GETTING STARTED

1.1 INTRODUCING THE INTERCEPTOR 147

The INTERCEPTOR 147 2 Mbit/s and Data Analyzer is a hand-held, battery-operated digital communications test instrument. It can perform in-service and out-of-service analysis on 2048 kbit/s circuits, 64 (or 56) kbit/s timeslots (including individual, adjacent, or non-adjacent timeslots), as well as physical layer testing at data interface access points.

The front panel of the test instrument is arranged so that the test instrument is easy to use. To learn more about the functions of controls and indicators on the front panel, see Section 2, Instrument Description. To set up to test a digital communications circuit, see Section 3, Setup Categories.

As you conduct a test, the test instrument provides a number of test results that provide information about the circuit under test. For information about the test results, see Section 4, Test Results.

In addition to performing the tests and viewing the results, you can also connect a printer to the test instrument and print information regarding the test setup and test results. The information can be printed in a number of formats, including histogram format. For information regarding printing, see Section 5, Using a Printer.

Additionally, the test instrument can be controlled through a remote controller such as a personal computer. For information regarding remote control, see Section 6, Remote Control.

INTERCEPTOr 147 2 Mbit/s and Data Analyzer

The INTERCEPTOR 147 includes the following key features:

- Operates at 2 Mbit/s, Nx64, Mx64, Nx56, Mx56 kbit/s, and Data Communications rates
- Measures 2 Mbit/s signal level
- Performs digital and VF channel analysis
- Displays 2 Mbit/s timeslot activity
- Automatically detects 2 Mbit/s framing and pattern
- Performs bit slip and frame slip analysis and stress testing of network timing (Option 147-1)
- Detects REBE (Remote End Block Error) bits in 2Mbit/s mode
- Measures round trip delay
- Provides a 16K test mode
- Transmits NTPM, LEPM, and programmable ISDN (Sa6) loop codes
- Displays and prints Sa6 messages
- Generates frequencies from 50 bit/s to 2.048 Mbit/s
- Transmits and displays Transmic 2G (C-Bit) loop codes
- Performs M.2100 in-service performance analysis
- Provides remote control commands for remote operation
- Stores and recalls setup configuration
- Stores and prints Results with/without Histograms
- Squelches prints when high error rate produces too many prints

INTERCEPTOR 147 Applications include:

- Commissioning (pre-service testing) new 2048 kbit/s circuits
- In-service monitoring of 2048 kbit/s circuits
- Monitoring individual voice channels in 2048 kbit/s circuits

- Testing 64 (or 56) kbit/s, Nx64, or Mx64 kbit/s paths through digital cross-connect systems (DCS)
- Commissioning new fractional 2048 kbit/s services
- Out-of-service testing of 2 Mbit/s circuits by using ISDN NTPM and LEPM (Sa6) loop codes
- Out-of-service testing of 2 Mbit/s circuits by using Transmic 2G (C-Bit) loop codes
- Testing data circuits with an X.21, V.11, V.24, V.35, or codirectional 64 kbit/s G.703 interface
- Wrap (Mux/Demux) testing of multiplexers and Network Terminating Equipment (NTE)
- Testing 2 Mbit/s, Nx64, and Mx64 circuits for timing-related problems (with Option 147-1 installed)
- Stress testing equipment.

1.2 OPTIONS FOR THE INTERCEPTOR 147

Options for the test instrument are available to provide additional functionality. Currently, the following option is available.

Option 147-1, Timing Analysis Option

The Timing Analysis option allows you to input an external clock source. With this option, the test instrument can provide Bit Slip and Frame Slip results. With this option, the test instrument can also transmit at a user-set variable frequency offset from -20,000 ppm to +20,000 ppm. A data synthesizer is included with this option.