L3 CARRIER

DELAY DISTORTION EQUALIZATION OF AN L3 UNIT

GENERAL

1. GENERAL

1.01 This section is one of a number of point sections in the E34.090 series. It describes the adjustments to be made in the equalization of delay distortion on L3 carrier facilities equipped for television transmission.

1.02 The delay distortion equalization adjustments outlined in this section should be made immediately after completing the gain equalization line-up of an L unit.

1.03 In order to provide acceptable video transmission over L3 carrier television facilities, it is necessary to establish and maintain the delay frequency characteristics of the facilities at TV dropping and switching points.

1.04 The characteristic of the fixed DEL EQ (see Figs. 2, 3, and 4 of Section E34.090.11), selected for a particular section, is determined by the number of nominal 4 mile sections and the number of equalizing repeaters in the switching section. The adjustment of the DEL BO network matches each line to its associated set of fixed equalizers with the variable feature of the DEL BO compensating for the variation in the delay characteristics of the individual lines and of the fixed delay equalizers. The standby line has its individual DEL BO and when the standby line is switched into service this DEL BO can be adjusted to give a good match to only one set of fixed delay equalizers in the line connecting equipment. For this reason, where there is more than one regular TV line, the standby line should be adjusted to the line connecting equipment of the line over which best transmission is desired, if any choice exists.

1.05 Where the standby line is the only line used for TV, this line should be taken out of telephone service and its normal TV circuit established. Applicable tests are then made per Section E34.090.11, Steps 1, and 3 through 8.

1.06 When equalizing from a switching main to a following switching main or terminal repeater, the transmitting connection to the L unit must be made in the receiving equipment (TV REC HY NET jack) associated with the preceding switching section to avoid removing the 7266 and 8320 kc pilots.

1.07 Pilots for the standby line, for a line which is terminal to terminal in one switching section, will be furnished from the normal pilot source. If the standby line is longer than one switching section the pilots are fed from one switching section to the next through the standby line normal TV circuit at the switching repeaters. However, to line up an isolated switching section that is not being fed pilots from the transmitting end of the TV circuit, pilots must be supplied at the transmitting end of the switching section; patch from a PIL jack to the TRSG HY NET of the transmitting hybrid used for TV on the standby line before connecting the L-unit to the hybrid. The use of pilots taken from an all message system of a preceding switching section, as a pilot source, is not suitable as the MG2 and MG3 telephone signals will interfere with the delay adjustments.

1.08 During the time delay adjustments are being made on a line which is completely contained in one switching section the switching circuit should be locked to the line under test because adjustments of the 475-type delay equalizer may cause an operation of the switch initiator, resulting in a switch to the standby line. The information on the procedures and the steps to be taken to disable the switching circuit, during delay adjustments on a line composed of more than one switching section, are not available at this time.

1.09 The procedures for making delay distortion equalization tests and adjustments are given in the following point sections:

E34.090.11 - Adjustments at equalizing auxiliary repeaters (equipped for TV dropping), switching and terminal repeaters.