VOICE BANDWIDTH PRIVATE LINE DATA CIRCUITS MAINTENANCE

1. GENERAL

1.001 This addendum supplements Section 314-410-300, Issue 3. Place this pink sheet ahead of Page 1 of the section.

1.002 This addendum adds information concerning type D5 high performance data conditioning (HPDC) circuits.

2. CHANGES TO SECTION

2.001 On Page 2, change the first sentence of paragraph 2.04 and add subparagraph (d) as follows:

The HPDC is available in any one of four offerings.

(d) Type D5 HPDC is designed for multipoint voice-grade 3002-type analog data channels within the contiguous 48 states. Multipoint voice-grade HPDC-type D5 can be provided only on those circuits operating in a polling environment. The HPDC-type D5 conditioning will be provided between the master station and each remote station. The number of simultaneously active channels/remotes is limited to two.

2.002 On Page 5, add new subtitle F and new paragraphs 3.11, 3.12, and 3.13 as follows:

F. Type D5 HPDC Maintenance

3.11 To obtain HPDC on multipoint polled circuits, the noise build up as seen by the master station must be controlled. The device used to provide this control on some circuits is an energy gated amplifier (EGA) (Section 880-420-102). The EGA is activated (LED "On") by the presence of energy (−31 DBm0) on the receive side. If energy is not present, the EGA is in a blocking state (LED "Off"); and the noise contributed by that leg can be ignored. Care must be exercised in testing D5 circuits because a master and two remote stations may be simultaneously active (eg, split band). A main channel could be operating to one remote station while a second (possibly diagnostic) channel could be operating to another remote station. In this instance, the additional leg must be added into the mileage computations.

3.12 It should be noted that the use of simultaneous active channels/remotes bring with it the possibility of wide variations in the signal to C-notched noise. Consider the case of two active channels/remotes where both are connected to the same bridge as the master. If an EGA is blocking the rest of the circuit, the signal to C-notched noise would be high (eg, 34 dB). Should one of the channels now switch to a distant remote, the additional noise contribution would be such that the signal to C-notched noise would drop (possibly as low as 28 dB).

3.13 While the EGA blocks steady state noise, it is essentially transparent to impulse noise. Analysis of the impulse noise accumlation has shown a need to limit the number of remotes to twenty. This means a multipoint HPDC-type D5 circuit may consist of one master and twenty remotes.