L MULTIPLEX TERMINALS

LMX-2

TRANSMITTING GROUP BANKS

PATCHING PROCEDURES

This section provides patching procedures whereby regular transmitting group banks are removed from or restored to service. Because of the numerous configurations applicable to this equipment, only a typical transmitting group bank configuration is depicted. Each office must determine its own equipment configuration and establish applicable patching procedures.

This section is reissued to add a caution note to Step 1. ***Equipment Test Lists are not affected.***

To prevent service interruptions while patching group equipment, effective monitoring procedures must be used. Three types of signals are available for monitoring: test tone, message, and pilot. The most effective signal is a 1-kHz tone on a message channel; however, local policy establishes monitoring and verification procedures to keep service interruptions to a minimum.

Transmission requirements must be met for the equipment involved before proceeding.

APPARATUS

Receiving Test Equipment (RTE) (Section 356-010-500) capable of measuring the signal to be monitored at the correct power

Test Cords and Plugs as required

STEP	PROCEDURE

Caution: Some patches may affect transmission levels; therefore, patching should be kept to a minimum. Before attempting any patches, read and understand the entire procedure.

Note: To prevent service interruptions due to patching errors, craft personnel must have a thorough understanding of the following:

(a) The regular and spare transmission circuits involved

STEP	PROCEDURE

(b) Local equipment and jack designations

(c) Local policy regarding minimum monitoring requirements.

Monitoring

Caution: Group banks assigned program circuit units (PGCU) should not be patched without a release from the carrier program control office. When program service is assigned to a group bank, the program signal is fed to the net side of the hybrid coil and appears out of phase at the CH BK OUT and CH BK OUT ALT sides of the coil. Consequently, when Step 5d is completed, the out-of-phase program signals from the parallel paths cancel out at the SG MOD IN until Step 7 is completed.

1 Determine the monitoring procedure to be used.

2 Prepare the RTE to measure the signal (determined in Step 1) at the correct power.

Note: See Section 359-080-501 for level diagrams and frequency charts.

3 Connect the RTE to the monitoring point determined in Step 1 (Fig. 1).

Note: Always monitor at a point in the circuit path which is beyond the final patch point.

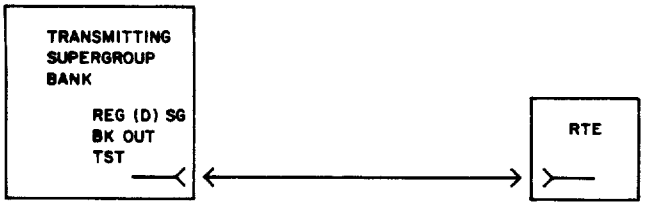

Fig. 1—Suggested Monitoring Point

Patching

4 ***To remove a regular transmitting group bank from service,*** proceed to Step 5. ***To restore a regular transmitting group bank to service,*** proceed to Step 11.

Removing Regular Transmitting Group Banks From Service

5 At the transmitting high-frequency patch bay (HFPB),

STEP	PROCEDURE

Caution: In (a), connect the patch cord to the SP GR MOD IN jack first, and then to the REG CHAN BK or GR CONN OUT ALT jack to preclude a service interruption.

(a) Connect the spare GR MOD IN jacks for group 1 to its associated regular CHAN BK or GR CONN OUT ALT jacks [patch (1), Fig. 2].

(b) Repeat (a) for groups 2 through 5 [patch (1), Fig. 2].

(c) Verify continuity of the spare groups at the SP GR BK OUT B jack.

(d) Connect the SP GR BANK or SG CONN OUT B jack to the REG SG MOD IN B jack [patch (2), Fig. 2].

6 Observe the RTE indication.

Requirement: Approximately a 3-dB increase from normal power for the monitoring point

7 At the transmitting HFPB, remove the patch between the regular GR BANK or SG CONN OUT A and REG SG MOD IN A jacks [patch (3), Fig. 2].

8 Observe the RTE indication.

Requirement: Normal power indication for the monitoring point

9 At the transmitting HFPB, terminate, into 135 ohms, the regular CHAN BK or GR CONN OUT jacks associated with each group being patched [patch (4), Fig. 2].

10 Disconnect the RTE; identify all patches.

Restoring Regular Transmitting Group Banks To Service

11 At the transmitting HFPB,

(a) Remove the 135-ohm terminations from the regular CHAN BK or GR CONN OUT ALT jacks of each group being restored [patch (4), Fig. 2].

(b) Verify continuity of each group at regular GR BANK or SG CONN OUT A jacks.

(c) Connect the regular GR BANK or SG CONN OUT A jack to the REG SG MOD IN A jack [patch (3), Fig. 2].

12 Observe the RTE indication.

Requirement: Approximately a 3-dB increase from normal power for the monitoring point

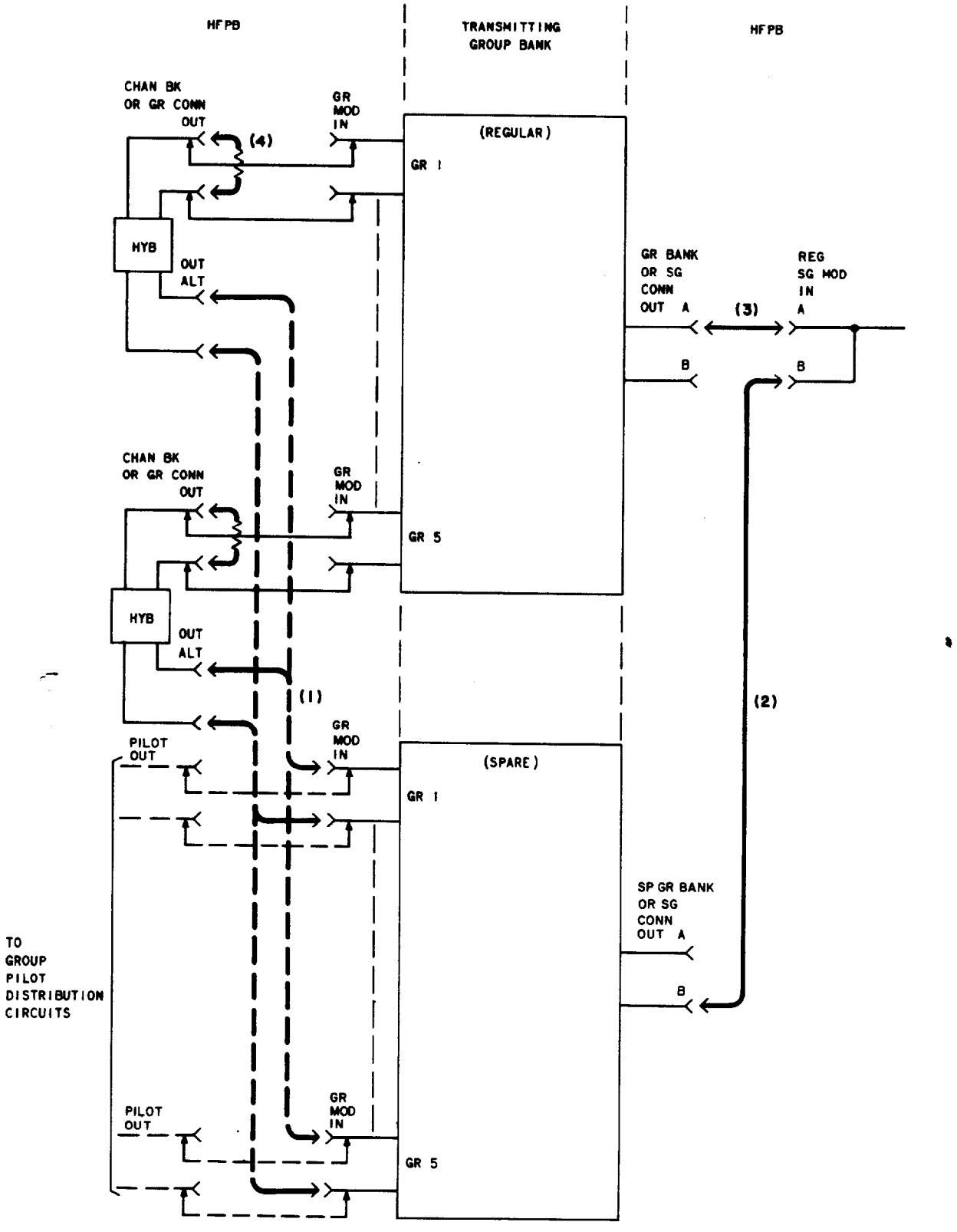

Fig. 2—Regular Transmitting Group Bank—Patching Procedure

STEP	PROCEDURE
13	At the transmitting HFPB, remove the patch from the REG SG MOD IN B and SP GR BANK or SG CONN OUT B jacks [patch (2), Fig. 2].
14	Observe the RTE indication. ***Requirement:*** Normal power indication for the monitoring point
15	At the transmitting HFPB, for each group being restored, remove the patch from the regular CHAN BK or GR CHAN OUT ALT jacks [patch (1), Fig. 2].
16	Identify (tag) patches.
17	Disconnect the RTE.