


**PRISM 3111**

**PRISM 3111 with LCD Option**

Button or Indicator	Unit	Description
TEST	Non-LCD	Press once to transmit five seconds of in-band loop code network. If S2-8 is set to Clear Loop, the unit goes into test mode and does not generate an alarm. If S2-8 is set to BERT, the last test pattern selected in the terminal interface is transmitted toward the network.
LOOP	Non-LCD	Press once to activate a line loopback. Press again, to clear the loop and turn off the LOOP indicator.
EXIT	LCD	The EXIT button allows exiting a current menu option which then places the unit in the next higher menu level. If the unit is at the main menu, pressing EXIT logs off the unit.
SCROLL	LCD	The SCROLL button allows reviewing the options or selections for a menu level.
SELECT	LCD	The SELECT button allows choosing the option or value for a field.
NET	Non-LCD	This indicator is green when the unit is in frame sync; amber when receiving a yellow alarm from the far end; and red when out of sync and/or has lost signal.
BACKUP	Both	This amber indicator flashes when dialling, connecting, or disconnecting. This indicator is on continuously when active.
TEST	Both	This indicator flashes green when the unit transmits loop code. It is green continuously when a BERT has no errors, the unit has a loop, or when the unit is in clear test. It is red during a BERT when the unit receives errors.
ALARM	Both	This red indicator is on continuously when the unit has an active alarm. It flashes when an invalid switch setting has been made.
POWER	Both	This green indicator is on when power is applied to the unit.

## Specifications

### Network Interface

Line Rate:	1.544 Mbps (± 50 ppm)
Line Framing:	D4 or ESF
Line Code:	AMI or B8ZS
Input Signal:	0 to -27 dB ALBO
Connection:	RJ-48C jack, 100 Ω (± 5%)
Output Signal:	3.0 V (±10%) base-peak into 100 Ω with protection
Line Build Out:	0, -7.5, -15, -22.5 dB attenuation
Transient Voltage:	1000 V protection, fused in/out
Jitter Control:	per TR 62411 and T1.403
Timing Source:	Internal, recovered line clock, external DTE, T1 DTE
Ones Density:	B8ZS, N×56 bit stuffing, alternate fill; TR 62411

### Equipment Interface

DTE Ports:	3111 single and 3112 dual
Compatibility:	ITU V.35, female 34-pin EIA-530, female 25-pin
Data Rate:	Synchronous, N×56 kbps or N×64 kbps (where N = 1 to 24); independent selection on each port
Clocking:	Internal, External, Oversample
Data Invert:	Independent selection on each port

### Supervisory Port

Connection:	8-pin modular (RS-232)
Data Rates:	1.2, 2.4, 9.6, and 19.2 kbps

### SLIP Port

Connection:	8-pin modular (RS-232)
Data Rates:	1.2, 2.4, 9.6, and 19.2 kbps

### Ethernet (option)

Connection:	8-pin modular (RJ-45)
Network Protocol:	TCP/IP-based networks
Data Rate:	10 Mbps
Compatibility:	10BASE-T

### Token Ring (option)

Connection:	8-pin modular (RJ-45)
Network Protocol:	TCP/IP-based networks
Data Rate:	4 or 16 Mbps
Compatibility:	Type 3 unshielded twisted pair

### T1 DTE (option)

Line Rate:	1.544 Mbps, ± 50 ppm
Line Framing:	D4 or ESF
Line Code:	AMI or B8ZS
Input Signal:	DSX1 to -6 dB
Connection:	RJ-48C modular jack (100 Ω, ± 5%)
Output Signal:	Selectable DSX1 level from 0 to 655 feet in six increments

### Dial Backup

Connection:	RS-232, 10-pin modular
Backup Service:	PSTN external device
Configuration:	Information for backup unit is stored in unit and transmitted to backup unit by in-band AT commands
Dialing:	Numbers programmed and stored in unit and transmitted to backup unit by in-band AT commands or DTR dialing (assertion)
Restoral:	Manual or automatic restoral to leased line service

### Diagnostics

Performance:	Monitoring per TR 54016 and T1.403
Network Loops:	Line, payload, or maintenance loopback
Fractional Loop:	Generates and responds to in-band V.54 loop
DTE Port Loops:	Bidirectional loop toward DTE and network
T1 DTE Loops:	MLB and LLB toward DTE
BERT:	Multiple test patterns toward network or DTE ports

### Alarms

Activation:	Programmable thresholds
Reporting:	Front panel LEDs, call out on alarm (COA), SNMP traps

### Power

115 VAC:	120 mA, 7 W max, 24 BTU max
48 VDC:	180 mA, 9 W max, 31 BTU max

### Mechanical

Mounting:	Desktop or horizontal rack
Dimensions:	11.75" (29.8 cm) wide 1.75" (4.45 cm) high 9.5" (24.1 cm) deep
Weight:	3 pounds (1.36 kg)

### Environmental

Storage Temp:	32° to 122°F (0° to 50°C)
Operating Temp:	-4° to 185°F (-20° to 85°C)
Humidity:	95% maximum (non-condensing)

## Rear Panel Pinouts

Pin	LAN Enet	LAN Tkn Rng	SUPV/SLIP Terminal	SUPV/SLIP Modem	T1 DTE*	Network	DBU
1	Data Out		DCD Out	DTR Out	Data Out	Data In	Rx Clk In
2	Data Out		CTS Out	RTS Out	Data Out	Data In	DTR Clk Out
3	Data In	Data Out	Frm Gnd	Frm Gnd			RTS Clk Out
4		Data In	Data Out	Data Out	Data In	Data Out	Frm Gnd
5		Data In	Data In	Data In	Data In	Data Out	Data Out
6	Data In	Data Out	Sig Gnd	Sig Gnd			Data In
7			RTS In	CTS In	Ch. Gnd	Ch. Gnd	Sig Gnd
8			DTR In	DCD In	Ch. Gnd	Ch. Gnd	CTS In
9							DCD In
10							Tx Clk In

\* An RJ-48X modular jack with loopback (100 Ω ± 5%) is available for the T1 DTE port. Unlike an RJ-48C, the RJ-48X has a shorting bar that engages when no cable is plugged into the connector, looping the transmitted data back into the unit.

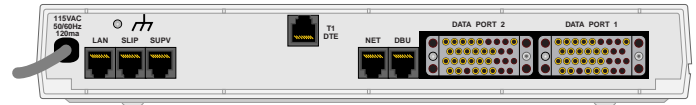
## Data Port Pinouts

Signal	V.35 34-pin	EIA-530 25-pin	Signal	V.35 34-pin	EIA-530 25-pin
Frm Gnd	A	1	DSR	E	6, 22
Sig Gnd	B	7	DTR	H	20, 23
Tx Data	P, S	2, 14	DCD	F	8, 10
Rx Data	R, T	3, 16	Tx Clk	Y, AA	12, 15
RTS	C	4, 19	Rx Clk	V, X	9, 17
CTS	D	5, 13	Term Tmg	U, W	11, 24

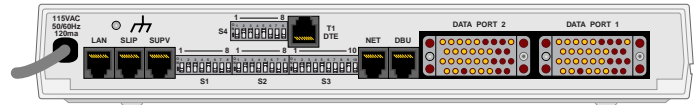
## Switch 3

# of DS0s	Port 1 (Port 2)					kbps if S1-7 (S1-8) is Up	kbps if S1-7 (S1-8) is Down
	S3-1 (S3-6)	S3-2 (S3-7)	S3-3 (S3-8)	S3-4 (S3-9)	S3-5 (S3-10)		
—	Down	Down	Down	Down	Down	Disabled	Disabled
1	Up	Down	Down	Down	Down	56	64
2	Down	Up	Down	Down	Down	112	128
3	Up	Up	Down	Down	Down	168	192
4	Down	Down	Up	Down	Down	224	256
5	Up	Down	Up	Down	Down	280	320
6	Down	Up	Up	Down	Down	336	384
7	Up	Up	Up	Down	Down	392	448
8	Down	Down	Down	Up	Down	448	512
9	Up	Down	Down	Up	Down	504	576
10	Down	Up	Down	Up	Down	560	640
11	Up	Up	Down	Up	Down	616	704
12	Down	Down	Up	Up	Down	672	768
13	Up	Down	Up	Up	Down	728	832
14	Down	Up	Up	Up	Down	784	896
15	Up	Up	Up	Up	Down	840	960
16	Down	Down	Down	Down	Up	896	1024
17	Up	Down	Down	Down	Up	952	1088
18	Down	Up	Down	Down	Up	1008	1152
19	Up	Up	Down	Down	Up	1064	1216
20	Down	Down	Up	Down	Up	1120	1280
21	Up	Down	Up	Down	Up	1176	1344
22	Down	Up	Up	Down	Up	1232	1408
23	Up	Up	Up	Down	Up	1288	1472
24	Down	Down	Down	Up	Up	1344	1536

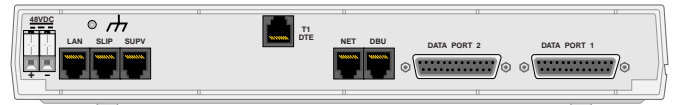
Any DS0 not allocated to a data port is automatically allocated to the T1 DTE port.



PRISM 3112 Rear Panel (AC/V.35/LCD option)



PRISM 3112 Rear Panel (AC/V.35 option)



PRISM 3112 Rear Panel (DC/EIA-530/LCD option)

## Switch 1

**S1-1:** Determines the power-up mode.

Down: Switches Up: RAM

## S1-2 S1-3 SUPV Port Rate

Up Up 1.2 kbps

Down Up 2.4 kbps

Down Down 9.6 kbps

Up Down 19.2 kbps

## S1-4 S1-5 SLIP Port Rate

Up Up 1.2 kbps

Down Up 2.4 kbps

Down Down 9.6 kbps

Up Down 19.2 kbps

**S1-6:** Sets the channel assignment mode.

Down: Contiguous Up: Alternate

**S1-7:** Sets the Port 1 rate multiplier.

Down: N×64K Up: N×56K

**S1-8:** Sets the Port 2 rate multiplier.

Down: N×64K Up: N×56K

## Switch 4

**S4-1:** Set the DTE framing type.

Down: ESF Up: D4

**S4-2:** Set the DTE line coding.

Down: B8ZS Up: AMI

## S4-3 S4-4 S4-5 DTE LBO

Down Down Down 0–110 ft

Up Down Down 111–220 ft

Down Up Down 221–330 ft

Up Up Down 331–440 ft

Down Down Up 441–550 ft

Up Down Up 551–660 ft

Down Up Up >660 ft

## Switch 2

**S2-1:** Set the network line framing.

Down: ESF Up: D4

**S2-2:** Sets the network line coding.

Down: B8ZS Up: AMI

## S2-3 S2-4 SUPV Port Rate

Down Down 1.2 kbps

Up Down 2.4 kbps

Down Up 9.6 kbps

Up Up 19.2 kbps

## S2-5 S2-6 Timing Source

Down Down Network

Up Down Internal

Down Up Port 1 EXC

Up Up T1 DTE

**S2-7:** TEST button loop code

Down: LLB code Up: V.54 code

**S2-8:** TEST button operational mode.

Down: BERT Up: Clear Loop



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FAX-On-Demand

(800) 957-5465

Technical Assistance Center

(800) 285-2755

# 3111/3112 Menutree

Main Menu	Alarms	<p>Net: LOS, OOF, RAI, AIS, ERR, Ok, TST, UAS, DBA, DBF</p> <p>DTE: Ok, T1D, P1, P2</p> <p>Reset Tmr: 000-900</p> <p>ES</p> <p>SES</p> <p>LOS</p> <p>OOFS</p> <p>UAS</p> <p>RAS</p> <p>AISS</p> <p>BPVS</p> <p>DLOS</p> <p>PLS</p> <p>Reset Alms: No, Yes</p>	<p>* An underscore appears under the character to be entered or modified.</p> <p>Press the EXIT button on the last character to enter the value and return to the previous screen.</p> <p>Press the SCROLL button to increment the characters (a-z, A-Z, 0-9, special characters).</p> <p>Press the SELECT button to accept the current value and move the cursor right.</p>															
	Performance	<p>Target: User, Net; User, DTE; Tlco, Net; Tlco, DTE</p> <table border="1"> <tr> <td>15 Min Perform</td> <td>ES</td> <td>SES</td> <td>CRCS</td> <td>AISS</td> <td rowspan="3">The number of events in the specified period.</td> </tr> <tr> <td>24 Hr Perform</td> <td>UAS</td> <td>LOFC</td> <td>OOFS</td> <td>RAS</td> </tr> <tr> <td>30 Day Perform</td> <td>BES</td> <td>CSS</td> <td>LOSS</td> <td>BPVS</td> </tr> </table> <p>Reg Reset: No</p> <p>Yes: Verification Continue?: No, Yes</p>	15 Min Perform	ES	SES	CRCS	AISS	The number of events in the specified period.	24 Hr Perform	UAS	LOFC	OOFS	RAS	30 Day Perform	BES	CSS	LOSS	BPVS
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Maintenance	T1 Net Loops	<p>Far PLB: None, LpUp, LpDn</p> <p>Far LLB: None, FLpUp, FLpDn, ULpUp, ULpDn</p> <p>Net PLB: None, LpUp, LpDn</p> <p>Net LLB: None, LpUp, LpDn</p> <p>DTE MLB: None, LpUp, LpDn</p>																
	T1 DTE Loops	<p>Net MLB: None, LpUp, LpDn</p> <p>DTE LLB: None, LpUp, LpDn</p>																
Configuration	Port 1 Loops	Near: None, LpUp, LpDn																
	Port 2 Loops	Far: None, LpUp, LpDn																
Utilities	BERT Function	<p>Pattern: QRSS, 63, 511, 2047, 2<sup>15</sup>, 2<sup>20</sup>, 2<sup>23</sup>, 1:8, 3:24, Alt, Clear</p> <p>BERT: None, Idle, T1 Net, T1 DTE, 1 Net, 1 DTE, 2 Net, 2 DTE, Ch. 1-24</p> <p>Sync: No Test, No Sync, In Sync</p> <p>Time: HH:MM:SS</p> <p>BitErr: 0-999999</p> <p>ErrSec: 0-999999</p> <p>SynLos: 0-999999</p> <p>Reset: No, Yes</p>																
		<p>SUPV: 1.2K, 2.4K, 9.6K, 19.2K</p> <p>SLIP: 1.2K, 2.4K, 9.6K, 19.2K</p> <p>Date: MM/DD/YY</p> <p>Time: HH:MM:SS</p> <p>Set Password*</p> <p>Maint Rst: No</p> <p>Yes: Verification Continue?: No, Yes</p> <p>Fact Rst: No</p> <p>Yes: Verification Continue?: No, Yes</p> <p>Contrast: 0-15</p> <p>Download: No</p> <p>19.2K, 38.4K, 57.6K: Verification Continue?: No, Yes</p>																

T1 Net Params	<p>Framing: ESF, D4</p> <p>Ln Code: B8ZS, AMI</p> <p>LBO: 0 dB, -7.5 dB, -15 dB, -22.5 dB</p> <p>PRM: Dis, En</p> <p>Zero Sup: En, Dis</p> <p>Timing: Net, T1-DTE, Port 1, Int</p> <p>Rem Comm: 1-24</p>																								
T1 DTE Params	<p>Framing: ESF, D4</p> <p>Ln: B8ZS, AMI</p> <p>Level: 0-110 ft, 111-220 ft, 221-330 ft, 331-440 ft, 441-550 ft, 551-660 ft, &gt;660 ft</p> <p>Chan Assign: Ch. 1-Ch. 24: Idle, Thru, T + Sig</p>																								
Port 1 Params	Rate: N×56K, N×64K																								
Port 2 Params	<p>Ch assign: Cont., Alt</p> <p>Start Chan: 1-24</p> <p>56/64×N:</p> <table border="1"> <tr> <td>×1 = 56/64</td> <td>×9 = 504/576</td> <td>×17 = 952/1088</td> </tr> <tr> <td>×2 = 112/128</td> <td>×10 = 560/640</td> <td>×18 = 1008/1152</td> </tr> <tr> <td>×3 = 168/192</td> <td>×11 = 616/704</td> <td>×19 = 1064/1216</td> </tr> <tr> <td>×4 = 224/256</td> <td>×12 = 672/768</td> <td>×20 = 1120/1280</td> </tr> <tr> <td>×5 = 280/320</td> <td>×13 = 728/832</td> <td>×21 = 1176/1344</td> </tr> <tr> <td>×6 = 336/384</td> <td>×14 = 784/896</td> <td>×22 = 1232/1408</td> </tr> <tr> <td>×7 = 392/448</td> <td>×15 = 840/960</td> <td>×23 = 1288/1472</td> </tr> <tr> <td>×8 = 448/512</td> <td>×16 = 896/1024</td> <td>×24 = 1344/1536</td> </tr> </table> <p>Clock: Int, Ext, Oversamp</p> <p>Invert: No, Yes</p> <p>CTS: Force T, Force F, Int</p> <p>DSR: Force T, Force F, Int</p> <p>DCD: Force T, Force F, Int</p> <p>LL: Dis, En</p> <p>RL: Dis, En</p> <p>V54: Dis, En</p> <p>DTR Alm: Dis, En</p>	×1 = 56/64	×9 = 504/576	×17 = 952/1088	×2 = 112/128	×10 = 560/640	×18 = 1008/1152	×3 = 168/192	×11 = 616/704	×19 = 1064/1216	×4 = 224/256	×12 = 672/768	×20 = 1120/1280	×5 = 280/320	×13 = 728/832	×21 = 1176/1344	×6 = 336/384	×14 = 784/896	×22 = 1232/1408	×7 = 392/448	×15 = 840/960	×23 = 1288/1472	×8 = 448/512	×16 = 896/1024	×24 = 1344/1536
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DBU Params	<p>State: Disabled, Enabled, Active, Connecting, Disallow, Dialing, Disconn, Testing, Tst Pass, Tst Fail</p> <p>Cmd: Disable, Enable, En Daily, Activate, Test</p> <p>Activator 1: LOS UAS AIS</p> <p>Activator 2: ES OOF BPV</p> <p>SES RAS Any</p> <p>Mode: Master, Slave</p> <p>Security: Dis, En</p> <p>DBU Password*</p> <p>DTR Dial: Dis, En</p> <p>Dial String*</p> <p>Init String*</p> <p>Reset String 1-5*</p> <p>Activation Periods</p>																								
TCP/IP Params	<p>LAN Con TokR: Tok Spd: 4 MHz, 16 MHz</p> <p>Unit IP Addr* Enet</p> <p>Subnet Mask* SLIP</p> <p>Router IP Addr*</p> <p>Filtr 1-8 IP Addr*</p> <p>Reset LAN: No, Yes</p>																								
SNMP Params	<p>Element ID*</p> <p>SETS: En, Dis</p>																								
Manage Ports	<p>SUPV Prt Params</p> <table border="1"> <tr> <td>COA Con: Dis, Dial, Direct</td> <td>Trap 1-6 IP Addr*</td> </tr> <tr> <td>Prim Dial Str*</td> <td>Read Community*</td> </tr> <tr> <td>Sec Dial Str*</td> <td>Write Community*</td> </tr> <tr> <td>Init Dial Str*</td> <td>Sys Contact*</td> </tr> <tr> <td>Dis Conn Str*</td> <td>Sys Name*</td> </tr> <tr> <td></td> <td>Sys Location*</td> </tr> </table> <p>SLIP Prt Params</p> <table border="1"> <tr> <td>SLIP Con: Dis, Dial, Direct</td> </tr> <tr> <td>Prim Dial Str*</td> </tr> <tr> <td>Sec Dial Str*</td> </tr> <tr> <td>Init Dial Str*</td> </tr> <tr> <td>Dis Conn Str*</td> </tr> <tr> <td>Comp SLIP: Auto, Dis, En</td> </tr> </table>	COA Con: Dis, Dial, Direct	Trap 1-6 IP Addr*	Prim Dial Str*	Read Community*	Sec Dial Str*	Write Community*	Init Dial Str*	Sys Contact*	Dis Conn Str*	Sys Name*		Sys Location*	SLIP Con: Dis, Dial, Direct	Prim Dial Str*	Sec Dial Str*	Init Dial Str*	Dis Conn Str*	Comp SLIP: Auto, Dis, En						
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