

## Digital Communications Analyzer

WG PFA-30 is a multi-purpose instrument designed for commissioning, maintaining and troubleshooting digital networks. It is used to carry out both framed and unframed tests on a wide variety of equipment such as multiplexers, demultiplexers, digital cross connects, automatic protection switches and circuits operating at speeds from 50 bit/s to 2048 kbit/s. WG PFA-30 tests  $n \times 64$  kbit/s circuits in both unframed and framed modes. The large high resolution LCD and softkey menu-driven operation, combined with 8 menu setups, make WG PFA-30 easy to use.

- Framed and unframed testing of PCM and data channels at speeds from 50 bit/s to 2048 kbit/s**
- Multi-interface capability**
- $n \times 64$  kbit/s error testing**
- Mux/Demux measurements**
- Level and frequency measurements**
- CAS analysis**
- V.24/RS232 remote control**

**Extensive test capabilities** In unframed mode WG PFA-30 has 7 different interfaces for end-to-end and loopback testing of digital channels and VF, baseband and wideband data circuits. It can be configured as a DCE as well as a DTE; this allows a data circuit to be taken out of service and tested in sections so that a fault can be isolated to a specific part of the circuit. Mux/demux mode allows through testing of multiplexers using only one instrument. Autoconfigure mode allows tests to be initiated by a simple key sequence.

**Framed generator** In RX/TX mode a framed signal is generated internally by the WG PFA-30. The transmitter operates independently of the receiver. Various test patterns can be inserted into one selectable timeslot or into  $n \times 64$  kbit/s timeslots.

**Through mode** In Through mode a framed signal received by the WG PFA-30 is connected through to the WG PFA-30's transmitter. Selectable patterns can be written into any timeslot and errors can be injected in this mode.

**Framed receiver** WG PFA-30 can either terminate the circuit or act as a high impedance monitor. In both cases it provides:

- BER/BLER and G.821 analysis of a test pattern in one selectable timeslot or in  $n \times 64$  kbit/s timeslots
- BER and G.821 analysis (CRC or FAS)
- Simultaneous monitoring and evaluation of up to 18 alarms and errors
- PCM decoding and audio output of a selected timeslot over the WG PFA-30's integral loudspeaker
- Level and frequency measurements in any selected timeslot. For A-D measurements a tone can be injected into a telephone channel using, for example, the PCM-23 VF Tester. It can then be monitored in the 2048 kbit/s frame by the WG PFA-30, and the decoded r.m.s. level, peak code, coder offset and frequency displayed.



**Error and alarm indication** LEDs provide an instant indication of error and alarm status of the network under test. A programmable summary LED indicates the occurrence of any detected error and alarm event; a beeper is sounded simultaneously. Fourteen LEDs indicate individual alarms and errors.

