L MULTIPLEX TERMINALS

TERMINAL CIRCUITS

GENERAL

PATCHING PROCEDURES

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1. GENERAL

1.01 The terminal circuits, which consist of terminal trunks and mastergroup trunks, connect the L multiplex terminal to either a high-frequency line, a radio terminal via the wire line entrance link, or a mastergroup multiplex terminal. Spare equipment is provided to permit maintenance and trouble clearing on the regular equipment with minimal interruptions to service. Patching procedures are necessary when this equipment is used to replace the regular equipment.

1.02 This section is issued to expand upon the patching procedures required because of the many possible configurations of the terminal circuits. Sections 356-018-301 and 356-018-302 provide patching procedures, to be used as guidelines, for patching terminal trunks and mastergroup trunks, respectively. A typical transmitting trunk and a typical receiving trunk are covered in each section, with instructions provided for removing regular equipment from service and for restoring regular equipment to service.

1.03 Because of the many possible configurations of terminal circuits, it is necessary that each office determine the trunk configurations for their particular office and establish applicable patching procedures.

1.04 Some patches will cause level changes; therefore, patching should be kept to a minimum. Level-changing patches are limited to double feeds which cause a momentary level change of about 3 dB. Service interruptions can be minimized by reading and understanding the entire patching procedure before attempting any patches.

1.05 All patches must be made using the most effective monitoring procedures available. Three types of signals are available for monitoring purposes: test tone, conversation, and pilot. The most effective monitoring signal is a 1-kHz tone on a voice channel, which should be used whenever possible. It may not always be possible to obtain tone on a channel, especially at intermediate LMX-2 terminal offices where voice-frequency equipment is not provided. Group, supergroup, and mastergroup patches can affect many circuits and tone monitoring should be used. Where tone on a voice channel cannot be obtained, a pilot frequency can be monitored.

CAUTION: When monitoring pilot frequencies, verify circuit and jack designations before attempting any patches.

Patching of complete channel banks requires the use of conversation for monitoring purposes where complete turndown of the circuits cannot be accomplished.

1.06 Always monitor at a test point in the circuit path which is beyond the final patch connection. Special monitoring and verification may be necessary; therefore, local procedures must be established for the individual offices.

2. TERMINAL TRUNKS

2.01 The terminal trunks connect the transmitting and receiving L multiplex terminal to a high-frequency line or to a radio terminal via the wire line entrance link. These trunks are shown in SD-59251-01.

2.02 Pads in the transmitting and receiving terminal trunks match the impedance of the terminal and insert losses so that the correct signal level is maintained.

2.03 Hybrid coils and jacks are provided for combining and patching regular and spare supergroup or submastergroup circuits. Tandem patch panels may be required where spare equipment serves more than one corresponding unit.

3. MASTERGROUP TRUNKS

3.01 The mastergroup trunks connect either the L multiplex terminal or a mastergroup connector to the mastergroup multiplex (MMX-1 or MMX-2) terminal. Both transmitting and receiving trunks are provided with connections made via jacks at the high-frequency path bays.

3.02 The basic mastergroup trunks are shown on SD-50719-01. Section 356-019-100 provides a description of the basic mastergroup trunk configurations.