

**GDK Version 5.0**  
**Installation & Configuration Guide**  
for Windows<sup>®</sup>

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Dialogic, an Intel Company  
1515 Route 10  
Parsippany NJ 07054  
U.S.A.

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## **OPERATING SYSTEM SUPPORT**

The term *Windows* refers to both the Windows NT<sup>®</sup> and Windows<sup>®</sup> 2000 operating systems. For a complete list of supported Windows operating systems, refer to the *Release Guide* that came with your Dialogic System Release for Windows, or to the Dialogic support site at <http://support.dialogic.com/releases>.

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# 1. Introduction

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Dialogic's GDK Version 5.0 for Windows offers a seamless migration path, supporting low-density to high-density fax solutions.

## 1.1. About This Guide

This guide describes how to install, configure and use the GDK Version 5.0 for Windows.

This guide contains the following chapters:

- **Chapter 2** provides instructions for installing the GDK software.
- **Chapter 3** describes how to configure the GDK software using the “*Configure GDK*” utility and features.
- **Chapter 4** details how to use the GDK software. A discussion about system startup, network drive access, and sending/receiving faxes is included.

## 1.2. Related Documentation

The following documents may be useful when using this product:

- *GDK, Version 5.0, Programming Reference Manual for Windows*
- *GlobalCall E-1/T-1 Technology User's Guide for UNIX and Windows*
- *GlobalCall ISDN Technology User's Guide for UNIX and Windows*
- *GammaLink Fax Products Error and Status Codes Guide*

## 1.3. Before You Begin

**NOTE:** Before you attempt to install the GDK Version 5.0, uninstall any previous versions of the GDK and Dialogic drivers.

## **1.4. Supported Hardware**

### **1.4.1. DM3 Boards**

- CPi/2400CT-T1
- CPi/3000CT-E1
- CPi/2400CT
- CPi/3000CT

### **1.4.2. CP Boards**

- CPi/100
- CPi/200
- CPi/400 (formerly called CP4/LSI)
- CPD/220
- CPi/200-BRI
- CPi/400-BRI
- CP6/SC
- CP12/SC
- XPi/200
- CPi/200-PCI
- CPi/400-PCI

### **1.4.3. Springware Boards**

- BRI/2VFD

### **1.4.4. DTI Network Interfaces**

- DTI/240SC
- DTI/300SC

## 1.5. Supported Configurations

**NOTE:** Dialogic recommends that you install the board in your system *before* installing the software. The installation instructions that follow assume the board is already installed.

There are seven possible configurations:

- DM3 boards with on-board network interfaces
- DM3 resource boards with DTI network interfaces in transparent ISDN mode
- DM3 resource boards in SCbus mode
- Board based on Dialogic's Springware architecture
- CP boards with on-board network interfaces
- CP resource boards with DTI network interfaces in transparent ISDN mode
- CP resource boards in SCbus mode

An explanation of each configuration follows.

### 1.5.1. DM3 Boards With On-board Network Interface

#### T1 ISDN Configuration

Hardware: CPi/2400CT-T1

Possible Protocols: 4ESS, 5ESS, DMS, NTT

#### E1 ISDN Configuration

Hardware: CPi/3000CT-E1

Possible Protocol: CTR4 (also called Net5 or Euro ISDN)

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**T1 CAS (Robbed Bit Signaling) Configuration**

Hardware: CPi/2400CT-T1

Possible Protocols: E&M, Loop Start, Ground Start

**1.5.2. DM3 Resource Boards With DTI Network Interface in Transparent ISDN Mode (Fax Only Applications)**

**T1 ISDN Configuration**

Hardware: CPi/2400CT with DTI/240SC

Possible Protocols: Any ISDN protocol supported by the DTI/240SC card

**E1 ISDN Configuration**

Hardware: CPi/3000CT with DTI/300SC

Possible Protocols: Any ISDN protocol supported by the DTI/300SC card

**1.5.3. DM3 Resource Boards in SCbus Mode (Multimedia Applications)**

Hardware: CPi/2400CT or CPi/3000CT

**1.5.4. Board Based on Dialogic's Springware Architecture**

Hardware: BRI/2VFD

Possible Protocol: CTR3 (also known as Euro ISDN)

**1.5.5. CP boards With On-board Network Interface**

Hardware: Any CP board (listed in the *CP Boards* section) except CP6/SC and CP12/SC

## ***1. Introduction***

### **1.5.6. CP Resource Boards With DTI Network Interface in Transparent ISDN Mode (Fax Only Applications)**

#### **T1 ISDN Configuration**

Hardware: 2 CP12/SCs with DTI/240SC

Possible Protocols: Any ISDN protocol supported by the DTI/240SC card

#### **E1 ISDN Configuration**

Hardware: 2 CP12/SCs and a CP6/SC with DTI/300SC

Possible Protocols: Any ISDN protocol supported by the DTI/300SC card

### **1.5.7. CP Resource Boards in SCbus Mode (Multimedia Applications)**

Hardware: CP6/SC and CP12/SC boards

***GDK Version 5.0 Installation & Configuration Guide***



## 2. Installation

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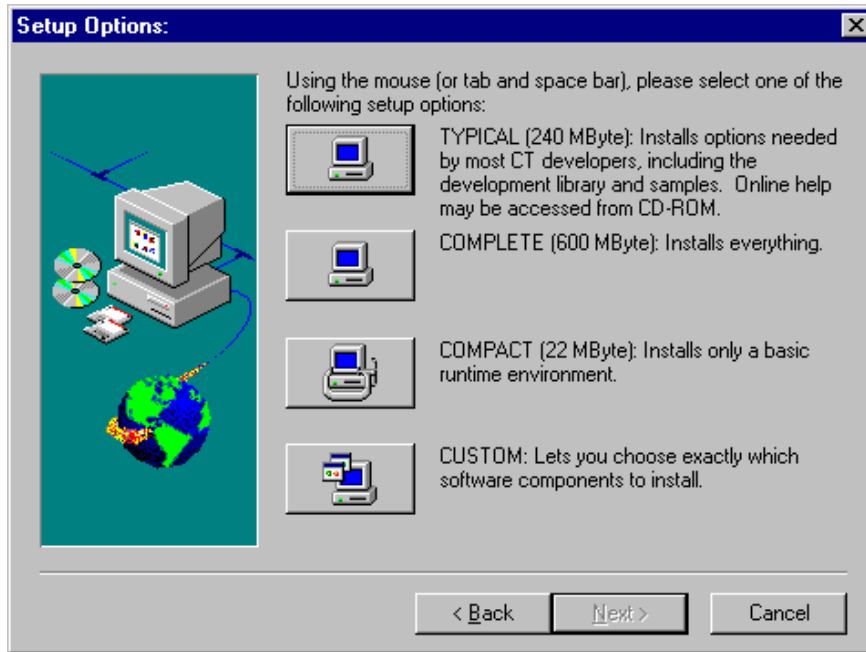
### 2.1. Installing Dialogic Hardware

Install Dialogic's hardware in the chassis. For installation instructions, refer to the hardware documentation that was shipped with your product.

### 2.2. Installing Dialogic Software

**NOTE:** The software is installed from the Dialogic System Release (SR) CD-ROM. This guide assumes that Dialogic's hardware is already installed in the system

1. Run **SETUP.EXE** from the Dialogic SR CD-ROM and follow the screen prompts.



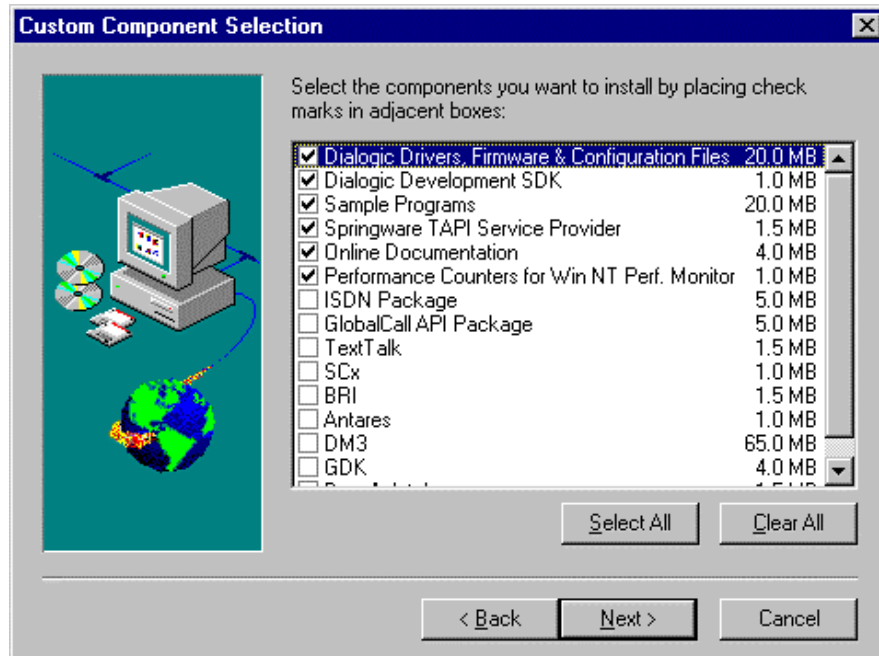
**Figure 1. Setup Options Window**

2. From the Setup Options window, choose the **CUSTOM** option.

<p style="text-align: center;"><b>WARNING</b></p> <p style="text-align: center;">If you choose the TYPICAL option, the GDK components will <i>not</i> be installed.</p>
---

Once you have selected the Custom option, the Custom Component Selection window appears.

## 2. Installation

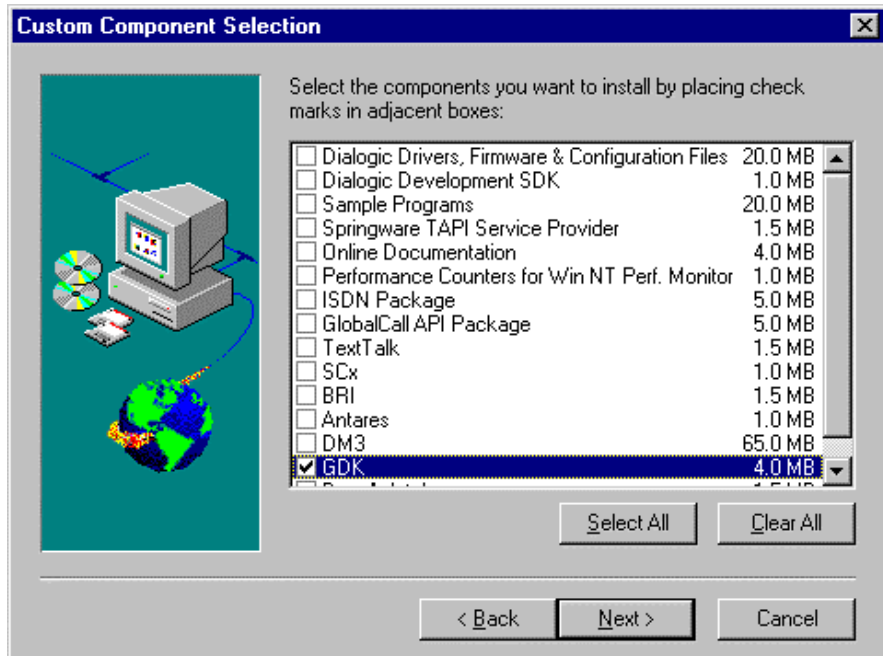


**Figure 2. Custom Component Selection Window**

3. From the Custom Component Selection Window, select *only* the **GDK** component. Click **Clear All** and then select the GDK component by placing a check mark in the box adjacent to GDK.

The recommended Custom Component Selection window appears.

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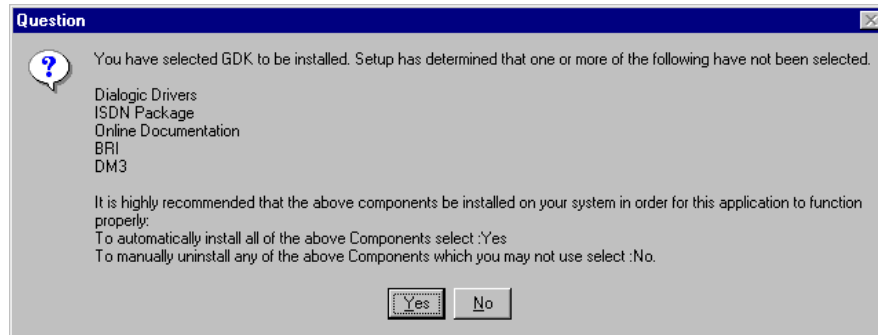


**Figure 3. Custom Component Selection Window**

4. Click **Next** after selecting *only* the GDK component.

A Question dialog box appears:

## 2. Installation



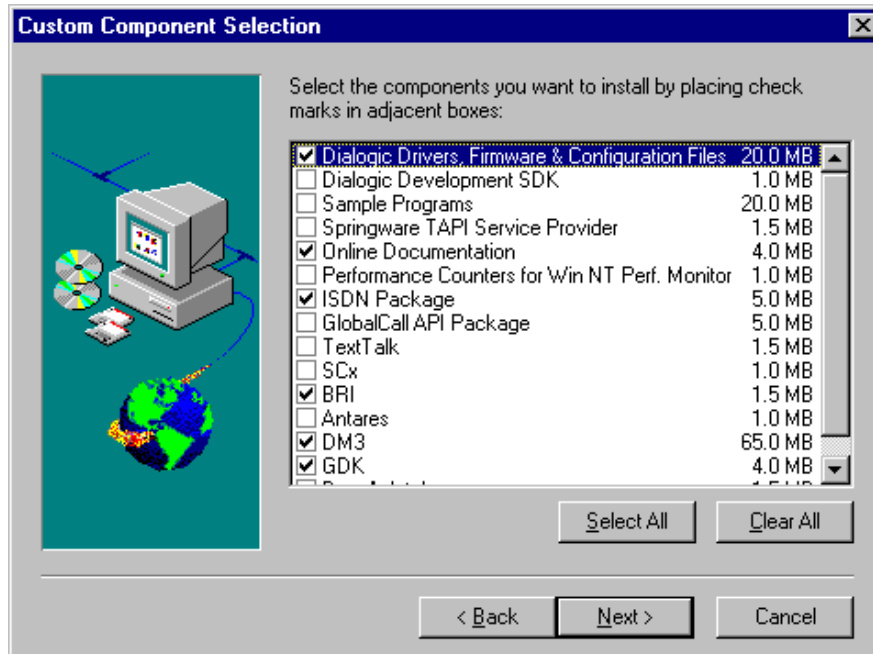
**Figure 4. Question Dialog Box**

5. Click **No**.

**NOTE:** If you select YES, *all* the components needed to support *all* the possible configurations are automatically installed on your disk. This option utilizes a large amount of disk space, and is not recommended for most installations.

If you select No, you return to the Custom Component Selection window, which has all the necessary GDK components selected for you.

**NOTE:** Previously selected components remain checked.



**Figure 5. Custom Component Selection Window**

6. From the Custom Component Selection window, click **Clear All**.

## 2. Installation

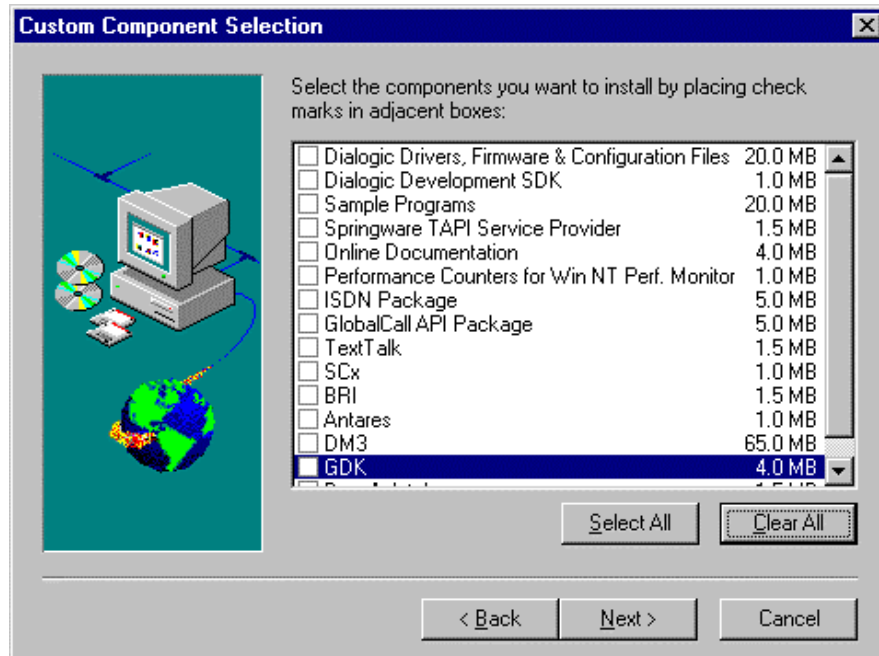


Figure 6. Custom Component Selection Window

### 2.3. Minimum Component Selection

**NOTE:** To install the minimum components, select **No** in the Question dialog box (Figure 4).

At this time, it is very important to select the minimum components that are needed for your particular configuration to operate properly. Selecting the minimum components also optimizes disk space.

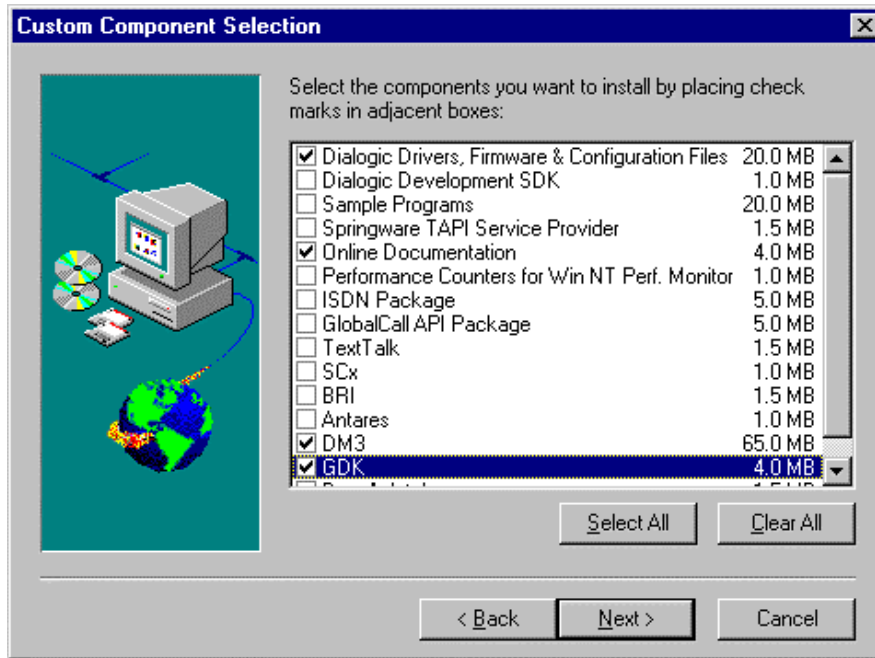
There are seven possible configurations listed in the *Supported Configurations* section. Each of the following paragraphs describes the installation of the *minimum* components required for a fully operational system with a given configuration.

### 2.3.1. DM3 Boards With On-board Network Interfaces

This configuration includes the CPi/2400CT-T1 and CPi/3000CT-E1 boards.

**NOTE:** Skip this section if this configuration does not apply to your environment.

Select the following components by placing a check mark in the adjacent box: Dialogic Drivers, Online Documentation, DM3 and GDK.



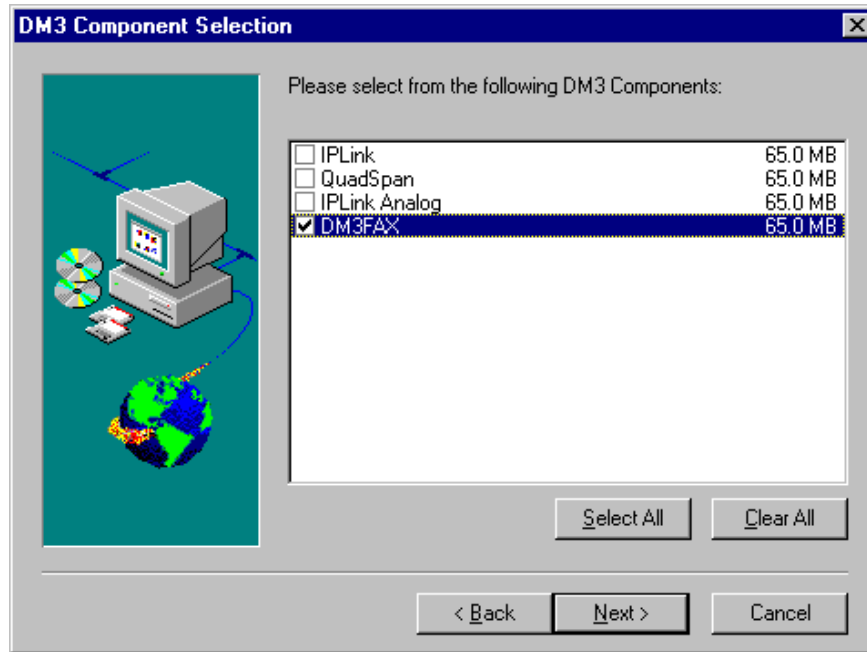
**Figure 7. Custom Component Selection Window**

After selecting the recommended options, click **Next**.

The DM3 Component Selection window appears:



## 2. Installation



**Figure 8. DM3 Component Selection Window**

Select *only* the DM3Fax component from the window and click **Next**.

Skip to the *Completing the Installation* section.

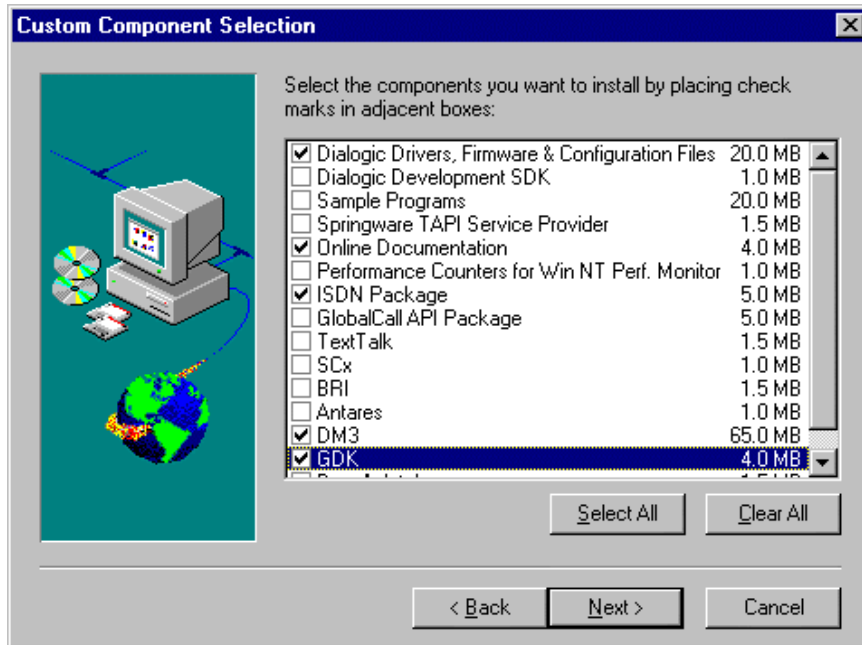
### 2.3.2. DM3 Resource Boards With DTI Network Interfaces in Transparent ISDN Mode

This configuration includes the CPi/2400CT with DTI/240SC or CPi/3000CT with DTI/300SC boards.

**NOTE:** Skip this section if this configuration does not apply to your environment.

Select the following components by placing a check mark in the adjacent box: Dialogic Drivers, Online Documentation, ISDN Package, DM3 and GDK.

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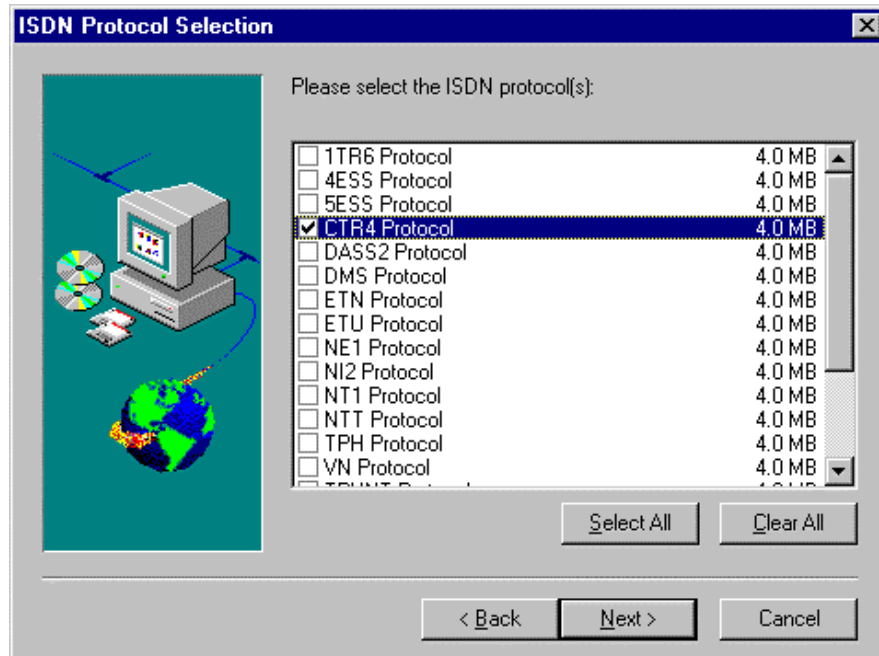


**Figure 9. Custom Component Selection Window**

After selecting the recommended options, click **Next**.

The ISDN Protocol Selection window appears:

## 2. Installation



**Figure 10. ISDN Protocol Selection Window**

Select the appropriate ISDN protocol for your system. If you do not know your ISDN protocol, contact your Central Office (CO) or telephony provider.

- NOTES:**
1. In the example shown, CTR4 (also known as Euro ISDN) is selected. The popular protocols available for the United States are 4ESS, 5ESS, DMS, NTT.
  2. It is possible to select more than one protocol. This results in copying multiple 4-MB protocol files on your hard disk.

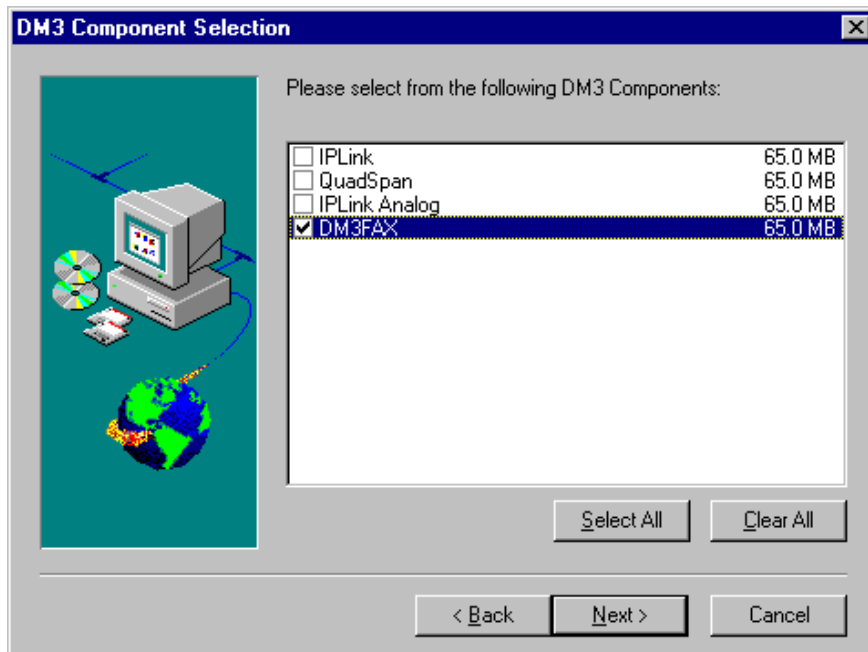
### **CAUTION**

Selecting an incorrect protocol requires that you uninstall and reinstall the software.

**GDK Version 5.0 Installation & Configuration Guide**

After selecting the ISDN protocol, click **Next**.

The DM3 Component Selection window appears:



**Figure 11. DM3 Component Selection Window**

Select *only* the DM3Fax component from the window and click **Next**.

Skip to the *Completing the Installation* section.

## **2. Installation**

### **2.3.3. DM3 Resource Boards in SCbus Mode**

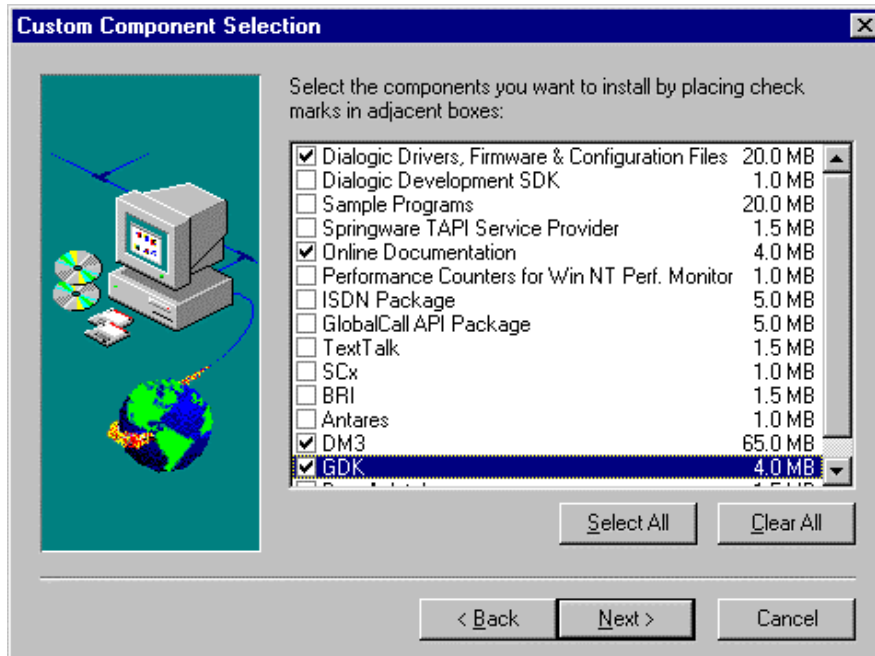
This configuration includes the CPi/2400CT or CPi/3000CT resource boards in SCbus mode.

- NOTES:**
1. Skip this section if this configuration does not apply to your environment.
  2. This configuration is required for multimedia applications where fax resources are used in combination with other resources (such as voice) and network interfaces. This configuration is for advanced developers that want to fully control the fax resource via the SCbus functions.

Select the following minimum components by placing a check mark in the adjacent box: Dialogic Drivers, Online Documentation, DM3 and GDK.

Add other components that are needed by the other resource or network interface boards you are using.

**GDK Version 5.0 Installation & Configuration Guide**



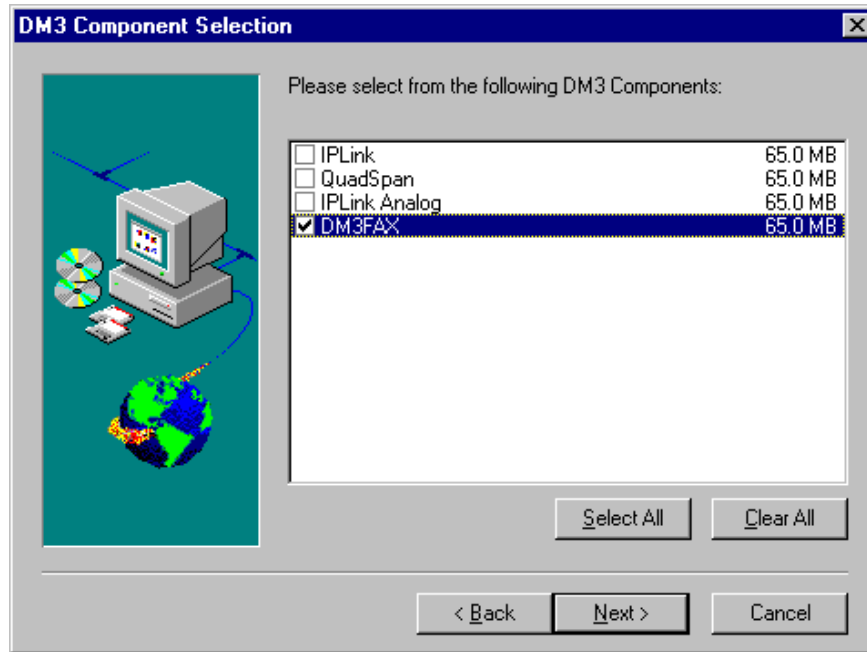
**Figure 12. Custom Component Selection Window**

After selecting the recommended options and adding the components required by other cards in the system, click **Next**.

**NOTE:** Depending on the components selected in the Custom Component Selection window, other dialog screens may display. Follow the screen prompts and refer to other component manuals for additional information.

The DM3 Component Selection window appears:

## 2. Installation



**Figure 13. DM3 Component Selection Window**

Select at least the DM3Fax component, and if you have other DM3 card types in the configuration, add other components from the window. Click **Next**.

Skip to the *Completing the Installation* section.

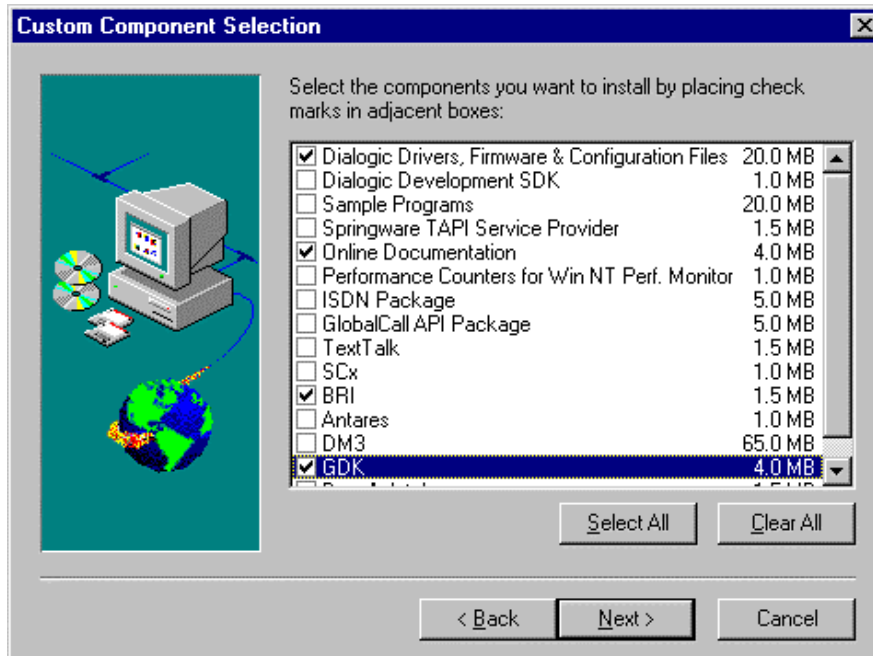
### 2.3.4. Board Based on Dialogic's Springware Architecture

This configuration includes the BRI/2VFD board.

**NOTE:** Skip this section if this configuration does not apply to your environment.

Select the following components by placing a check mark in the adjacent box: Dialogic Drivers, Online Documentation, BRI and GDK.

**GDK Version 5.0 Installation & Configuration Guide**



**Figure 14. Custom Component Selection Window**

After selecting the recommended options, click **Next**.

Skip to the *Completing the Installation* section.



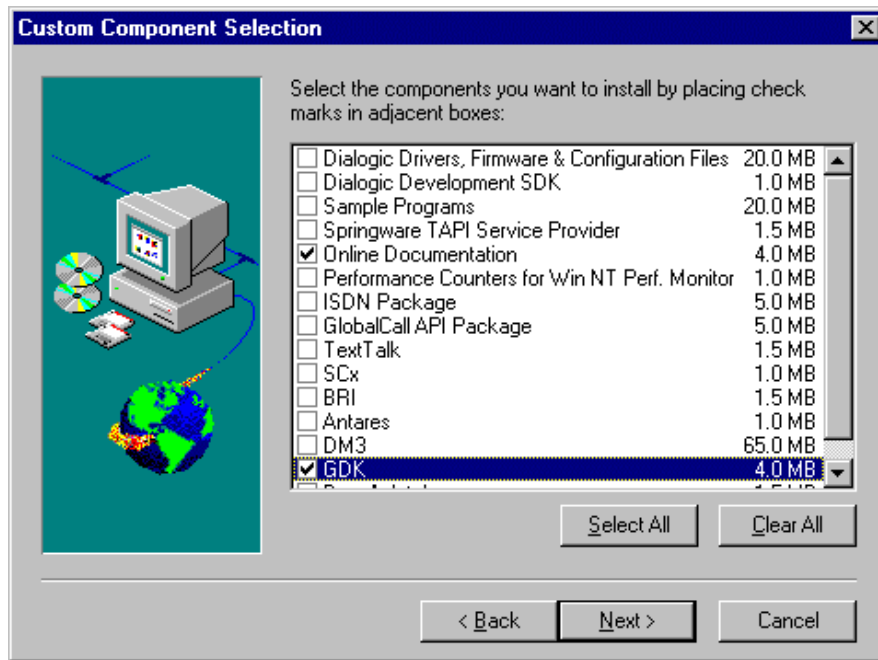
## 2. Installation

### 2.3.5. CP Boards

This configuration includes the boards listed in the *CP Boards* section.

**NOTE:** Skip this section if this configuration does not apply to your environment.

Select the following components by placing a check mark in the adjacent box: Online Documentation and GDK.



**Figure 15. Custom Component Selection Window**

After selecting the recommended options, click **Next**.

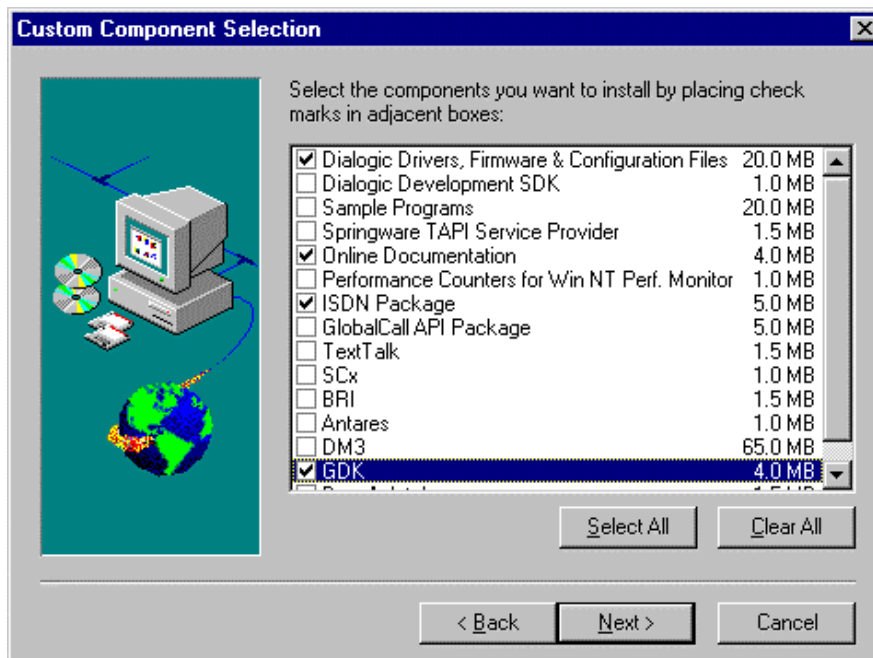
Skip to the *Completing the Installation* section.

### 2.3.6. CP Resource Boards With DTI Network Interfaces in Transparent ISDN Mode

This configuration includes CP6/SC and CP12/SC with DTI/240SC or DTI/300SC boards.

**NOTE:** Skip this section if this configuration does not apply to your environment.

Select the following components by placing a check mark in the adjacent box: Dialogic Drivers, Online Documentation, ISDN Package and GDK.

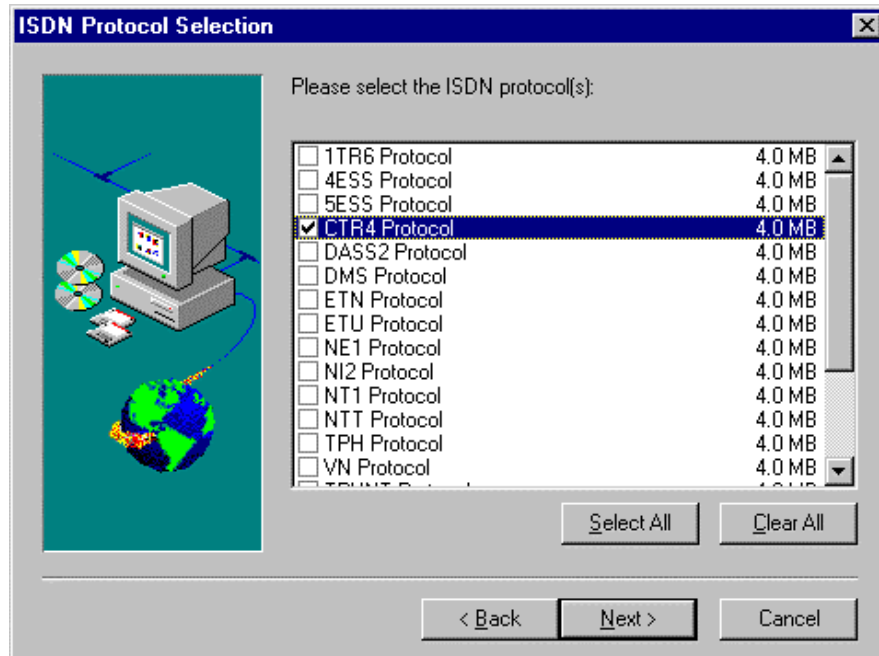


**Figure 16. Custom Component Selection Window**

After selecting the recommended options, click **Next**.

The ISDN Protocol Selection window appears:

## 2. Installation



**Figure 17. ISDN Protocol Selection Window**

Select the appropriate ISDN protocol for your system. If you do not know your ISDN protocol, contact your Central Office (CO) or telephony provider.

- NOTES:**
1. In the example shown, CTR4 (also known as Euro ISDN) is selected. The popular protocols available for the United States are 4ESS, 5ESS, DMS, NTT.
  2. It is possible to select more than one protocol. This results in copying multiple 4-MB protocol files on your hard disk.

### CAUTION

Selecting an incorrect protocol requires that you uninstall and reinstall the software.

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After selecting the ISDN protocol, click **Next**.

Skip to the *Completing the Installation* section.

### **2.3.7. CP Resource Boards in SCbus Mode**

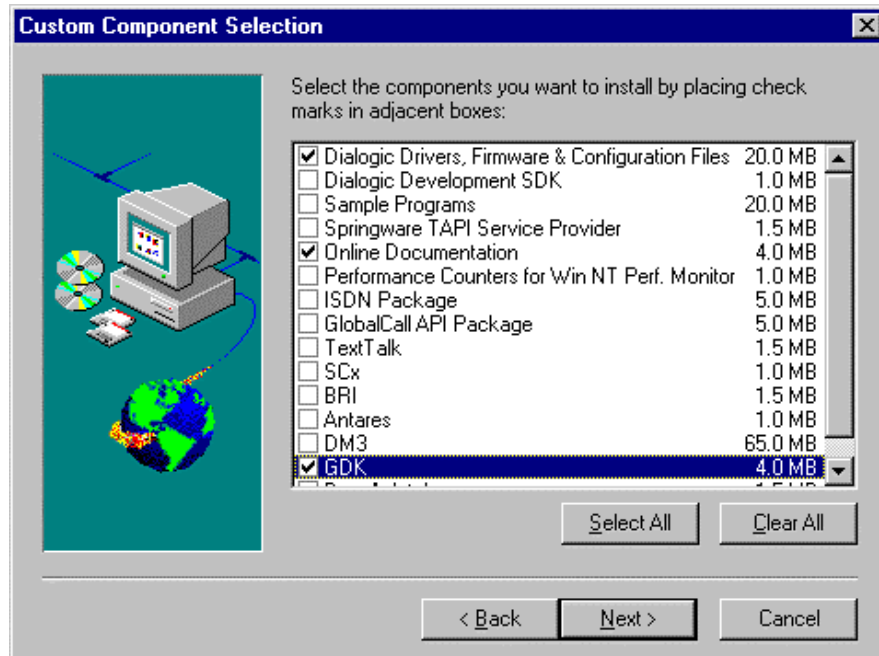
This configuration includes the CP6/SC or CP12/SC resource boards in SCbus mode.

- NOTES:**
1. Skip this section if this configuration does not apply to your environment.
  2. This configuration is required for multimedia applications where fax resources are used in combination with other resources (such as voice) and network interfaces. This configuration is for advanced developers who want to fully control the fax resource via the SCbus functions.

Select the following minimum components by placing a check mark in the adjacent box: Dialogic Drivers, Online Documentation and GDK.

Add other components that are needed by the other resource or network interface boards you are using.

## 2. Installation



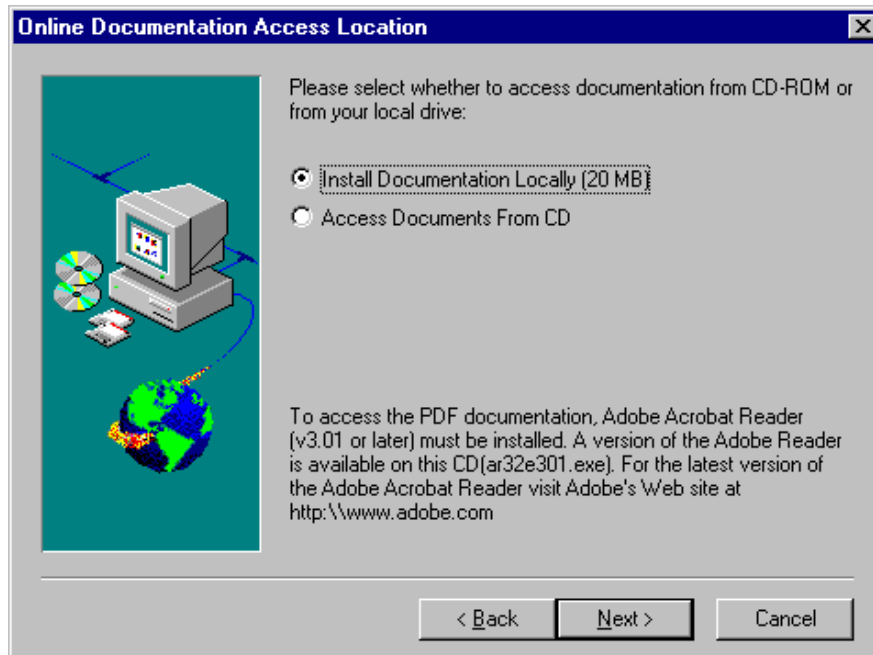
**Figure 18. Custom Component Selection Window**

After selecting the recommended options and adding the components required by other cards in the system, click **Next**.

**NOTE:** Depending on the components selected in the Custom Component Selection window, other dialog screens may appear. Follow the screen prompts and refer to other component manuals for additional information.

Skip to the *Completing the Installation* section.

## 2.4. Completing the Installation



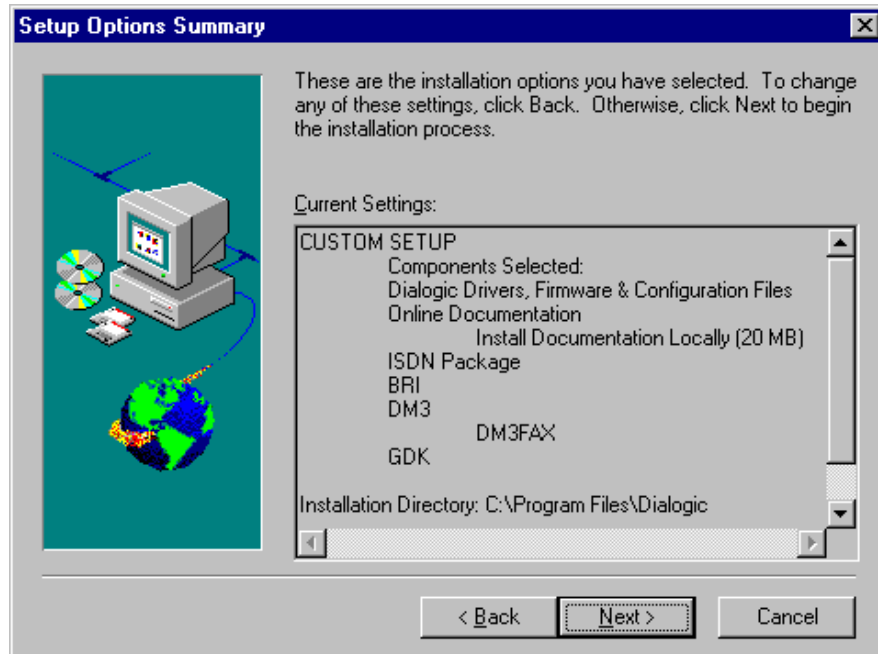
**Figure 19. Online Document Access Location Window**

In order to minimize disk space utilization, access the documentation from the CD. Select **Access Documents From CD** and click **Next**.

Follow the screen prompts to complete the software installation.

The Setup Option Summary screen displays:

## 2. Installation

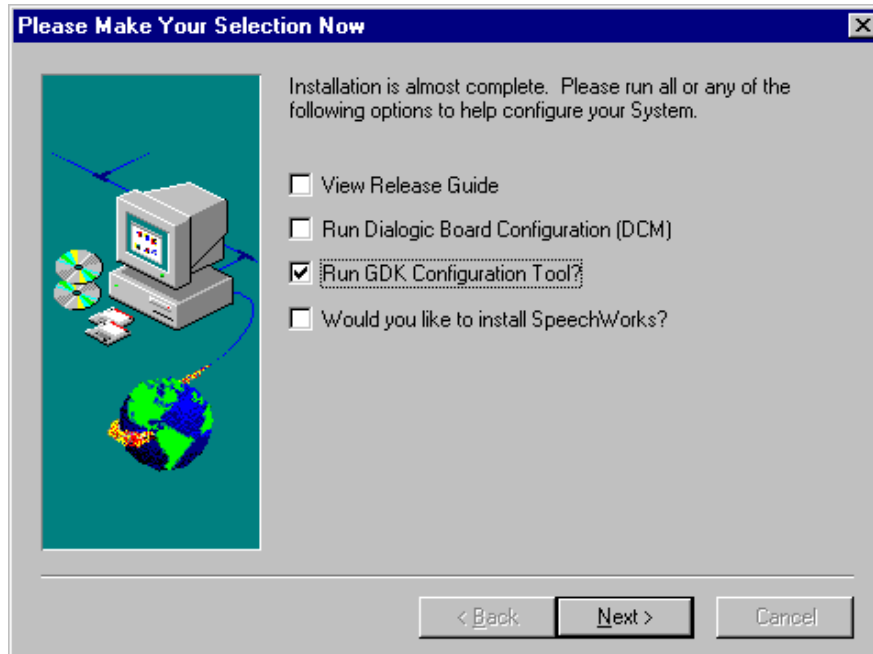


**Figure 20. Setup Option Summary Window**

**NOTE:** The Setup Option Summary lets you review all the options you have selected. It is your last chance to modify the selected components. Click the **Back** button if you need to modify the selections. The screen displayed here corresponds to DM3-based products with on-board network interfaces.

Click **Next** to start the software installation.

Depending on your system, the installation may take several minutes. After the files are successfully copied on the hard disk, the Please Make Your Selection Now dialog box appears:



**Figure 21. Please Make Your Selection Now Dialog Box**

You may select **Run GDK Configuration Tool** to start configuring your system now (default), or uncheck the box and run the GDK Configuration Tool after the installation is complete. See the *Fax Configuration* chapter.

**NOTE:** After you complete the configuration using the GDK Configuration tool, you will be prompted to reboot your system.



## 3. Fax Configuration

---

There are six fax configuration steps required:

1. Launching the Dialogic GDK Configuration utility.
2. Detecting the installed boards using the DCM Utility.
3. Modifying the DCM configuration.
4. Detecting the Fax configuration.
5. Importing pre-defined profiles.
6. Adapting protocol configuration files.

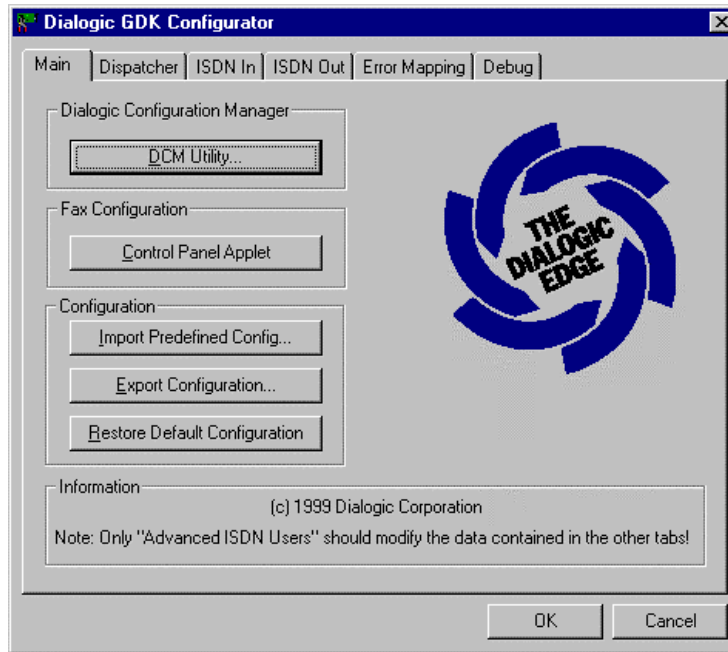
Each step is described in the following sections.

**NOTE:** These steps **MUST** be executed in the order listed above. You may perform steps 1 to 5 at any time using the Dialogic GDK Configuration Utility.

### 3.1. Launching the Dialogic GDK Configuration Utility

There are two ways to launch this utility:

- At the end of the installation procedure, click the **Run GDK Configuration Tool** checkbox (Figure 21).
- Select the **Configure GDK** option from the Dialogic System Software program group, found on the Programs menu located on the Windows Start bar.



**Figure 22. Dialogic GDK Configuration Window**

**NOTE:** If you are not an advanced user, *do not* attempt to use any settings except those on the Main configuration tab. The parameters that are related to the other configuration tabs are loaded using the predefined Configuration profiles.

### **3.2. Board Detect Using the Dialogic Configuration Manager (DCM)**

The next step in configuring your fax board is to launch the DCM utility.

There are two ways to launch the DCM:

- Click the **DCM Utility** button located on the Main configuration tab of the Dialogic GDK Configuration window.

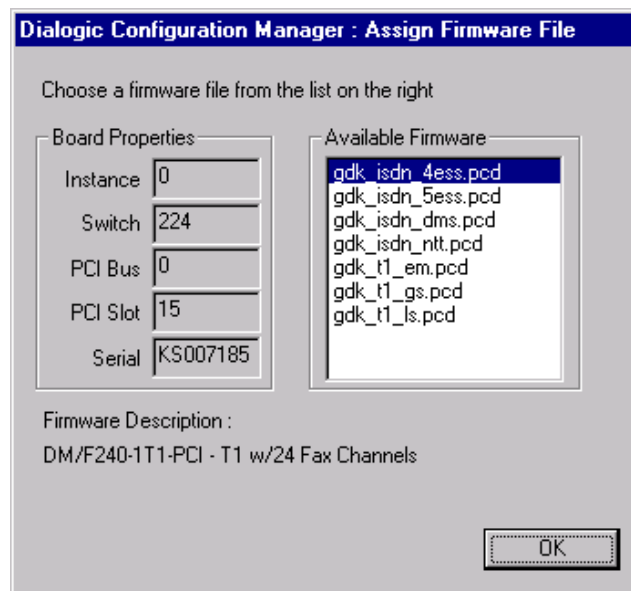
### 3. Fax Configuration

- Select the **Dialogic Configuration Manager - DCM** option from the Dialogic System Software program group, which is found on the Programs menu located on the Windows Start bar.

Board detection is performed automatically when you start the DCM utility to determine what type of board is installed in the system and to set the network interface parameters.

#### 3.2.1. CPi/2400CT-T1 Board Detection

When the CPi/2400CT-T1 board is detected, you are prompted to select a .pcd file.



**Figure 23. Assign Firmware File Window**

**NOTE:** Ignore the .pcd files that do not start with gdk.

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Select the .pcd file that matches your phone company's description of your telephony network interface. If you are not sure of the line protocol, contact your phone company to obtain the protocol information. The following tables indicate which protocols are appropriate for the supported .pcd files.

**Table 1. ISDN T1 Protocols**

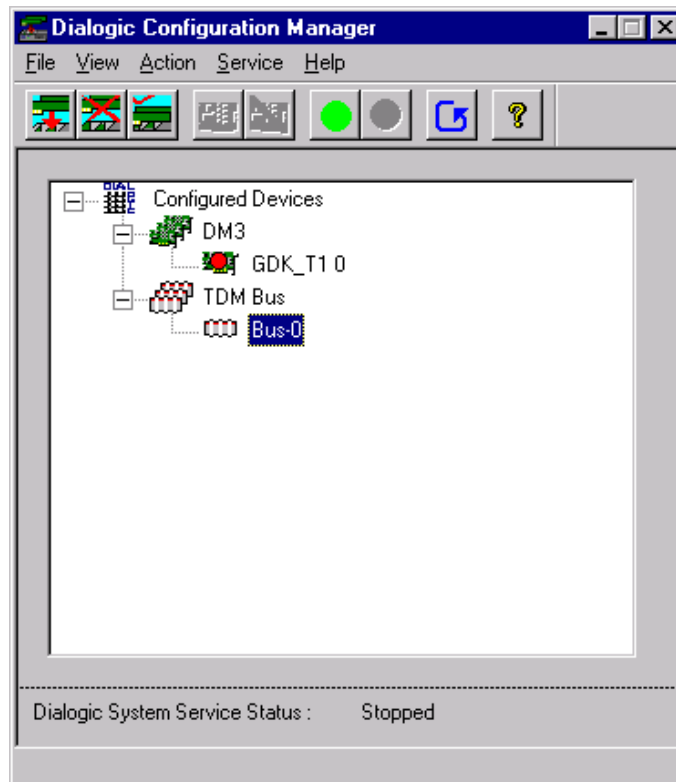
<b>PROTOCOL</b>	<b>PCD FILE</b>
4ESS	gdk_isdn_4ess.pcd
5ESS	gdk_isdn_5ess.pcd
DMS	gdk_isdn_dms.pcd
NTT	gdk_isdn_ntt.pcd

**Table 2. T1 CAS (Robbed-Bit Signaling) Protocols**

<b>PROTOCOL</b>	<b>PCD FILE</b>
CAS T1 E&M	gdk_t1_em.pcd
CAS T1 Loop Start	gdk_t1_ls.pcd
CAS T1 Ground Start	gdk_t1_gs.pcd

Once the detection is complete, the DCM window shows the detected board:

### 3. Fax Configuration

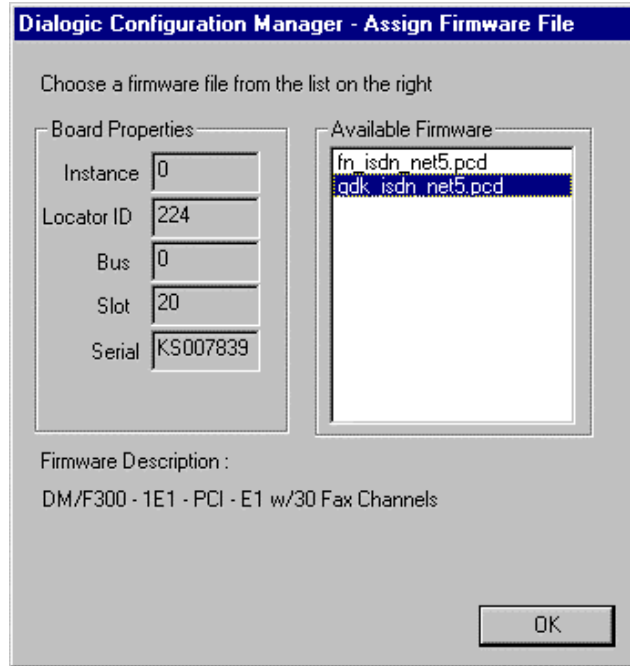


**Figure 24. DCM Showing One CPi/2400CT-T1**

**NOTE:** This screen is typical for the configuration described as “DM3 boards with on-board network interfaces” in ISDN T1 or CAS T1 mode.

#### 3.2.2. CPi/3000CT-E1 Board Detection

When the CPi/3000CT-E1 board is detected, you are prompted to select a .pcd file.



**Figure 25. Assign Firmware File Window**

**NOTE:** Ignore the .pcd files that do not start with gdk.

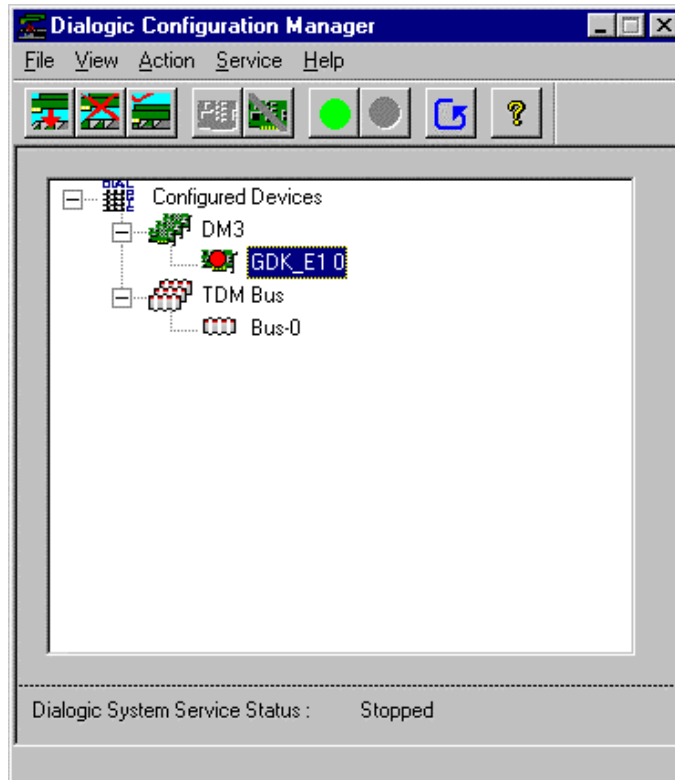
Select the .pcd file that matches your phone company’s description of your telephony network interface. If you are not sure of the line protocol, contact your phone company to obtain the protocol information. The following table indicates which protocol is appropriate for the supported .pcd file.

**Table 3. ISDN E1 Protocols**

<b>PROTOCOL</b>	<b>PCD FILE</b>
CTR4	gdk_isdn_net5.pcd

Once the detection is complete, the DCM window shows the detected board:

### 3. Fax Configuration

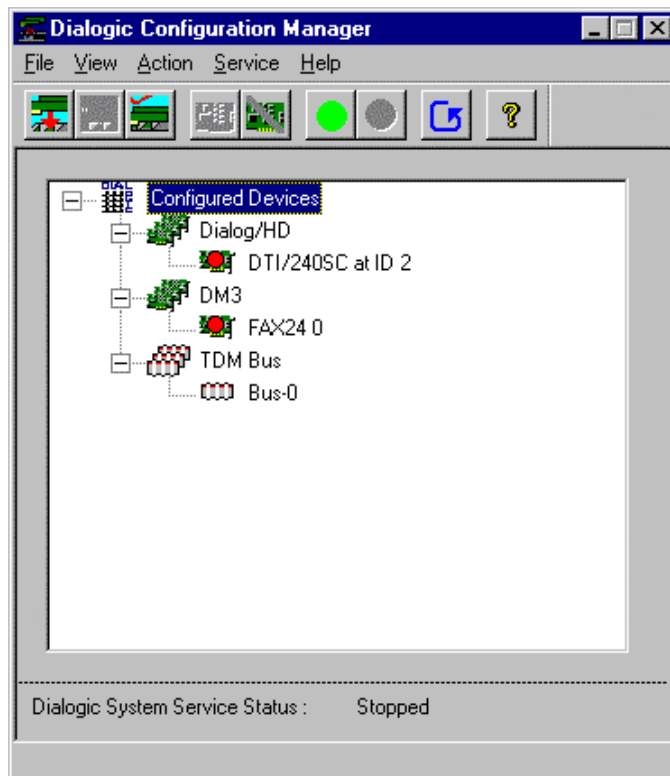


**Figure 26. DCM Showing One CPi/3000CT-E1**

**NOTE:** This screen is typical for the configuration described as “DM3 boards with on-board network interfaces” in ISDN E1 mode.

### 3.2.3. CPi/2400CT Board Detection

When the CPi/2400CT board is detected, you are normally not prompted to select a .pcd file. The fax24.pcd file is automatically selected for you. Depending on the hardware configuration, other boards may be displayed (such as the DTI/240SC as shown in Figure 27).



**Figure 27. DCM Showing CPi/2400CT and DTI/240SC**

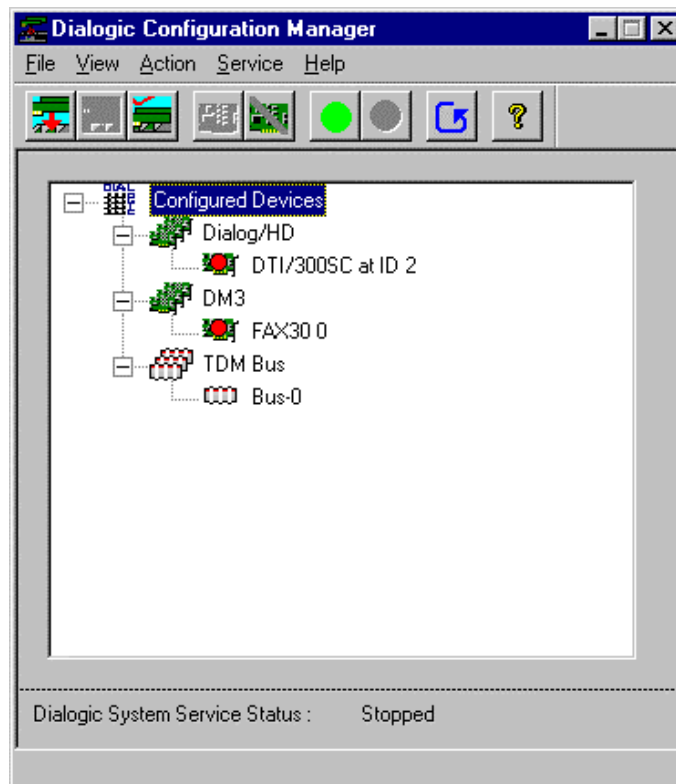
**NOTE:** This screen is typical for the configuration described as “DM3 resource boards with DTI network interfaces in transparent ISDN mode” in ISDN T1 mode.



### 3. Fax Configuration

#### 3.2.4. CPi/3000CT Board Detection

When the CPi/3000CT board is detected, you are normally not prompted to select a .pcd file. The fax30.pcd file is automatically selected for you. Depending on the hardware configuration, other boards may be displayed (such as the DTI/300SC as shown in Figure 28).

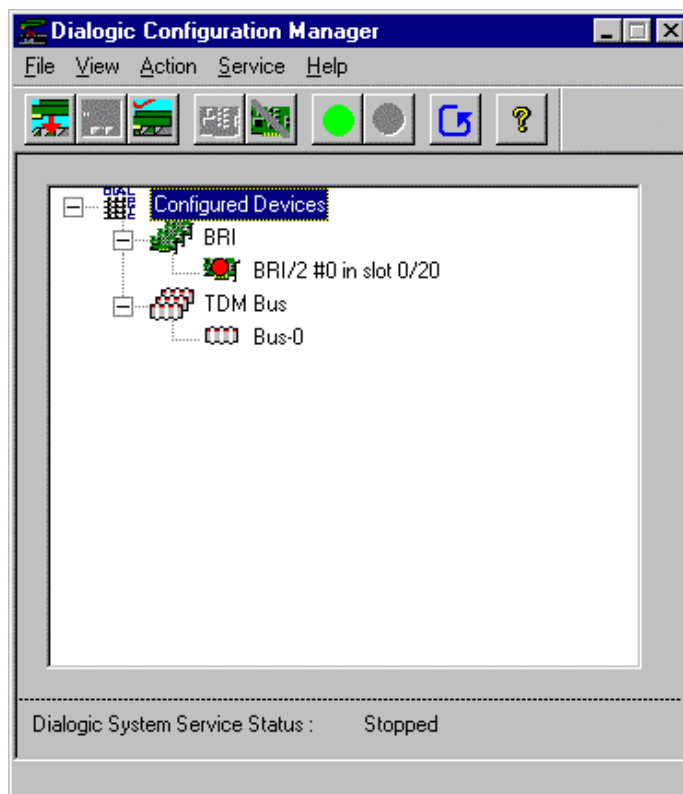


**Figure 28. DCM Showing CPi/3000CT and DTI/300SC**

**NOTE:** This screen is typical for the configuration described as “DM3 resource boards with DTI network interfaces in transparent ISDN mode” in ISDN E1 mode.

### 3.2.5. BRI/2VFD Board Detection

The BRI/2VFD board is automatically detected and appears in the DCM Configuration Manager window. Depending on the hardware configuration, other boards may be displayed.



**Figure 29. DCM Showing BRI/2VFD**

### **3. Fax Configuration**

#### **3.2.6. DTI/240SC Board Detection**

The DTI/240SC board is automatically detected and appears in the DCM Configuration Manager window. Depending on the hardware configuration, other boards may be displayed.

#### **3.2.7. DTI/300SC Board Detection**

The DTI/300SC board is automatically detected and appears in the DCM Configuration Manager window. Depending on the hardware configuration, other boards may be displayed.

#### **3.2.8. CP Board Detection**

The CP boards are not detected via the DCM utility. Therefore, they will not appear here.

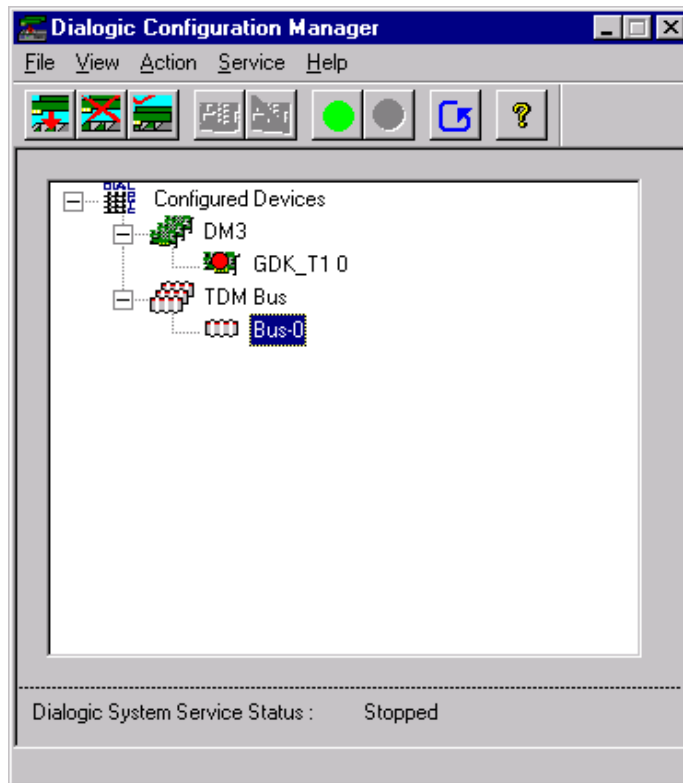
**NOTE:** If your configuration uses CP cards with an on-board line interface (and depending on the components selected at installation time), it is possible that the DCM utility is not installed on your system. Therefore, attempting to invoke the DCM utility fails.

#### **3.2.9. Other Resource and Network Interface Board Detection**

If you are using CP6/SC, CP12/SC, CPi/2400CT or CPi/3000CT boards, it is likely that other resource boards (such as voice, text-to-speech,...) and network interfaces will be installed in your system.

### 3.3. Modifying the Configuration (via the DCM)

#### 3.3.1. CPi/2400CT-T1 Board

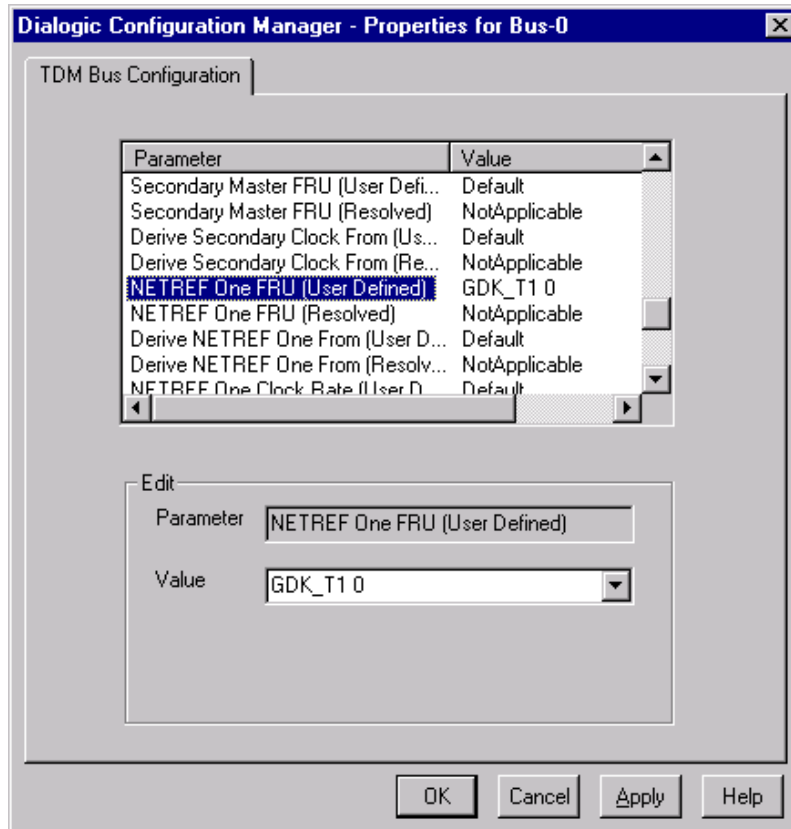


**Figure 30. Dialogic Configuration Manager**

To modify the “NETREF One FRU” parameter:

1. Double-click on the Bus-0 text from the TDM Bus group. The TDM Bus Configuration Tab window appears.

### 3. Fax Configuration



**Figure 31. TDM Bus Configuration Tab Window**

2. Scroll through the Parameter list to locate the NETREF One FRU (User Defined) parameter.
3. Click on the parameter to highlight it. The parameter name and parameter value appear in the Edit section.
4. Highlight the text that appears in the Value text box.

If you are using T1 CAS protocols, such as E&M, Loop Start, Ground Start, enter the following in all capital letters:

GDK\_T1 0

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If you are using T1 ISDN protocols, such as 4ESS, 5ESS, DMS, NTT, enter the following in all capital letters:

GDK\_T1\_ISDN 0

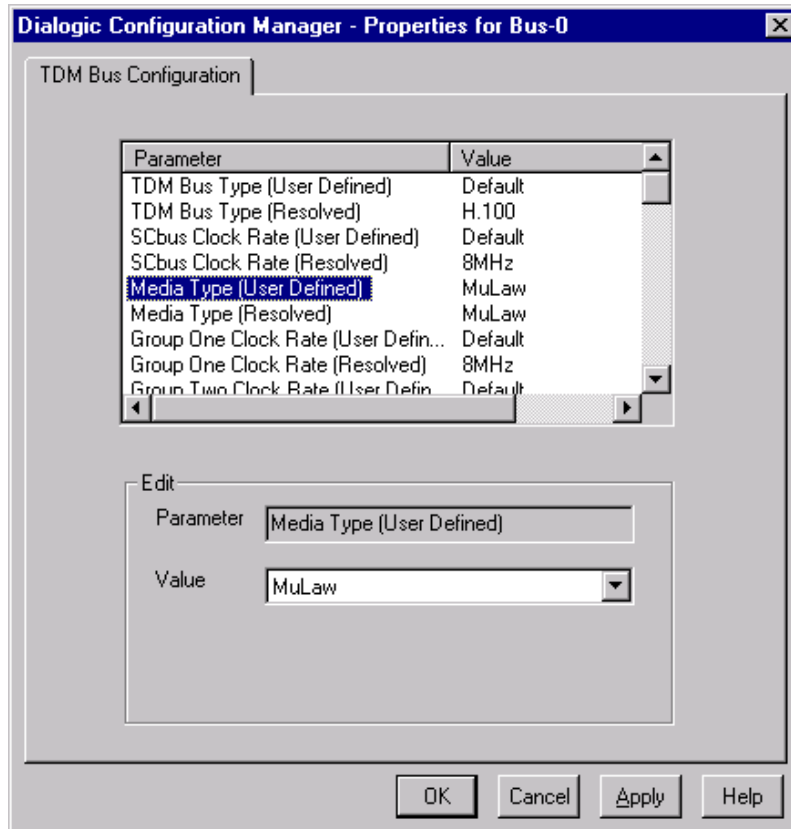
**NOTE:** The 0 value represents the board ID materialized by the hardware rotary switch of the CPi/2400CT\_T1 board installed in your system. This value may be different in your configuration. Make sure the value selected here matches your configuration.

5. Click the **OK** button to save the parameter change.

To modify the “Media Type” parameter value:

1. Double-click on the Bus 0 text from the TDM Bus group. The TDM Bus Configuration Tab window appears.
2. Scroll through the Parameter list to locate the Media Type (User defined) parameter. Click on the parameter to highlight it. The parameter name and parameter value appear in the Edit section.

### 3. Fax Configuration



**Figure 32. TDM Bus Media Type — Mu-law Selected**

3. Click on the down arrow next to the Value field to display the parameter values. Select Mu-law from the drop down list.
4. Click the **OK** button to save the parameter changes.

Generally, no additional configuration is required for DM3 boards. To verify the correct .pcd and .fcd files are being used, click on the Misc tab.

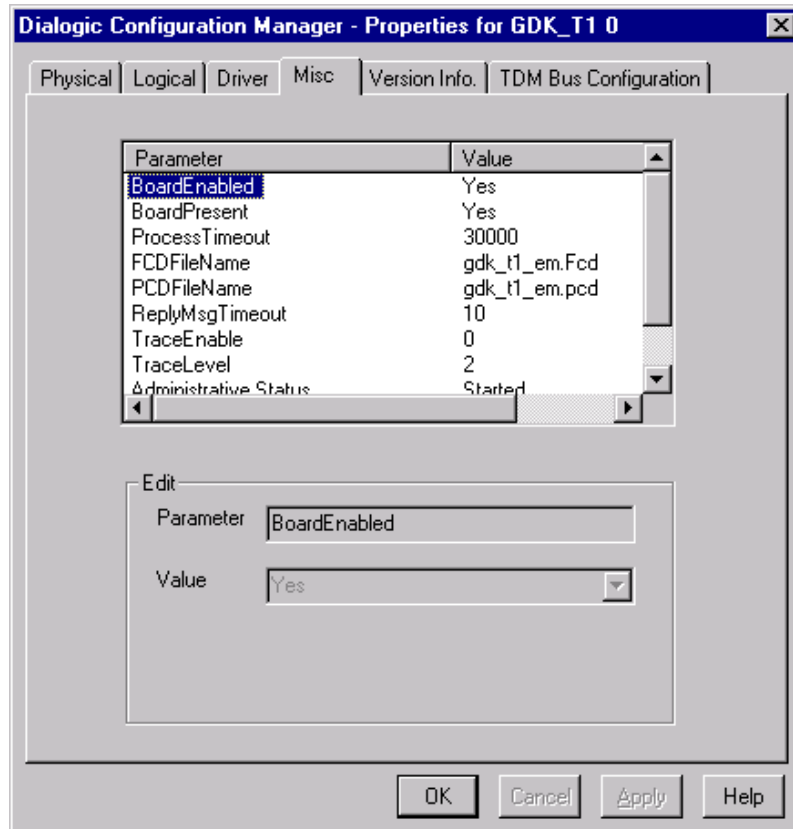
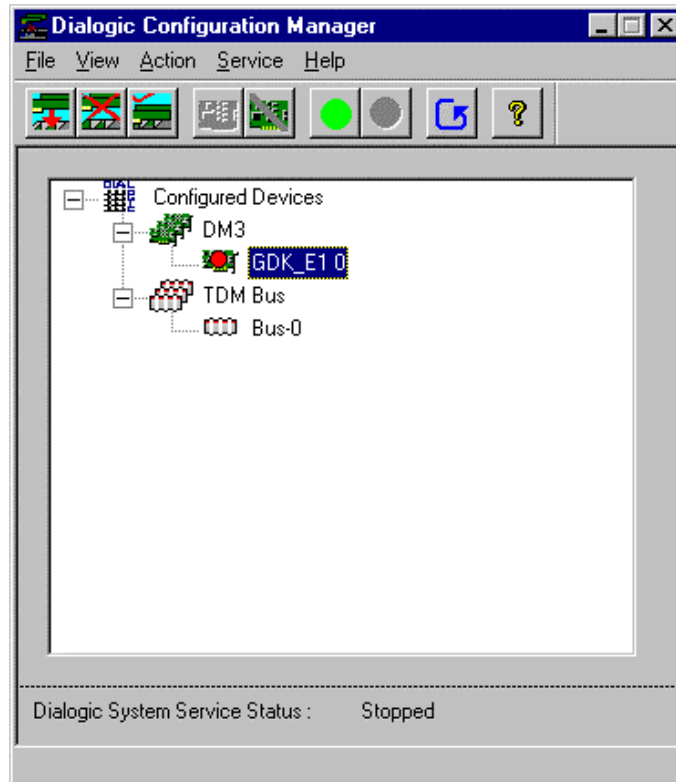


Figure 33. Properties Window — Misc Tab



### 3. Fax Configuration

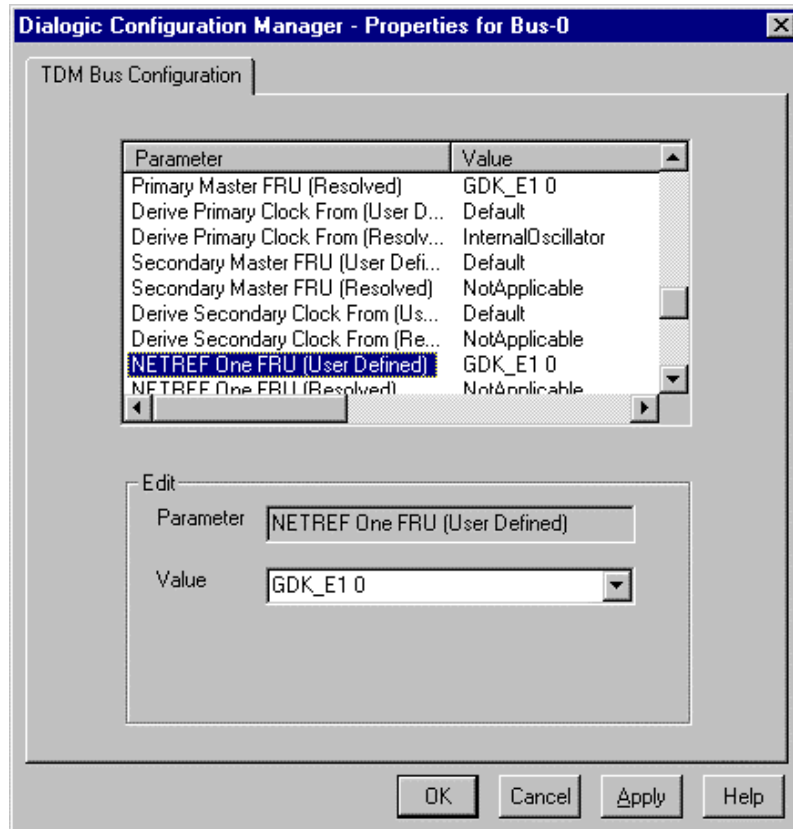
#### 3.3.2. CPi/3000CT-E1 Board



**Figure 34. Dialogic Configuration Manager**

To modify the "NETREF One FRU" parameter:

1. Double-click on the Bus-0 text from the TDM Bus group. The TDM Bus Configuration Tab window appears.



**Figure 35. TDM Bus Configuration Tab Window**

2. Scroll through the Parameter list to locate the NETREF One FRU (User Defined) parameter.
3. Click on the parameter to highlight it. The parameter name and parameter value appear in the Edit section.
4. Highlight the text that appears in the Value text box and enter the following in all capital letters:

GDK\_E1 0

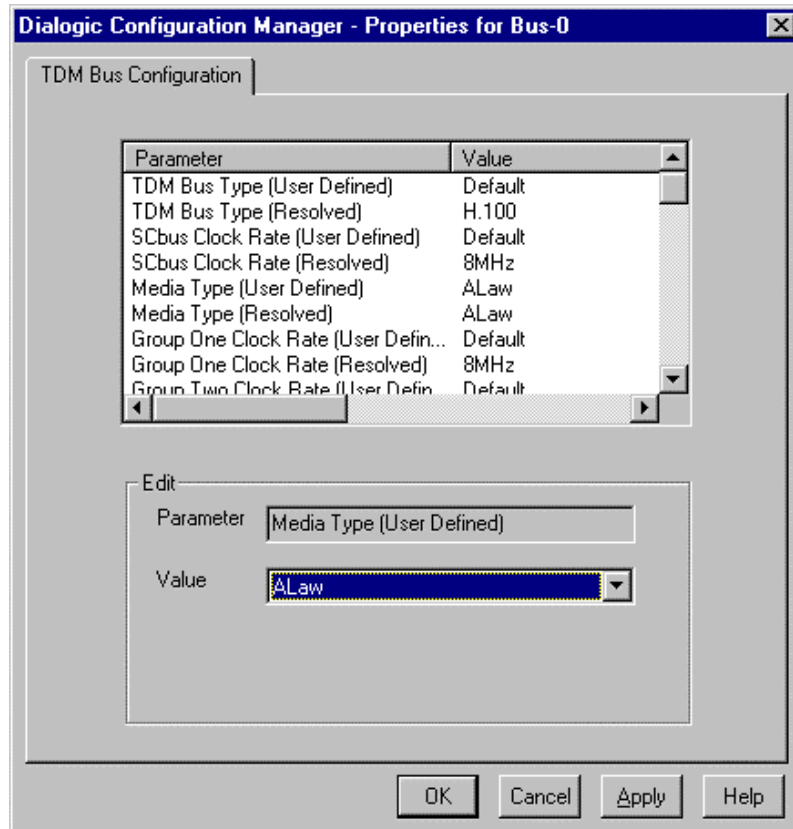
### 3. Fax Configuration

**NOTE:** The 0 value represents the board ID materialized by the hardware rotary switch of the CPi/3000CT\_E1 board installed in your system. This value may be different in your configuration. Make sure the value selected here matches your configuration.

5. Click the **OK** button to save the parameter change.

To modify the “Media Type” parameter value:

1. Double-click on the Bus 0 text from the TDM Bus group. The TDM Bus Configuration Tab window appears.
2. Scroll through the Parameter list to locate the Media Type (User defined) parameter. Click on the parameter to highlight it. The parameter name and parameter value appear in the Edit section.



**Figure 36. TDM Bus Media Type — A-law Selected**

1. Click on the down arrow next to the Value field to display the parameter values. Select A-law from the drop down list.
2. Click the **OK** button to save the parameter changes.

Generally, no additional configuration is required for DM3 boards. To verify the correct .pcd and .fcd files are being used, click on the Misc tab.

### 3. Fax Configuration

#### 3.3.3. CPi/2400CT Board

No configuration modification is required.

#### 3.3.4. CPi/3000CT Board

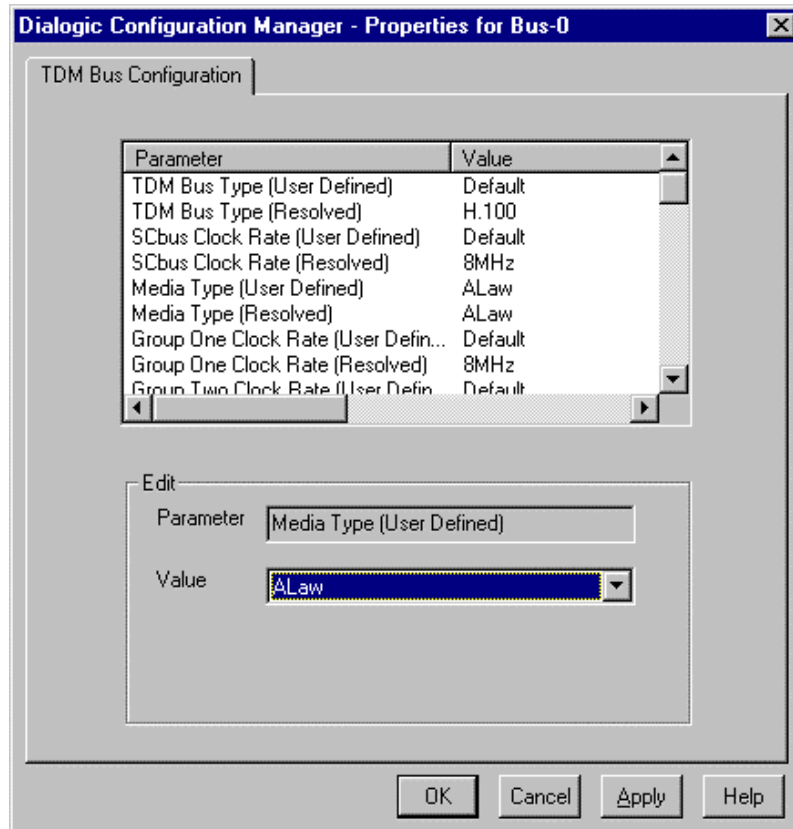
Make sure the “NETREF One FRU” parameter is configured with the DLGCSRAM value. This will be the case if another Dialogic Network Interface card in the chassis, such as DTI/300SC, is the SCbus Clock Master and is detected via the DCM. Refer to the *DTI/300SC Board* section for additional details on the DTI/300SC configuration.

To modify the “NETREF One FRU” parameter:

1. Double-click on the Bus-0 text from the TDM Bus group. The TDM Bus Configuration Tab window appears.
2. Scroll through the Parameter list to locate the NETREF One FRU (User Defined) parameter.
3. Click on the parameter to highlight it. The parameter name and parameter value appear in the Edit section.
4. Highlight the text that appears in the Value text box and enter the following in all capital letters:  
DLGSRAM
5. Click the **OK** button to save the parameter change.

To modify the “Media Type” parameter value:

1. Double-click on the Bus 0 text from the TDM Bus group. The TDM Bus Configuration Tab window appears.
2. Scroll through the Parameter list to locate the Media Type (User defined) parameter. Click on the parameter to highlight it. The parameter name and parameter value appear in the Edit section.



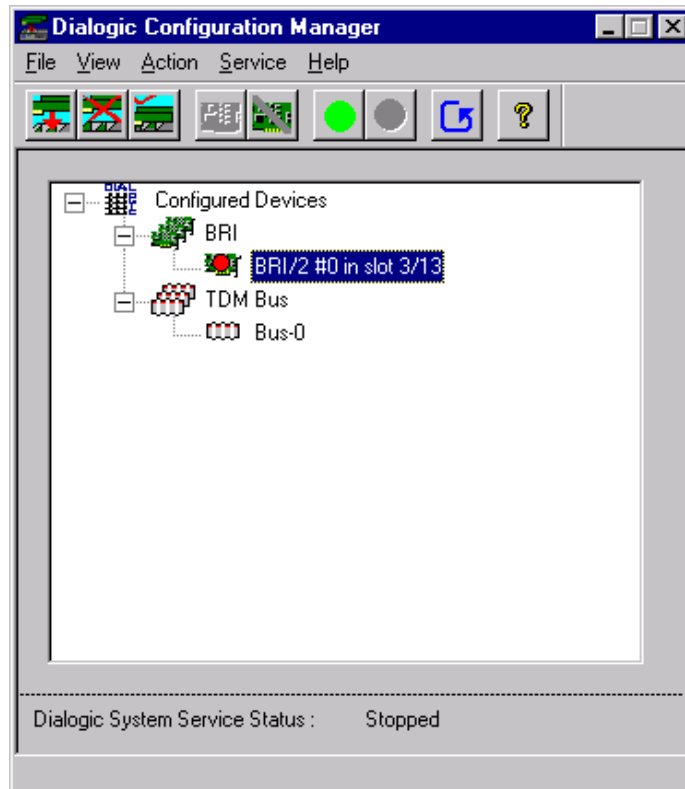
**Figure 37. TDM Bus Media Type — A-law Selected**

3. Click on the down arrow next to the Value field to display the parameter values. Select A-law from the drop down list.
4. Click the **OK** button to save the parameter changes.

Generally, no additional configuration is required for DM3 boards. To verify the correct .pcd and .fcd files are being used, click on the Misc tab.

### 3. Fax Configuration

#### 3.3.5. BRI/2VFD Board



**Figure 38. Dialogic Configuration Manager**

By default, the BRI/2VFD is configured for the “Point-to-Multipoint” configuration.

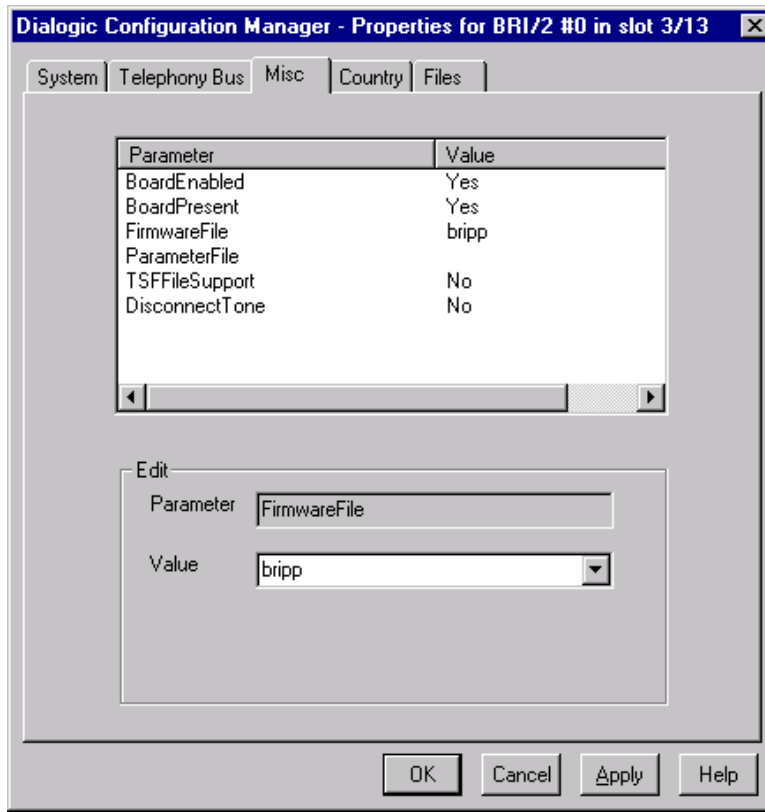
**NOTE:** The BRI/2VFD must be the *only device* present on the ISDN BRI line, even in Point-to-Multipoint configuration mode.

To modify the Point-to-Point configuration:

1. Double-click on the BRI/2 # text from the BRI group. The BRI Properties window appears.

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2. Click on the Misc Tab.



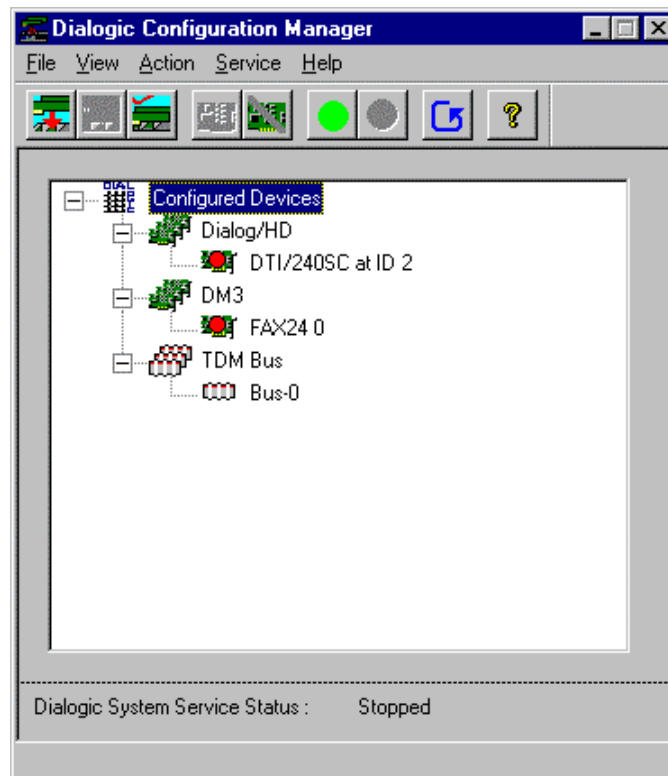
**Figure 39. BRI Properties Window — Misc Tab**

3. Click on the FirmwareFile parameter to highlight it. The parameter name and value appear in the Edit section.
4. Highlight the text that appears in the Value text box and enter the following in lower case letters:  
bripp
5. Click the **OK** button to save the parameter change.



### 3. Fax Configuration

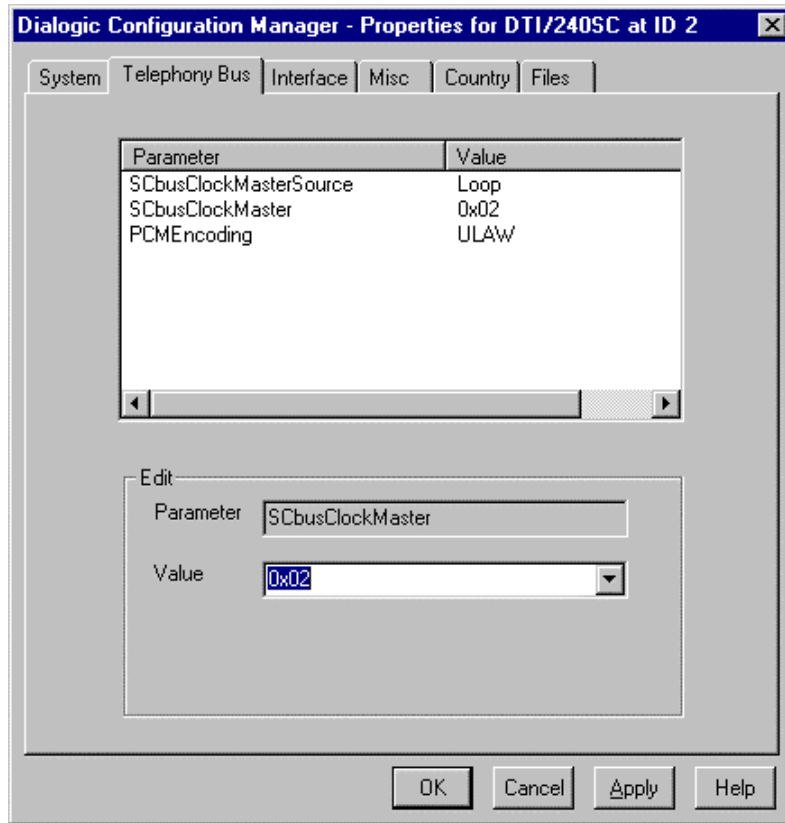
#### 3.3.6. DTI/240SC Board



**Figure 40. Dialogic Configuration Manager**

To modify the “Telephony Bus” parameter:

1. Double-click on the DTI/240SC at ID x text from the Dialog/HD group. The DCM – DTI Properties window appears.
2. Click on the Telephony Bus tab.



**Figure 41. Telephony Bus Configuration Tab Window**

3. Click on the parameters to highlight them. The parameter name and parameter value appear in the Edit section.
4. Click on the down arrow next to the Value field to display the parameter values.

### 3. Fax Configuration

5. Set the Telephony Bus parameters as displayed in the following table:

**Table 4. T1 ISDN Telephony Bus Parameters**

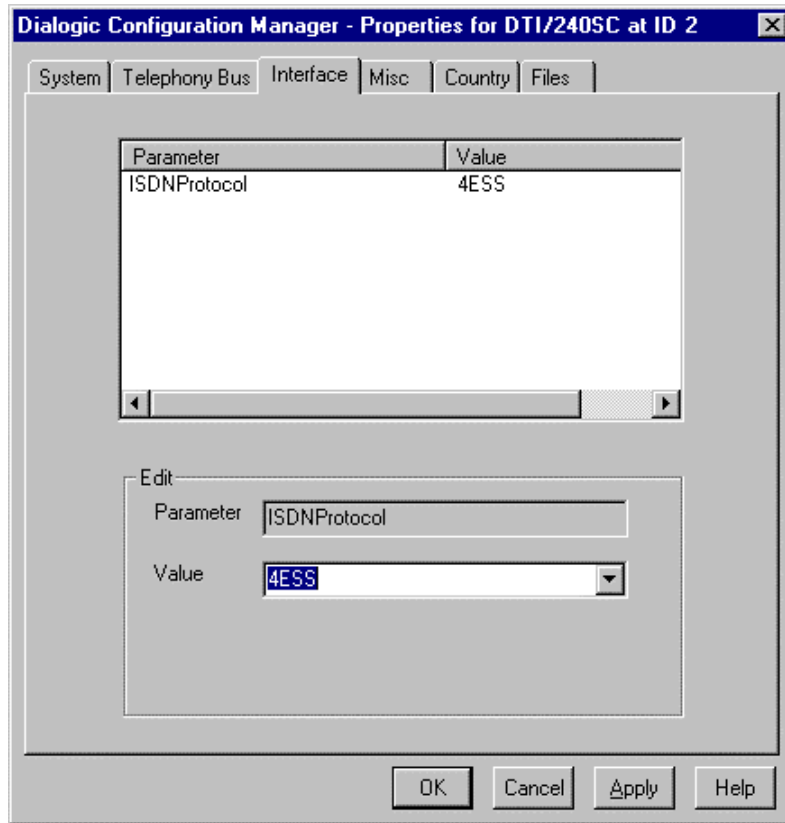
Parameter	Value
SCbusClockMasterSource	Loop
SCbusClockMaster	0x02
PCMEncoding	ULAW

**NOTE:** The 0x02 value selected for the SCbusClockMaster parameter represents the ID materialized by the hardware rotary switch of the DTI board installed in your system. This value may be different in your configuration. Make sure the value selected here matches your configuration.

6. Click the **OK** button to save the parameter change.

To modify the “ISDN Protocol” parameter:

1. Click on the Interface tab.
2. Click on the ISDNProtocol parameter to highlight it. The parameter name and parameter value appear in the Edit section.
3. Click on the down arrow next to the Value field to display the parameter values.



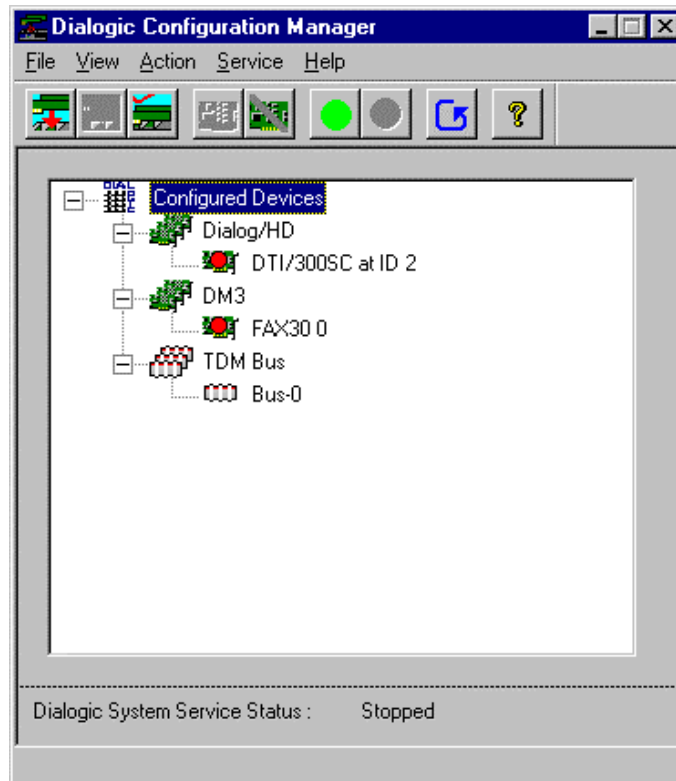
**Figure 42. Interface Configuration Tab Window**

4. Scroll through the Parameter list to select the appropriate ISDN protocol for your system. If you do not know your ISDN protocol, contact your Central Office (CO) or telephony provider. The protocol you select here has to correspond to one of the ISDN protocols you have selected to be copied to the hard disk at installation time. In the example shown here the 4ESS protocol is selected.
5. Click the **OK** button to save the parameter change.

Generally, no additional configuration is required for the DTI board.

### 3. Fax Configuration

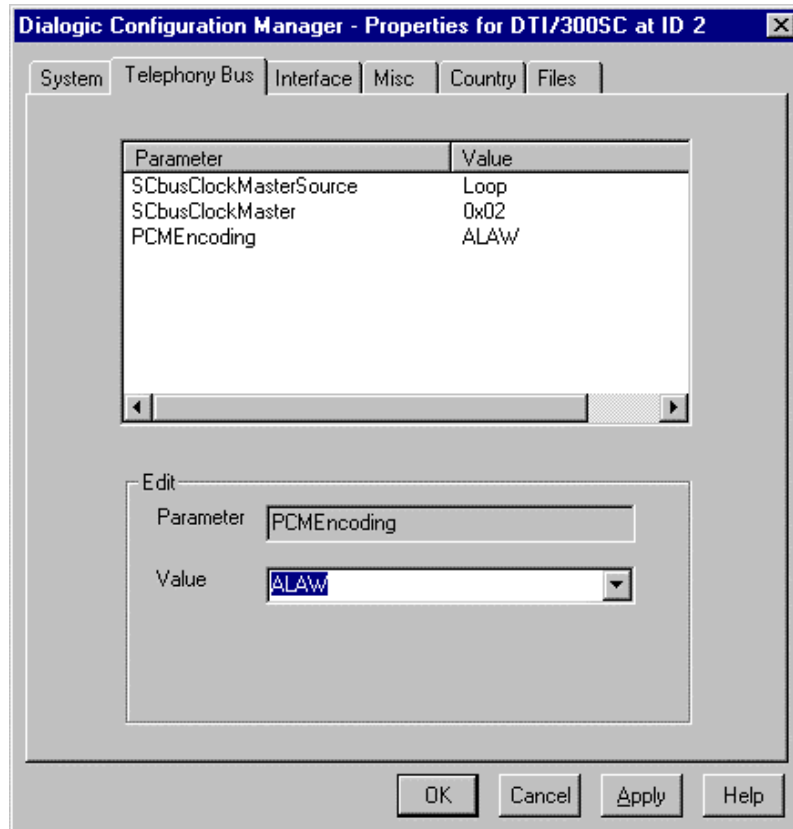
#### 3.3.7. DTI/300SC Board



**Figure 43. Dialogic Configuration Manager**

To modify the “Telephony Bus” parameter:

1. Double-click on the DTI/300SC at ID x text from the Dialog/HD group. The DCM – DTI Properties window appears.
2. Click on the Telephony Bus tab.



**Figure 44. Telephony Bus Configuration Tab Window**

3. Click on the parameters to highlight them. The parameter name and parameter value appear in the Edit section.
4. Click on the down arrow next to the Value field to display the parameter values.

### 3. Fax Configuration

5. Set the Telephony Bus parameters as displayed in the following table:

**Table 5. E1 ISDN Telephony Bus Parameters**

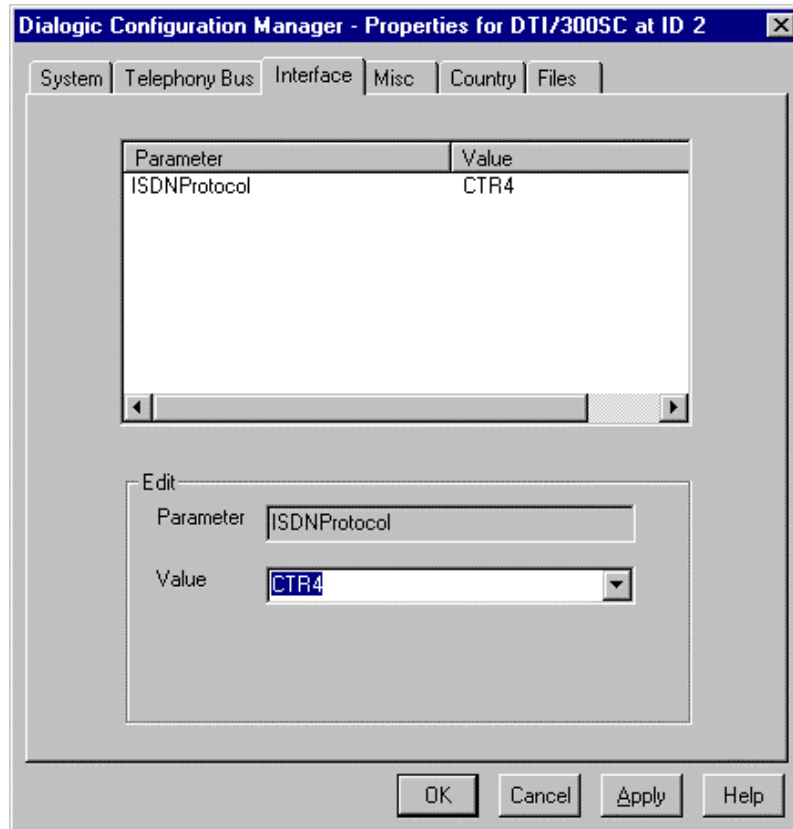
Parameter	Value
SCbusClockMasterSource	Loop
SCbusClockMaster	0x02
PCMEncoding	ALAW

**NOTE:** The 0x02 value selected for the SCbusClockMaster parameter represents the ID materialized by the hardware rotary switch of the DTI board installed in your system. This value may be different in your configuration. Make sure the value selected here matches your configuration.

6. Click the **OK** button to save the parameter change.

To modify the “ISDN Protocol” parameter:

1. Click on the Interface tab.
2. Click on the ISDNProtocol parameter to highlight it. The parameter name and parameter value appear in the Edit section.
3. Click on the down arrow next to the Value field to display the parameter values.



**Figure 45. Interface Configuration Tab Window**

4. Scroll through the Parameter list to select the appropriate ISDN protocol for your system. If you do not know your ISDN protocol, contact your Central Office (CO) or telephony provider. The protocol you select here has to correspond to one of the ISDN protocols you have selected to be copied to the hard disk at installation time. In the example shown here the CTR4 (Euro ISDN) protocol is selected.
5. Click the **OK** button to save the parameter change.

Generally, no additional configuration is required for the DTI board.



### **3. Fax Configuration**

#### **3.3.8. CP Board**

**NOTE:** CP boards are not displayed on the DCM. Therefore, no modification to the CP configuration is possible via the DCM.

#### **3.3.9. Other Resource and Network Interface Board**

If you are using CP6/SC, CP12/SC, CPi/2400CT or CPi/3000CT, it is likely that other resource boards (such as voice, text-to-speech, etc.) and network interfaces will be installed in your system.

### **3.4. Detecting the Fax Configuration Using the Control Panel Applet (CPA)**

Use the Control Panel Applet (CPA) to detect the fax configuration. There are two ways to launch the CPA:

- Click the **Control Panel Applet** button from the Fax Configuration group you find in the Dialogic GDK Configuration window.
- Select the **GammaLink Fax** option from the Control Panel program group, found on the Settings menu located on the Windows Start bar.

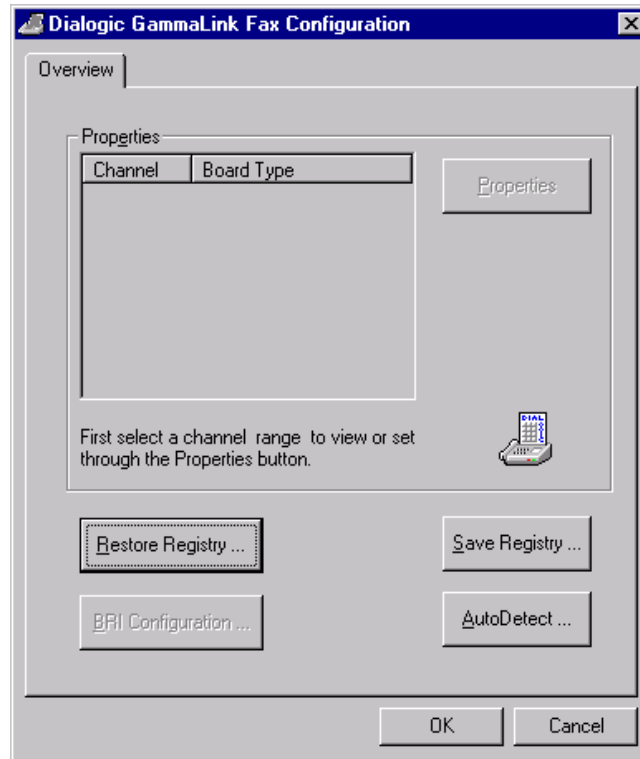


Figure 46. Dialogic GammaLink Fax Configuration Window (CPA)

- NOTES:** 1. Some configurations cannot coexist in the same chassis. Refer to the *Supported Configuration* section to find out which are the valid configurations. If conflicting hardware configurations are detected, you will be prompted to resolve the conflict by selecting the prevalent hardware configuration type. The other configuration types are ignored.

### 3. Fax Configuration



**Figure 47. Hardware Selection Window**

2. Dialogic CP boards are detected with their model name. DM3 and Springware-based products are detected by the number of channels that belong to virtual CP4/LSI and CPi/200 boards. See the following table for details.
3. A warning message appears before modifying your Registry information, advising you that the existing Registry information will be replaced with new data. This only applies to the Dialogic Registry entries.

**Table 6. Board Detection**

<b>Board Model</b>	<b>Detection as</b>
CP boards	CP boards
CPi/2400CT-T1	6 CP4/LSI Series 2
CPi/3000CT-E1	7 CP4/LSI Series 2 + 1 CPi/200
CPi/2400CT	6 CP4/LSI Series 2
CPi/3000CT	7 CP4/LSI Series 2 + 1 CPi/200
BRI/2VFD	2 CPi/200-BRI

### **3.4.1. The Overview Tab**

The Overview tab in the Fax Configuration window contains features that allow you to:

- Configure fax board properties
- Restore saved registry settings
- Save the current registry settings
- Set BRI configuration settings
- Automatically detect the fax boards currently installed in the system

### **3.4.2. Properties List Box**

The Properties list box displays the channel and its board type currently installed in the system.

### 3. Fax Configuration

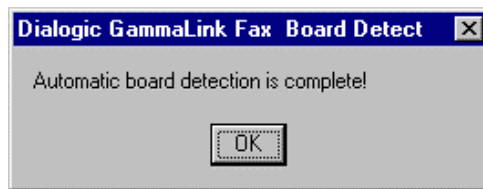
#### 3.4.3. AutoDetect Button

The **AutoDetect** button is used after a new board is installed in the system or to repair an incomplete GDK registry key information set. The **AutoDetect** process scans the system for fax hardware and assigns sequential channel number(s) to the detected physical channel(s).

To view this data after the **AutoDetect** operation is complete, select the desired channel number and then click the **Properties** button. To view all configuration settings, select the **Advanced** tab to display the Advanced Properties options.

**NOTE:** To save the existing GDK registry configuration before you use **AutoDetect**, click **Save Registry**.

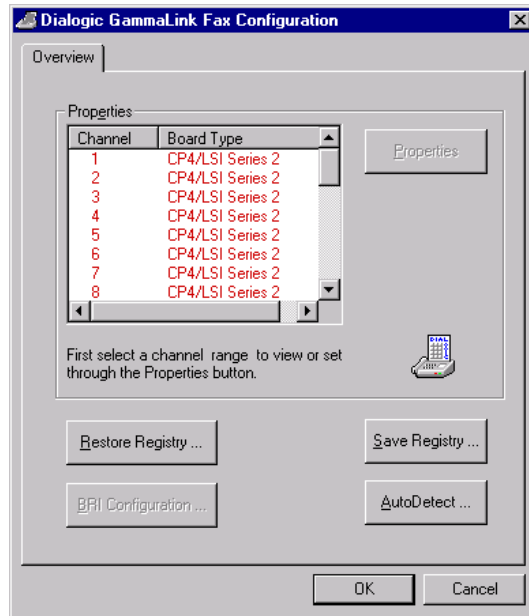
The following message box appears when **AutoDetect** is complete:



**Figure 48. Board Detect Complete Message**

An example of detected boards is displayed as in Figure 49:

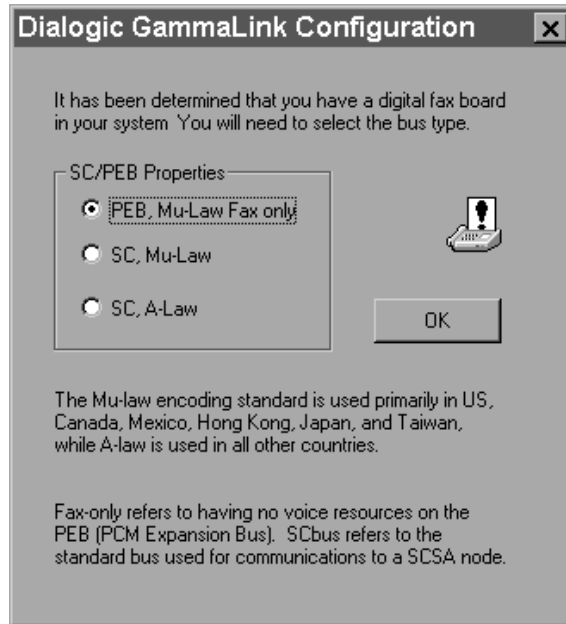
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**Figure 49. Boards Detected by the CPA**

If **AutoDetect** detects a CP PEB- or SCbus-based board in the system (CP6/SC or CP12/SC), it prompts the user for further configuration information.

### 3. Fax Configuration



**Figure 50. Dialogic Configuration**

The following bus types are available:

- The Mu-law encoding and companding standard is used primarily in the US, Canada, Mexico, Hong Kong, Japan and Taiwan.
- The A-Law encoding and companding standard is used in all other countries and in particular in Europe.
- “Fax-only” means that there are no voice resources on the PCM Expansion bus (PEB).
- SCbus refers to the standard bus interface used for communicating with an SCSA bus.

**Table 7. Encoding Standards**

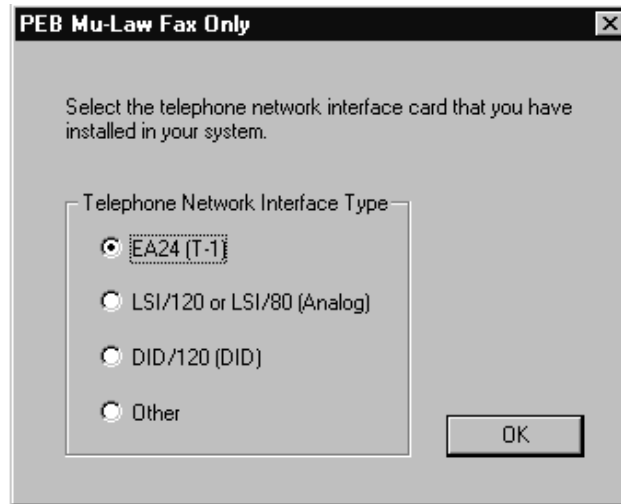
<b>Configuration Type</b>	<b>Description</b>
PEB, Mu-Law Fax only	PEB configuration, use Mu-Law encoding, with fax card performing call control.  Use this option for CP-SCbus boards used in combination with LSI/120, DID/120 or EA-24 boards for instance.
SC, Mu-Law	SCbus configuration, use Mu-Law encoding.  Use this option for CP-SCbus boards used in combination with DTI/240SC boards for instance.
SC, A-Law	SCbus configuration, use A-Law encoding.  Use this option for CP-SCbus boards used in combination with DTI/300SC boards for instance.

**NOTE:** If the SC Mu-Law or SC A-Law options were selected, the GDK software configuration process will update the GammaLink System Service to include a dependency on the Dialogic System Service.

Select the PEB, Mu-Law Fax only option. The PEB Mu-Law Fax Only dialog box displays.



### 3. Fax Configuration



**Figure 51. PEB Mu-Law Fax Only Dialog Box**

Select the telephone network interface card that you have installed in your system and click **OK**.

#### 3.4.4. Save Registry

The **Save Registry** feature saves the current GDK configuration to a binary file format using the name and location you specify. The file created has a .REG extension. It is recommended that you do not modify this file. If you must modify the file, it can be read by the Windows NT<sup>®</sup> application, RegEdit32.exe.

#### 3.4.5. Restore Registry

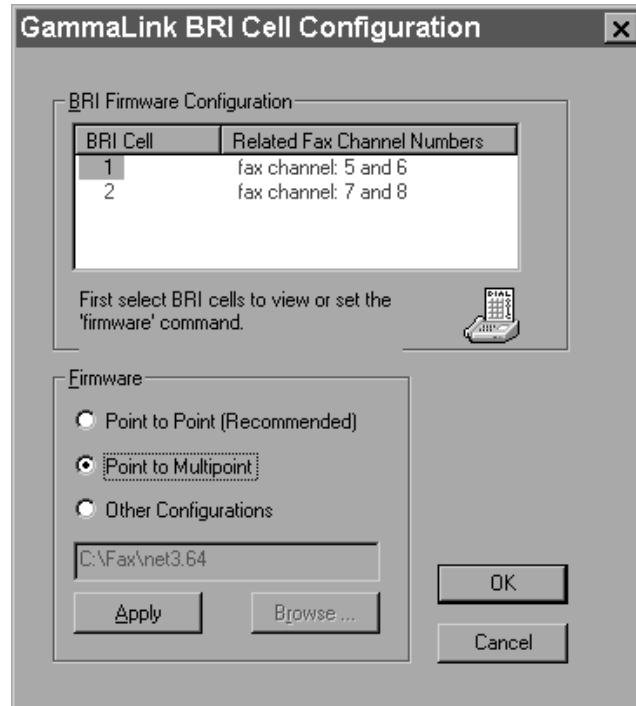
The **Restore Registry** feature restores a configuration from a previously saved registry file. The file must be a binary type file saved from either the Control Panel Applet **Save Registry** feature or from the Windows NT<sup>®</sup> application, RegEdit32.exe.

### 3.4.6. CPi/200-BRI or CPi/400-BRI Configuration

If no BRI board(s) is detected, the **BRI Configuration** button is disabled.

The **BRI Configuration** button is used to configure a CP BRI board. Currently, the only configuration parameter available is the specification of firmware. **AutoDetect** assigns a default value for this configuration parameter.

To configure a BRI board, click the **BRI Configuration** button. The GammaLink BRI Cell Configuration Window appears.



**Figure 52. GammaLink BRI Cell Configuration Window**

Each BRI channel and its associated logical channel numbers are listed in the **BRI Firmware Configuration** window.

### 3. Fax Configuration

To view or set the firmware commands for a BRI board, select the desired BRI Cell. To modify the BRI firmware characteristics, select the desired firmware configuration.

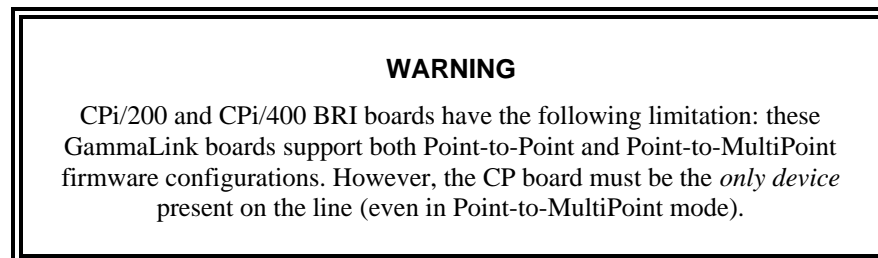
**Table 8. Firmware Configuration**

<b>Firmware Configuration</b>	<b>Description</b>
Point-to-Point	In point-to-point mode one Terminal Equipment (TE) is connected at the end of up to 1km of cable. This is the recommended firmware configuration.
Point-to-Multipoint	In point-to-multipoint mode up to eight terminals can be connected in parallel along the bus. The length of the bus is limited to about 200 m, depending on the cable.
Other Configuration	Enter the name of a firmware file.

If you select Other Configuration, click the **Browse** button to find a firmware file to associate with the selected BRI cell.

Click **OK** to accept the changes, or **Cancel** to exit the GammaLink BRI Cell Configuration dialog box without accepting the changes.

**NOTE:** The firmware file associated with the BRI cell manages the BRI board cell configuration. There is an additional firmware file, *GFXCX.BIN*, which manages the communication hardware on each fax channel.



**Figure 53. BRI Board Warning Screen**

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You can modify the characteristics of each board channel using the Control Panel Applet (CPA). To view the channel properties, select the desired Channel Number and click the **Properties** button. You can select more than one channel at a time by holding down the Ctrl key and selecting the channels, or by dragging a box around multiple channels.

### **3.5. Properties for Selected Fax Channels Window Tabs**

The Properties for Selected Fax Channels window consists of four dialog tabs that contain the controls you use to set the configuration property values for the selected channels. See Appendix B for more information about the property settings.

#### **WARNING**

- Real CP boards with on-board line interface such as CPi/100, CPi/200, etc.) must be configured with their appropriate country code. The COUNTRY command should be set for the country model of the fax board, which is not necessarily the same as the country in which the board is operating.
- CP cards without on-board line interface (such as CP6/SC, CP12/SC), and all models detected as virtual CP board channels (such as CPi/2400CT-T1, BRI/2VFD, etc.) need to always have their associated county code set to “1 = United States” regardless of the country in which the board is operating.

### 3.6. Importing Pre-Defined Configuration Profiles (PRF Files)

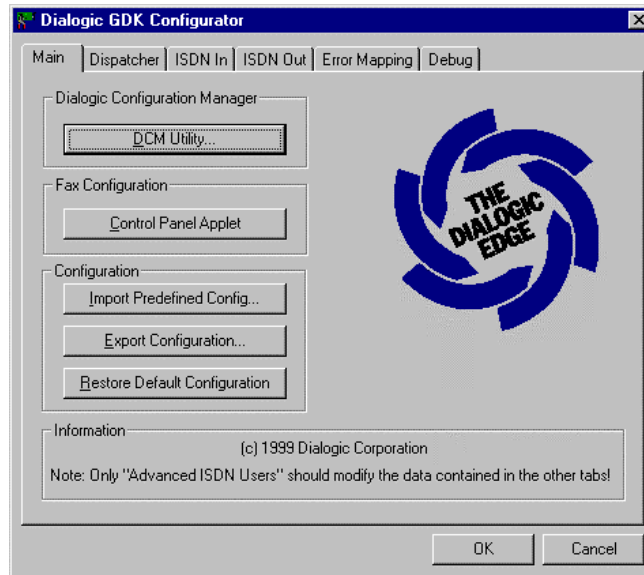
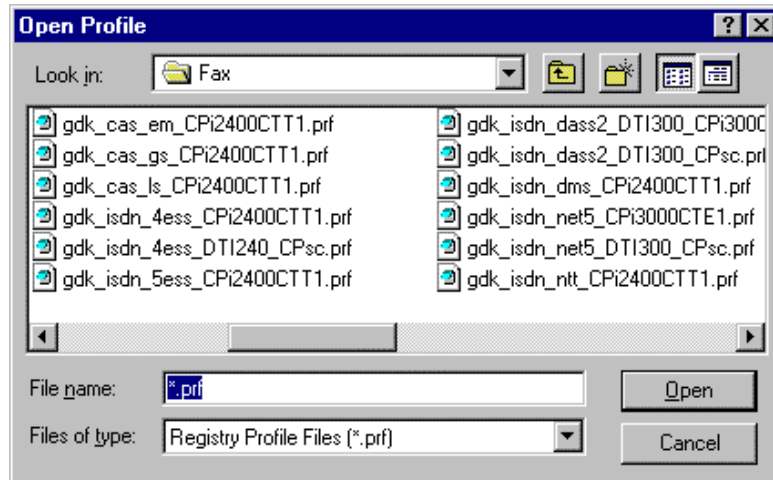


Figure 54. Configurator Window

1. Click the **Import Predefined Config...** button from the Dialogic GDK Configurator Main tab. The Open Profile window displays.

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**Figure 55. Open Profile Window**

2. Select the appropriate profile (.prf) files from the c:\fax (%GFAX%) directory.

- NOTES:**
1. Importing pre-defined PRF Network Profiles results in assigning recommended parameters that may be displayed through the following tabs of the Dialogic GDK Configuration Utility (GammaLink, ISDN In, ISDN Out, Error Mapping, Debug).
  2. It is recommended NOT to modify these pre-defined parameters.
  3. Parameters accessible via the Dialogic GDK Configuration Utility are not used by all configurations. Refer to Appendix D for a list of parameters used for each configuration.

### 3.6.1. DM3 Boards With On-board Network Interfaces

The possible .prf files are dependent on the protocol used. Select the appropriate .prf file from the following tables.

### 3. Fax Configuration

**Table 9. ISDN T1 Protocol Profiles**

PROTOCOL	PRF FILE
4ESS	gdk_isdn_4ess_CPi2400CTT1.prf
5ESS	gdk_isdn_5ess_CPi2400CTT1.prf
DMS	gdk_isdn_dms_CPi2400CTT1.prf
NTT	gdk_isdn_ntt_CPi2400CTT1.prf

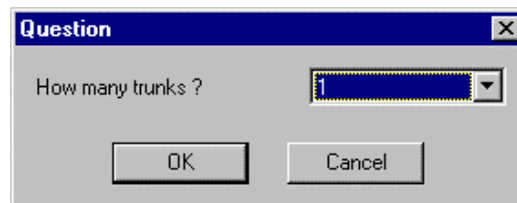
**Table 10. ISDN E1 Protocol Profiles**

EURO ISDN	gdk_isdn_net5_CPi3000CTE1.prf
-----------	-------------------------------

**Table 11. T1 CAS Setup (Robbed Bit Signaling) Protocol Profiles**

PROTOCOL	PRF FILE
CAS T1 E&M	gdk_cas_em_CPi2400CTT1.prf
CAS T1 Loop Start	gdk_cas_ls_CPi2400CTT1.prf
CAS T1 Ground Start	gdk_cas_gs_CPi2400CTT1.prf

When you import one of these .prf files, you will be prompted to enter the number of trunks installed in the chassis.



**Figure 56. How Many Trunks Dialog Box**

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Select the number of trunks installed in the chassis. Proposed choices are from 1 to 4 in T1 mode, and 1 to 3 in E1 mode.

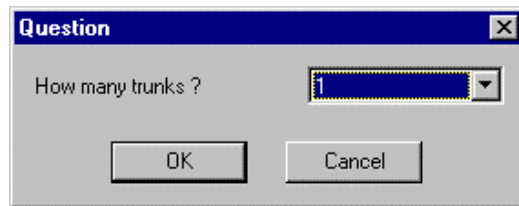
### **3.6.2. DM3 Resource Boards With DTI Network Interfaces in Transparent ISDN Mode**

The possible .prf files are dependent on the protocol used. Select the appropriate .prf file from the following table.

**Table 12. ISDN E1 Protocol Profiles**

<b>PROTOCOL</b>	<b>PRF FILE</b>
DASS2	gdk_isdn_dass2_DTI300_CPi3000CT.prf

When you import one of these .prf files, you will be prompted to enter the number of trunks installed in the chassis.



**Figure 57. How Many Trunks Dialog Box**

Select the number of trunks installed in the chassis. Proposed choices are from 1 to 4 in T1 mode, and 1 to 3 in E1 mode.

### **3.6.3. CP Resource Boards With DTI Network Interfaces in Transparent ISDN Mode**

The possible .prf files are dependent on the protocol used. Select the appropriate .prf file from the following tables.



### 3. Fax Configuration

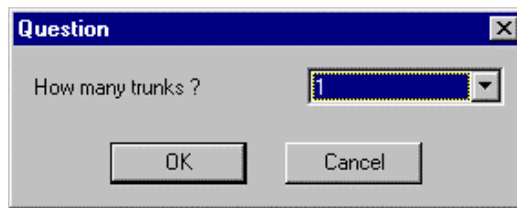
**Table 13. ISDN T1 Protocol Profiles**

PROTOCOL	PRF FILE
4ESS	gdk_isdn_4ess_DTI240_CPsc.prf

**Table 14. ISDN E1 Protocol Profiles**

DASS2	gdk_isdn_dass2_DTI300_CPsc.prf
EURO ISDN	gdk_isdn_net5_DTI300_CPsc.prf

When you import one of these .prf files, you will be prompted to enter the number of trunks installed in the chassis.



**Figure 58. How Many Trunks Dialog Box**

Select the number of trunks installed in the chassis. Proposed choices are from 1 to 4 in T1 mode, and 1 to 3 in E1 mode.

#### 3.6.4. DM3 Resource Boards in SCbus Mode

The possible .prf files are dependent on the hardware used. Select the appropriate .prf file from the following table.

**Table 15. DM3 SCbus Profiles**

CPi/2400CT	gdk_SCBus_CPi2400CT.prf
CPi/3000CT	gdk_SCBus_CPi3000CT.prf

### 3.6.5. Board Based on Dialogic's Springware Architecture

The possible .prf files are dependent on the hardware and protocol used. Select the appropriate .prf file from the following table.

**Table 16. BRI/2VFD Profile**

BRI/2VFD in EURO ISDN Mode	gdk_bri_euro_bri2vfd.prf
----------------------------	--------------------------

### 3.6.6. All Other Configurations

These configurations include:

- CP boards with on-board network interfaces
- CP resource boards in SCbus mode

No .prf file is needed to support these configurations.

**NOTE:** If a .prf file is accidentally imported, click the **Restore Default Configuration** button from the Dialogic GDK Configurator Main tab to restore the default settings.

## 3.7. Adapting Protocol Configuration Files

### 3.7.1. CPi/2400CT-T1 or CPi/3000CT-E1 Boards

The support for the CPi/2400CT-T1 and CPi/3000CT-E1 boards is developed using the DM3 GlobalCall network abstraction layer. The protocols are characterized by their .config files. Select the appropriate .config file according to the line protocol from the following tables.

#### **ISDN T1 or E1**

**NOTE:** To modify a .config file, Dialogic recommends you use WORDPAD as the editor to guarantee the file integrity.

### 3. Fax Configuration

It is unlikely that these .config files need to be modified except for the CRC parameter in ISDN E1 mode. The files are located in the Program Files\Dialogic\data directory.

**Table 17. ISDN T1 or E1 Configuration Files**

PROTOCOL	.CONFIG FILE
4ESS	gdk_isdn_4ess.config
5ESS	gdk_isdn_5ess.config
DMS	gdk_isdn_dms.config
NTT	gdk_isdn_ntt.config
EURO ISDN	gdk_isdn_net5.config

If you need to modify these files for any reason, refer to the *GlobalCall ISDN Technology User's Guide for UNIX and Windows*.

#### Activating Overlap Sending

By default, the ISDN phone number will be sent “en-bloc”. This implies a limit of 20 digits to the destination number. If you want to use more than 20 digits in the destination number, or if the PBX or Central Office requires not to use the “en-bloc” method, it is possible to adapt the configuration to select the “Overlap Sending” method. Refer to the *GlobalCall ISDN Technology User's Guide for UNIX and Windows* for instructions.

#### Modifying the CRC

In order to modify the CRC in ISDN E1 mode, which is ON by default, the section that will need to be modified is [lineAdmin.1] in the gdk\_isdn\_net5.config file.

**[lineAdmin.1]**

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In this section, you will be able to adapt the CRC by modifying the line SetParm=0x1601,3. The default value 3 designates that CRC is in the ON condition. You may need to change this value to 2 in case the CRC of the ISDN needs to be set to the OFF condition. Contact your phone company to inquire about the CRC of your ISDN line.

```
[lineAdmin.1]          ! Instance 1
SetParm=0x1601,3      ! LineType (dsx1_E1=2, dsx1_E1_CRC=3)
SetParm=0x1602,5      ! SignalingType (CAS=4, CCS=5, Clear=6)
SetParm=0x1603,9      ! Coding (AMI=8, HDB3=9)
```

Once the files are modified, you must convert the name.config file into a name.fcd file by using the **FCDGEN** utility. Refer to the *GlobalCall ISDN Technology User's Guide for UNIX and Windows* for instructions.

**NOTE:** You must stop and restart the Dialogic Service each time a new fcd file is created to activate the modifications.

### **T1 CAS**

For T1 CAS protocols, you may need to modify the .config file so that the protocol matches the particular PBX or CO line. The files are located in the Program Files\Dialogic\data directory.

**NOTE:** To modify a .config file, Dialogic recommends you use WORDPAD as the editor to guarantee the file integrity.

**Table 18. T1 CAS Configuration Files**

<b>PROTOCOL</b>	<b>.CONFIG FILE</b>
CAS T1 E&M	gdk_t1_em.config
CAS T1 Loop Start	gdk_t1_ls.config
CAS T1 Ground Start	gdk_t1_gs.config

### **Adapting T1 CAS Parameters**

Refer to the *GlobalCall ISDN Technology User's Guide for UNIX and Windows* for instructions.

### 3. Fax Configuration

If you need to modify these files for any reason, refer to the *GlobalCall E-1/T-1 Technology User's Guide for UNIX and Windows*. The sections that are likely to be modified are the [CAS] and [CHP] sections.

#### [CAS]

In this section, you will be able to adapt the definition of the transitions and pulses, like transition off-hook, on-hook, and pulses such as wink. Refer to the following example:

```
[CAS]
! transition = SigId, PreVal, PostVal, PreTm, PostTm
! pulse = SigId, OffVal, OnVal, PreTm, MinTm, NomTm, MaxTm, PostTm
! All transition and pulse times are in units of 1 msec
! T1 E&M CAS Signals
:
transition=0xC15CA001,0xF0,0xFF,100,300      ! Offhook
transition=0xC15CA002,0xFF,0xF0,300,100     ! Onhook
pulse=0xC15CA011,0xF0,0xFF,100,210,250,280,100 ! Wink (250ms +/- 30ms)
:
```

Refer to the *GlobalCall E-1/T-1 Technology User's Guide for UNIX and Windows* for a complete definition of these parameters.

#### [CHP]

In this section, you will be able to adapt the definition of the protocols specific parameters like, *DIALformat* (DTMF, MF, DP), *ANI* (No, Pre, Post), *ANI* and *DNIS* count. Refer to the following example:

```
[CHP]
! T1 Protocol variant definitions
:
Variant Dial                Y
Variant DialFormat         1          ! DTMF=1, MF, DP
Variant ANI                 0          ! No=0, Pre, Post
Variant ANIFormat          1          ! DTMF=1, MF, DP
Variant ANICount           0
Variant DNIS                Y
Variant DNISFormat         1          ! DTMF=1, MF, DP
Variant DNISCount          0
:
```

Refer to the *GlobalCall E-1/T-1 Technology User's Guide for UNIX and Windows* for a complete definition of these parameters.

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Once modified, it is necessary to convert the name.config file into a name.fcd file. This is achieved via the **FCDGEN** utility. Refer to the *GlobalCall ISDN Technology User's Guide for UNIX and Windows* for instructions.

**NOTE:** You must stop and restart the Dialogic Service each time a new .fcd file is created to activate the modifications.

### **3.7.2. DTI/240SC or DTI/300SC Boards**

The support for the DTI/240SC and DTI/300SC boards is developed using the ISDN ICAPI package. The protocols are characterized by an associated protocol name .prm file (such as 4ess.prm, ctr4.prm, dass2.prm).

#### **ISDN T1**

It is unlikely that these .prm files need to be modified. The files are located in the Program Files\Dialogic\data directory.

**NOTE:** You must stop and restart the Dialogic Service each time a .prm file is modified to activate the modifications.

#### **ISDN E1**

It is unlikely that these .prm files need to be modified except for the CRC parameter in Euro-ISDN E1 mode. The files are located in the Program Files\Dialogic\data directory.

#### **Activating Overlap Sending**

By default, the ISDN phone number will be sent “en-bloc”. This implies a limit of 20 digits to the destination number. If you want to use more than 20 digits in the destination number, or if the PBX or Central Office requires not to use the “en-bloc” method, it is possible to adapt the configuration to select the “Overlap Sending” method.

In order to activate “Overlap Sending” in Euro-ISDN E1 mode, which is disabled by default, the section that needs to be modified is [ISDN feature list] in the ctr4.prm file.

### 3. Fax Configuration

#### [ISDN Feature List]

In this section, set the parameter 0024 to 08 in order to activate the “Overlap Sending Feature”.

**NOTE:** Make sure there is no semicolon “;” character before 0024. A semicolon character denotes a comment line.

```
;--- ISDN feature list
;--- this parameter uses bit masks
;
;--- 01H = Layer 2 access active           (default = inactive)
;--- 02H = Enable Double Call Feature
;--- 04H = not used
;--- 08H = Enable Overlap Sending Feature
;--- 10H = Enable Host Controlled Release
;--- 20H = not used
;--- 40H = not used
;--- 80H = not used
;
;--- The default value is 00H.
0024 08
```

#### Configuring Overlap Sending

To configure “Overlap Sending” in Euro-ISDN E1 mode, you may have to adapt the following registry settings using REGEDIT:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Dialogic\Gammalink\ISDN]
```

```
"PRI_Overlap_Sending_T1"=dword:000001f4
```

0 = No Overlap sending supported

xxx = a value (in milliseconds) defines that Overlap sending is active and that this timer will be used between the SETUP and INFO packets and also between consecutive INFO packets. A value of 500 ms (in decimal) is recommended.

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```
"PRI_Overlap_Sending_Digits_1"=dword:00000005
```

Defines the number of digits to be sent in the SETUP packet. This value depends on the network. Enter 5 as the value. You may increase up to 20 to speed up the establishment of the call, but the network might not be fast enough.

```
"PRI_Overlap_Sending_Digits_2"=dword:00000002
```

Defines the number of digits to be sent in INFO packets. This value depends on networks. Enter 5 as the value. You may increase the value up to 20 to speed up the establishment of the call.

**NOTE:** You must stop and restart the Dialogic Service each time a .prm file or a registry setting is modified to activate the modifications.

### **Modifying the CRC**

To modify the CRC in Euro-ISDN E1 mode, which is ON by default, the section that needs to be modified is [CRC ENABLE SWITCH] in the ctr4.prm file.

#### **[CRC ENABLE SWITCH]**

In this section, you will be able to adapt the CRC by modifying the line 000F 01. The default value 01 designates that CRC is in the ON condition. You may need to change this value to 00 in case the CRC of the ISDN needs to be set to the OFF condition. Contact your phone company to inquire about the CRC of your ISDN line.

```
;--- CRC ENABLE SWITCH (Parameter type 0FH - E1 only)
;--- Turns the transmission of the CRC4 pattern on or off and searches
;--- for such a pattern in the received signal.
;--- Possible values for the data are as follows:
;--- 00H = Turn CRC off.
;--- 01H = Turn CRC on.
;--- The default data value is 00H (Turn CRC off).
000F 01
```

**NOTE:** You must stop and restart the Dialogic Service each time a .prm file is modified to activate the modifications.



## 4. Using the Dialogic Fax Software

---

### 4.1. System Startup

#### 4.1.1. Launching the Dialogic System Service

If your configuration includes boards that are detected in the Dialogic DCM utility (such as DM3, DTI, BRI/2VFD, etc.) it is necessary to first start the Dialogic System Service. You need to launch the DCM (Dialogic Configuration Manager). From the DCM window, click the **Green** button.

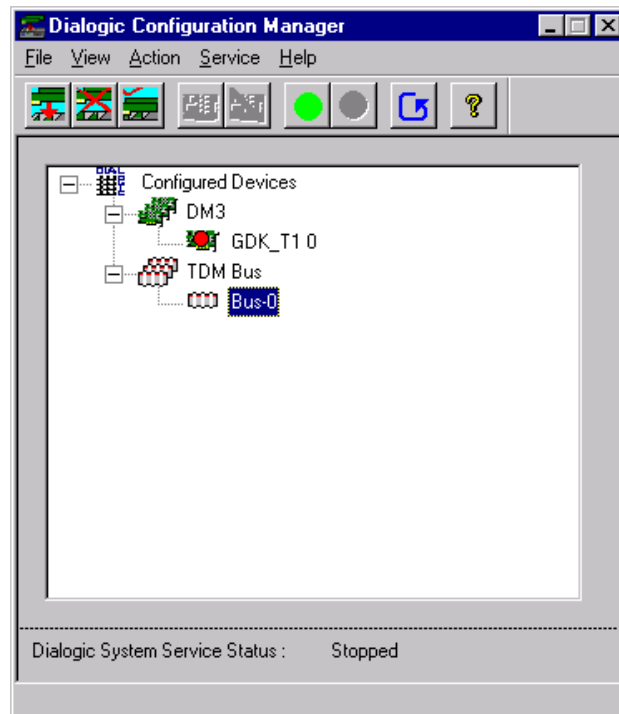


Figure 59. Dialogic Configuration Manager Window

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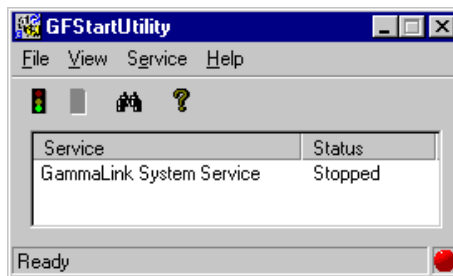
It takes a few minutes for the service to start on a Pentium® system.

**NOTE:** If the Dialogic Service cannot be started successfully, error and information messages that can help troubleshoot the installation are stored in the Event Viewer.

### **4.1.2. Starting the GammaLink System Service (Dispatcher)**

The GammaLink System Service is the operating system dependent interface to the fax channels and to the fax applications. The service can be managed from a GDK utility.

To start the GammaLink System Service, either select the **Start GammaLink System Service** option from the Dialogic System Service program group found in the Programs menu of the Windows Start bar, or click the signal light button. The GFStartUtility window appears.



**Figure 60. GFStartUtility Screen**

**NOTE:** The name of the GammaLink Service displayed in the figure above is the Service's `DisplayName` value. Your screen may display a different name.

Placing the mouse cursor over the service name in the list display will activate a pop-up data tip, which provides information on the number of active fax channels in the system.

## 4. Using the Dialogic Fax Software

The GammaLink System Service's startup mode and the service logon account can be configured from the Service Menu, as shown below.



**Figure 61. GFStartUtility Service Menu**

During startup the GammaLink System Service outputs information to the Event Viewer.

**NOTE:** If you have activated the GDKTRACE diagnostic tool, there will be large quantities of information passed by the Dispatcher into this window. If you have trouble starting the dispatcher, this diagnostic tool will help troubleshoot the installation. See Appendix A for detailed information about GDKTRACE.

### 4.2. Network Drive Access

To send from or receive to a networked drive, the GammaLink System Service's default 'LocalSystem' account must be changed to an account that contains administrative and network privileges.

The GammaLink service must be able to use the same account name and password to log onto the current system and to the networked server.

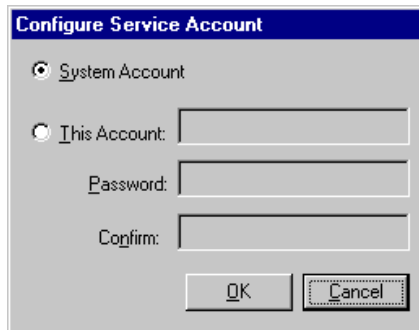
Changing the logon account must be performed *after* the installation is complete.

Follow these steps to change the GammaLink System Service's logon account:

1. Select the **Start GammaLink System Service** option from the Windows Start Menu, Dialogic System Software program group.

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2. In the Services menu, select **Account...**. The following dialog box appears:



**Figure 62. Configure Service Account Menu**

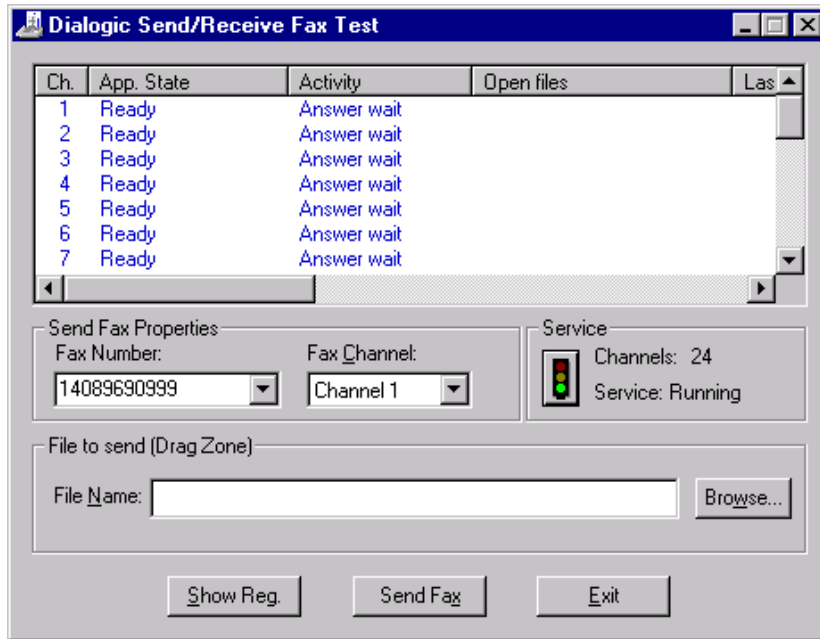
3. The default setting is System Account. Choose **This Account**, and edit the boxes to enter new account information.
4. Enter an account name that contains administrative privileges to the current system and is a valid account on the server system. Enter and confirm the account password.
5. Select **OK** to save the account information, and start the GammaLink System Service.

### **4.3. Sending and Receiving Faxes**

To send a test fax, select the **Send Fax Applet** option from the Dialogic System Service program group found in the Programs menu of the Windows Start bar.

The Dialogic Send/Receive Fax Test dialog box allows you to send and receive fax(es) to/from an external fax machine.

#### 4. Using the Dialogic Fax Software



**Figure 63. Dialogic Send/Receive Fax Test Dialog**

The Status/Activity area of the Dialog Send/Receive Fax Test dialog box reports the status of the GammaLink Fax System Services. The size of the report area can be configured by the user; the size of the rows in the Status/Activity area is user configurable within a session.

**Table 19. Send Receive Fax Test Report Area Fields**

Channel	Lists the fax channels configured in the system.
App. State	Lists the state of the application for the associated fax channel. The application state is either waiting, sending or receiving based upon the fax activity.
Activity	Lists the current activity for the associated fax channel.
Files in use	Lists number of files and the path of the file(s) selected to send.
Error code	Lists any error codes for the associated fax channel.

Scroll to the right with the horizontal scroll bar to view additional System Service information.

**Table 20. Additional System Service Information Fields**

Duration	Lists the duration of the activity.
CSID	Lists the customer subscriber identification (CSID) number for the fax channel.
Speed	Lists the speed of the transaction.
State	Lists the current state.
Channel Name	Lists the channel name.
User_ID field	Lists the ID of the user.
Number of Pages	Lists the number of pages of the fax being sent.
Files used	Lists the number of file(s) used.

#### 4. Using the Dialogic Fax Software

The **Fax Number:** entry box in the Send Fax Properties area lists the last 15 fax numbers entered by the user. To select a number from the last 15 numbers, scroll down and highlight the number. To send a fax to a number not listed, enter the number in the user entry box.

The **Fax Channel** box contains the available fax channels in your system. Select a fax channel from the available channels listed in the Fax Channel box. You can also select a fax channel by selecting it in the Status/Activity area of the dialog box.

The Status area lists the number of fax channel(s) on the system and the current state of the Service. The button is available only when the Service is in the Running or Stopped state. The bitmap on the button of the traffic signal and the accompanying text reflect the state of the Service.

**Table 21. Service States**

Red	Service is stopped. The user must restart the Service to send/receive faxes.
Green	Service is running. Faxes may be sent/received.
No Light	No GDK fax service is available. Service is in an unknown state.
Red+Yellow+Green	Service start/stop is pending.

Stopping the Service closes all channels and closes the GammaLink System Service. To stop the Service click the signal light button. If one of the channels is in use, a message is displayed warning that stopping the system while a fax is being sent/received is not recommended.

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Three different methods may be used to select a file name to send in the **File to Send** area.

- Enter the literal path and file name in the **File Name:** box.
- Click the **Browse...** button and navigate to the location of the file to send. This standard Windows Open dialog box points by default to the %GFAX% directory with test001.tif as the default filename. Select either TIFF files (\*.tif), Text files (\*.txt), or from All files (\*.\*) to send.
- The user can select the file to send from the desktop or from Explorer and drag and drop the file onto the File to Send area. If multiple files are selected, only the latest one will be considered.

Click the **Send Fax** button to send the selected file to the designated fax number using the selected fax channel. This operation will return an error message under the following conditions: if the file name does not exist; if the fax number is not valid; or if the channel was not in the correct state. You can view error messages in the Status/Activity area. Click **Exit** to exit the Dialogic Send/Receive Test Fax screen to exit without sending a fax.

To register your software by fax, click the **Show Reg.** button. Fill out the requested fields in the Registration Information area.



#### 4. Using the Dialogic Fax Software

**Test Fax - Registration Form**

Please fill out the registration form below.  
The information will be written to the file REGISTER.TXT which will become the default file to send.

Registration Information

Name:

Title:  Dept:

Company:

Address:

City:  State/Country:  Zip:

Phone Number:  Fax Number:

E-mail:

Ok Cancel

**Figure 64. Test Fax Registration Form Dialog**

Click **OK** to fax the product registration to Dialogic. You will receive an error message if you do not fill out the Name, Address and Fax Number fields. To exit the screen without sending the product registration fax, click **Cancel**.

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# Appendix A

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## Diagnostic Tools Utilization

Two diagnostic tools are provided with this product:

- GDKTRACE
- DM3FAXDEBUG

GDKTRACE provides diagnostic information available at the GammaLink System Service level, while DM3FAXDEBUG provides diagnostic information available at DM3 Fax firmware level.

### Activating the GDKTRACE Diagnostic Tool (Optional)

- NOTES:**
1. This utility is a diagnostic tool which analyzes the contents of the shared memory in real time and displays it to the user. The user has the opportunity to activate or deactivate the display of debug levels. The masks just affect the display to increase readability. All the information is always available regardless of the debug levels displayed.
  2. This step is not mandatory, but is recommended to troubleshoot the installation. This option allows monitoring all the activity occurring at the dispatcher level.

To start GDKTRACE:

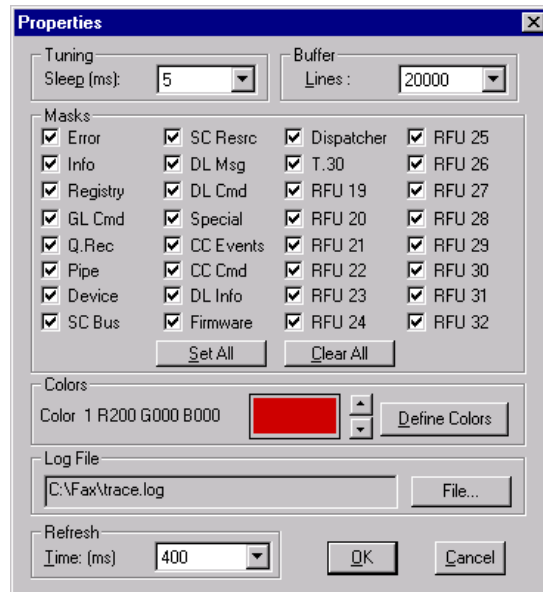
1. Click **Start**.
2. Choose the **Dialogic System Software** option from the Programs menu.
3. Choose the **Dialogic GDK Tools** option from the pop-up menu.
4. Choose the **GDK Trace Viewer** option from the Dialogic GDK Tools pop-up menu.

## Log File Option

The Log File option captures any dispatcher activity and stores it in a log file.

**NOTE:** Do not use the Log File option on production systems. The log file size can grow very large. To prevent this from occurring, disable this feature immediately.

1. From the File menu, select **Properties**.



**Figure 65. Properties Window**

2. Click the **File** button.
3. Enter a valid file name for the Log File.

## **Activating the DM3FAXDEBUG Debugging Tool (Optional)**

**NOTE:** This utility is a diagnostic tool.

### **WARNING**

Activating this option on a system under heavy load may create performance issues associated with traffic on the line. This tool is helpful to understand protocol issues on single-line transactions.

## **Starting the DM3FAXDEBUG Tool**

To start DM3FAXDEBUG from the DOS prompt:

1. Change to the c:\programfiles\dialogic\bin directory.
2. At the DOS prompt, enter **FAXTRACE -r -board 0**.

To start DM3FAXDEBUG from Windows:

1. Click **Start**.
2. Choose the **Programs** option.
3. Choose the **Dialogic System Software** from the Programs menu.
4. Choose the **Dialogic GDK Tools** option from the pop-up menu.
5. Choose the **DM3 Debug Viewer** option from the Dialogic GDK Tools pop-up menu.

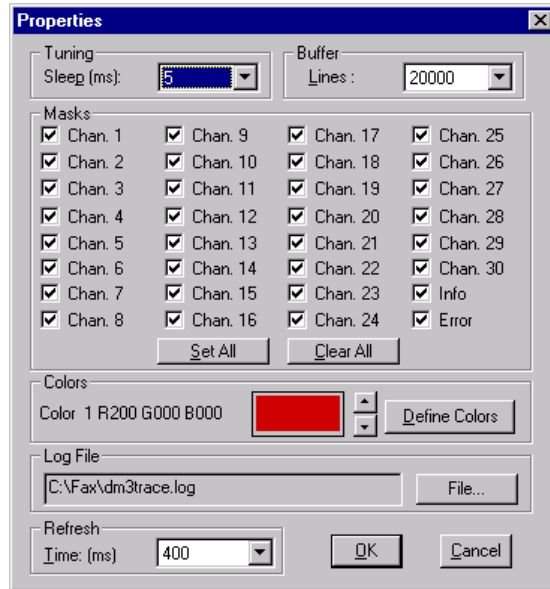
## **Log File Option**

The Log File option captures any DM/F firmware activity and stores it in a Log File.

**NOTE:** Do not use the Log File option on production systems. The log file size can grow very large. To prevent this from occurring, disable this feature immediately.

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1. From the File menu, select **Properties**.



**Figure 66. Properties Window**

2. Click the **File** button.
3. Enter a valid file name for the Log File.

<p><b>WARNING</b></p> <p>The modification takes effect the next time the utility is started.</p>
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## Appendix B

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### Properties for Selected Fax Channels

The Dialogic GammaLink Fax Configuration window appears after you have run AutoDetect from the Control Panel Applet (CPA). When you click on a channel number and then click the **Properties** button, the Properties for Selected Fax Channels window appears.

The window consists of four dialog tabs that contain the controls to set the configuration property values for the selected channel.

To select a range of channel numbers grouped together, click on the first channel number you want and then press the Shift key and click on the last channel. To select a non-contiguous range of channels, click on the first desired channel, and then hold the Ctrl key down and click on each desired channel.

Any configuration value that has not yet been set in the registry appears blank. For example, if **Font Style** has not been set in the registry then the control would not show a selected value.

If you select a range of channels and a specific control is set differently for some of the channels, then the control value appears blank. For example, if fax channels 1, 2 and 3 were selected and had different country code values, then the Country control would not display a value.

**NOTE:** Some fax configuration commands are global for all fax channels and some are associated with a particular fax channel. The **Advanced** tab **Configuration Status:** list box displays the global commands first and then the commands that are associated with each fax channel sorted by channel number. Refer to the Advanced Tab section of Properties for Selected Fax Channels Window Tabs for a screen shot of the dialog box.

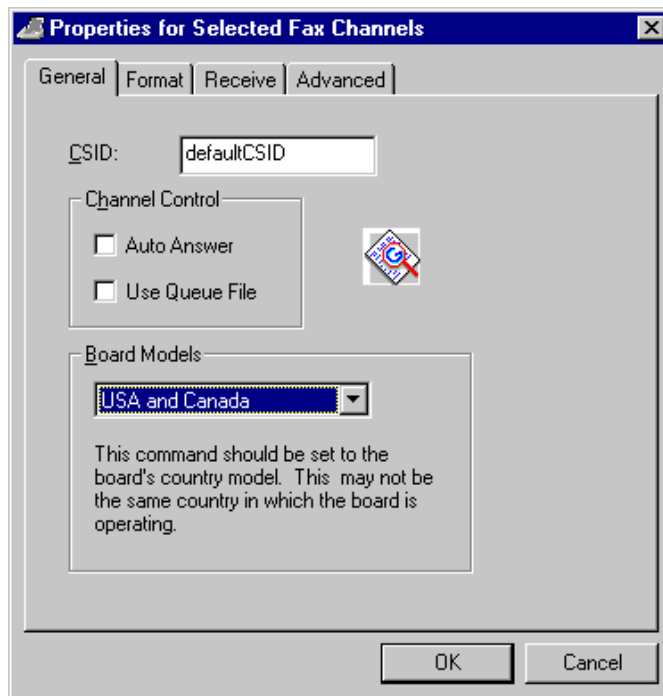
The options on each tab are described in the sections that follow.

#### The General Tab

The **General** dialog tab sets general properties for the selected fax channels.

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1. Select a channel or range of channels.
2. Click the **Properties** button to view the properties associated with the selected channel(s).
3. Click the **General** tab.



**Figure 67. Properties for Selected Fax Channels — General Tab**

Enter a customer subscriber identification number (CSID) in the **CSID** edit box. The CSID is the fax channel identification number.

For a host system with multiple outgoing fax lines, the CSID should reflect the phone number of the incoming fax line. If no number is specified, the default CSID, "default CSID" is transmitted.



## ***Appendix B. Properties for Selected Fax Channels***

The ITU recommends that the CSID be set to the international phone number of the fax channel. The maximum length of the CSID is 20 characters.

**NOTE:** Command values are blank if the specified channel(s) have conflicting values or if the command is not set.

The **Channel Control** area of the **General** tab allows the user to select two check boxes for the selected channel(s). Select one or both of the following **Channel Control** options:

<b><u>A</u>uto Answer</b>	Select this option if you want the system software to automatically answer an incoming call.
<b><u>U</u>se Queue File</b>	Select this option if you want the system software to poll the queue file for pending queue records. (Disable for GRT applications.)

The options selected in the **Channel Control** group sets the GFXSHUTDOWN command.

Select a country from the **Country** pull down menu for the selected fax channel(s).

**NOTE:** The COUNTRY command should be set for the country model of the fax board, which is not necessarily the same as the country in which the board is operating.

This command is required to configure the fax modem for the different electrical specifications and compliance standards required by various countries.

**NOTE:** The default value for this configuration parameter is United States and Canada.

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You can change the Country code and the associated command by selecting from the following countries:

**Table 22. Country Codes**

<b>COUNTRY</b>	<b>CODE</b>	<b>COUNTRY</b>	<b>CODE</b>
Australia	61	Korea	82
Austria	43	Luxembourg	352
Bahrain	973	Malaysia	60
Belgium	32	Mexico	52
Canada	1	Netherlands	31
Chile	56	New Zealand	64
Czech Republic	42	Norway	47
Denmark	45	Poland	48
Finland	358	Portugal	351
France	33	Singapore	65
Germany	49	South Africa	27
Hong Kong	852	Spain	34
Hungary	36	Sweden	46
Iceland	354	Switzerland	41
Indonesia	62	Thailand	66
Israel	972	Turkey	9
Italy	39	United Kingdom	44
Japan	81	United States	1
Jordan	962	Europe	1000

## Appendix B. Properties for Selected Fax Channels

**NOTE:** Only the United States (1), Canada (1) and Europe (1000) country codes are supported in this release. Choosing an unsupported code defaults to the country code of 1.

### The Format Tab

**NOTE:** The **Format** tab options are not used for this version of the product. Modifying any of these settings does not change the fax formatting or the software performance.

The **Format** dialog tab controls the appearance of ASCII-text fax transactions.

1. Select a channel or range of channels from the **Overview** tab.
2. Click the **Properties** button to view the properties associated with the selected channel(s).
3. Click the **Format** tab.

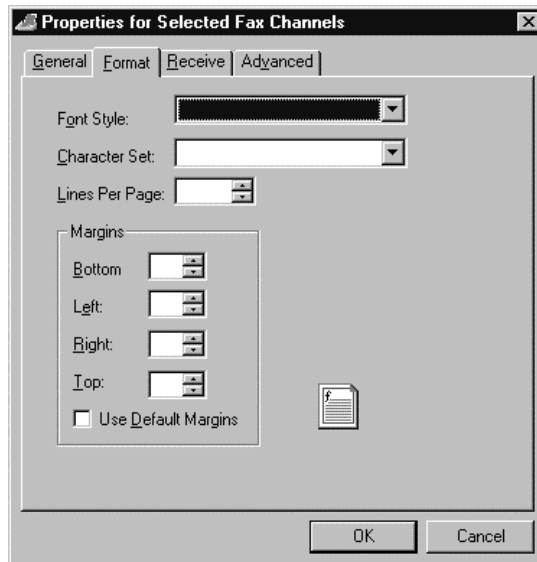


Figure 68. Properties for Selected Fax Channels — Format Tab

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The Control Panel Applet software initially assumes that no values are set in the registry for the **Format** page, so most of the controls may appear blank.

If no user values are specified in the **Format** tab, faxes can still be sent and received with your system defaults.

The following fonts are available from the **Font Style** pull down menu:

System	Select this option to use the default system font.
Standard (Sans Serif 12 pt)	Select this option to use 12 point Sans Serif font.
Auxiliary (Courier 12 pt)	Select this option to use 12 point Courier font.
Compressible	Select this option to use a compressible font.

Selecting one of these options adds the GFXCHARSET command and its associated value to the registry key for the selected channel(s).

Select the ASCII character set to use from the **Character Set** pull down menu. Selecting one of these options adds the GFXEXTEND command and its associated value to the registry key for the selected channel(s).

32-127 Standard ASCII code	Select this option to use Standard ASCII characters for text. This selection is the default selection for this option.
32-255 Extended ASCII code	Select this option to use the Extended ASCII character set for text.
0-255 Full ASCII code	Select this option to use the Full ASCII character set for text.

The **Lines Per Page** control box sets the number of lines to print on each facsimile page sent. This command adds the GFXPAGELENGTH command to the selected channel(s).

## **Appendix B. Properties for Selected Fax Channels**

Valid values range from 0 to 32,767 (use setting 0 used for variable length documents). The default value is 0.

Margin control is set through the **Margins** area of the **Format** tab. Bottom, left, right and top margins are set individually through the **Bottom**, **Left**, **Right** and **Top** control boxes.

Valid values for the top and bottom margin range from 0-65 while the left and right margin range from 0-215.

Selecting a value adds the GFXBOTTOMMARGIN, GFXLEFTMARGIN, GFXRIGHTMARGIN and GFXTOPMARGIN values to the registry key.

The applet generates a **Format Page Error** if the value specified for a margin is out of range. That is, the left margin cannot be greater than the right margin and the bottom and top margins cannot be greater than the number of lines specified in **Lines Per Page**.

Click the **Use Default Margins** radio control button at the bottom of the **Margins** area to override any user selected entries in the control boxes and return margins to the default values. The default margins are:

Bottom	3
Left	14
Right	94
Top	3

Click **OK** to accept the changes for the selected channel(s) or **Cancel** to exit the **Format** tab without accepting the changes.

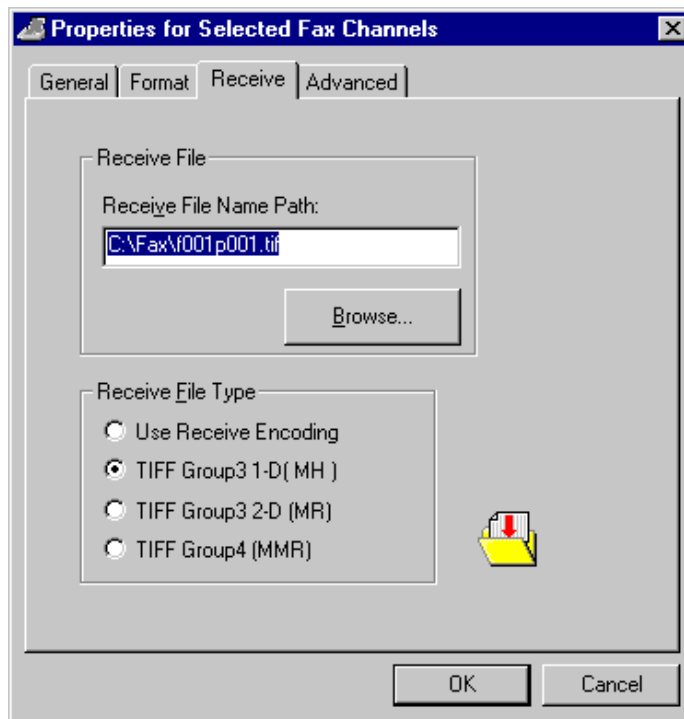
### **The Receive Tab**

The **Receive** dialog tab controls where and in what image type incoming faxes are saved.

1. Select a channel or range of channels from the **Overview** tab.

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2. Click the **Properties** button to view the properties associated with the selected channel(s).
3. Click the **Receive** tab.



**Figure 69. Properties for Selected Fax Channels — Receive Tab**

The **Receive** dialog controls where and how faxes are received for the selected channel(s). The **Receive File** area contains the **Receive File Name Path** user entry box. This sets the GFXRECVPATH command in the registry key and specifies where incoming fax files should be saved. This command defines both the directory in which received files are placed and the filename template to be used. The default directory path is c:\Fax\.

## **Appendix B. Properties for Selected Fax Channels**

The default file naming convention is shown below:

x001P001.tif - where x represents the first 26 channels

xa001P001.tif - where xa represents channels 27 and higher.

Use the **B**rowse button to navigate or enter the fully qualified path name.

The **Receive File Type** area contains four radio control buttons that select the image format in which to save the received fax:

<b>Use Receive Encoding</b>	Turning on this button saves the file in the same format used during transmission by the remote fax machine. For non-ECM fax transmissions, this may include bad scan lines.
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The software maintains facsimile data in a TIFF (Tagged Image File Format) compression format. The TIFF header describes the data in the file, and helps to distinguish facsimile image files from other types of image files.

GDK supports TIFF Type 3 and TIFF Type 4 compression formats. TIFF Type 3 is compatible with ITU Group 3 T.4 recommendation. Select either 1-D (one-dimensional) or 2-D (two-dimensional) Modified Huffman (MH) encoding compression.

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**TIFF Group 3 1-D (MH)** Turning this button on saves each incoming fax as a TIFF Group 3 1-D (MH) file. Each image line is encoded as a TIFF type 3 1-D line with EOL codes after each scan line and the TIFF file is terminated with six EOLs to indicate the end of the page. The fill order can be MSBF (most significant bit first) or LSBF (least significant bit first). The default is LSBF.

Selecting this option adds the GFORM line and associated value to the registry key.

**TIFF Group 3 2-D (MR)** Turning this button on saves each incoming fax as a TIFF Group 3 2-D file. These files are also called “Modified READ” (MR) files. The first image line of these files is encoded as a TIFF 3 1-D line. A certain number of lines, usually one to three, follow the 1-D line and encode the differences between the current and previous lines.

Following the 2-D lines is another 1-D line. Then, there are more 2-D lines based on this new reference line. A flag indicates whether a line is complete in itself (a 1-D encoded line) or is based on the preceding line (a 2-D encoded line) and is embedded in the end of line code.

This encoding scheme results in approximately a 15 to 20 percent reduction in file size over 1-D encoding in most cases. This can vary greatly, depending on the type of image. A failure in one line affects only a small portion of the document. Selecting this option adds the GFORM lines and associated value to the registry key.



## **Appendix B. Properties for Selected Fax Channels**

<b>TIFF Group 4 (MMR)</b>	<p>Saves each incoming fax as a TIFF Group 4 file. These files are also called “Modified Modified READ” (MMR) files. An imaginary white line precedes the first line. Every line in the file is based on the differences between the current line and the line that preceded it; the first line presumes a blank line preceded it.</p> <p>This byte-oriented compression scheme results in approximately a 20 to 40 percent reduction in file size over one-dimensional encoding in most cases. A scan line error can corrupt an entire image from the point of the error forward.</p> <p>Selecting this option adds the G4FORM with the appropriate value.</p>
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Click **OK** to accept the changes for the selected channel(s) or **Cancel** to exit the **Receive** tab without accepting the changes.

### **The Advanced Tab**

The **Advanced** dialog tab allows configuration modifications on a per command basis.

1. Select a channel or range of channels from the **Overview** tab.
2. Click the **Properties** button to view the properties associated with the selected channel(s).
3. Click the **Advanced** tab.

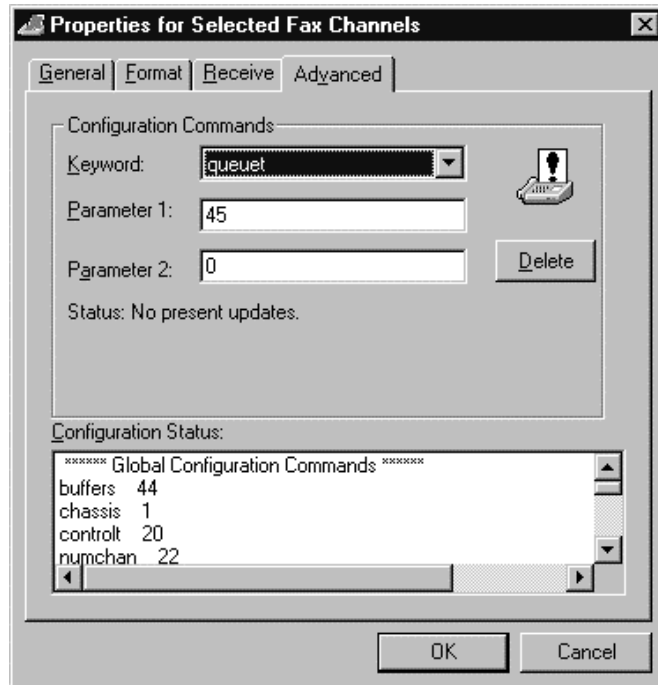


Figure 70. Properties for Selected Fax Channels — Advanced Tab

The **Configuration Commands** area of the **Advanced** tab adds, modifies or deletes any configuration commands. Each command is listed in the **Keyword** pulldown menu. To add a new command:

1. Select a value from the **Keyword** pulldown menu.
2. The Parameter 1 and Parameter 2 boxes are active/inactive based upon the number of parameters accepted by the selected keyword.
3. Enter the value associated with the command.

The **Status** line in the **Configuration Commands** area reflects changes made for the selected command and parameter.

If the change was accepted, the Status line changes to *"Change accepted to "command" # parameter."*

## ***Appendix B. Properties for Selected Fax Channels***

If the change was not accepted, the **Status** line produces an error message for an unacceptable value.

If the command is out of the range, then the change will not be saved.

If the value was within range the change will be saved and will be reflected in the **Configuration Status** list box.

**NOTE:** There are some configuration commands that cannot be modified by the user. These commands are system related (such as the number of channels in the system) and will not be available in the **Keyword** pulldown menu. These commands and their associated values can be found in the **Configuration Status** list box.

The **Configuration Status** area of the **Advanced** tab is a summary of all configuration commands set in the registry key. Global configuration commands — **BUFFERS, CHASSIS, CONTROLT, DEBUG, NUMCHAN, QUEUET, STATUST, UPDATET** — are listed first and are the same for all fax channels. Channel configuration commands are listed under the channel number for each logical channel number in the system. Use the scroll bar to view all of the commands.

To modify a command from the **Advanced** tab:

1. Select a value from the **Keyword** pull down menu.
2. The Parameter 1 and Parameter 2 boxes are active/inactive based upon the number of parameters accepted by the selected keyword. The entry associated with the command is in the parameter box(es).
3. Replace the existing value with the new value for the selected keyword.

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To delete a command from the **Advanced** tab:

1. Select a value from the **Keyword** pull down menu.
2. The Parameter 1 and Parameter 2 boxes are active/inactive based upon the number of parameters accepted by the selected keyword. The current values are reflected in the parameter box(es).
3. If you want to delete the GFXFAXCONTROL, GFCCONTROL or MODEMCTRL commands, the command number value must be entered in the Parameter 1 text box before you click the **Delete** button.
4. Click the **Delete** button.
5. A warning message requests confirmation that the selected configuration command should be deleted from the registry key. Click **OK** to delete the command and **Cancel** to cancel the delete request.

Click **OK** to accept the changes or **Cancel** to exit without accepting the changes.

The following table summarizes the configuration commands that can be added, modified or deleted in the **Advanced** tab.

- NOTES:**
1. Other commands are available. Making changes to these settings will not impact performance.
  2. In the following table, the term “on-the-fly” refers to files converted automatically at the time of transmission on the board.

**Appendix B. Properties for Selected Fax Channels**

**Table 23. Configuration Commands**

COUNTRY	<p><b>Parameter 1</b> defines the country code, which is used for country-specific modem operating parameters. This code must be specified for each fax channel for the channel to function correctly. The default value is 1 for United States and Canada.</p> <p><b>NOTE:</b> This version only supports 1 and 1000 for United States, Canada and Europe.</p>
CSID	<p><b>Parameter 1</b> sets the customer subscriber identification (CSID) number for a fax channel. This is the fax number that you enter. For a host system with multiple outgoing fax lines, the CSID should reflect the phone number of an incoming fax line. If no value is entered, a blank CSID is transmitted. The ITU_U recommends that the CSID be set to the international phone number of the fax channel. The maximum length of CSID is 20 characters.</p>
GFXECM	<p>Sets the Error Correction Mode. <b>Parameter 1</b> specifies a value for sending faxes. <b>Parameter 2</b> specifies a value for receiving faxes. The GFXSECM and GFXRECM commands override the GFXECM command. Do not use them with the GFXECM command.</p>
GFXFAXCONTROL	<p><b>Parameter 1</b> is a specific modem control command and <b>Parameter 2</b> is the command's associated value. Refer to the <i>GDK, Version 5.0 Programming Reference Manual for Windows</i> for more information.</p>
GFCCONTROL	<p><b>Parameter 1</b> is a specific modem control command and <b>Parameter 2</b> is the command's associated value. Refer to the <i>GDK, Version 5.0 Programming Reference Manual for Windows</i> for more information.</p>

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GFXFINE	<b>Parameter 1</b> specifies whether or not to accept only fine resolution incoming faxes and fail all calls that are not in fine-resolution mode.
GFXFORM	<b>Parameter 1</b> specifies the image format in which to save a received fax and sanitizes faulty scan lines and other errors.
GFXHEADER	<b>Parameter 1</b> customizes the header on outgoing faxes to contain user-defined information. Up to 95 characters can be printed on a header.
GFXMAXRATE	<b>Parameter 1</b> specifies the maximum bps a fax channel will attempt to transmit. Possible values are 2400, 4800, 7200, 9600, 12000 or 14400 bps. This may be limited by the hardware that is installed on the host system. The default is the maximum rate the channel can handle.
GFXMINRATE	<b>Parameter 1</b> specifies the minimum rate a fax channel will attempt to transmit. Possible values are 2400, 4800, 7200, 9600, 12000 or 14400. This may be limited by the hardware that is installed on the host system. The default value is 2400.
GFXRECM	<b>Parameter 1</b> specifies the Error Correction Mode (ECM) for incoming faxes.
GFXRECVPATH	<b>Parameter 1</b> sets the fully qualified path and filename template used for the selected fax channel(s) to receive faxes. This command defines both the directory in which received files will be placed and the filename template to be used.
GFXRT6	<b>Parameter 1</b> controls the reception of T.6 encoding. T.6 encoding requires Error Correction Mode (ECM). ECM must be enabled to receive any T.6 encoded faxes.
GFXRTWOD	<b>Parameter 1</b> controls TIFF Type 3 2-D line or transmission compression of received faxes.

### Appendix B. Properties for Selected Fax Channels

GFXRWIDTH	<b>Parameter 1</b> selects the page width requested of the sending fax machine for incoming faxes.
GFXSCANTIME	<b>Parameter 1</b> sets the scan lines timing in milliseconds for incoming calls. When receiving from a remote fax machine, the software specifies in the DIS field that it is capable of accepting scan lines at a certain rate (the default is 0 msec).
GFXSECM	<b>Parameter 1</b> specifies the Error Correction Mode (ECM) for outgoing faxes.
GFXSHUTDOWN	<b>Parameter 1</b> specifies the state of the selected fax channel(s). GFXSHUTDOWN must contain a value in order to send and receive faxes.
GFXST6	<b>Parameter 1</b> controls the transmission of T.6 encoding. T.6 encoding requires ECM.
GFXSTWOD	<b>Parameter 1</b> controls TIFF Type 3 2-D line compression of fax transmissions.
CHANNELID	<b>Parameter 1</b> is a string that identifies a symbolic name for the channel. This command replaces the CHANNEL command from earlier versions.
MODEMCTRL	<b>Parameter 1</b> is a specific modem control command and <b>Parameter 2</b> is the command's associated value. Refer to the <i>GDK, Version 5.0 Programming Reference Manual for Windows</i> .

Refer to the *GDK, Version 5.0 Programming Reference Manual for Windows* for the valid numeric values for, and a complete description of, each command.

Click the **OK** button in the **Overview** dialog box to save any changes made in the four tab dialog pages to the registry. Click **Cancel** to cancel any changes made. Changes made to the properties will only be saved at the end of the session when the user selects **OK** from the **Overview** dialog box.

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# Appendix C

## Properties Supported By Configuration Types

Not all the properties are supported by all the different configurations. This appendix describes which specific properties are supported by each configuration.

### CP Boards (With and Without On-board Line Interface)

All properties and all commands described in Appendix B are supported.

### DM3 Boards (With and Without On-board Line Interface)

This includes the CPi/2400CT-T1, CPi/3000CT-E1, CPi/2400CT, and CPi/3000CT boards.

The following properties and commands described in Appendix B are supported.

**NOTE:** Commands not listed below are ignored and behave in a neutral manner.

**Table 24. DM3 Active Commands**

Commands	Properties
CSID	
GFXRECVPATH	Default x001P001 if x > 26, then xa001P01
GFXSHUTDOWN	2 and 3 as expected (no auto receive option)
NUMCHAN	Checked only at initialization time; no dynamic change
GFXFINE	
GFXFORM	Supports 3, 4, 5. Default = 3
GFXHEADER	
GFXLEFTMARGIN	Remark: Value has to be in 1 to 32 range
GFXTOPMARGIN	Remark: Value has to be in 0 to 32 range

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GFXRIGHTMARGIN	Remark: Value has to be in 64 to 152 range
GFXEXTEND	Supports option 0 and 1
MODEMCONTROL 1074	Permanent CSID
MODEMCONTROL 1075	Numeric CSID
MODEMCONTROL 2050	Header
GFCCONTROL 36	Recv Page per file. Default = 1
GFCCONTROL 37	Multi page option. Default = 0
GFXFAXCONTROL 51	T.30 Timer T1
GFXFAXCONTROL 52	T.30 Timer T2
GFXFAXCONTROL 53	T.30 Timer T3
GFXFAXCONTROL 54	T.30 Timer T4
GFXFAXCONTROL 55	T.30 Timer T5
GFXFAXCONTROL 73	Sub-address delimiter. Default = #
GFXFAXCONTROL 75	Leading digit truncation. Default = 0
GFXECM	Supports option 0 and 1
GFXRECM	Supports option 0 and 1
GFXRT6	Supports option 0 and 1
GFXRTWOD	Supports option 0 and 1
GFXSCANTIME	Supports 0, 5, 10, 20, 40
GFXSECM	Supports option 0 and 1
GFXST6	Supports option 0 and 1
GFXSTWOD	Supports option 0 and 1
GFXMINRATE	Default = 2400
GFXMAXRATE	Default = 14400. Supports 2400, 4800, 7200, 9600 & 12000
GFXRLENGTH	
GFXRWIDTH	
CHANNEL	Using logical channel

**Appendix C. Properties Supported by Configuration Types**

**Board Based on Dialogic's Springware Architecture**

This includes the BRI/2VFD board.

The following properties and commands described in Appendix B are supported.

**NOTE:** Commands not listed below are ignored and behave in a neutral manner.

**Table 25. BRI/2VFD Active Commands**

<b>Commands</b>	<b>Properties</b>
CSID	
GFXRECVPATH	Default x001P001 if x> 26, then xa001P01
GFXSHUTDOWN	2 and 3 as expected (no auto receive option)
NUMCHAN	Checked only at initialization time; no dynamic change
GFXFORM	Supports 3, 5. Default = 3 Remark: 4 is mapped to 3
GFXHEADER	
MODEMCONTROL 1074	Permanent CSID
MODEMCONTROL 1075	Numeric CSID
MODEMCONTROL 2050	Header
GFCCONTROL 36	Recv Page per file. Default = 1
GFCCONTROL 37	Multi page option. Default = 0
GFXFAXCONTROL 73	Sub-address delimiter. Default = #
GFXFAXCONTROL 75	Leading digit truncation. Default = 0
GFXSCANTIME	Supports 0, 5, 10, 20, 40
GFXSTWOD	Supports option 0 and 1
GFXMAXRATE	Default = 14400. Supports 2400, 4800, 9600 & 12000 Remark: 7200 is mapped to 9600
GFXRWIDTH	
CHANNEL	Using logical channel

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# Appendix D

## Dialogic GDK Configuration Utility Parameters

### Active or Inactive Parameters

Not all the parameters accessible via the GDK Configuration Utility are used by all the different configurations. This section describes which specific parameters are used by each configuration.

- NOTES:**
1. If you are not an advanced user, do not attempt to use any settings except those on the Main configuration tab. The parameters that are related to the other configuration tabs are loaded using the predefined Configuration profiles.
  2. Parameters that are not accessible via the GDK Configuration Utility in certain configurations may be accessible by other means e.g. via config or .prm files as described earlier in this manual.

### DM3 or CP Resource Boards With DTI Network Interface in Transparent ISDN Mode (Fax Only Applications)

All parameters from all tabs are active.

### DM3 Boards With On-board Network Interface

Table 26. GDK Configuration Utility — Active Parameters

TAB	STATUS
Dispatcher	All parameters are active.
ISDN In	No parameter is active except “Use ACCEPTED State” in the “ISDN Feature” group.
ISDN Out	All parameters are inactive except “Origination Phone Number” in the “Make Call Block” group.

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Error Mapping	The “GammaLink Error Mapping” group is active. The other parameters are inactive.
Debug	The “Debug / Logs” group is active. The other parameters are inactive.

### **All Other Supported Configurations**

The other supported configurations include:

- DM3 Resource Boards in SCbus Mode (Multimedia Applications)
- CP Resource Boards in SCbus Mode (Multimedia Applications)
- Board Based on Dialogic’s Springware Architecture
- CP Boards with On-board Network Interface

**Table 27. GDK Configuration Utility — Active Parameters**

<b>TAB</b>	<b>STATUS</b>
Dispatcher	In this configuration, the “Activate Transparent PRI Layer” has to be unchecked. In this case, all other parameters on this tab are inactive
ISDN In	All parameters are inactive.
ISDN Out	All parameters are inactive.
Error Mapping	All parameters are inactive.
Debug	The “Debug / Logs” group is active, all other parameters on this tab are inactive.

### **Parameter Description**

Each GDK Configuration Utility parameter is described in the utility itself. Set the focus on the desired parameter by clicking several times the “Tab” key. Read the parameter description in the “Information” window located at the bottom of the utility. The example below shows the description that relates to the “Activate Transparent PRI Layer”.

Appendix D. Dialogic GDK Configuration Utility Parameters

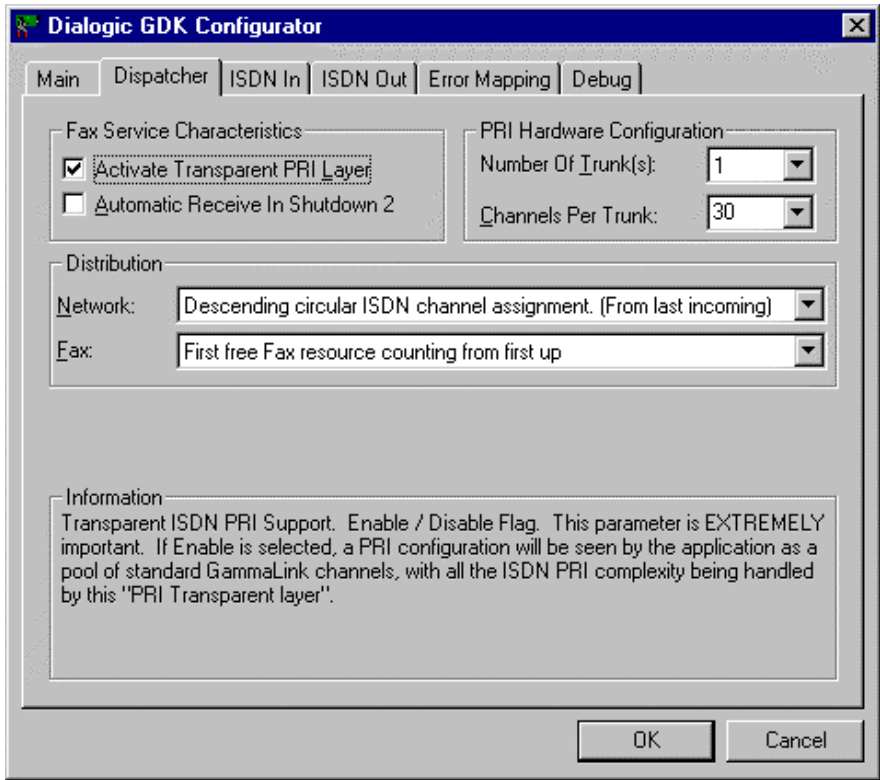


Figure 71. GDK Configuration Utility — Dispatcher Tab

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## NOTES

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## NOTES

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