Model 570 ISDN Primary Rate Test Set

TPI™ 570

ISDN Primary Rate Test Set

ACTERNA
The Keepers of Communications

TPI™ 570
ISDN Primary Rate Test Set

The first portable test set to support Primary Rate Interface ISDN, TTC's TPI 570 has now become the industry standard in Primary (PRI) and Basic Rate (BRI) ISDN testing. Most major ISDN service providers, including all Regional Bell Operating Companies (RBOCs) and large independent telephone companies (ILECs), rely on the TPI 570's versatility and power. A full-featured, multi-functional test set, the TPI 570 supports all U.S. call controls, including national ISDN, and allows considerable flexibility in turning-up and troubleshooting present and future PRI and BRI ISDN services.

An easy-to-follow, menu-driven display allows field technicians to handle each job the first time out without formal training. Rugged, compact and weather-resistant, the TPI 570 is built to test under all types of field conditions. A rechargeable battery pack provides 12 hours of continuous use, and connector interfaces are protected from the elements under a weather-sealed cover. The backlit LCD is ideal for testing in dark environments, and a built-in speaker and microphone enable hands-free operation.
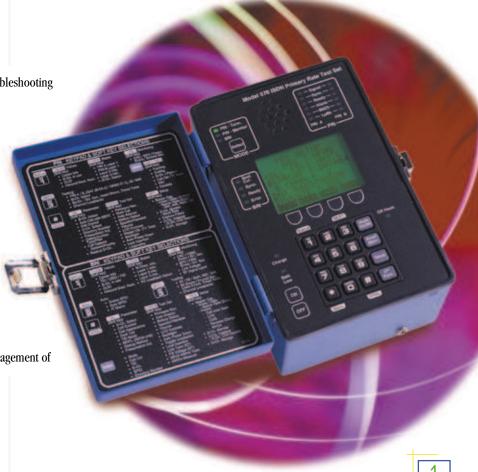
Highlights

Primary Rate Interface
- Emulates customer premises equipment for troubleshooting and turn-up
- Monitors existing services
- Emulates network to troubleshoot CPE

Basic Rate Interface
- Emulates customer premises equipment for troubleshooting at the U or S/T interfaces
- Monitors existing services at U or S/T interfaces
- Emulates network at the U interface to trouble-shoot CPE
- Measures 40 kHz tone: U-Line voltage; S/T Receive Signal Level and PS1, PS2, PS3 power sources

Remote Management
- ViTL™ software provides remote access and management of the TPI 570

1

Primary Rate Interface

- Verifies voice and data customer services, including multi-rate ISDN, multiple span configurations, and network-specific facilities.
- Determines line quality with BER testing on any combination of channels.
- Conducts Non-Facility Associated Signaling (NFAS) testing, including back-up D-channel service.
- Checks service translations, including simultaneous B-channel calls for multi-media applications, such as video conferencing.
- Functions at the CO or customer premises as TE or network emulator.
- Functions at the U interface as a NT1 and TE combination, at the S/T interface as TE and monitors U or S/T interfaces with optional BRI.

Basic Rate Interface Highlights (Optional)

- Functions at the U or S/T interface in a monitor mode
- Functions at the CO or customer premise as a network emulator or CPE
- NT1 replacement mode
- S/T interface TE mode
- Dual BERT/Dual Loopback
- Measures 40 kHz tone; U-line voltage; S/T receive signal level; and PS1, PS2, PS3 power sources
- Intelligent Testing™ capability

Interface Testing Capabilities

- Tests Primary Rate ISDN circuits at the customer premises or at the central office cross connect panels.
- Tests a 23B+D circuit configuration or a NFAS 23B+D and 24B configuration.
- Verifies bearer services carried on a BRI ISDN circuit.
- Determines line quality using test patterns to determine error performance.
- Verifies service translations on individual B-channels by supporting multiple simultaneous calls.

Emulation Capabilities

- Emulates the NT2 and verifies operation of premises equipment, such as a PBX or a router.
- Tests multiple (NFAS) configurations and verifies service.
- Emulates the NT1 or TE, enabling testing to isolate troubles.

When it comes to troubleshooting, the TPI 570 quickly isolates and resolves problems using selectable interfaces and test modes.

2

Monitoring

- Functions in a monitor mode, allowing full duplex D-channel monitoring of an operational PRI circuit.
- Analyzes layers 1, 2, and 3 and D-channel messaging.
- Decodes and stores D-channel messages in a 4 K storage buffer. These messages can be displayed on the LCD for on-the-spot detail analysis.
- Monitors BRI D-channel messages to isolate and identify trouble spots. D-channel messages are decoded into English and sent to a printer or computer for analysis via the data access port.

ViTL™

Increase the power of your test set with Virtual Test Link™ (ViTL) software that streamlines and enhances circuit turn-up and maintenance processes by providing remote access to the TPI 570. This access allows centrally-located technicians to effectively support technicians in the field—reducing time to turn-up and trouble resolution.

Customer Care

Technical Support

To complement our instruments and systems, engineers at TTC's Technical Assistance Center offer expert consultation on any technical problems. Call 800-638-2049 or 301-353-1550 between 8 a.m. and 8 p.m. EST, Monday through Friday.

Training

Our instructors provide practical, hands-on training that can be tailored to your specific needs. Classes are provided at locations across the country, or at a location that you choose.

Warranty and Repair Service

Customer Care starts with a comprehensive warranty on all mainframes. We also offer extended warranty options, as well as service/calibration plans to meet your unique needs. As part of our ISO-9001 approved quality system, all components are screened before installation and each instrument is rigorously tested before being shipped.

Software Enhancement Agreement

TTC offers individual software subscription services for the TPI 570. This service provides software upgrades, release notices that detail new features and their applications, and complete installation instructions with every software upgrade package. *Visit TTC on the Internet at www.ttc.com.*

Specifications

Interface (PRI)

Dual PRI Transceiver Capability:
    Supports NFAS and back-up D-channel
Virtual Test Link™ (ViTL™) remote control
Line code (B8ZS or AMI)
Framing (ESF or SF)
Physical (mini-bantam or 8-pin modular)

Interface (BRI) – Optional

U interface
S/T interface
U monitor
S/T monitor
Physical (8-pin modular)

Voice capability (PRI/BRI)

Hands-free operation
Simultaneous call capability
Dual call capability
Multi-call feature
Network emulation capability
Speed dialing (10, 30-digit #'s)
Redial
B-channel selection

Data Capability (PRI)

Selectable bandwidth (Nx64, contiguous, flexible)
Speed dial/redial
Simultaneous call capability
Dual call capability
Multi-call feature
Network emulation capability
B-channel selection

Data Capability (BRI)

Circuit switched data calls
Packet data calls
Dual call feature
Simultaneous call capability
Dual call capability
Multi-call feature
Network emulation capability
B-channel selection

Analysis (PRI/BRI)

LED status (each interface)
Layer 1 states
Layer 2 (LAPD) states
Layer 3 (call status) states
Cause messages
Loopbacks
D-channel location select (PRI)
D-channel back-up testing (PRI)
NFAS support (PRI)
RS-232 data port
D-channel monitor
D-channel message capture/LCD display/store

Measurements

ISDN Testing

Call controls (National, AT&T and NTI custom)
Modes: Terminate, Monitor, PRI, BRI
DS1: CRC/BPV/frame errors and errored seconds
Bit Error Testing
Timed tests
Network loopbacks
User configured loopbacks
Line build-out (dB loss selection)
Margin analysis (BRI)
IT™ Intelligent Testing
U-line voltage
S/T signal level
PS1, PS2, PS3 voltage/polarity
40 kHz test tone (send and receive)

Facilities Testing

Bit Error Rate Testing
T1 (511, 2047, 2^{15-1}, 2^{20-1}, 2^{23-1}, 1 in 8, 2 in 8, 3 in 24, Zeros, Ones, QRSS)

General

Physical

Dimensions: 8.5" L x 5.5" W x 4.5" D
Weight: 6 lb
Quick reference lid label

Power

Rechargable 12v lead acid battery
A/C adapter/charger accessory
12-hour continuous use
Auto shut-off mode

Controls

Speaker phone with volume adjust
Dial pad with special function keys
16-line display with soft keys
User-friendly menu selections with interactive soft keys

Accessories

Handset
Test cords
Soft pack carrying case

Firmware

Field replaceable EPROM card

World Headquarters

20400 Observation Drive
Germantown, Maryland 20876-4023 USA
Toll Free 1-800-638-2049 • +1-301-353-1550 • Fax +1-301-353-0234
www.acterna.com

North America

United States
Atlanta, Georgia • Chicago, Illinois • Dallas, Texas • Denver, Colorado
East Rutherford, New Jersey • Los Angeles, California • Roanoke, Virginia
San Diego, California • San Francisco, California • Terre Haute, Indiana

Canada
Calgary, Alberta • Laval, Quebec • Vancouver, British Columbia
Toronto, Ontario Toll Free 1-888-689-2165 • +1-905-812-7471 • Fax +1-905-812-3892

International

Australia	
Melbourne	+61-3-9563-4800
Sydney	+61-2-9926-1447
Benelux	+32-15-28-7686
China	
Beijing	+86-10-6460-5258
Hong Kong	+852-2892-0990
Shanghai	+86-21-6255-2333
France	+33-1-39-30-24-24
Germany	+49-6172-5911-00
United Kingdom	+44-1189-759696
European Freephone	+800-TTC-UKTAC
	(+800-882-85822)

International Distributors

Argentina • Austria • Brazil • Chile • Colombia • Costa Rica
Czech Republic • Denmark • El Salvador • Finland • Hungary
India • Indonesia • Ireland • Israel • Italy • Japan • Korea
Malaysia • Mexico • Norway • Peru • Philippines • Poland
Saudi Arabia • Singapore • Slovakia • Slovenia • South Africa
Spain • Sweden • Switzerland • Taiwan • Thailand
United Arab Emirates • Venezuela

ACTERNA™
The Keepers of Communications

TPI570-A-3/00

www.valuetronics.com