



SUNRISE TELECOM

... a step ahead

SunSet™ ISDN

**Comprehensive BRI & PRI
Testing in a Handheld Package**

A complete testing solution for ISDN
installation, troubleshooting, and maintenance

SunSet ISDN

Complete ISDN Testing in One Handheld Package

Guaranteeing circuit integrity and service reliability is simpler than ever with the SunSet ISDN. This comprehensive instrument delivers complete ISDN test capabilities in a handheld package. It provides everything you need for acceptance testing, troubleshooting, and maintenance of ISDN Basic Rate and Primary Rate circuits.

The SunSet ISDN is a field-proven access network test set from Sunrise Telecom, the industry leader in the design and manufacture of handheld telecommunications service verification equipment. Technicians increase efficiency, improve training, and reduce costs by performing all testing with a single handheld unit. The SunSet ISDN is the only handheld unit that can provide comprehensive testing features across an entire access network.



- BRI S/T and Dual BRI U Interfaces
- Dual PRI Interfaces
- Bidirectionally Monitor In-service Lines at S/T, U, and PRI Interfaces
- PRI at 1.544 Mbps or 2.048 Mbps
- Emulation: BRI: LT-U, NT1, U-Repeater, TE/NT1-U, TE-S/T, LT-S/T, and ST-MON; PRI: TE, NT, Monitor
- Full Protocol Monitoring and Analysis

The SunSet ISDN weighs only 1.2 kg (2.7 lbs.) and fits comfortably in the palm of your hand.

Ultimate Field Convenience

At 1.2 kg (2.7 lbs.), the SunSet ISDN is an ideal tool for the field technician, effectively combining the functions of separate Basic Rate Interface (BRI) and Primary Rate Interface (PRI) test sets. Its ergonomic design makes it easy to handle and a conveniently placed microphone and speaker can be used for talk/listen applications. The large LCD display features a 16 line x 32 character area. LCD contrast and backlight controls make the SunSet ISDN easy to read in low-light conditions. And, 5-hour battery operation keeps it working without an external power source.

Dual-Color LEDs

clearly indicate operational mode, signal/error conditions, and signal status (both current and history).

Large, Backlit Display

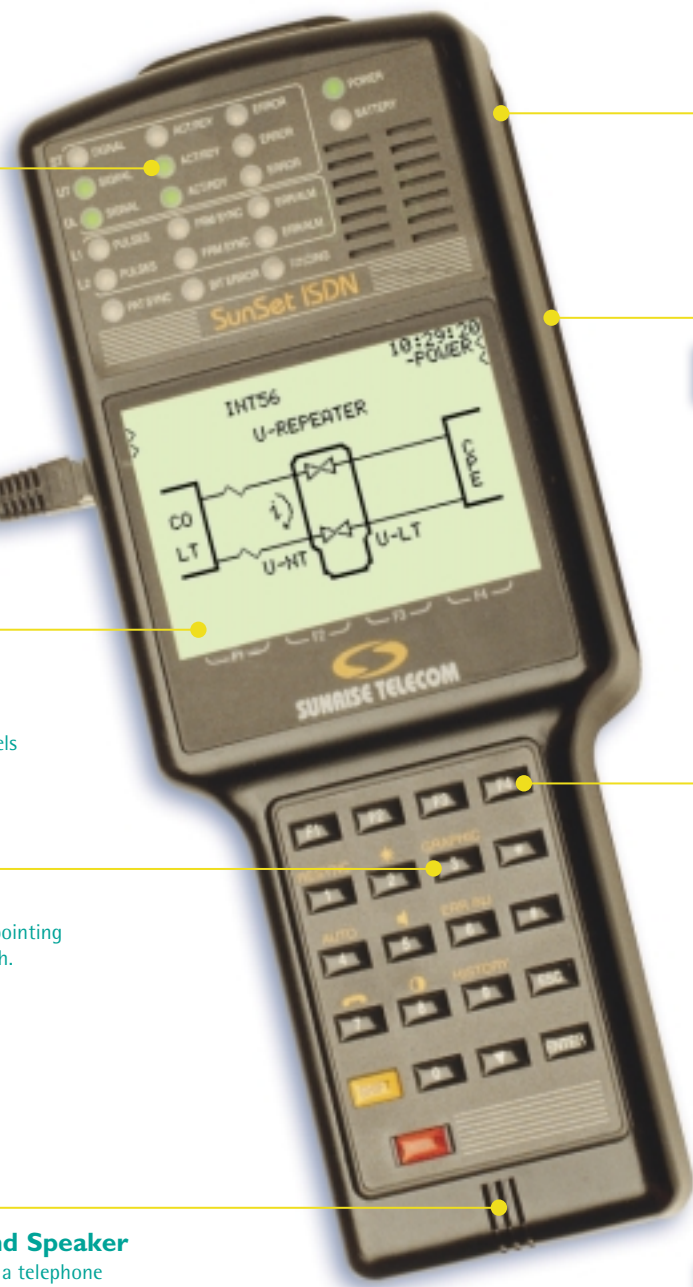
is visible in low-light conditions, with a full 16 line x 32 character area. Adjustable contrast and backlight levels provide the clearest possible image.

Graphic Display Controls

clarify circuit status and assist in pinpointing problem areas... all with a single touch.

Integrated Microphone and Speaker

allow the SunSet ISDN to function as a telephone handset and speakerphone.



External Handset Connection

lets you use an external handset to place a second simultaneous voice call.

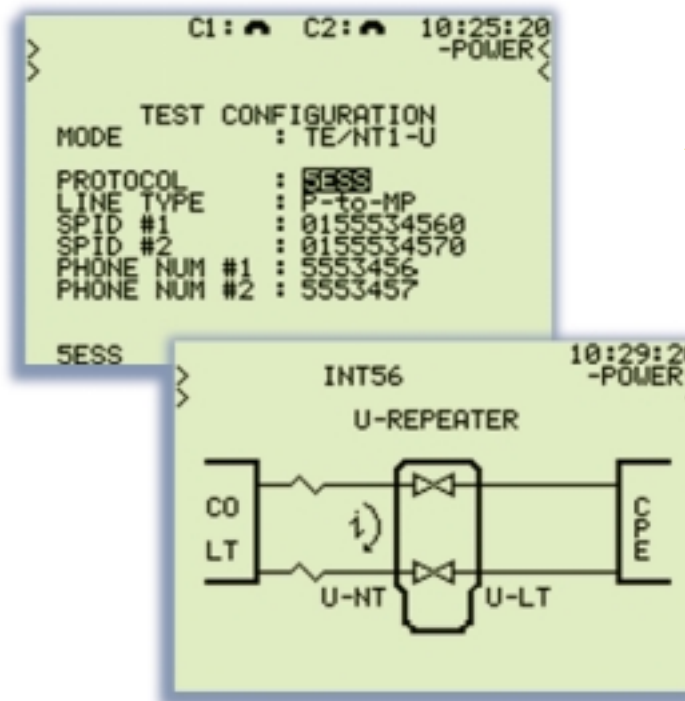


BRI interface is positioned for easy access.

Intuitive Function Keys

make configuration efficient and simple: just follow the prompts.

PRI interfaces are available for either T1 or E1.



Operational Simplicity

Straightforward configuration and menu-driven operation make using the SunSet ISDN easy. All necessary setup items are shown on the multi-line display. Or, use the convenient graphic display for instant verification of instrument setup. Because it employs the latest Digital Signal Processing (DSP) technology, the SunSet ISDN is completely noncalibrating and requires no regular maintenance.

Versatile Functions, Worldwide Standards

With a full range of both Basic Rate and Primary Rate testing capabilities, as well as extensive protocol analysis features, the SunSet ISDN delivers an impressive feature set. BRI operation supports S/T and dual U interface access with in-service, bidirectional monitoring from either interface. A TE device can be powered directly from the SunSet ISDN using the optional internal phantom power supply. Its multiple emulation modes allow for many applications. Call setup

protocols include ETSI, AUSSIE, National ISDN-2, National ISDN-1, NTT, AT&T 5ESS and Nortel DMSF. (Refer to the specifications for more details.)

Simultaneous placement of two calls (voice or data) verifies proper provisioning of both B channels. In PRI mode (available for either a T1 or E1), NT, TE, and PRI-Monitor emulations are standard. Many advanced features are available, including support for 46B+2D and 47B+1D configurations for dual T1 Primary Rate interfaces (NFAS circuits). Both BRI and PRI modes include protocol analysis with live tracing, pre-filters, and post-filters.

Dual Card Capacity

for software cartridges gives you even more ISDN testing power on call. One card is used for the software, and the second is available for extra D-Channel message capture.



Removable Battery

is field-exchangeable, and provides 5 hours of continuous operation.

ISDN Basic Rate Testing

A comprehensive suite of BRI functions is standard in the SunSet ISDN. Its dual U interface capability—a first in handheld ISDN test sets—allows in-service troubleshooting at the U interface. LT-U, NT1, U-Repeater, TE/NT1-U, TE-S/T, LT-S/T, and ST-MON modes are all supported. This allows the same test set to be used anywhere from the Central Office (Exchange) to the Customer Premises, including a repeater site.

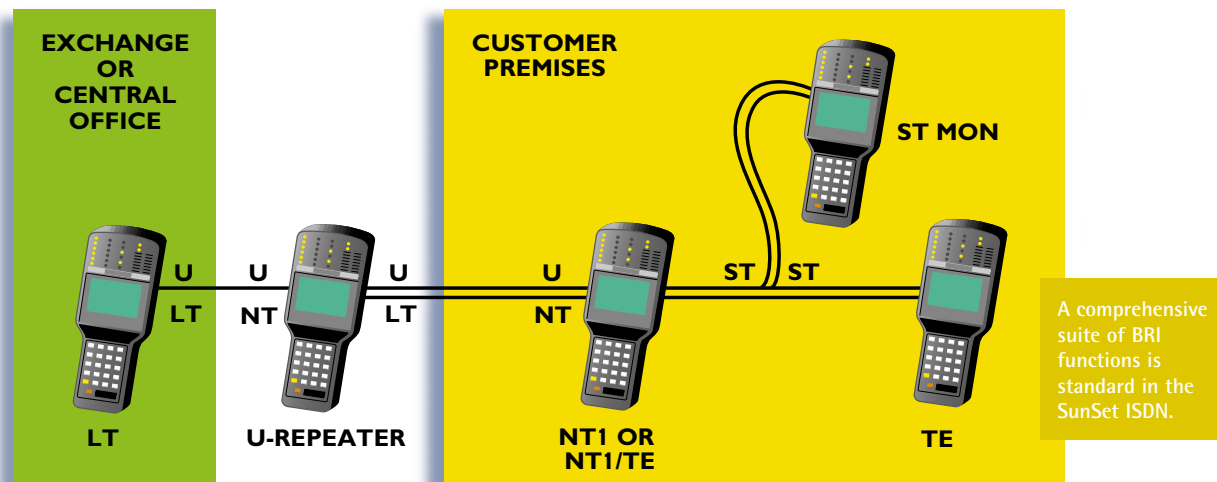
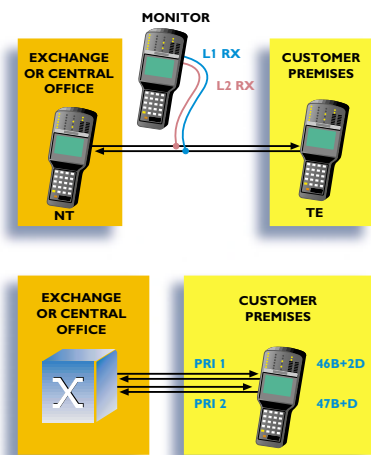
LT-U mode supports EOC maintenance commands and generates loopback control commands to a mid-span U-Repeater, U-Brite, and/or NT1. U-Repeater, NT1, and ST-MON modes provide in-service monitoring of the D-Channel messages anywhere on a BRI circuit. TE/NT 1-U, TE-ST, and LT-S/T emulations operate in both point-to-point and point-to-multipoint modes, allowing you to place and receive calls. Calls can be set up as either speech or data.

For higher layer compatibility, optional modes include Telephony 3.1k, Telephony 64k, FAX G2/3, FAX G4, MIX MODE, OSI, PROCFORM, and VIDEOTEX. The SunSet ISDN can also scan and qualify available services to help streamline your work. Leased-Line BRI modes let you perform BERT analysis on the entire 144 kbit/s bandwidth of an S/T interface.

BRI measurements include ITU-T G.821 analysis (ES, SES, EFS, AS, UAS, and DGRM) and BIT error count and rate. Measure CRC, NEBE, and FEBE errors at the U interface. Or, measure code (BPV) and frame errors at the S/T interface. Long-term test results are easy to store and review from the test results buffer featuring non-volatile memory and timestamping.

Protocol Analysis

The SunSet ISDN can troubleshoot problems between terminal equipment and the network on either an in-service or out-of-service basis. Reporting is straightforward with programmable trace filters and a serial port. Detailed trace information is sent to the optional printer or directly to a PC screen.



A comprehensive suite of BRI functions is standard in the SunSet ISDN.

ISDN Primary Rate Testing

The SunSet ISDN also features ISDN PRI testing. BERT analysis lets you verify physical layer performance. TE and NT emulations are provided, with call set-up and full D-Channel message decoding. Optional protocols include National ISDN-1, National ISDN-2, ETSI, AUSSIE, NTT, Nortel custom, and AT&T custom. (Refer to the specifications for more details.) Dual receivers allow in-service, bidirectional monitoring of D-channel messages in both T1 and E1 applications. Error injection functions include BIT errors, Code/BPV violations, and frame errors, with full reporting and storage capabilities. At 1.544 Mbps, testing of both 46B+2D and 47B+1D configurations is supported (NFAS circuits). The Sequential Call feature tests each B-Channel on a PRI. The Bulk Call feature places calls on all B-Channels simultaneously to stress-test the D-channel.



Easily Upgradeable

With programmable software cartridges, the SunSet ISDN easily keeps pace with new developments in ISDN technology and testing. These convenient memory cards allow field upgrades to more advanced features without using tools or returning the unit to the factory. Simply unplug the old system software cartridge, plug in the new one, and power up the test set. The SunSet ISDN also accommodates a second software cartridge, providing extra D-Channel storage capability, as well as increased flexibility for future enhancements.

Plug-in Software

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Service & Support

Sunrise Telecom is proud to give its customers excellent service and support. Technical assistance is available 24 hours a day from local representatives in over 70 countries, from factory experts, on the Internet, and via Sunrise's toll-free customer support line.

Contact Sunrise Telecom to find your local Sales Representative or Distributor and discover how the SunSet ISDN can solve your testing needs.

Accessories

Several SunSet ISDN accessories are available for specific testing requirements. Ask your representative for ordering information and additional specifications.

Order Direct

toll-free order hotline 1 888 242 7077 (US/Canada only)

fax hotline 1 408 360 1958

order@sunrisetelecom.com

Customer Support

1 800 701 5208 (US/Canada only)

1 408 363 8000 (International)

e-mail

support@sunrisetelecom.com

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