

**OPERATION AND MAINTENANCE
TERMINAL STATION
1XN FREQUENCY DIVERSITY
DR6/11-135EC
TERMINAL TROUBLE ISOLATION**

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1. GENERAL

This practice is used to troubleshoot the line terminal bay equipment in a DR6/11-135EC Digital Radio System. All terminal bay trouble-clearing begins with the Line Terminal Bay Trouble Isolation Flowchart in this practice. Any line terminal bay failure will light the COM ALARM indicator on the MSTR ALARM unit located in the Control and Service Channel Shelf of the initial line terminal bay. All transmission-related failures are centralized on the CHAN CONTR unit for each separate line terminal shelf. The resulting office alarm can be silenced by pressing the alarm cutoff (ACO) pushbutton. However, dc power failures cannot be silenced by the ACO pushbutton.

This practice is reissued to include reference to the digital transversal equalizer. This practice is used in binders 421-102-090, 421-102-100, 421-102-003AC, and 421-102-004AC.

Power unit troubles can cause false and misleading alarms. Check the power unit voltages before clearing an alarm. If an output voltage does not meet the requirement, the trouble is either a faulty power unit or an abnormal current demand by one or more of the units supplied by the power unit.

2. LINE TERMINAL FUNCTIONAL BLOCK DIAGRAMS

A functional block diagram of a digital transmitter is shown in Figure 1. Functional block diagrams of a digital receiver equipped with analog transversal equalizers (ATE) and digital transversal equalizers (DTE) are shown in Figures 2 and 3, respectively. The diagrams show the transmission signal flow and the nominal input and output signal levels.

3. LINE TERMINAL BAY TROUBLE ISOLATION FLOWCHART

The Line Terminal Bay Trouble Isolation Flowchart is the starting point for isolating and clearing alarmed conditions in a line terminal bay. It should be entered when directed by the STATION ALARM TROUBLE ISOLATION tab or when referenced from one of the detailed line terminal alarm-clearing flowcharts. The detailed alarm-clearing flowcharts are not specifically designed to clear multiple failures or take into account faulty spare units. However, if the alarm indicators are functioning properly and the flowchart instructions and recommendations are followed, any multiple failure should be cleared.

It is assumed that the alarm circuits are functioning properly. Use local equipment indicators to determine if the trouble is a dc power failure, fan failure, control system failure, digital receiver failure, digital transmitter failure, excess (performance) failure, or switch signaling failure. Once this has been determined, the flowchart references the detailed alarm-clearing flowchart that should be followed to clear the indicated failure.

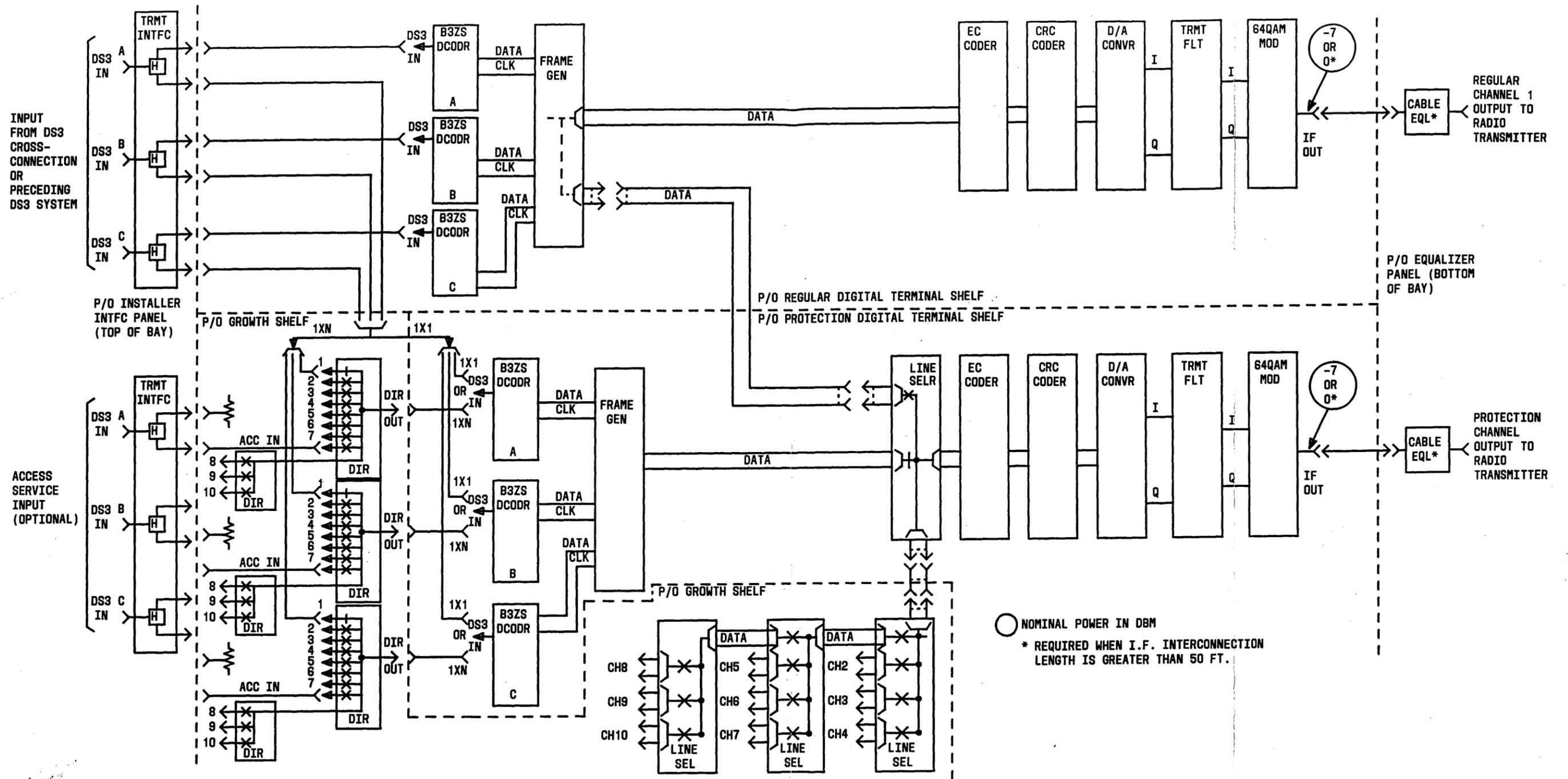


Figure 1-135EC Line Terminal Transmit Block Diagram

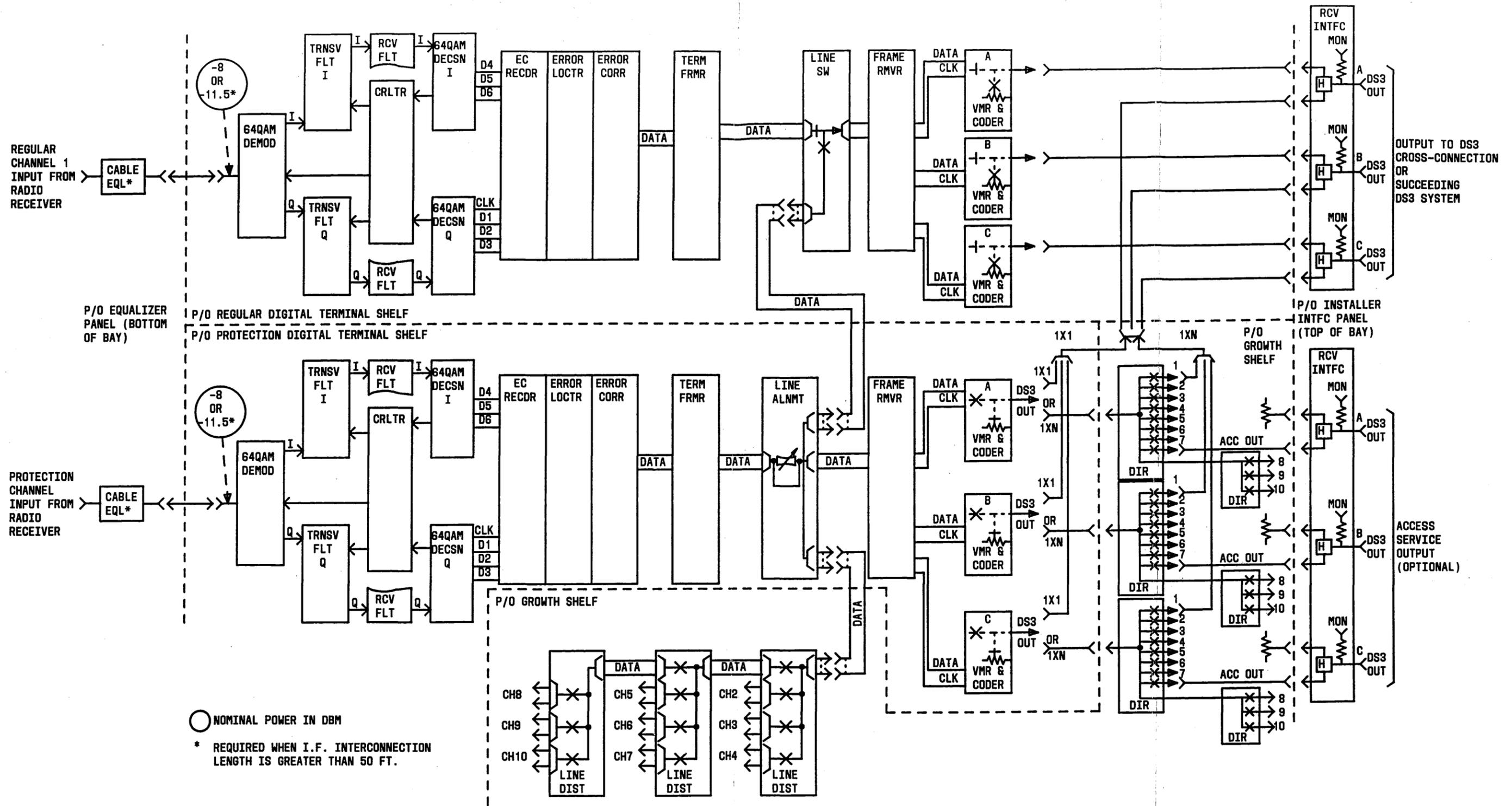
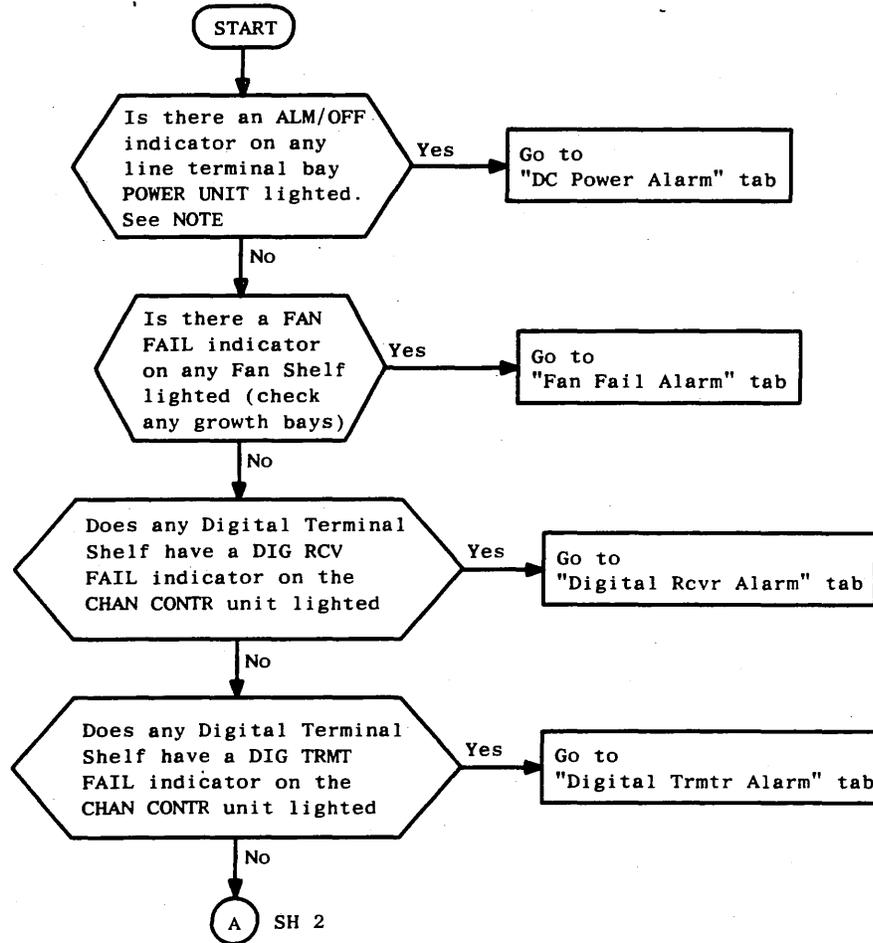


Figure 2-135EC Line Terminal Receive (ATE) Block Diagram



NOTE:
 Check power unit of Growth Shelf (if equipped) by removing the top front cover.

Figure 4- Line Terminal Bay Trouble Isolation Flowchart (Sheet 1 of 2)

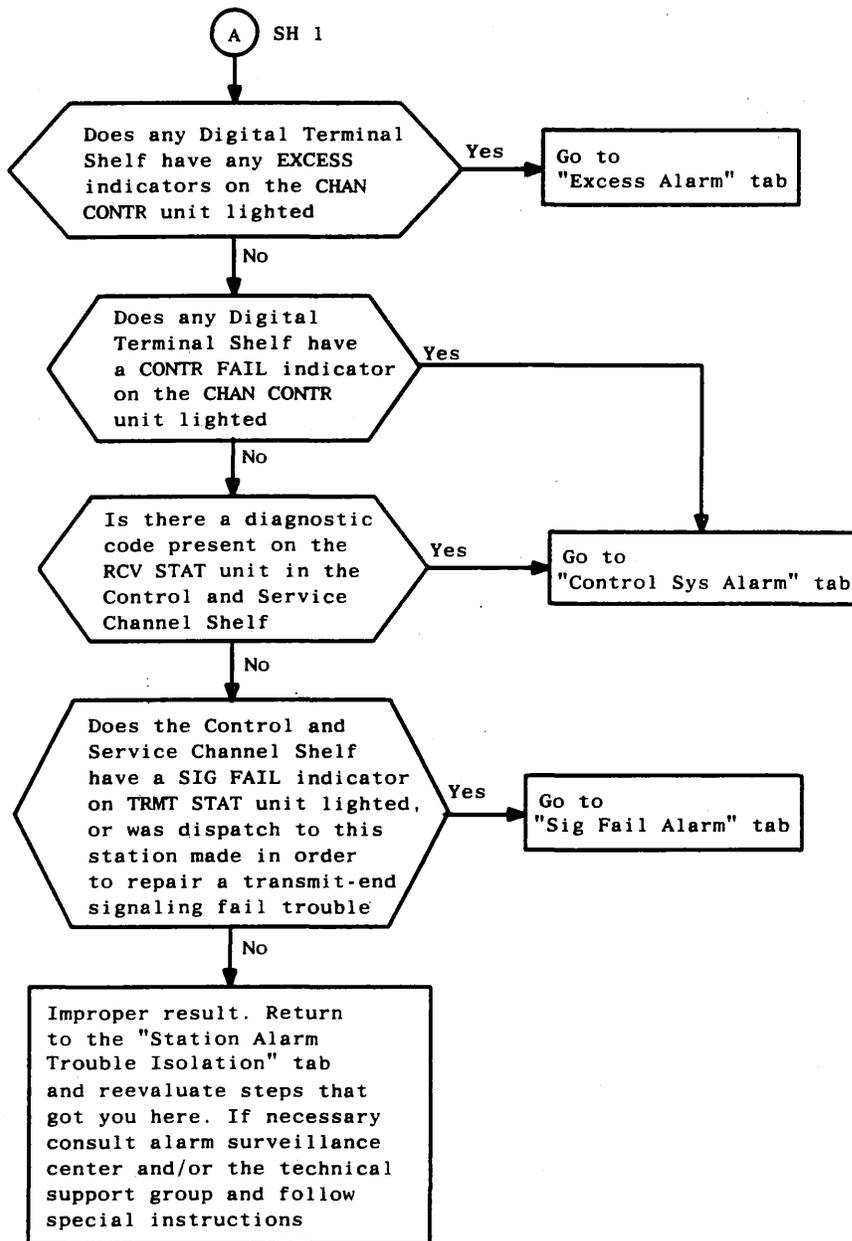


Figure 4-Line Terminal Bay Trouble Isolation Flowchart (Sheet 2 of 2)