NetTek™ Analyzer

▶ YBT1 Backhaul T1 Tester

▶ **Features & Benefits**

T1 Circuit Testing Capability Adds to the Flexibility of the NetTek™ BTS Field Tool

User-defined Pattern Sequence Testing and Timed Testing

Verify the Most Important T1 Characteristics for Field Testing: Signal Level, Line Coding, Frame Sync

Modular Instrument for Handheld NetTek, Which Allows for Easy Future Expansion for New Functions

▶ **Applications**

Timed T1 Acceptance Tests

Verification of DS0 Timeslot Configuration

Troubleshooting and Diagnosis of T1 Alarms and Errors

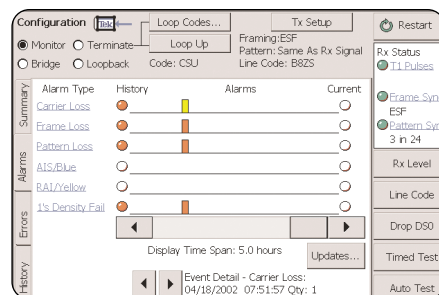## Affordable, Portable, Ready for the Field

T1 Circuit Tester for NetTek BTS Field Tool

The Tektronix NetTek is a revolutionary portable BTS field tool. The YBT1 Backhaul T1 tester enables mobile operators to troubleshoot the T1 connection to the base station. The YBT1 PC card offers this capability at a surprisingly low price, in a rugged, easy-to-use package, suitable for all field environments.

Field Troubleshooting

The YBT1 card for the NetTek BTS Field Tool includes the most common measurements needed to uncover T1 problems affecting a live mobile network. The YBT1 can verify the presence and level of T1 signals. Frame format, synchronization and line coding are displayed.

The YBT1 also has the capability to display the alarm and error status of the T1 span.

The YBT1 allows users to gather detail on any of the alarm or error events. Simply touch any of the red events and the instrument provides detail about the network event. This detail includes the number of events and the time of the event, and provides useful information to correlate network logs to field data.
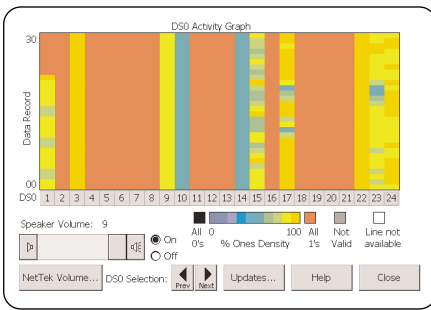
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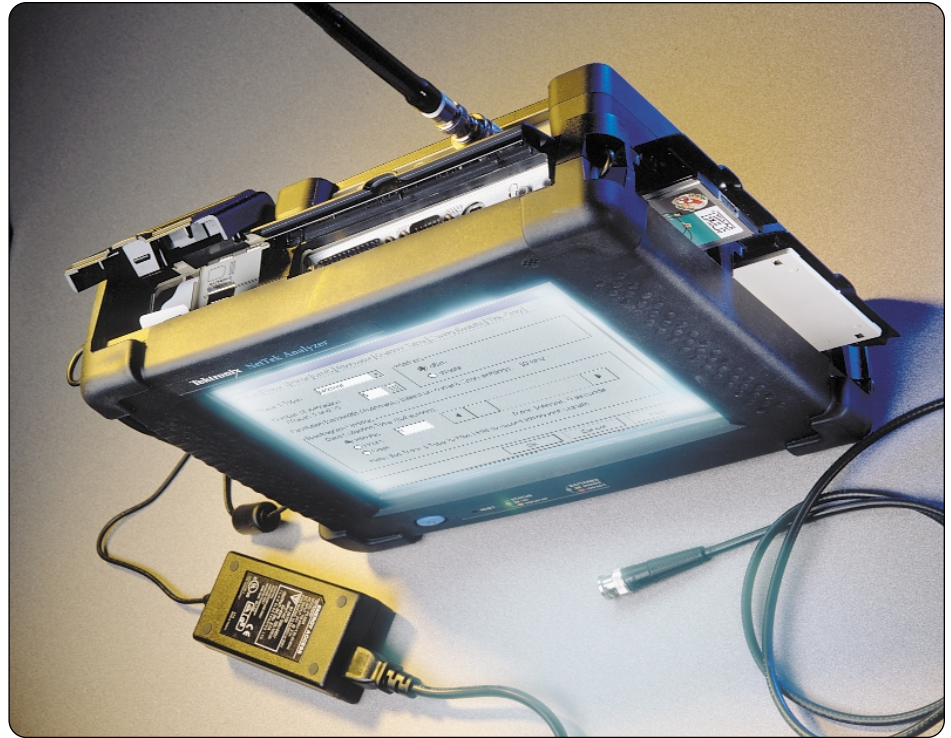
Installation Tests

Many of the same tests available for field troubleshooting are also useful for installing the T1 span. The YBT1, however, also supports measurements that specifically aid in the acceptance of a new, or repaired, T1 circuit.

The YBT1 provides a "channel gram" feature for monitoring the status of each of the 24 DSOs that make up a T1. This enables quick verification of data content of the T1 span – this feature is particularly useful for checking the correct configuration of a multiplexed circuit.

The DSO Activity Graph arranges the DSOs into columns. Time is the vertical axis and different densities are shown with different colors. With this unique feature, users can quickly verify the presence of traffic, signaling channels, etc. and how the data is changing over time.

User-defined multiple-pattern tests can be created with the YBT1. These are automated sequences that can be run for minutes, or hours, of performance testing. The sequence for the test and the length of time for each pattern can be selected. These sequences can be saved with a unique filename for future use, including e-mailing to multiple users so that all spans, even those in remote locations, are being tested with the same method.

The Modules and the Platform

The Tektronix NetTek analyzer platform is required for using NetTek modules and cards. The C platform includes the display, power supply, CPU and battery compartments. Modules can be attached to the back of the platform and PC cards (such as the YBT1) can be inserted into the PC card slots on the platform. Up to four modules can be attached at once. A variety of modules and options allows you to tailor the instrument to service the standards and interfaces for use in your network.

The modular design also means that the instrument can easily be upgraded. New measurements or standards can be added with software upgrades or with additional modules.

▶ Characteristics

YBT1 Measurement Characteristics

Line Coding –
AMI.
B8ZS.

Framing Modes –
D4 (Superframe).
ESF (Extended Superframe).

Connection Configurations –
Monitor.
Terminate.
Loopback.
Bridge.

Circuit Status Reports –
T1 Pulses.
Line Coding.
Frame ID and Sync.
Pattern ID and Sync.

Alarm Detection –
Blue Alarms.
Yellow Alarms.

Error Detection – Bit, CRC, Frame.

Error Insertion – BPV, Bit Error, Framing.

Pattern Generation and Detection – QRSS, 1-in-8, 2-in-8, 3-in-24, T1-1 (Min/Max), T1-2 (Trip Test), T1-3 (54 Octet), T1-4 (120 Octet), T1-5 (53 Octet), T1-6 (55 Octet), User-defined, All zeros, All ones.

Loopback Codes –
CSU.
NIU.
User-defined.
In-Band or Out-of-Band.

Level Measurements –
dBdsx or V_{p-p}.
±3 dB Accuracy.

General Characteristics

Temperature –
Operating: 0 °C to +50 °C.
Nonoperating: –40 °C to +60 °C.

Humidity – Operating: 5% to 80% up to 30 °C; 5% to 35% from 30 °C to 50 °C.

Altitude –
Operating: Up to 15,000 ft. (4,570 m).
Nonoperating: Up to 50,000 ft. (15,240 m).

Physical – PCMCIA Type II standard.

Warranty – One year parts and labor.

▶ Ordering Information

YBT1 Circuit Tester

PC Card without platform. NetTek analyzer platform is required for using NetTek modules and cards.

Each Includes: YBT1 PC card, user manual, Software CD-ROM, RJ48C T1 dongle, Loopback plug, RJ48C-to-Bantam Y cable.

Additional Accessories

RJ48C T1 Dongle[1] **–** Order 119-6618-00.

User Manual[1] **–** Order 070-9964-01.

Software CD-ROM[1] **–** Order 063-3539-01.

Standard Connector Kit[1] **–** Order 020-2424-00.

Accessory Connector Kit – Order 020-2425-00.

[1]Also included as standard accessories with YBT1.

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Our most up-to-date product information is available at:
www.tektronix.com

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