage system, one of two methods of control may be used: (1) RTE system commands IT and ON as above for routine execution and RU for demand execution, or (2) control by the auxiliary terminal monitor (ATM) program in which PLPB is initialized by an IP command, scheduled by an IS command, and run as a demand program by an ON,PLPB,NOW... command. The BOS and RTE system commands and the ATM program commands are described in Section 103-260-300.

3.02 When run as a demand program, PLPB may be called to measure all office pilot bus levels or only the pilot bus level of a specific line. The command to start PLPB is then:

*ON,PLPB[,NOW] [,p1],p2,p3]]

in a magnetic tape system or in a disc system when PLPB is under ATM program control, or:

*RU,PLPB[,p1],p2,p3]]

in a disc system using only system commands.

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

Where:

$p1 = 0$ (or absent) measure all mastergroups.

$p1 > 0$ is short code of specific mastergroup to measure.

$p2$ is always zero (enter by default using two commas).

$p3 = 0$ (or absent) print only out-of-limits measurements.

$p3 > 0$ print all measurements.

4. PRINTOUT

4.01 Figure 3 illustrates a typical routine PLPB printout. The meaning of some entries in the heading, measurement results, and summary have been identified for convenience.

5. CORRECTIVE ACTION

5.01 Chart 1 is a suggested procedure for clearing pilot bus deviations. In Step 2, if only one or two pilots are out of limits, it may be preferable to make RC&D demand measurements rather than rerun PLPB to determine whether corrective action is still necessary. When trouble has been cleared, follow local procedures to update the maintenance history file.

TABLE A

SECONDARY DISTRIBUTION BUS LEVELS
AND CTMS ACCESS LEVEL

SECONDARY DISTRIBUTION BUS TYPE	ASSOCIATED WITH J68857P*	ASSOCIATED WITH J68857P (Mod.)*	ASSOCIATED WITH J68857R*	CTMS LEVELS
J68857K	-47.8 dBm	-46.8 dBm	-35.0 dBm	-63.4 dBm
J68857T	-47.8 dBm	-46.8 dBm	-35.0 dBm	-63.4 dBm
J68857V	-47.8 dBm	-46.8 dBm	-35.0 dBm	-63.4 dBm
J68857AH	—	—	-35.0 dBm (Note)	-63.4 dBm

* Pilot insertion unit

Note: If the pilot bus has a test jack in addition to the CTMS test point, the level at the test jack is 10 dB lower than the bus level.

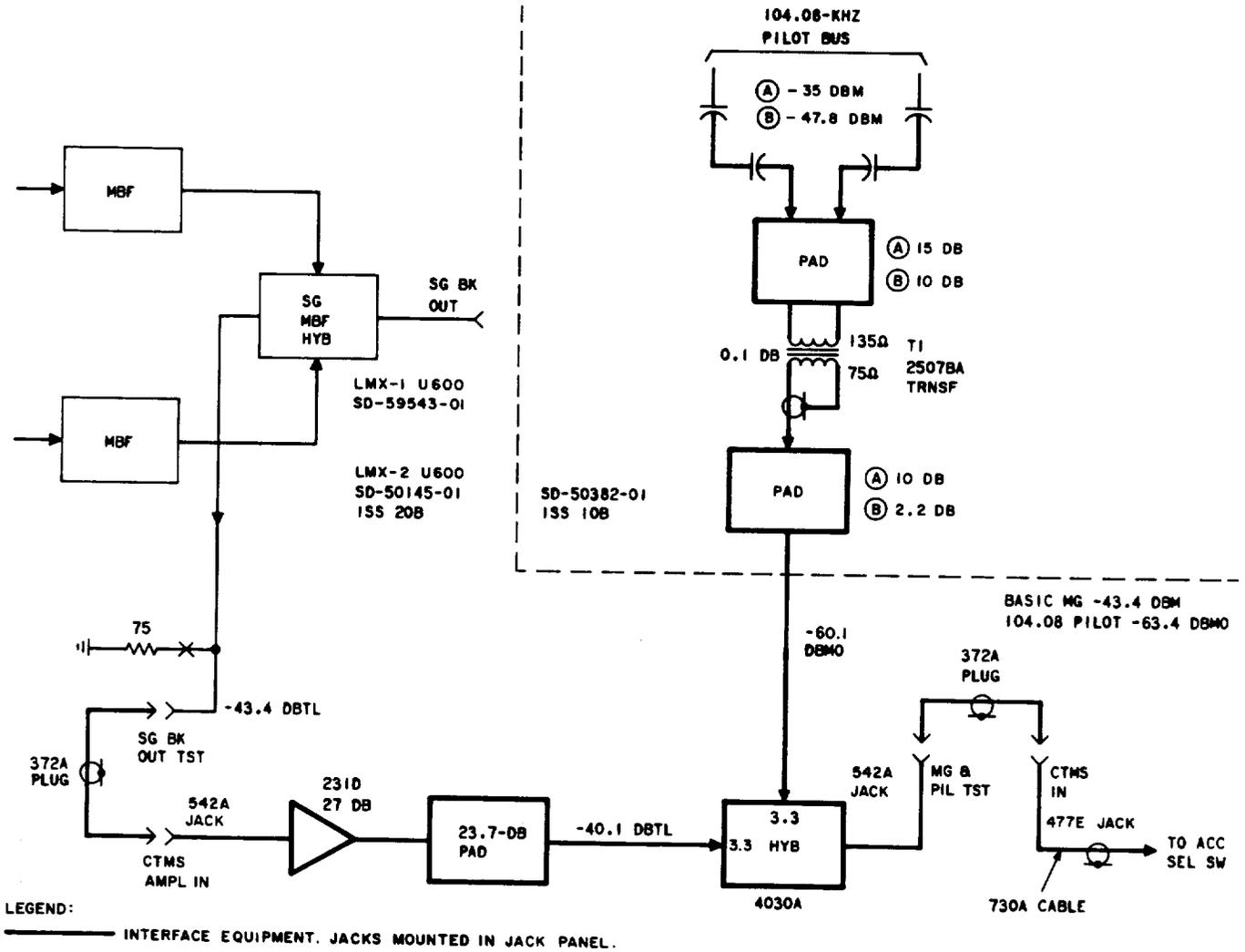


Fig. 1—LMX-1 and LMX-2 Multiplex Mastergroup Transmitting and Pilot Access Circuit (U600 Configuration)

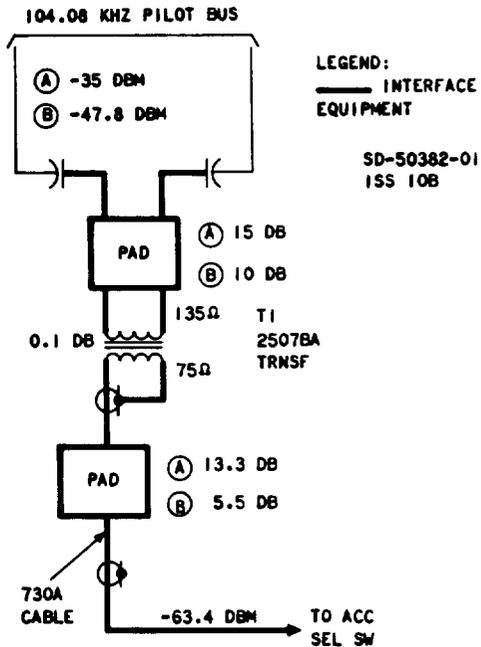


Fig. 2—104.08 kHz Pilot Bus Access Circuit (L600 Configuration)

```

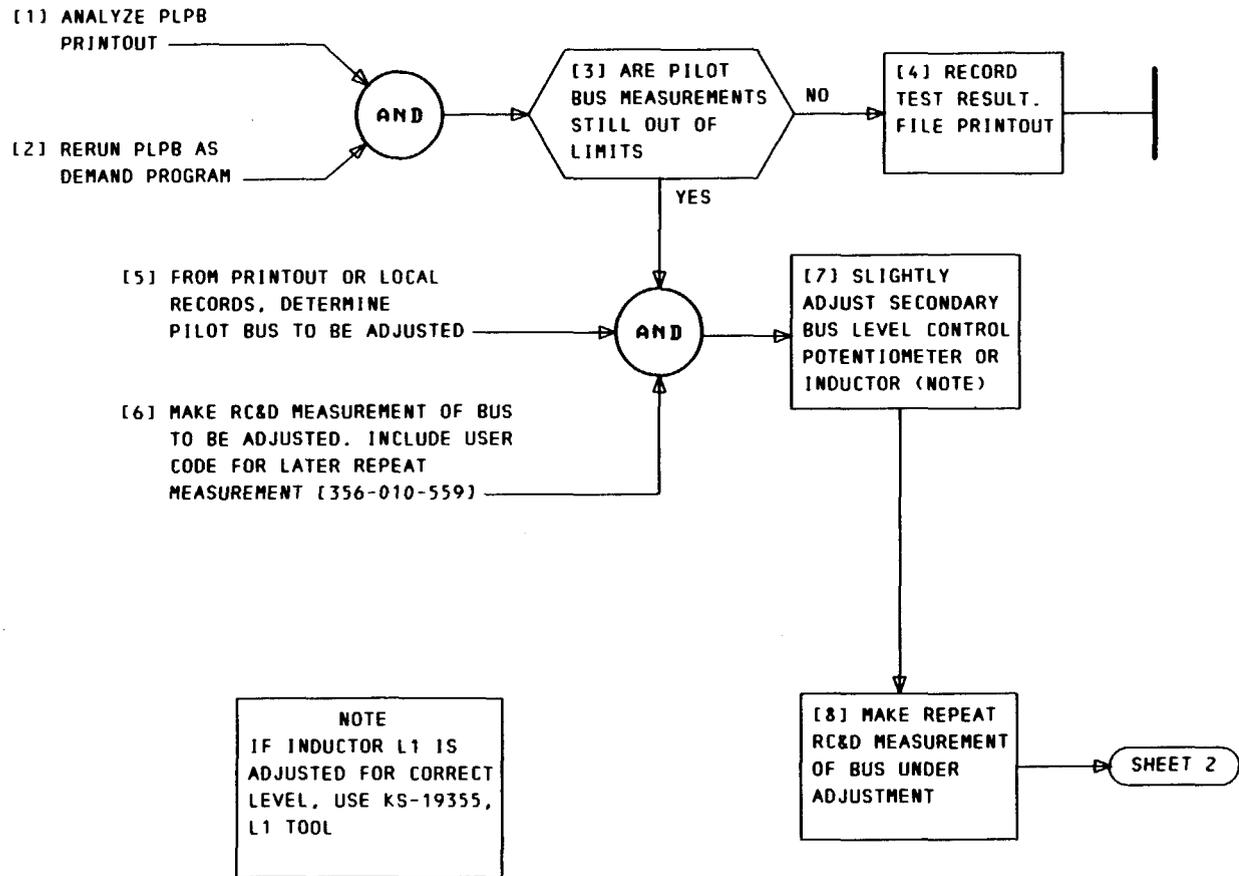
PROGRAM NAME          ISSUE NO.      JULIAN DAY    TIME
-----
PLPB: PILOT BUS LEVELS  ISSUE 4      DATE  70    2:33
LIMIT: .2 DB ← PRINT LIMITS (± FROM NOMINAL)

*****
PLPB:                SHORT CODES OF OUT-OF-LIMITS BUSES
PR...SC ←           DEV ← DEVIATIONS (IN DB) FROM LIMIT
 1402                - .2 } OUT-OF-LIMITS MEASUREMENTS
 4603                - .8 }

*****

PLPB SUMMARY          DATE  70    2:33
PB PILOTS= 31        NO. OF PILOTS MEASURED }
#>LIMIT= 2           NO. OUT-OF-LIMITS      } PROGRAM
?>LIMIT= 6           PERCENT OUT-OF-LIMITS } SUMMARY
FIG/MERIT= 87.19     FIGURE OF MERIT
    
```

Fig. 3—PLPB Printout of Pilot Bus Levels



NOTE
IF INDUCTOR L1 IS
ADJUSTED FOR CORRECT
LEVEL, USE KS-19355,
L1 TOOL

Chart 1—Clearing Pilot Bus Deviations (Sheet 1 of 2)

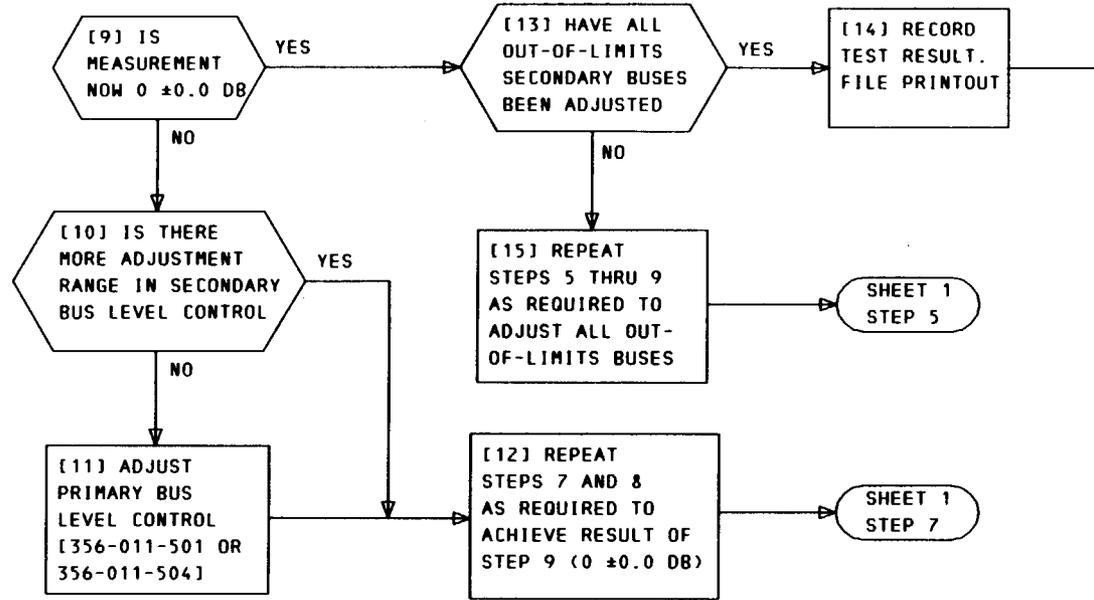


Chart 1—Clearing Pilot Bus Deviations (Sheet 2 of 2)