Dialogic®

Dialogic® 1000 and 2000 Media Gateway Series

Getting Started Guide

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Revision History

This revision history summarizes the changes made in each published version of this document.

Document No.	Publication Date	Description of Revisions
64-0259-06	September 2011	Updated to support Version 6.0 SU8 Software. Added note for ROLMPhone 400 to PBX Requirements - DMG1000 Models table.
64-0259-05	February 2009	Added new requirement NTU, CSU, DSU, or some other similar device is required that provides line isolation to Additional Components section in System Requirements.
64-0259-04	March 2008	Updated to support Version 6.0 Software. Added new DMG2060DTISQ and DMG2120DTISQ models which include support for survivability. Added Rack Mounting Warnings to Installation Procedure - DMG2000 Models.
64-0259-03	January 2008	Updated to support Version 5.1 SU3 Software. Added new model NEC NEAX 2000 IVS2 to PBX Requirements - DMG1000 Models table.
64-0259-02	September 2007	Updated to support Version 5.1 SU2 Software. Added new DMG1004LS model. Added note to say H.323 is only supported in Version 5.1 SU1 Software or earlier. Added new model Tenovis Integral 3 to PBX Requirements - E1 QSIG Protocol table.
64-0259-01	March 2007	Updated to support Version 5.1 SU1 Software. Global Updates: Changed product names and links from Intel to Dialogic. The document number and title have been updated with new naming conventions. The products previously known as Intel NetStructure PBX-IP Media Gateway (PIMG) and T1/E1-IP Media Gateway (TIMG) are now Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000). For more product name changes, refer to New Product Naming Conventions. Added new models Ericsson MD110, Nortel Meridian 1 - Option 11c, Nortel Communications Server 1000, and Phillips Sopho (iS3030-288) to PBX Requirements - E1 QSIG Protocol table. Removed ECMA references in PBX Requirements tables. Updated notes to say LAN2 is only supported in Version 5.1 SU1 Software or later.
D40122-002 Rev 01	October 2006	Updated to support Version 5.1 Software.
D40122-001 Rev 01	March 2006	Initial version of document to support Version 5.0 Software. Much of the information contained in this document was previously published in the *PBX-IP Gateway User's Guide*, document number C73213-001 Rev 02.

About This Publication

The following topics provide information about this guide:

Purpose

This document provides information about installing, cabling, and initializing the Dialogic® Media Gateway prior to performing configuration and operation tasks.

Intended Audience

This information is intended for:

- Distributors
- System Integrators
- Value Added Resellers (VARs)
- Original Equipment Manufacturers (OEMs)

How to Use This Publication

This information is organized as follows:

- Chapter 1, “Controls, Indicators, and Connectors” describes the front and rear panel controls, indicators, and connectors for both the Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000) models.
- Chapter 2, “Preparing for Installation - DMG1000 Models” provides information about preparing to install the Dialogic® 1000 Media Gateway (DMG1000) models.
- Chapter 3, “Preparing for Installation - DMG2000 Models” provides information about preparing to install the Dialogic® 2000 Media Gateway (DMG2000) models.
- Chapter 4, “Installation” provides information about installing and initially logging on to the Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000) models.

Note: The products previously known as Intel NetStructure PBX-IP Media Gateway and T1/E1-IP Media Gateway are now Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000). For more product name changes, refer to New Product Naming Conventions.

New Product Naming Conventions

Previous Name	New Name
PBX-IP Media Gateway	Dialogic® 1000 Media Gateway (DMG1000)
PIMG	DMG1000
PIMG40LS	DMG1004LSW
PIMG80LS	DMG1008LSW
PIMG80DNI	DMG1008DNIW
PIMG80MTLDNI	DMG1008MTLDNIW
PIMG80RLMDNI	DMG1008RLMDNIW
T1/E1-IP Media Gateway	Dialogic® 2000 Media Gateway (DMG2000)
TIMG	DMG2000
TIMG300DTI	DMG2030DTIQ
TIMG600DTI	DMG2060DTIQ
TIMG1200DTI	DMG2120DTIQ
	DMG2060DTISQ (with survivability)
	DMG2120DTISQ (with survivability)

Related Information

For additional information related to the Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000) products, see the following:

- *Dialogic® 1000 and 2000 Media Gateway Series User's Guide*
- *Dialogic® Media Gateway Installation and Configuration Integration Notes*
- *High Density Dialogic® Media Gateway Chassis Hardware Installation Guide*
- *http://www.dialogic.com/manuals/* (for Dialogic® product documentation)
- *http://www.dialogic.com/support/* (for Dialogic technical support)
- *http://www.dialogic.com/* (for Dialogic® product information)

Controls, Indicators, and Connectors 1

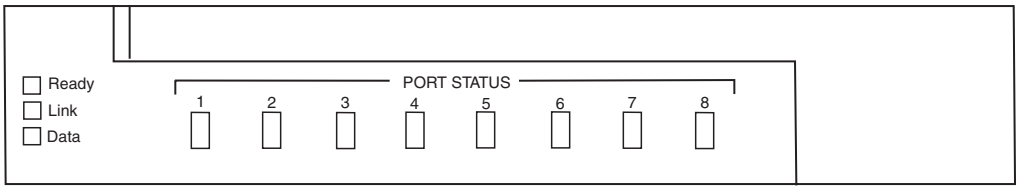
This chapter provides information about the controls, indicators, and connectors for both the Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000) models in the following sections:

1.1 Front Panel Indicators for DMG1000 Models

The front panel LED indicators, Figure 1, include:

1. Ready Indicator
2. Link Indicator
3. Data Indicator
4. PORT STATUS Indicators

Figure 1. Front Panel - DMG1000 Models



1.1.1 Ready Indicator

The **Ready** indicator is a multicolored LED that shows the unit's system status, where:

- **Unlit** - indicates that the unit is not powered on.
- **Steady Red** - indicates that the unit is in the power-on initialization stage.
- **Steady Green** - indicates that power-on initialization is complete and the unit is awaiting application load.

- **Flashing Green** - indicates that the application initialization process has completed and that the unit is active.
- **Flashing Red** - indicates that an error has occurred during application initialization. The unit is inactive.

  Note: The cause of the error can be found by checking the DMG1000 Status/Alarm Web page. See the "Unit Status" chapter in the *User's Guide* for details.
- **Flashing Orange** - indicates that the unit is functional, but it encountered and recovered from a functional error.

  Note: The cause of the error can be found by checking the DMG1000 Status/Alarm Web page, provided the Ethernet link is up. See the "Unit Status" chapter in the *User's Guide* for details.

1.1.2 Link Indicator

The **Link** indicator shows the unit's Ethernet status, where:

- **Steady Green** - indicates that an Ethernet link has been established.
- **Unlit** - indicates that no Ethernet link has been established.

1.1.3 Data Indicator

The **Data** indicator shows the unit's Ethernet real time processing (RTP) activity, where:

- **Flashing Green** - indicates that one or more calls are active and that the unit is transmitting and receiving RTP information.
- **Unlit** - indicates that the unit is not transmitting or receiving RTP information.

1.1.4 PORT STATUS Indicators

The **PORT STATUS** indicators (1 through 8) are multicolored LEDs that show the unit's PBX Port link status for the respective port. The functions of the PORT STATUS Indicators depend on whether the DMG1000 is an Emulator or Driver type.

1.1.4.1 Phone Emulating Models (DMG1004LSW, DMG1008LSW, DMG1008DNIW, DMG1008MTLDNIW, DMG1008RLMDNIW)

When the DMG1000 is a Phone Emulating model, the functions of the PORT STATUS Indicators are:

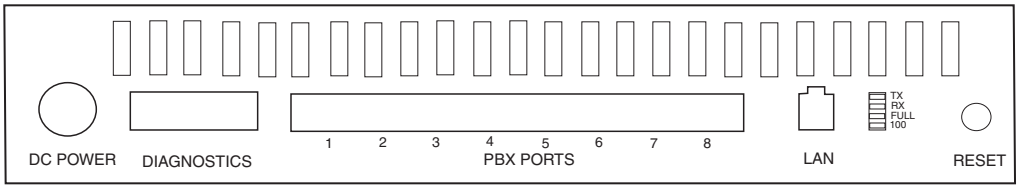
- **Steady Green** - indicates that Carrier is present.
- **Flashing Green** - indicates that there is activity on the port.
- **Steady Yellow** - Hardware Carrier is present, but no software communication.
- **Flashing Yellow** - External power detected, but port cannot gain carrier.
- **Steady Red** - indicates that no Carrier is present and no external power detected.

1.2 Rear Panel Controls, Indicators, and Connectors for DMG1000 Models

The rear panel controls, indicators, and connectors, Figure 2, include:

- DC POWER Connector
- DIAGNOSTICS Connector
- PBX PORT Connectors
- LAN (Ethernet) Port
- TX/RX/FULL/100 Indicators
- RESET Switch

Figure 2. Rear Panel - DMG1000 Models



1.2.1 DC POWER Connector

The **DC POWER** connector is a 5-pin DIN connector that accepts the mating plug from the Power Supply Unit DC output cord.

1.2.2 DIAGNOSTICS Connector

The **DIAGNOSTICS** connector is a female DB-9 connector that provides for connecting to the PBX serial interface, permitting call party information to be passed by the PBX to the DMG1000. Table 1 shows the connector pin designations.

Table 1. DIAGNOSTICS Connector Pin Designations

Pin	Description
1	Not used
2	Transmit
3	Receive
4	Not used
5	Ground
6	Not used
7	Not used
8	Not used
9	Not used

1.2.3 PBX PORT Connectors

The PBX PORT connectors are shielded 8-pin modular phone jacks that allow you to connect up to eight ports of a digital DMG1000 model to eight digital phone ports on a digital PBX or eight ports of an analog DMG1000 model to eight analog phone ports on an analog PBX (phone emulating mode). See Table 2 for the connector pin designations.

Table 2. PBX PORT Connector Pin Designations

Pin	DMG1008DNIW, DMG1008MTLDNIW, DMG1008RLMDNIW	DMG1004LSW DMG1008LSW
1		
2		
3		
4	Tip	Tip
5	Ring	Ring
6		
7		
8		

1.2.4 LAN (Ethernet) Port

The **LAN** port connector is a shielded 8-pin modular phone jack that allows you to connect to a 10 or 100 BaseT Ethernet.

1.2.5 TX/RX/FULL/100 Indicators

The LED indicators on the rear panel provide the following information:

- The TX indicator blinks when data is transmitted across the Ethernet interface.
- The RX indicator blinks when data is received on the Ethernet interface (even data that is not intended for the DMG1000).
- The FULL indicator lights to show that the Ethernet is connected to the network in full duplex mode.
- The 100 indicator lights to show that the Ethernet interface is connected to the network at 100 Mbps.

1.2.6 RESET Switch

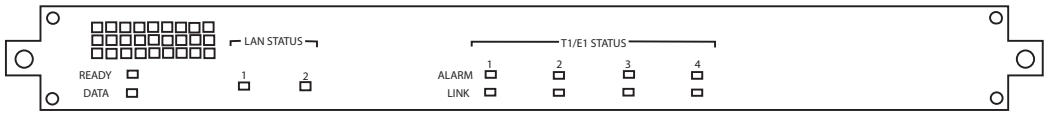
The RESET switch allows you to restart the DMG1000 Unit. Restarting is necessary to cause changes to specific parameters to take effect.

1.3 Front Panel Indicators for DMG2000 Models

The front panel LED indicators, Figure 3, include:

1. READY Indicator
2. DATA Indicator
3. LAN STATUS 1 and 2 Indicators
4. T1/E1 STATUS Indicators

Figure 3. Front Panel - DMG2000 Models



1.3.1 READY Indicator

The **READY** indicator is a multicolored LED that shows the unit's system status, where:

- **Unlit** - indicates that the unit is not powered on.
- **Steady Red** - indicates that the unit is in the power-on initialization stage.
- **Steady Green** - indicates that power-on initialization is complete and the unit is awaiting application load.
- **Flashing Green** - indicates that the application initialization process has completed and that the unit is active.

- **Flashing Red** - indicates that an error has occurred during application initialization. The unit is inactive.

  Note: The cause of the error can be found by checking the DMG2000 Status/Alarm Web page. See the "Unit Status" chapter in the *User's Guide* for details.

- **Flashing Orange** - indicates that the unit is functional, but it encountered and recovered from a functional error.

  Note: The cause of the error can be found by checking the DMG2000 Status/Alarm Web page, provided the Ethernet link is up. See the "Unit Status" chapter in the *User's Guide* for details.

1.3.2 DATA Indicator

The **DATA** indicator shows the unit's Ethernet real time processing (RTP) activity, where:

- **Flashing Green** - indicates that one or more calls are active and that the unit is transmitting and receiving RTP information.
- **Unlit** - indicates that the unit is not transmitting or receiving RTP information.

1.3.3 LAN STATUS 1 and 2 Indicators

The **LAN STATUS** indicator shows the unit's Ethernet status, where:

- **Steady Green** - indicates that an Ethernet link has been established.
- **Unlit** - indicates that no Ethernet link has been established.

1.3.4 T1/E1 STATUS Indicators

The **T1/E1 STATUS** indicators are multicolored LEDs that show the unit's PBX T1/E1 link status for the respective T1 or E1 port. The T1/E1 STATUS indicators include ALARM and LINK status indicators.

ALARM Status Indicator

The functions of the ALARM Status Indicators are:

- **Unlit** - indicates no alarm.
- **Steady Red** - indicates that local end of T1 or E1 connections is in Red alarm condition.
- **Steady Orange** - indicates that remote end of T1 or E1 connection is in Red alarm condition.
- **Slow Flashing Orange** - indicates absence of incoming signal (also know as Blue alarm condition).

LINK Status Indicator

The functions of the LINK Status Indicators are:

- **Unlit** - Not used.

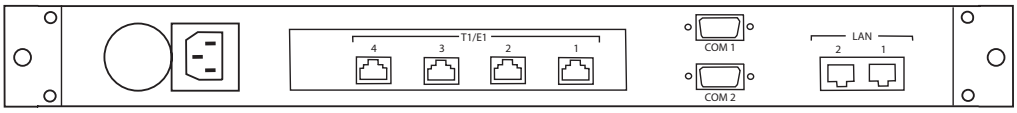
- **Fast Flashing Green** - indicates that there is activity on the port.
- **Steady Orange** - indicates that frame is in sync.
- **Medium Flashing Between Green and Orange** - indicates that frame is in sync and waiting for ISDN D-channel to come up.
- **Steady Green** - indicates that operational layer is in sync.
- **Steady Red** - indicates that no carrier is present.

1.4 Rear Panel Controls, Indicators, and Connectors for DMG2000 Models

The rear panel controls, indicators, and connectors, Figure 4, include:

- AC Power Connector
- AC Power Switch
- T1/E1 Connectors
- COM 1 and COM 2 Connectors
- LAN1 and LAN2 (Ethernet) Port

Figure 4. Rear Panel - DMG2000 Models



1.4.1 AC Power Connector

The AC Power Connector supports either the 115 VAC commonly used in NA or the 220 VAC commonly used in EU. See Section 3.2.2, “AC Power Cord”, on page 28 for details regarding the power cord shipped with the unit

1.4.2 AC Power Switch

The AC power switch is a two position rocker switch that, when in the on (**I**) position, applies power to the unit.

1.4.3 T1/E1 Connectors

The **T1/E1** connectors are RJ-45 connectors that provide connections to T1 or E1 trunks. See Table 3 for the connector pin designations.

Table 3. T1/E1 Connector Pin Designations

Pin	Description
1	RCV_RING
2	RCV_TIP
3	No connection
4	XMIT_RING
5	XMIT_TIP
6	No connection
7	No connection
8	No connection

1.4.4 COM 1 and COM 2 Connectors

COM 1 and COM 2 are DB9 serial port connectors. The COM 1 port is used for interfacing to PBX Serial Integration Protocols. The COM 2 port is used for interfacing to a diagnostics/administration terminal. Refer to the *User's Guide* for configuration information. See Table 4 for the connector pin designations.

Table 4. COM 1 and COM 2 Connector Pin Designations

Pin	Signal
1	Data Carrier Detect
2	Transmit Data
3	Receive Data
4	Data Terminal Ready
5	Signal Ground
6	Data Set Ready
7	Clear to Send
8	Request to Send
9	Ring Indicator

1.4.5 LAN1 and LAN2 (Ethernet) Port

The LAN1 connector is a shielded 8-pin modular phone jack that allows you to connect to a 10/100 BaseT Ethernet. This interface can be used to connect to the unit to VoIP endpoints and to connect users to the units maintenance interface. The LAN2 connector is a shielded 8-pin modular phone jack that allows you to connect to a 10/100 BaseT Ethernet. This interface can be used to connect users to the units maintenance interface.

Note: Currently, the LAN2 connector is only supported in Version 5.1 SU1 Software or later.

Preparing for Installation - DMG1000 Models 2

This chapter provides information about preparing to install the Dialogic® 1000 Media Gateway (DMG1000) models in the following sections:

2.1 Unpacking the Unit

The DMG1000, as shipped, consists of the following items:

- DMG1000 Unit
- Power Supply Unit
- AC Power Cord
- Getting Started Guide
- Regulatory Notice
- China DOC (Declaration of Conformity)

Before proceeding, be sure the DMG1000 you have received includes all of these items.

2.2 Components of the System

The DMG1000 system includes the following components:

- DMG1000 Unit
- Power Supply Unit
- AC Power Cord

2.2.1 DMG1000 Unit

The DMG1000 unit is the main component of the system. This device accepts up to eight digital voice connections from the PBX. The unit translates each digital voice channel into H.323 or SIP format and connects these channels to devices on an IP-based LAN.

Note: H.323 is only supported in Version 5.1 SU1 Software or earlier.

2.2.2 Power Supply Unit

The Power Supply Unit is an AC to DC converter that connects via the AC Power Cord to an AC source. The unit contains a DC cord that terminates in a 5-pin DIN connector. This cord connects to the DC POWER connector on the rear panel of the DMG1000.

2.2.3 AC Power Cord

The AC Power Cord connects the Power Supply Unit to an AC power source.

Warning!

Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

Avertissement!

Ne pas utiliser ni midifier le cable d.alimentation C.A. fourni, s.il ne correspond pas exactement au type requis.

Warnug!

Versuchen Sie nicht, das mitgelieferte Netzkabel zu ändern oder zu verwenden, wenn es sich nicht um genau den erforderlichen Typ handelt.

Avvertenza!

Non modificare o utilizzare il cavo di alimentazione in c.a. fornito dal produttore, se non corrisponde esattamente al tipo richiesto.

¡Advertencias!

No intente modifcar ni usar el cable de alimentación de corriente alterna, si no se corresponde exactamente con el tip requerido.

In some cases, the power cord supplied with this system may not be compatible with the AC wall outlet in your region. If this is true, you must obtain a suitable power cord that meets the following criteria:

- The cord must be rated for use at the AC voltage available, with a current rating that is at least 125% of the current rating of the product (for current rating information, refer to the UL label affixed to the power supply).
- The AC plug end must be terminated in a grounding-type male plug designed for use in your region. The plug ends must be labeled or marked to indicate they have been certified by an agency acceptable in your region.
- The power service must be connected through a properly grounded outlet.
- The connector at the product end must be an IEC 320, sheet C13, female connector (or the equivalent EN 60 320 connector).
- The cord must be less than 14.8 feet (4.5 meters) long and, for use in Europe, be created with <HAR> (harmonized) or VDE certified cordage.

If power needs to be removed from this product, you must disconnect the power cord; therefore, the socket-outlet shall be installed near the equipment and shall be easily accessible.

2.3 System Requirements

System requirements include the following:

- Additional Components
- Power Requirements
- PBX Requirements

2.3.1 Additional Components

Additional components that are not supplied with the product, but are necessary to complete the installation, include:

- PBX port to DMG1000 port cable (one per port) - Phone Emulating models
- 10/100 BaseT Ethernet cable

2.3.2 Power Requirements

The power requirements of the Power Supply Unit are:

- Line Voltage:90 to 264 Volts AC
- Frequency:47 to 63 Hz

2.3.3 PBX Requirements

Table 5 lists the requirements for each of the PBX types supported by the DMG1000 unit.

Table 5. PBX Requirements - DMG1000 Models

Manufacturer	Models	Software Version	Digital Station Set
Avaya	DEFINITY G3	Version 3 or greater	8434DX or 7434ND (2-wire models)
	S8100, S8300, S8700, S8710	Communications Manager Software Version 2.0 or greater	
	Magix	Release 2.0 or greater	4424D
Mitel	SX-200D, SX-200 Light, SX-2000 Light, SX-2000 S, SX-2000 VS	Lightware Release 17 or greater	Superset 430
Nortel	Meridian 1-Option 11, 21, 21A, 51, 61, 71, and 81	Release 15 or greater and options 19 and 46 are required	M2616
	Meridian SL1-Generic X11	Release 15 or greater, and options 19 and 46 are required	
	Nortel Communications Server - 1000M, 1000S, and 1000E	Release V3.0 or greater	
	Norstar 8x24	DR5 Release 1.2 or greater	M7324
	Norstar MICS	Release 4.5 or greater	
NEC	2400 IMG	Release 7400 or greater	DTerm III
	2400 IMX	Release 5200 Dec. 92 1b or greater	
	2400IPX	Release V.17 Issue 3.46.001	
	NEAX 2000 IVS2	SC#: SC-3385 OFFICIAL ISSUE: K1-0003.05 ENG ISSUE: FF-0012.00 DATE: 2003/08/03	
Siemens	Hicom 300E CS	Release 9006.4 or greater (North American software load only)	E Advance Plus
	Hicom 300E	Release 2.0 or greater (EU software load only)	
	8000	Release 80003 or greater	ROLMPhone 400 **Note:** Audio quality may decrease if connecting less than 8 lines to the DMG1008RLMDNI. Workarounds include disabling ports through the Web interface or connecting 8 active lines to the DMG1008RLMDNI.
	9000	Any release	
	9751	Any release of 9005	
	9751	Release 9006.3 or greater **Note:** Release 9006.4 or greater required to support end-to-end signalling necessary with many Media Server applications (e.g. Voice Mail, Unified Messaging, IVR, etc.)	

Preparing for Installation - DMG2000 Models 3

This chapter provides information about preparing to install the Dialogic® 2000 Media Gateway (DMG2000) models in the following sections:

3.1 Unpacking the Unit

The DMG2000, as shipped, consists of the following items:

- DMG2000 Unit
- AC Power Cord
- Getting Started Guide
- Regulatory Notice
- China DOC (Declaration of Conformity)

Before proceeding, be sure the DMG2000 you have received includes all of these items.

3.2 Components of the System

The DMG2000 system includes the following components:

- DMG2000 Unit
- AC Power Cord

3.2.1 DMG2000 Unit

The DMG2000 unit is the main component of the system. This device accepts one (DMG2030DTIQ), two (DMG2060DTIQ / DMG2060DTISQ), or four T1/E1 (DMG2120DTIQ / DMG2120DTISQ) connections from the PBX. The unit translates each digital voice channel of a T1 or E1 trunk into H.323 or SIP format and connects these channels to devices on an IP-based LAN.

Note: H.323 is only supported in Version 5.1 SU1 Software or earlier.

3.2.2 AC Power Cord

The AC Power Cord connects the Power Supply Unit to a 115 VAC power source.

Warning!

Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

Avertissement!

Ne pas utiliser ni modifier le cable d'alimentation secteur fourni, s'il ne correspond pas exactement au type requis.

Warnug!

Versuchen Sie nicht, das mitgelieferte Netzkabel zu ändern oder zu verwenden, wenn es sich nicht um genau den erforderlichen Typ handelt.

Avvertenza!

Non modificare o utilizzare il cavo di alimentazione in c.a. fornito dal produttore, se non corrisponde esattamente al tipo richiesto.

¡Advertencias!

No intente modifcar ni usar el cable de alimentación de corriente alterna, si no se corresponde exactamente con el tip requerido.

In some cases, the power cord supplied with this system may not be compatible with the AC wall outlet in your region. If this is true, you must obtain a suitable power cord that meets the following criteria:

- The cord must be rated for use at the AC voltage available, with a current rating that is at least 125% of the current rating of the product (for current rating information, refer to the UL label affixed to the power supply).
- The AC plug end must be terminated in a grounding-type male plug designed for use in your region. The plug ends must be labeled or marked to indicate they have been certified by an agency acceptable in your region.
- The power service must be connected through a properly grounded outlet.
- The connector at the product end must be an IEC 320, sheet C13, female connector (or the equivalent EN 60 320 connector).
- The cord must be less than 14.8 feet (4.5 meters) long and, for use in Europe, be created with <HAR> (harmonized) or VDE certified cordage.

If power needs to be removed from this product, you must disconnect the power cord; therefore, the socket-outlet shall be installed near the equipment and shall be easily accessible.

3.3 System Requirements

System requirements include the following:

- Additional Components
- Power Requirements
- Protocols Supported/PBXs Validated Against

3.3.1 Additional Components

Additional components that are not supplied with the product, but are necessary to complete the installation, include:

- PBX port to DMG2000 port T1 or E1 cable (one per span)
- 10/100 BaseT Ethernet cable
- NTU, CSU, DSU, or some other similar device is required that provides line isolation

  Note: This device is required only if the product is not connecting directly to a PBX T1 or E1 interface. Please refer to Safety Warnings section of Regulatory Notice included with the product.

3.3.2 Power Requirements

The power requirements of the DMG2000 unit are:

- Line Voltage:90 to 264 Volts AC
- Frequency:47 to 63 Hz

3.3.3 Protocols Supported/PBXs Validated Against

The DMG2000 supports the following protocols and has been validated against the PBXs listed in the respective tables:

- T1 CAS (see Table 6)
- T1 QSIG (see Table 7)
- T1 NI-2 (see Table 8)
- E1 QSIG (see Table 9)
- T1 5ESS (see Table 10)
- T1 DMS100 (see Table 11)
- E1 ETSI (EuroISDN)

Note: The following supplemental services must be supported by the PBXs listed in the following tables in order for the DMG2000 to provide the features required by VoIP Messaging Applications (e.g. Unified Messaging, Voice Mail, etc.)

- Call Transfer
- Diversion
- MWI (Optional)

Table 6. PBX Requirements - T1 CAS Protocol

Manufacturer	Models	Software Version	Supplemental Service Support		
			Call Party ID	Transfer	MWI
Avaya	DEFINITY G3	Version 3 or greater	✔	✔	✔
Avaya	S8500	Communications Manager SW V2.0 or greater	✔	✔	✔
Nortel	Meridian 1- Option 11c	Release 15 or greater, and options 19 and 46 are required	—	—	—
NEC	2400 IMX	Release 5200 Dec. 92 1b or greater	✔[1]	✔	✔[1]
Siemens	Hicom 300E CS	Release 9006.4 or greater (North American Software load only.	✔[2]	✔	✔

Note 1: Call Party ID and MWI are supported via the MCI serial protocol.

Note 2: PBX does not send the Calling Party on inbound calls. However, the Called Party and the Call Reason Code fields are supported.

✔ = Supported

— = Not Supported by the DMG2000 and/or the PBX.

Table 7. PBX Requirements - T1 QSIG Protocol

Manu-facturer	Models	Software Version	Basic Call Control			Supplemental Service Support					
						Diversion		Call Transfer			
			In-bound	Out-bound	CPID	For-ward ID & Rea-son	Re-direct	Join (Hair-pin)	Re-Route (TBCT)	Path Replace ment	MWI
Alcatel	Omni PCX 4400	Version 3.2.712.5	✔	✔	✔	✔	—	✔	N/A	✔	✔
Avaya	S8500	Communica-tions Manager SW V2.0 or greater	✔	✔	✔	✔	—	✔	N/A	✔	✔
Mitel	SX-2000 S, SX-2000 VS	LW 34	✔	✔	✔	✔	—	✔	N/A	✔	✔
Mitel	3300	Version 5.1.4.8	✔	✔	✔	✔	—	✔	N/A	✔	✔
NEC	2400 IPX	R17 Release 03.46.001	✔	✔	✔	✔	—	✔	✔	✔	✔[1]
Nortel	Meridian 1-Option 11c	Release 15 or greater, and options 19 and 46 are required	✔	✔	✔	✔	—	✔[2]	N/A	✔	✔
Nortel	Communica-tions Server 1000	Version 2121, Release 4, Issue 00 T	✔	✔	✔	✔	—	✔[2]	N/A	✔	✔
Siemens	HiPath 4000	V2 SMR 9 SMPO	✔	✔	✔	✔	—	✔[2]	N/A	✔	✔

Note 1. MWI operation is supported via the MCI serial protocol.

Note 2. Display on the called party phone does not update after the Join transfer completes.

✔ = Supported

— = Not Supported by the DMG2000 and/or the PBX.

N/A = Feature is not available on this PBX.

Table 8. PBX Requirements - T1 NI-2 Protocol

Manu-facturer	Models	Software Version	Basic Call Control			Supplemental Service Support					
						Diversion		Call Transfer		Path Replacement	MWI
			In-bound	Out-bound	CPID	For-ward ID & Rea-son	Re-direct	Join (Hair-pin)	Re-Route (TBCT)		
Avaya	5ESS	Version 5e16(2)02.00	✔	✔	✔	✔	—	N/A	✔	N/A	✔[1]
Mitel	SX-2000 S, SX-2000 VS	LW 34	✔	✔	✔	N/A	N/A	N/A	N/A	N/A	N/A
Mitel	3300	Version 5.1.4.8	✔	✔	✔	N/A	N/A	N/A	N/A	N/A	N/A
NEC	All Models	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nortel	DMS100	Version SN000.007	✔	✔	✔	✔	—	N/A	✔	N/A	✔
Nortel	Meridian 1-Option 11c	Release 15 or greater, and options 19 and 46 are required	✔	✔	✔	—	—	—	—	—	—
Siemens	HiPath 4000	V2 SMR 9 SMPO	✔	✔	✔	—	—	—	—	—	—

Note 1. MWI operatIon is supported via the SMDI serial protocol.

✔ = Supported

— = Not Supported by the DMG2000 and/or the PBX.

N/A = Feature is not available on this PBX.

Table 9. PBX Requirements - E1 QSIG Protocol

Manu-facturer	Models	Software Version	Basic Call Control			Supplemental Service Support					
						Diversion		Call Transfer			
			In-bound	Out-bound	CPID	For-ward ID & Rea-son	Re-direct	Join (Hair-pin)	Re-Route (TBCT)	Path Replace ment	MWI
Alcatel	Omni PCX 4400	Version 3.2.712.5	✔	✔	✔	✔	—	✔	N/A	✔	✔
Avaya	S8500	Communica-tions Manager SW V2.0 or greater	✔	✔	✔	✔	—	✔	N/A	✔	✔
Ericsson	MD110	Release MX1 TSW R2A (BC13)	✔	✔	✔	✔	—	✔	N/A	✔	✔
Mitel	SX-2000 S, SX-2000 VS	LW 34	✔	✔	✔	✔	—	✔	N/A	✔	✔
Mitel	3300	Version 5.1.4.8	✔	✔	✔	✔	—	✔	N/A	✔	✔
Nortel	Meridian 1 - Option 11c	Release 15 or greater and options 19 and 46 are required	✔	✔	✔	✔	—	✔[1]	N/A	✔	✔
Nortel	Communica -tions Server 1000	Version 2121, RELEASE 4, ISSUE 00 T	✔	✔	✔	✔	—	✔[1]	N/A	✔	✔
Phillips	Sopho (iS3030-288)	Version 6810.34	✔	✔	✔	✔	—	✔	N/A	✔	✔
Siemens	HiPath 4000	V2 SMR 9 SMPO	✔	✔	✔	✔	—	✔[1]	N/A	✔	✔
Tenovis	Integral 3	E062V01.0.0.2	✔	✔	✔	✔	—	✔	N/A	✔	✔

Note 1. Display on the called party phone does not update after the Join transfer completes.

✔ = Supported

— = Not Supported by the DMG2000 and/or the PBX.

N/A = Feature is not available on this PBX.

Table 10. PBX Requirements - T1 5ESS Protocol

Manu-facturer	Models	Software Version	Basic Call Control			Supplemental Service Support					
						Diversion		Call Transfer			
			In-bound	Out-bound	CPID	For-ward ID & Rea-son	Re-direct	Join (Hair-pin)	Re-Route (TBCT)	Path Replace ment	MWI
Avaya	5ESS	Version 5e16(2)02.00	✔	✔	✔	✔	—	N/A	✔	N/A	✔[1]

Note 1. MWI operatIon is supported via the SMDI serial protocol.
✔ = Supported
— = Not Supported by the DMG2000 and/or the PBX.
N/A = Feature is not available on this PBX.

Table 11. PBX Requirements - T1 DMS100 Protocol

Manu-facturer	Models	Software Version	Basic Call Control			Supplemental Service Support					
						Diversion		Call Transfer			
			In-bound	Out-bound	CPID	For-ward ID & Rea-son	Re-direct	Join (Hair-pin)	Re-Route (TBCT)	Path Replace ment	MWI
Nortel	DMS100	Version SN000.007	✔	✔	✔	✔	—	N/A	✔	N/A	✔[1]

Note 1. MWI operatIon is supported via the SMDI serial protocol.
✔ = Supported
— = Not Supported by the DMG2000 and/or the PBX.
N/A = Feature is not available on this PBX.

Installation 4

This chapter provides information about installing and initially logging on to the Dialogic® 1000 Media Gateway (DMG1000) and Dialogic® 2000 Media Gateway (DMG2000) models in the following sections:

4.1 Installation Procedure - DMG1000 Models

Perform the following steps to install the DMG1000 system for use as a phone emulator (connected to PBX):

1. Connect the 10/100BaseT Ethernet cable from the LAN connector on the rear panel of the DMG1000 to the Ethernet. See Section 1.2, "Rear Panel Controls, Indicators, and Connectors for DMG1000 Models", on page 17 for descriptions of the rear panel connectors.
2. For a digital DMG1000, connect up to eight digital PBX lines from the digital PBX to the eight PBX Port connectors on the rear panel of the DMG1000. (See the *User's Guide* for more details.)

   For an analog DMG1000, connect up to eight analog PBX lines from the analog PBX to the eight PBX Port connectors on the rear panel of the DMG1000.

   To connect a port on the DMG1000 to the associated PBX port, a PBX-to-DMG1000 cable is needed. This requires an 8-wire cable with an 8-pin modular plug on one end and a connector on the other end that is determined by the mating connector on the PBX.

   The DMG1000 is connected to the PBX as follows:

   a. Connect the 8-pin modular plug end of a PBX-to-DMG1000 cable to PBX PORT connector 1 on the rear panel of the DMG1000.
   b. Connect the other end of the PBX-to-DMG1000 cable to a telephone port on the PBX.
   c. Repeat steps 1 and 2 for each successive PBX port that is to be connected to the DMG1000.

3. Connect the 5-pin DIN plug from the Power Supply Unit DC output to the DC POWER connector on the rear panel of the DMG1000.

CAUTION

Be sure to connect the DC cable from the Power Supply Unit to the DMG1000 before connecting the AC Power Cord to the AC power source.

4. Connect the AC Power Cord from the Power Supply Unit to an AC power source. This will immediately apply power to the DMG1000.
5. Observe the initial status of the front panel indicators.

See Section 1.1, "Front Panel Indicators for DMG1000 Models", on page 15 to interpret the status of the DMG1000 LEDs during unit initialization.

4.2 Installation Procedure - DMG2000 Models

Perform the following steps to install the DMG2000 model (phone emulator):

1. Mount the unit in a standard 19" rack. The DMG2000 occupies 1 rack unit (RU).

   Rack Mounting Warnings:

   - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature of 40°C.
   - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
   - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
   - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
   - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

2. Connect the 10/100BaseT Ethernet cable from the LAN1 connector on the rear panel of the DMG2000 to the Ethernet. See Section 1.4, "Rear Panel Controls, Indicators, and Connectors for DMG2000 Models", on page 21 for descriptions of rear panel connectors.
3. Depending on your model, connect one, two, or four T1 or E1 cables from the PBX to the T1/E1 connectors on the rear panel of the DMG2000. (See *User's Guide* for more details.)
4. Connect the AC Power Cord from the connector on the rear of the DMG2000 to an AC power source.
5. Turn the power switch to the on (I) position.
6. Observe the initial status of the front panel indicators.

See Section 1.3, "Front Panel Indicators for DMG2000 Models", on page 19 to interpret the status of the DMG2000 LEDs during unit initialization.

4.3 Basic Configuration via the Serial Port (All Models)

For first time configuration, the preferred and recommended method for initially logging on and performing basic configuration of the Media Gateway is via the serial port.

Note: If configuring the unit via the serial port is not an option, the unit can also be initially configured via the Web interface - please see Section 4.4, "Basic Configuration via the IP Interface (All Models)", on page 38.

Additionally, the serial port can be used to reconfigure the unit when a previously configured IP address becomes unreachable on your network.

The following procedure can be used to set the Client IP Address, Client Subnet Mask, Default Network Gateway Address, Operating Mode, and PBX Type parameters of the Media Gateway unit via the serial port:

1. Connect a serial cable to the serial connector on the rear panel of the Media Gateway unit (DIAGNOSTICS connector on DMG1000 models and COM 2 connector on DMG2000 models). For connector pin designation information, refer to Table 1, "DIAGNOSTICS Connector Pin Designations", on page 18 or Table 4, "COM 1 and COM 2 Connector Pin Designations", on page 22.
2. Using a standard serial interface application (for example, Procomm Plus or HyperTerminal), set the workstation to the following:
   - Baud Rate = 38400 (DMG1000 models) or 115200 (DMG2000 models)
   - Parity = None
   - Data Bits = 8
   - Stop Bits = 1
   - Hardware Flow Control = Off

3. Press the Enter key repeatedly until the following prompt appears:

   PIMG>

4. At the prompt, type **pwd** and press Enter.
5. When prompted, enter the password for the admin user (the default is **IpodAdmin**) and press Enter.
6. At the prompt, type **quickcfg** and press Enter.
7. You will then be prompted to enter the following parameter information:
   - Client IP Address (See Client IP Address parameter information in the "Parameter Reference" section of the *User's Guide*.)
   - Client Subnet Mask (See Client Subnet Mask parameter information in the "Parameter Reference" section of the *User's Guide*.)
   - Network Gateway IP (if required) (See Default Network Gateway Address parameter information in the "Parameter Reference" section of the *User's Guide*.)
   - Select Operating Mode (See Operating Mode parameter information in the "Parameter Reference" section of the *User's Guide*.)
   - Select PBX Type (See PBX Type (DMG1000 Only) parameter information in the "Parameter Reference" section of the *User's Guide*.)
   - Select T1/E1 Line Mode (DMG2000 only) parameter information in the "Parameter Reference" section of the *User's Guide*.)
   - Select T1/E1 Protocol (DMG2000 only) parameter information in the "Parameter Reference" section of the *User's Guide*.)
8. When prompted that the parameters have been successfully configured, type **restart** at the PIMG> prompt to restart the Media Gateway unit.

   You should now be able to connect to the Media Gateway unit from the Web interface using the newly configured IP Address.

4.4 Basic Configuration via the IP Interface (All Models)

Each Media Gateway unit is initially configured with a default IP address of **10.12.13.74**. This allows the unit to be configured using a Web browser by pointing the Web browser to the default IP address.

Caution: Because all Media Gateway units use the same default IP address, you should connect them one at a time to avoid IP address conflicts when configuring a system with multiple Media Gateways.

The preferred method for initially logging on to the Media Gateway is via the serial port (DIAGNOSTICS connector on DMG1000 models and COM 2 connector on DMG2000 models). Refer to Section 4.3, "Basic Configuration via the Serial Port (All Models)", on page 37 for information about initially logging on to the Media Gateway unit via the serial port.

Note: The unit's IP address must be changed from the default IP address in order to have multiple Media Gateway units in a system. If you do not use the serial port for initially logging on to the Media Gateway, refer to "Setting the IP Address" section in the *User's Guide* for instructions on changing the IP address once you have completed the initial log on procedure.

If the serial port is not an option, use the following procedure.

1. Temporarily change the IP address of the Windows® workstation that you are using to access the Media Gateway unit to an IP address on the same subnet as the default IP address of the Media Gateway unit (For example, **10.12.13.75**). Refer to the Windows® workstation user documentation or online Help for information about changing the workstation IP address.

   You should then be able to access the Media Gateway unit using its default IP address.
2. Start your Web browser.
3. In the Web browser address box, enter the following address:

   `http://10.12.13.74`
4. When the System Login dialog box appears, enter the default user name **admin** in the **Username** box and enter the default password **IpodAdmin** in the **Password** box (the user name and password are case-sensitive) then click on the **OK** button.

   Once the login has been accepted, the initial DMG1000 Web page will appear. At this time you are required to configure the Operating Mode and PBX Type parameters.

   Note: Refer to "Parameter Reference" chapter in the *User's Guide* for a description of the Operating Mode and PBX Type parameters.
5. Select an operating mode from the Operating Mode drop down list.
6. Select a PBX type from the PBX Type drop down list.
7. Click on the **Apply Changes** button to save the configuration in the database, or click on the **Reset** button to return the parameter to the previous value.
8. For the configuration change to take effect, you will be prompted to restart the Media Gateway unit by clicking on Restart on the Web page or by selecting **Restart** from the **Configuration** menu. When the **Restart** Web page appears, click on **Restart Unit Now** to restart the Media Gateway unit.

   Note: You do not need to perform a restart at this time, but may continue with setting the new IP address.
9. After completing the Initial Log On procedure, refer to "Setting the IP Address" section in the *User's Guide* for instructions on changing the IP address.