



**COMSPHERE  
DUALFLOW DSU**

**QUICK REFERENCE**

Document No. 3615-A2-GL10-00

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## COMSPHERE DualFlow DSU Quick Reference

Document Number 3615-A2-GL10-00

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3615-A2-GB20

*COMSPHERE DualFlow Data Service Units User's Guide*

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### Precautions

Before installing your DSU, read the *Important Safety Instructions* on page 19.

#### **HANDLING PRECAUTIONS FOR STATIC-SENSITIVE DEVICES**

**This product is designed to protect sensitive components from damage due to electrostatic discharge (ESD) during normal operation. When performing installation procedures, however, take proper static control precautions to prevent damage to equipment. If you are not sure of the proper static control precautions, contact your nearest sales or service representative.**



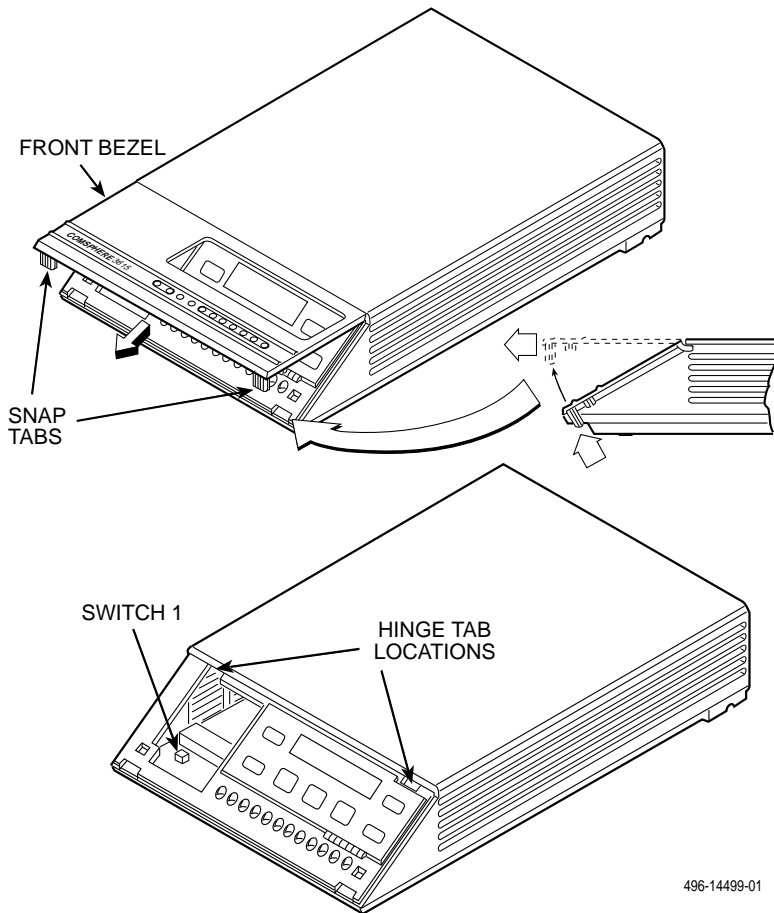
496-15149

## How to Change Hardware Straps

The Model 3615 DSU has a switch located behind its diagnostic control panel (DCP). This switch contains two straps, one that controls the permissive or programmable connection for the DBM, and one that controls the frame-to-signal grounds. Table 1 shows the DSU's switch settings. Use the following procedure to set the switches.

### ► Procedure

1. With your thumbs under the edge of the front bezel, firmly press upward to lift the bezel from the tabs securing it in place.
2. Swing the front bezel up and set the bezel aside.
3. Refer to Table 1 to determine which switch needs to be changed. Then, using a small instrument, carefully change the position of the switch.
4. Reinsert the front bezel's hinge tabs into position and swing the bezel down. Snap the bezel back into place.



496-14499-01

**Model 3615 DSU Hardware Switch Location**

**Table 1. Model 3615 DSU Switch Settings**

Switch Position	Switch Setting	Function
S1-1	ON (default)	Permissive V.32 DBM transmit output level of -9 dBm
	Off	Programmable V.32 DBM transmit level between -12 dBm and 0 dBm
S1-2	ON	Frame ground (FG) connected to signal ground (SG)
	Off (default)	FG connected to SG through 100 ohm resistor

ON is toward the rear as you face the front of the DSU.  
Off is toward the front.

## Where to Place the DSU

The DSU must be placed within 6 feet of a dedicated grounded ac outlet that is protected by a circuit breaker.

The distance between the DSU and its DTE must be within EIA-232-D/V.24 limits, or V.35 limits if operating the DSU at speeds greater than 19.2 kbps.

- For the EIA-232 connector, the typical maximum distance is 50 feet at speeds less than or equal to 19.2 kbps. If a longer distance is needed, use high quality, low capacitance cable and ensure that the effective shunt capacitance of the circuit (measured at the DSU and including the capacitance of the cable and the DTE) does not exceed 2500 picofarads, as specified in EIA-232-D.
- For the V.35 connector, the maximum distance recommended between the DSU and the DTE is nominally 1000 feet.

Allow 1 to 2 feet of clearance around the DSU for access and cable connections during installation.

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## Installing the DSU

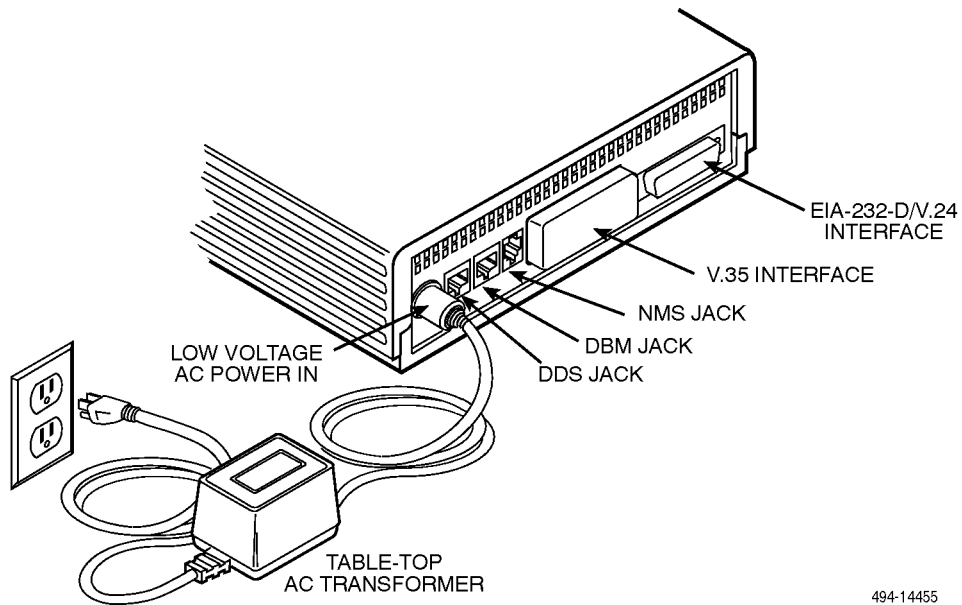
Before installing the DSU, label the circuit breaker that protects the ac wall outlet, and make sure that it is set to ON. Then proceed with the installation.

### ► Procedure

1. Place the DSU in its planned location. Make sure the ventilation slots are not blocked.
2. At the rear of the DSU, insert the ac transformer, circular plug into the interface labeled POWER.
3. Plug the ac transformer's 3-prong plug into the ac wall outlet.

### ⚠ WARNING:

**Only use the power transformer designed for the Model 3615 DSU. Using other transformers may result in personal injury or damage to the equipment.**



494-14455

**Model 3615 DSU Electrical Connection**

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## Power-Up Routine

When power is applied, the DSU:

- Runs a Device Test on itself and the DBM.  
During the tests, all indicators on the DCP light briefly and the message Power-Up Tests appears on the liquid crystal display (LCD).
- Displays the results of each test momentarily as Pass, Fail, or Abrt. (Abrt indicates that the Device Test was aborted because a network loopback was in progress during the power-up procedure.) These tests take about 20 seconds to complete.

If the DSU or DBM fails this test, follow these steps.

### ► Procedure

1. Press the  key to return to the top-level menu.
2. Select Local (F1 key).
3. Press the  key to scroll the *Config* (Configuration) branch into view.
4. Press the function key directly below Config.
5. Press the F1 key to select Opts (Configuration Options).  
The *Load from* screen appears.
6. Press the  key to bring the factory-loaded unit configurations into view, and select the appropriate configuration. Select:
  - SyBC (Synchronous Backup for a Control DSU) for a control when the router controls backup.
  - SyBT (Synchronous Backup for a Tributary DSU) for a tributary when the router controls backup.
  - DiDg (Dial Diagnostics) for asynchronous router-management data to be sent over the EIA-232 port via the DBM connection and user data over the V.35 port via the DDS connection.
7. Press the F1 key to SAVE the selected configuration.  
The *Save to* screen appears.
8. Save the selected configuration to Activ (F1 key).
9. Press the  key to return to the top-level menu, then select Local again.
10. Select Test (F3).  
The *Run Test on* screen appears.
11. Select the device that Failed: the DSU or DBM.
12. Press the F2 key to run the Device Test again.  
The device should pass.
13. Should the device fail, contact your service representative.

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## Connecting to the Network

The DSU provides three interfaces. One jack connects the DSU to the 6700 or 6800 Series NMS, one connects the DSU to the dial (or public switched telephone network – PSTN) network, and one connects the DSU to the DDS network. Follow the appropriate procedure when making your network connections.

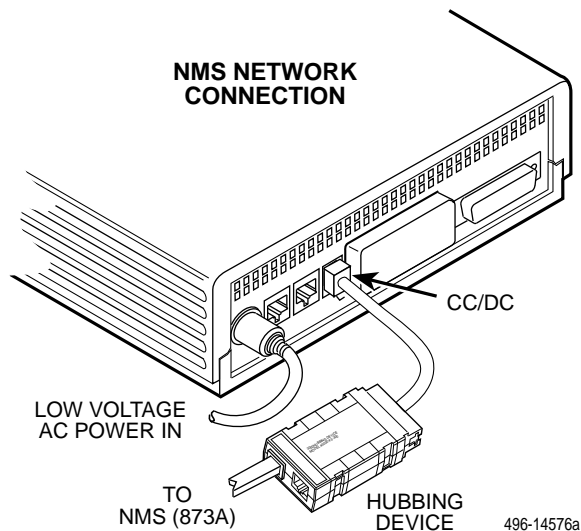
### Connecting to the NMS

A 3600 Hubbing Device is required to connect the control DSU to the 6700 or 6800 Series NMS. When connected to the NMS, the DSU can be controlled and configured from the NMS rather than from the DCP alone.

#### ► Procedure

1. Plug the 4-pin modular plug of the 3600 Hubbing Device into the DSU jack labeled CC/DC.
2. Plug one end of an M6BJ cable into the hubbing device jack labeled CC IN/DC OUT.
3. Plug the other end of the 6-pin M6BJ cable into the 6-pin end of the 873A adapter.
4. Plug the D-type end of the 873A adapter into the appropriate 6700 or 6800 Series NMS jack.

Refer to your COMSPHERE 6700 or 6800 Series NMS documentation to control and configure the DSU from the NMS.



**Model 3615 DSU NMS Connection**

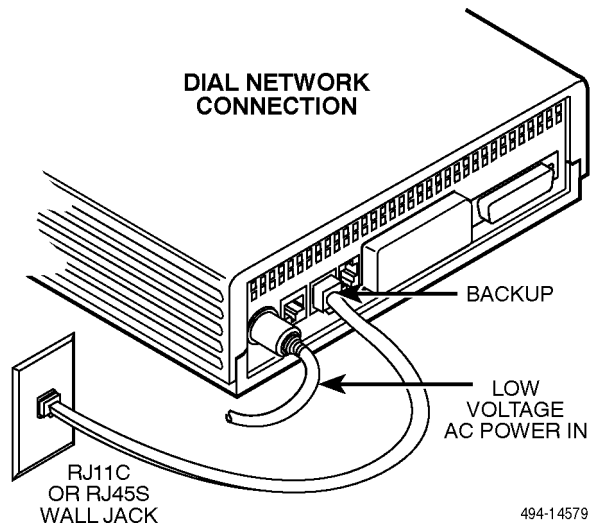
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## Connecting to the Dial (or PSTN) Network

If your DSU is equipped with a V.32 DBM, follow these steps to connect it to the dial network.

### ► Procedure

1. Plug either end of the dial (analog) interface cable into the DSU jack labeled **BACKUP**.
  - For permissive service, use a telephone cord with an 6-pin modular RJ11C plug.
  - For programmable service, use a telephone cord with an 8-pin RJ45S plug.
2. Plug the other end of the cable into the modular jack provided by the telephone company, USOC RJ11C (permissive) or USOC RJ45S (programmable).
3. If your site has programmable service, verify that the DSU's hardware strap S1-1 is switched to the Off position.



**Model 3615 DSU Dial (PSTN) Network Connection**

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## Connecting to the Switched 56 kbps Network

### NOTE:

Before connecting the DSU to the Switched 56 kbps network, ensure that approved primary protectors have been installed on the circuit in accordance with Article 800 of the National Electric Code, NFPA 70, in the United States and Section 60 of the Canadian Electric Code, Part 1, in Canada.

If the DSU is equipped with a 4-wire Switched 56 DBM, an 8-pin cable is provided; if a 2-wire Switched 56 DBM, a 6-pin cable is provided.

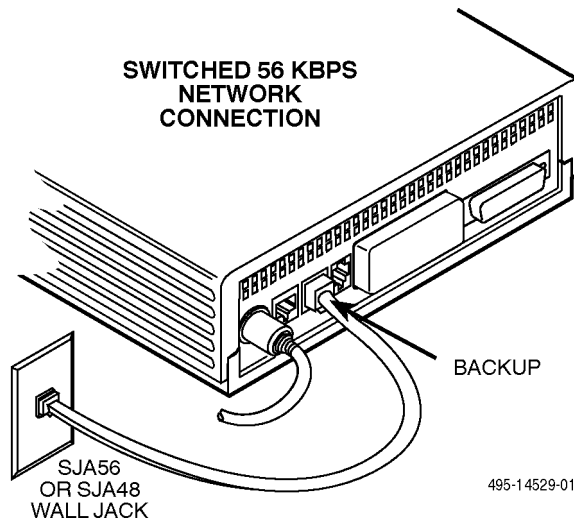
### ⚠ WARNING:

**Do not insert the 2-wire Switched 56 kbps plug into an RJ11C jack. This type of jack is intended for analog public switched telephone network (PSTN) devices. Doing so may cause equipment damage and harm to the telephone network.**

To make a physical connection to the Switched 56 kbps network, follow these steps.

### ► Procedure

1. Plug either end of the Switched 56 kbps network interface cable into the DSU jack labeled BACKUP.
  - For the 2-wire Switched 56 DBM, use the 6-pin cable.
  - For the 4-wire Switched 56 DBM, use the 8-pin cable.
2. Plug the other end of the cable into the modular jack provided for the Switched 56 kbps network connection.



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## Model 3615 DSU Switched 56 kbps Network Connection

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## Connecting to the DDS (or LADS) Network

### NOTE:

Before connecting the DSU to the DDS network, ensure that approved primary protectors have been installed on the circuit in accordance with Article 800 of the National Electric Code, NFPA 70, in the United States and Section 60 of the Canadian Electric Code, Part 1, in Canada.

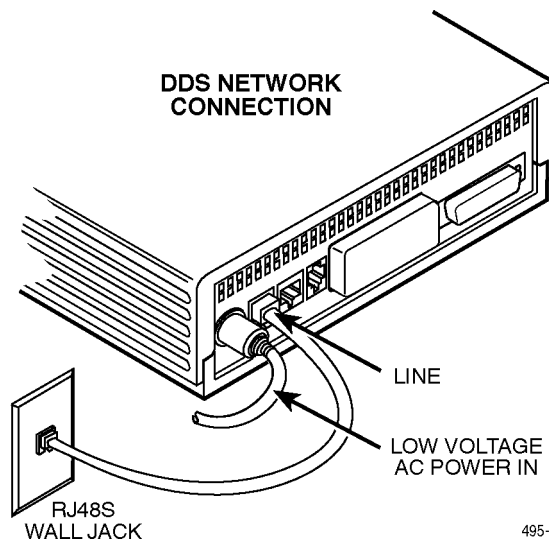
Follow these steps to connect the DSU to the network.

### ► Procedure

1. Plug the DDS network interface cable into the DSU jack labeled LINE.
  - U.S. – select either end of the cable
  - Canada – select the 8-pin end
2. Plug the other end of the cable into the modular jack (USOC RJ48S) provided by the circuit provider.

If the remote DSU is also connected to the network, the DSU's green OK indicator lights and the Alrm indicator goes off. The Health and Status screen no longer displays a *No Signal* message.

If connecting the DSU to a LADS network, there are distance limitations that govern the use of DSUs on the network. Table 2 summarizes these limitations.



495-14578-01

### Model 3615 DSU DDS (LADS) Network Connection

**Table 2. LADS Connection Distances**

Data Rate (kbps)	Wire Gauge (AWG)			
	19	22	24	26
2.4	20.0 mi (32.2 km)	16.6 mi (26.7 km)	12.7 mi (20.5 km)	9.4 mi (15.1 km)
4.8	19.4 mi (31.2 km)	12.7 mi (20.5 km)	9.6 mi (15.4 km)	7.1 mi (11.5 km)
9.6	15.2 mi (24.5 km)	9.7 mi (15.6 km)	7.3 mi (11.7 km)	5.6 mi (9.0 km)
19.2 <sup>1</sup>	11.8 mi (19.0 km)	7.5 mi (12.1 km)	5.7 mi (9.2 km)	4.2 mi (6.8 km)
38.4	11.2 mi (18.0 km)	6.5 mi (10.5 km)	4.6 mi (7.4 km)	3.2 mi (5.1 km)
56	9.2 mi (14.8 km)	5.4 mi (8.7 km)	3.8 mi (6.2 km)	2.8 mi (4.5 km)
64	9.2 mi (14.8 km)	5.4 mi (8.7 km)	3.8 mi (6.2 km)	2.8 mi (4.5 km)
<sup>1</sup> Power level is -10 dBm.				

## Connecting the DSU to a Router

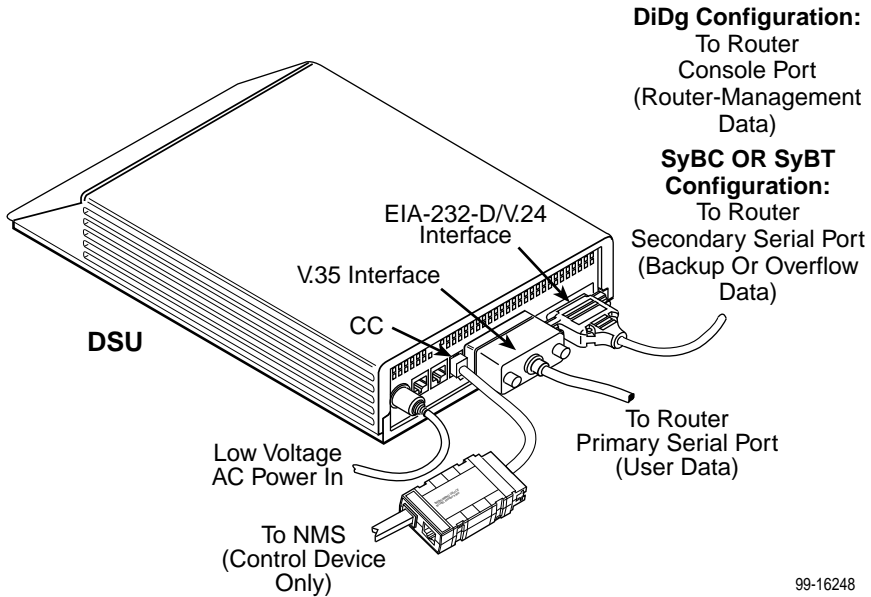
The DualFlow DSU transmits user data through its V.35 interface and diagnostic or user data through its EIA-232-D/V.24 interface. Cabling is based upon the preset configuration (SyBC, SyBT, or DiDg) selected in the Opts subbranch (Config branch).

Follow this procedure to connect the DSU to a router.

### ► Procedure

1. Connect the plug end of the router's V.35 cable to the DSU's V.35 connector.  
Tighten the two holding screws.
2. Connect the other end of the router's V.35 cable to the router's primary serial port.  
Tighten any holding screws.

3. Connect the plug end of the router's EIA-232 cable to the DSU's EIA-232-D/V.24 connector.  
Tighten any holding screws.
4. Connect the other end of the router's EIA-232 cable to the router:
  - If the DSU is to be configured using the SyBC or SyBT configuration, connect to the router's secondary serial port.
  - If the DSU is to be configured using the DiDg configuration, connect to the router's console port.
 Tighten any holding screws.



### Router Connection

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## Addressing the Unit

A unique address must be assigned to each control and tributary DSU in your network. You can assign an address within the range of 1 through 255.

Do not assign the number 192 as a network address. This number is reserved as a broadcast address.

The numbers 191 and 255 cannot be assigned to a DSU that has a DBM. However, addresses can be assigned in any order; they do not have to be sequential.

It is recommended that only odd-numbered addresses be assigned to DSUs so that even-numbered addresses are reserved for DBMs.

The DBM requires a separate address, which is automatically assigned by the DSU. The address assigned a DBM is the DSU's address, plus 1 (for example, if the DSU's address is 1, the assigned DBM address will be 2).

### Tributary DSU Addressing

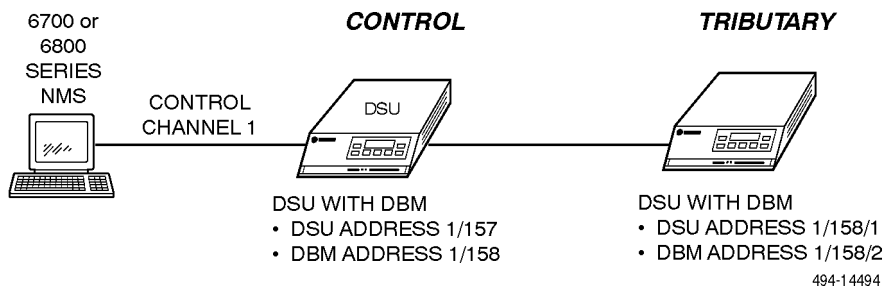
Tributary DSU addresses are user-definable. The control DSU accesses its tributary via an active backup connection by specifying the tributary's address.

The 6700 or 6800 Series NMS accesses the DSU via its network address. To access a tributary DSU, the NMS first addresses the control, then the tributary. An address issued from the NMS takes the format of control channel/control DBM network address/tributary network address. This is called link-level network addressing.

## Verifying Operation and Testing Connections

After installing and configuring the circuit (including control and tributary DSUs, the DDS network, the DBMs and their dial connections), perform the following series of tests from the control DSU to verify network operation (using either the DCP or NMS).

Next, test the tributary DBM for dial tone, and verify that the DSU can place and receive calls.



### Addressing Example

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## Verifying DBM Operation

A backup connection must be established to verify that the switched network is functioning. Then, perform the Digital Test by selecting the DBM path.

### ► Procedure

1. Select Local (F1).
2. Select Bckup (F2).
3. Select Dial to establish a dialed call to the tributary.  
Refer to Chapter 4 of the User's Guide for the procedure for entering telephone numbers.
4. Press the  $\triangle$  key, then select  $\rightarrow$ Cnnct to switch to the dial circuit.
5. Press the  $\triangle$  key twice.
6. Select Test (F3).
7. Select DBM (F2).
8. Select DT (F3).
9. Select Start (F1).
10. Select the amount of time you want the test to run in hours: minutes: seconds (hh:mm:ss).
  - Press the  $\triangleleft$  or  $\triangleright$  key to move the blinking cursor to the digit to be changed.
  - Press the F1 ( $\uparrow$ ) key to increment the digit (1 through 9).
  - Press the F2 ( $\downarrow$ ) key to decrement the digit.
11. Select Enter (F3). *Please wait* appears as the DBM runs the test.
12. When *Command Complete* appears, press the  $\triangle$  key.
13. Select Displ (F1) to display the results of the test.
14. Press the  $\triangleright$  key to scroll through the test results.

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## Verifying Network Addresses

Access the DSU's identity (ID) subbranch for the tributary DSU to ensure that the DSU is properly addressed.

### ► Procedure

1. Select Remot (Remote branch).
2. Enter the tributary's network address.
3. Select Stat (Status branch).
4. Press the  $\triangleright$  key until ID appears.
5. Select ID.
6. Press the  $\triangleright$  key until Network Addr appears.
7. Verify that the correct address has been entered.

## Verifying the Network

Perform a Health and Status check on the DDS circuit to ensure that the network is functioning.

### ► Procedure

1. Select Local (F1).
2. Select Stat (F1).
3. Select H/S (F1).
4. Select Devic (F1).
5. Press the  $\triangle$  key to return to the top-level menu.
6. Select Local (F1).
7. Select Bckup (F2).
8. Select DrBU to drop the backup call.

No error messages should appear.

## Configuration Options

Configuration options are accessed from the Configuration branch of the front panel menu.

In the following tables, factory defaults are shown in **boldface** type.

Key to symbols:

- Switched 56 DBM only
- 2-wire Switched 56 DBM only
- † V.32 DBM only
- †† Only if Call Setup set to Pswrd
- ††† Only if Diag Type set to NonD
- ‡ Only if Primary Core set to Yes
- ‡ ‡ Only at the Control

Hardware Straps	Value
DDD Interface ●	<b>Permissive</b> , Programmable
Frame Ground/Signal Ground	Connected, <b>Disconnected</b>
V.35 Test Mode Indication	<b>Enabled</b> , Disabled
EIA-232-D Test Mode Indication	<b>Enabled</b> , Disabled
-48 Vdc Alarm Monitoring	Enabled, <b>Disabled</b>
-48 Vdc Alarm Monitoring via NMS Adapter Cable	Enabled, <b>Disabled</b>

DSU	Value
Rate(Kbps)	64CC, 64L, <b>56</b> , 38.4, 19.2, 9.6, 4.8, 2.4
TxCikSource	Int, RXC, Ext, <b>DDS</b>
19.2 PowrLvl	<b>+ 6</b> , 0, -10
64KScramblng	On, <b>Off</b>
64KLatchLpbk	<b>On</b> , Off
V.54 Lpbk	Enab, <b>Disab</b>

<b>DSU Port (V.35)</b>	<b>Value</b>
DTE Port	<b>V.35</b>
RTS Cntrl	<b>FrcOn</b> , DTE
CTS Cntrl	<b>Std</b> , =RTS, Delay, FrcOn
AntiStream	<b>Disab</b> , 1–100 (sec)
LSD Lead	<b>Std</b> , Delay, FrcOn
DSR FrcOn	<b>Enab</b> , Disab
SystemStat	<b>Enab</b> , Disab
DSR on Tst	<b>Enab</b> , Disab
Circ Assur	Enab, <b>Disab</b>
RespondRDL	Enab, <b>Disab</b>
LL by DTE	Enab, <b>Disab</b>
Bilat Lpbk	Enab, <b>Disab</b>
DTR Alarm	Enab, <b>Disab</b>

<b>DBM</b>	<b>Value</b>
Rate(Kbps)†	14.4, 12.0, <b>9.6</b> , 4.8, 2.4
PrtSp(Kbps)	<b>56</b> (default for Switched 56 DBM), 48, 38.4, 32, 28.8, 19.2, 18.8, 18.0, 16.8, 14.4, 12.0, <b>9.6</b> (default for V.32 DBM), 9.2, 8.4, 7.2, 4.8, 4.4, 4.0, 2.4, 2.0, 1.2, Disab
TxCikSource†	<b>Int</b> (default for Control), <b>RXC</b> (default for Tributary), Ext
CarrLossDisc †	<b>Yes</b> , No
Auto Retrain †	<b>Yes</b> , No
Single Rate †	Yes, <b>No</b>
AutoAnswer	<b>Enab</b> , Disab
Call Setup	<b>None</b> , Pswrd, Cllbk, Alarm
RxPwdd ††	(Up to 10 digits)
TxPwdd ††	(Up to 10 digits)
Dial Test	Enab, <b>Disab</b>
Primary Core	Yes, <b>No</b>
DTRCallCon	<b>Orig</b> (default for SyBC), <b>Ansr</b> (default for DiDg andSyBT), Disab

<b>DBM (continued)</b>	<b>Value</b>
EchoCancel ●	Enab, <b>Disab</b>
Remot DBM ●●	2-wire, <b>4-wire</b>
Msg Clamp	<b>Enab</b> , Disab

<b>DBM Port (232)</b>	<b>Value</b>
DTE Port	<b>232</b> , V.35 ‡
RTS Cntrl	<b>FrcOn</b> (default for DiDg), <b>DTE</b> (default for SyBC and SyBT)
CTS Cntrl	<b>Std</b> , =RTS, FrcOn
AntiStream	<b>Disab</b> , (1 to 100 sec)
LSD Lead	<b>Std</b> , FrcOn
DSR FrcOn	<b>Enab</b> , Disab
DSR on Tst	<b>Enab</b> , Disab
RespondRDL	Enab, <b>Disab</b>
RL by DTE	Enab, <b>Disab</b>
Bilat Lpbk	Enab, <b>Disab</b>
Ext Leads	ExtLd, <b>Rate</b> , RPower
CCN by EL	Enab, <b>Disab</b>
DTR Alarm	Enab, <b>Disab</b>
Async→Sync	<b>Enab</b> (default for DiDg), <b>Disab</b> (default for SyBC and SyBT)
AsyncBit/Char	6, 7, <b>8</b> , 9, 10
Stop Bits	<b>1</b> , 2
Overspeed	1.0, <b>2.3</b>

<b>Diagnostic DBM</b>	<b>Value</b>
Diag Type	NonD, <b>Disr</b> , None
2nd Ch(bps) †††	100, <b>400</b> , 800, 1200, 1600

<b>Diagnostic General</b>	<b>Value</b>
Position	<b>Ctrl</b> (default for SyBC), <b>Trib</b> (default for DiDg and SyBT)
RemoteDiag	V.54 †, <b>Enhan</b>
Link Delay ††	<b>0s</b> , 1s, 2s, 5s, 10s, 20s, 50s
Packet Delay ††	<b>0s</b> , 1s, 2s, 5s

<b>Backup</b>	<b>Value</b>
Auto Bckup	Enab, <b>Disab</b>
Backup Dir	1–10
BckupOnCMI	Enab, <b>Disab</b>
AutoRestor	Enab, <b>Disab</b>
NtwkTimOut	<b>0:20</b> (default for a Control DSU), <b>01:00</b> (default for a Tributary DSU). (1 to 30 min)
RestorTimOut	<b>5m</b> , (1 to 60 min)
TriesTimeOut	<b>15m</b> , (1 to 60 min)
MultiCall	Enab, <b>Disab</b>

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## Important Safety Instructions

1. Read and follow all warning notices and instructions marked on the product or included in the manual.
2. This product is intended to be used with a 3-wire grounding type plug – a plug which has a grounding pin. This is a safety feature. Equipment grounding is vital to ensure safe operation. Do not defeat the purpose of the grounding type plug by modifying the plug or using an adapter.

Prior to installation, use an outlet tester or a voltmeter to check the ac receptacle for the presence of earth ground. If the receptacle is not properly grounded, the installation must not continue until a qualified electrician has corrected the problem.

If a 3-wire grounding type power source is not available, consult a qualified electrician to determine another method of grounding the equipment.
3. Slots and openings in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these slots and openings must not be blocked or covered.
4. Do not allow anything to rest on the power cord and do not locate the product where persons will walk on the power cord.
5. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous high voltage points or other risks. Refer all servicing to qualified service personnel.
6. General purpose cables are provided with this product. Special cables, which may be required by the regulatory inspection authority for the installation site, are the responsibility of the customer.
7. When installed in the final configuration, the product must comply with the applicable Safety Standards and regulatory requirements of the country in which it is installed. If necessary, consult with the appropriate regulatory agencies and inspection authorities to ensure compliance.
8. A rare phenomenon can create a voltage potential between the earth grounds of two or more buildings. If products installed in separate buildings are **interconnected**, the voltage potential may cause a hazardous condition. Consult a qualified electrical consultant to determine whether or not this phenomenon exists and, if necessary, implement corrective action prior to interconnecting the products.
9. In addition, if the equipment is to be used with telecommunications circuits, take the following precautions:
  - Never install telephone wiring during a lightning storm.
  - Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
  - Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
  - Use caution when installing or modifying telephone lines.
  - Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
  - Do not use the telephone to report a gas leak in the vicinity of the leak.

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## Notices

### WARNING:

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE. THE AUTHORITY TO OPERATE THIS EQUIPMENT IS CONDITIONED BY THE REQUIREMENTS THAT NO MODIFICATIONS WILL BE MADE TO THE EQUIPMENT UNLESS THE CHANGES OR MODIFICATIONS ARE EXPRESSLY APPROVED BY PARADYNE.

### WARNING:

TO USERS OF DIGITAL APPARATUS IN CANADA:

THE DIGITAL APPARATUS DOES NOT EXCEED THE CLASS A LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

LE PRÉSENT APPAREIL NUMÉRIQUE N'ÉMET PAS DE BRUITS RADIOÉLECTRIQUES DÉPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMÉRIQUES DE LA CLASSE A PRESCRITES DANS LE RÈGLEMENT SUR LE BROUILLAGE RADIOÉLECTRIQUE ÉDICTÉ PAR LE MINISTÈRE DES COMMUNICATIONS DU CANADA.

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## Government Requirements

Certain governments require that instructions pertaining to connection to the telephone network be included in the installation and operation manual. Specific instructions are listed in the following sections.

### Notice to Users of the Digital Data Service

This equipment complies with Part 68 of the FCC rules. On the bottom of the equipment is a label or silk-screened text that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. If requested, please provide this information to your telephone company.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your number is called. In most, but not all areas, the sum of the RENs of all devices should not exceed 5. To be certain of the number of devices you may connect to your line, as determined by the REN, you should call your local telephone company to ascertain the maximum REN for your calling area.

If your DSU causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC.

If your DSU causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation of your equipment. If so, you will be given advance notice so as to give you an opportunity to maintain uninterrupted service.

The DBM cannot be used on public coin-operated telephone service provided by the telephone company. Connection to party-line service is subject to state tariffs. (Contact the state public utility commission, public service commission, or corporation commission for information.)

No repairs may be performed by the user. Should you experience difficulty with this equipment, refer to *Warranty, Sales, and Service Information* inside the cover of this document.

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For Digital Data Service (DDS) installations, inform the local telephone company of the appropriate network channel interface code for the service you desire.

**DDS**

<b>Interface Code</b>	<b>Data Rate (bps)</b>
04DU5-24	2400
04DU5-48	4800
04DU5-96	9600
04DU5-19	19,200
04DU5-56	56,000
04DU5-64	64,000

The DDS Service Order Number is 6.0Y. The jack configurations required are RJ48S for the Model 3615 DSU and RJ48T for the Model 3616. With an RJ48T configuration, you must specify the number of data lines you require. Refer to the *Technical Specifications* section of Chapter 1 of the User's Guide for V.32 DBM jack information.

After the telephone company has installed the requested jack, you can connect the DSU with the appropriate cable (provided). An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant.



\*3615-A2-GL10-00\*