

# JANUS<sup>®</sup> 2.4 GHz Installation Utility (4MB)

 **intermec**

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### ***Manual Change Record***

This page records the changes to this manual, which was originally released as version 001.

<b>Version</b>	<b>Date</b>	<b>Description of Change</b>
002	12/96	New information was added for the JG2050 and for UDP Plus terminal emulation.
003	9/97	New information was added to describe using the installation utility on a JG2010.
004	7/98	Installation utility software was modified to streamline the installation/configuration process.



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## Before You Begin

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This section introduces you to cautions, document formatting conventions, and sources of additional product information.

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### ***Cautions and Notes***

The cautions and notes in this manual use the following format.



#### **Caution**

*A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.*

#### **Conseil**

*Une précaution vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour empêcher l'endommagement ou la destruction de l'équipement, ou l'altération ou la perte de données.*

***Note:** Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.*

---

### ***About This Manual***

This manual provides you with information on the features of the JANUS 2.4 GHz Installation Utility, how to use it, how to configure it, and what the error messages mean. To run this Installation Utility, you must be familiar with your host PC, JANUS RF devices, and your network.

### ***What You Will Find in This Manual***

This table summarizes the information in each chapter of this manual:

<b>For Information On</b>	<b>Refer To</b>
Understanding the Installation Utility	Chapter 1, "Learning About the Installation Utility." Explains the Installation Utility features and how it works. This chapter also provides system and host PC requirements.
Information you need to gather before running the Installation Utility	Chapter 2, "Preparing to Run the Installation Utility." Explains the network and radio parameters.
Running the Installation Utility	Chapter 3, "Running the Installation Utility." Explains how to run the Installation Utility.
Troubleshooting information	Chapter 4, "Troubleshooting." Provides solutions to problems you may encounter while running the Installation Utility.
Which files are deleted, modified, and created	Appendix A, "Deleted, Modified, and New Files." Provides printouts of the modified CONFIG.SYS and AUTOEXEC.BAT files and the new NET.CFG, NET.BAT, APP.BAT, GO.BAT, PCTCP.INI, and UNNET.BAT files.
Special Information	Appendix B, "Helpful Information." Provides helpful information you may need when running the Installation Utility.

In addition, this manual contains a glossary and an index.

### Format Conventions for Input From a Keyboard or Keypad

This table describes the formatting conventions for input from host PC keyboards and JANUS keypads:

Convention	How to Interpret the Convention
Special text	Shows the command as you should enter it into the device. See “Format Conventions for Commands” later in this section.
<i>Italic text</i>	Indicates that you must replace the parameter with a value. See “Format Conventions for Commands” later in this section.
<b>Bold text</b>	Indicates the keys you must press on a PC or host computer keyboard. For example, “press <b>Enter</b> ” means you press the key labeled “Enter” on the PC or host computer keyboard.
	Shows the key you must press on the device. For example, “press  ” directs you to press the key labeled “Enter” on the device keypad.
   	Shows a series of device keys you must press and release in the order shown. For example, “Press     to boot the device.”
 - 	Shows a series of device keys you must press simultaneously. Also, you must press and hold the keys in the order shown. For example, “Press  -  to enter Control mode.”

### Format Conventions for Commands

This manual includes sample commands that are shown exactly as you should type them on your device. The manual also describes the syntax for many commands, defining each parameter in the command. This example illustrates the format conventions used for commands:

When you use the LOADADD command, follow this syntax:

```
loadadd [path\]filename [path\filename path\filename...]
```

where:

*path* is the drive and directory of the file(s) to include in the image file. If you do not include a *path*, the current directory is used.

*filename* is the name of the file or files to include in the image file and load to the device.

You can include multiple *path\filename* and *path\\*.\** parameters in the command. The *path\\*.\** parameter loads all the files in a directory. For example, type this command at the DOS prompt and press :

```
loadadd c:\janus\config.sys c:\atadr\*. * c:\data\*. *
```

This table defines the conventions used in the example:

Convention	Description
Special text	Commands appear in this font. You enter the command exactly as it is shown.
<i>Italic text</i>	Italics indicate a variable, which you must replace with a real value, such as a number, filename, or keyword.
[ ]	Brackets enclose a parameter that you may omit from the command. Do not include the brackets in the command.
Required parameters	If a parameter is not enclosed in brackets [ ], the parameter is required. You must include the parameter in the command; otherwise, the command will not execute correctly.
where	This word introduces a list of the command's parameters and explains the values you can specify for them.

---

### ***Other Related Manuals***

You may need additional information when working with JANUS devices in a data collection system. Please visit our web site at [www.intermec.com](http://www.intermec.com) for a list of available manuals or to access many of our current manuals in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

# 1

## *Learning About the Installation Utility*



*This chapter introduces you to the JANUS 2.4 GHz Installation Utility and describes how it works with JANUS RF devices and your host PC. It also explains the contents of the installation kit and defines the system requirements.*

## ***Unpacking the Installation Utility Kit***

---

When you receive your JANUS® 2.4 GHz Installation Utility kit, you need to verify the contents of the kit. Each kit comes with:

- Installation Utility disk
- *JANUS 2.4 GHz Installation Utility User's Manual (4MB)*
- JANUS 2.4 GHz terminal emulation application disk
- JANUS 2.4 GHz terminal emulation for Model 200 Controller application disk
- *JANUS 2.4 GHz Terminal Emulation Quick Reference Guide*
- Security ID Configuration disk
- JANUS 2010 (4MB) companion disks (3 disks)
- JANUS 2020 (4MB) companion disks (3 disks)
- JANUS 2050 (4MB) companion disks (3 disks)

The Installation Utility disk contains a README file that provides additional information that became available after the printing of this manual.

**Note:** Contact your Intermec sales representative to order the FTTPC/TCP Stack Disk (P/N 067791).

## ***What the Installation Utility Does***

---

The JANUS 2.4 GHz Installation Utility configures JANUS RF devices to work in an Intermec 2.4 GHz RF network. The Installation Utility creates drive images for the devices that include the network software that allows these devices to connect with a Novell network or a TCP/IP-based network. The Installation Utility runs on a host PC in the DOS environment or a DOS window and uses a DOS text-based interface to prompt you for client network and radio operating parameters.

The Installation Utility:

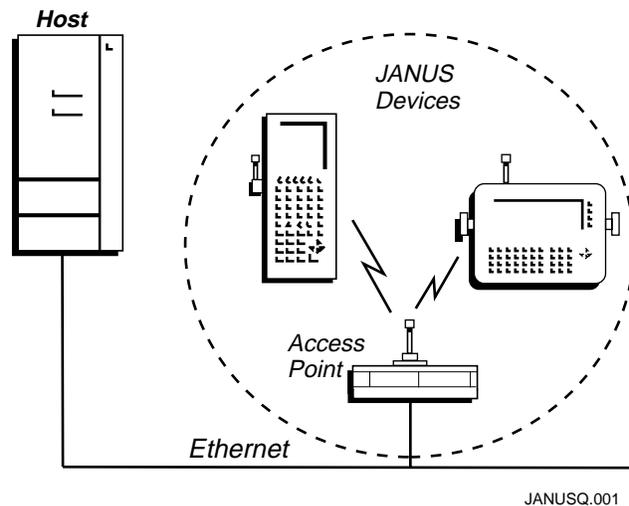
- Allows you to easily configure your JANUS device. All you have to do is fill in the fields and follow the instructions on your screen.
- Verifies that your host PC has the necessary files, memory, and hard disk space to ensure successful installation.

- Frees enough space on the JANUS device to install the network software. The Installation Utility deletes the IRL Desktop, the Intermec 900 MHz RF Protocol Handler, and some DOS utilities.
- Provides a shell out option before the drive images are built to allow you to change the contents of the drive images, add a security ID, modify JANUS configuration parameters, or perform any other DOS command.
- Saves time when configuring multiple JANUS RF devices by retaining the drive C and drive D images from the first device.

In a typical Intermec 2.4 GHz RF network, the JANUS RF devices communicate with the access points, wireless to wired bridges, that pass the packets through Ethernet on to the host.

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*A Typical Intermec 2.4 GHz RF Network*



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## *How the Installation Utility Works*

This section provides you with an overview of how the Installation Utility works.

1. JANUS drive images are extracted from the companion disks.
2. Selected JANUS files are removed from the drive C and drive D subdirectories to create space for the network software and radio drivers.
  - Network software, radio drivers, configuration files, and optional terminal emulation software are added.
  - Data collection applications can be added.
3. New JANUS drive C and drive D images are downloaded to the connected JANUS device.

**Note:** After you configure the first JANUS device, additional devices may be programmed using most of the data you entered on the first installation. The Installation Utility provides the option for multiple installations, allowing you to change the data you entered on the first installation. The Installation Utility then rebuilds the applicable images for downloading to the next device.

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## **Modifying the JANUS Drive Images**

The Installation Utility gives you a chance to modify the contents of drives C and D before the drive images are built. When running the Installation Utility, a message box appears asking if you want to shell out to the DOS command line. Using DOS commands or a DOS file editor, you can add, delete, or change files.

### **Drive C Image**

The scratch drive (\IM\_FLASH\DRIVEC) is where the drive C image is built that is downloaded to the JANUS RF device. In this directory, the Installation Utility removes files that are not needed for the JANUS device to operate in an Intermec 2.4 GHz RF network.

The list of files that are going to be deleted are in \IM\_FLASH\DRIVECX. If there is a file that you do not want the Installation Utility to delete in the DRIVECX subdirectory, copy the file back to \IM\_FLASH\DRIVEC. If you add too many files to the subdirectory and it does not have enough free disk space to load the network software, an error message will appear. Choose files in DRIVEC to delete to create the necessary free disk space.

See Appendix A for a complete list of the files that are deleted to create the necessary free space.

### **Drive D Image**

The scratch drive (\IM\_FLASH\DRIVED) is where the drive D image is built that is downloaded to the JANUS RF device. In this directory, the Installation Utility creates the necessary disk space for the Novell network software by deleting unnecessary JANUS files. See Appendix A for a complete list of the files that are deleted to create the necessary free space.

The Installation Utility copies the Novell network subdirectory structure from the installation directory to the DRIVED directory.

- If you are installing NetWare Client for DOS, the JANUS drive D network subdirectory structure looks like:

```
D:\NWCLIENT
  |_ NLS
    |_ ENGLISH
```

- If you are installing LAN WorkPlace for DOS, or PC/TCP for DOS, the JANUS drive D network subdirectory structure looks like:

```
D:\NET
  |_ BIN
  |_ HSTACC
  |_ PROFILE
  |_ DRIVERS
  |_ SCRIPT
  |_ TCP
  |_ LANG
```

See Appendix A for a list of the minimum required files for a LAN WorkPlace installation.

This list of files that are going to be deleted are in \IM\_FLASH\DRIVEDX. Default drive D files are copied to \IM\_FLASH\DRIVED. If there is a file that you do not want to delete in DRIVEDX, you need to copy it back to the DRIVED directory and choose another file in the DRIVED directory to delete so you can create the necessary free disk space.

The Installation Utility also copies special drivers from the program disk to the RAM drive directory. These drivers are:

- RL2OEM.COM, the radio driver
- MINIPM.EXE, the radio power management driver

---

### ***Downloading the New JANUS Drive Images***

The Installation Utility makes a new drive C image from the files in \IM\_FLASH\DRIVEC. It makes a new drive D image from the files in \IM\_FLASH\DRIVED. It then downloads these new drive images to the JANUS RF device.

The Installation Utility asks you if you want to perform another installation on another device. You can save time by configuring all the devices in your network at the same time. For each subsequent device you configure, the Installation Utility does not download and then upload the drive C and D images again.

When you finish running the Installation Utility, a message box appears asking you if you want to discard the files that it generated. You can save the files for future reference or you can discard the files.

## ***System Requirements***

---

You must have the following hardware/software components and network information before installing your data collection network.

- JANUS 2.4 GHz RF devices
- JANUS 2.4 GHz Installation Utility kit
- Optical adapter or communications dock (JG2010 or JG2020)
- Null modem cable
- Access points
- IP addresses for each device, the default router address, and the subnet mask, if this information will not be obtained from a BOOTP or RARP server at boot time.

## ***Host PC Requirements***

---

You can use any type of PC (desktop, laptop, or notebook) as your host PC if it meets the following minimum system requirements:

- Hard disk with at least 14MB of disk space available
- 3.5-inch high-density drive A
- Serial port
- PC-DOS or MS-DOS v5.0 or above, Windows 3.1 (DOS prompt), or Windows 95 (DOS prompt)

## ***Making a Backup Copy***

---

Intermec recommends that you make a backup copy of all the disks that ship in your original JANUS 2.4 GHz Installation Utility kit. Place the original disks in a safe place. Run the Installation Utility using the backup copy. You need to provide:

- 3.5-inch, high-density, formatted disks

To make a backup copy

1. Insert the disk in drive A of your host PC.
2. From a DOS prompt, type:  
`diskcopy a: a:`
3. Follow the instructions on the screen to make your backup copy.

## ***Navigating Within Screens***

---

You can navigate the screens in the Installation Utility in several ways. You can use many of the same conventions that you know from other software programs. When you open a screen, there may already be values in some of the fields. For toggle fields, use the **spacebar** to switch between options.

Press the **F1** key on your host PC to view the navigation help screen. This screen appears:

```
[↓], [Enter], [Tab]...Next Field
[↑], [Shift]+[Tab]....Previous Field
[F10].....Exit Entry Form
[Home].....Beginning of Field
[End].....End of Field
[Ins].....Toggle Insert Mode
[Ctrl]+[F9].....Erase to End of Field
[Shift]+[F9].....Erase Field
```

**Press any Key to Exit Help**

*Preparing to Run the Installation Utility*



*This chapter tells you what information you need to obtain before running the Installation Utility. It also helps you understand the parameters.*

## ***Why Read This Chapter?***

---

Running the Installation Utility, it can take up to 10 minutes to configure your first JANUS RF device depending on the baud rate you use for data transmission. Once you start running the Installation Utility, you must either complete the entire procedure to configure the first JANUS RF device or abandon the procedure and start over again. You cannot stop and then restart the process in the middle. Completing the installation tasks will be easier if you understand this chapter and have the correct configuration parameter information before you start.

## ***Setting Up the Host PC***

---

You can use any type of PC as your host PC as long as it meets the minimum system requirements listed in “Host PC Requirements” in Chapter 1.

---

### ***Creating a HOSTS File***

If you are using Intermec or Novell terminal emulation (LAN WorkPlace for DOS), you can create a HOSTS file in the directory \NET\TCP on the host PC. The Installation Utility will download the HOSTS file to the JANUS RF device. The HOSTS file is a hostname database that contains a list of the remote hosts that you can reach. Each line contains the host IP address and its aliases. For example:

```
192.9.175.274 host1
192.9.175.13 sunhost1
```

This ASCII text file must be less than 50K or it will not fit on the JANUS device. 50K is enough space to support a large network, most data collection networks will require a much smaller file. If you choose not to create a HOSTS file, this non-fatal diagnostic message appears during the installation.

```
Warning, HOSTS Too Large or Not Found, Continue?
```

Refer to your network documentation for help on creating and interpreting HOSTS files.

## Understanding Configuration Parameters

---

Use the following configuration parameter definitions when you fill in fields on the terminal selection, character set, network, and radio parameters screens.

---

### Terminal Selection Screen

```
Choose a Device to Configure
JG2010 <Intermec 4 Meg Hand Held>
JG2020 <Intermec 4 Meg Hand Held>
JG2050 <Intermec 4 Meg Vehicle Mount>
```

Use the Choose a Device to Configure screen to specify the type of JANUS device that you want to configure.

---

### Network/Protocol Selection Screen

```
Select a Network / Protocol
FTP Customer Application / PC/TCP
Intermec TNVTxxx Emulation / TCPIP
Intermec 3270 Emulation / TCPIP
Intermec 5250 Emulation / TCPIP
Intermec TNVTxxx Emulation / UDP+ <200 Controller>
Intermec 3270 Emulation / UDP+ <200 Controller>
Intermec 5250 Emulation / UDP+ <200 Controller>
Novell TNVTxxx Emulation / TCPIP
Netware Client / SPX/IPX
```

If your JANUS device is going to emulate a terminal, use the Select a Network/Protocol screen to specify the terminal type. The Installation Utility will load the appropriate terminal emulation application. Refer to the *JANUS 2.4 GHz Terminal Emulation Quick Reference Guide* for information about using Intermec terminal emulation software.

**Note:** If you configure your JANUS device to run terminal emulation software, a terminal emulation session will start after you complete the installation and reboot the device. If you do not want the terminal session to start, you need to modify your APP.BAT file or you can add a REM before the statement in the AUTOEXEC.BAT file that calls the APP.BAT file.

**Intermec TNVTxxx Emulation** This Intermec software allows your device to emulate a VT120/220/320 or ANSI terminal using a telnet session.

**Intermec 3270 or 5250 Emulation** This Intermec software allows your device to emulate an IBM 3270 or 5250 terminal using a telnet session.

*Note: The UDP+ option is for communication with the Model 200 Controller.*

**Novell TNVTxxx Emulation** Select this option to configure your JANUS device to emulate a VT120/220/320 or ANSI terminal using a telnet session. You may also need to load an application when running this emulation.

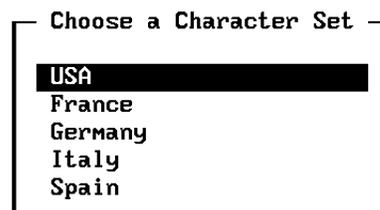
**NetWare Client for DOS** This Novell software allows your device to run your applications using SPX/IPX protocol.

**FTP PC/TCP Stack** This TCP/IP stack allows your JANUS device to run applications using the PC/TCP stack from FTP Corporation.

*Note: To install the FTP PC/TCP stack you will need to purchase the FTP PC/TCP Stack Disk (P/N 067791). See your Intermec sales representative to order the FTP disk.*

---

## Character Set Screen



The Choose a Character Set selection screen configures your JANUS RF device for the selected character set.

The Installation Utility supports international character sets for France, Germany, Italy, and Spain. The default BIOS keyboard driver supports the U.S. character set. An international character set allows DOS to display date and time prompts, currency symbols, date separators, time separators, and decimal separators in the standard format of the chosen country. The international character set drivers do not translate DOS message text.

If you select a non-U.S. character set, these actions are performed when the CONFIG.SYS file is processed:

- The COUNTRY configuration command is executed, which customizes country-dependent information (such as date and time formats, currency symbols, collating sequences, etc.) for a particular country.
- The DISPLAY.SYS device driver is loaded to support code page (character set) switching for the console device (LCD).

If you select a non-U.S. character set, these actions are performed when the AUTOEXEC.BAT file is processed:

- The appropriate code page is selected.
- The appropriate code page is prepared.
- The KEYB.COM program is loaded to replace the current keyboard driver.

#### Switching Between Keypads

Use the following commands to switch between keypad configurations on your JANUS RF device.

-    to switch to the U.S. keypad.
-    to switch to the keypad driver installed for the country you selected.

#### Conventional Memory Required

Configuring for international character sets requires an additional 17K to 35K of conventional memory on your JANUS device.

---

### ***About the Network Parameters***

Use the Installation Options screens to enter the network parameters for FTP PC/TCP for DOS, NetWare Client for DOS or LAN WorkPlace for DOS and the radio parameters. At this point, the utility checks to make sure that you have at least 14MB of hard disk space available on your host PC.

The Installation Options screen that appears depends on which terminal software option you chose in the Terminal Selection screen.

- LAN WorkPlace for DOS. This screen appears if you choose to load software that uses TCP/IP (Intermec TNVTxxx, 3270 or 5250, or Novell TNVTxxx).
- NetWare Client for DOS. This screen appears if you choose to load software that uses SPX/IPX (NetWare Client).
- FTP PC/TCP for DOS. This screen appears if you choose to load software that uses PC/TCP for DOS.

**LAN WorkPlace for DOS Parameters**

```

----- Installation Options -----
Product to Install:  Novell LAN Workplace for DOS  Version:  PROVIDED
Path to LAN Workplace Installation:
A:\NOVELL\
Drive that will be used to build new flash images:  C:
Station IP Address:
Unix User Name....:
Subnet Mask.....:
Default Router....:
Host IP Address or Host Name:
0200 Controller IP Address:
    
```

Field	Description
Version	Choose the version of LAN WorkPlace for DOS you are installing (4.2, 5.0, or provided).
Path to LAN WorkPlace Installation	Enter the location ( <i>drive:\pathname</i> ) of LAN WorkPlace for DOS on your host PC (for version 4.2 or 5.0).
Drive that will be used to build new flash images	Enter the hard drive (or partition) on your host PC that you want to use as a scratch drive to build the JANUS drive images. 14MB is required.
Station IP Address	Enter the JANUS device IP address.
Unix User Name	Enter a valid user name for the UNIX environment.
Subnet Mask	The Installation Utility enters the first part of the subnet mask based on the Station IP address. Enter the last part of the subnet mask.
Default Router	The Installation Utility enters the first part of the default router address based on the Station IP address. Enter the last part of the default router address.
Host IP Address or Host Name.	The Installation Utility enters the first part of the host IP address based on the Station IP address. Enter the last part of the host IP address or enter a host name.
0200 Controller IP Address	(UDP Plus only) Enter the IP address of the Model 200 Controller that you plan to communicate with.

**NetWare Client for DOS Parameters**

Installation Options	
Product to Install:	Novell NetWare Client for DOS      Version: 4.1
Path to Netware Client Installation:	C:\NWCLIENT
Drive that will be used to build new flash images:	C:
Novell User Name:	
Novell Server Name:	
Bindery Emulation?	No
Preferred Tree:	
Name Context:	

Field	Description
Version	(3.12, 4.x) Choose the version of NetWare Client for DOS you are installing.
Path to NetWare Client Installation	Enter the location ( <i>drive:\pathname</i> ) of NetWare Client for DOS files on your host PC.
Drive that will be used to build new flash images	Enter the hard drive (or partition) on your host PC that you want to use as a scratch drive to build the JANUS drive images. It must have at least 14MB free.
Novell User Name	(Optional) Enter the user's login name that will be used to log in to the network.
Novell Server Name	(Optional) Enter the server name to which the JANUS device will connect.
Bindery Emulation	(Optional) Choose Yes to enable bindery emulation.
Preferred Tree	(v4.x only) Enter the preferred tree.
Name Context	See your Novell NetWare Client documentation.

**FTP PC/TCP for DOS Parameters**

```

----- Installation Options -----
Product to Install:  FTP PC/TCP for DOS
Path to Network Installation:
A:\
Temporary drive for flash images:  C:
Install Novell compatibility shim:  Y
Station IP Address:
Subnet Mask:
Default Router:
    
```

Field	Description
Path to Network Installation	Enter the location ( <i>drive:\pathname</i> ) of FTP PC/TCP files on your host PC.
Temporary drive for flash images	Enter the hard drive (or partition) on your host PC that you want to use as a scratch drive to build the JANUS drive images. It must have at least 14MB free.
Install Novell compatibility shim	(Optional) Installing the Novell compatibility shim allows you to run applications written for the Novell stack to run on top of the FTP stack.
Station IP Address	Enter the JANUS device IP address.
Subnet Mask	The Installation Utility enters the first part of the subnet mask based on the Station IP address. Enter the last part of the subnet mask.
Default Router	The Installation Utility enters the first part of the default router address based on the Station IP address. Enter the last part of the default router address.

---

## About the Radio Parameters

Use the Radio Parameters screen to configure the parameters that are required for your JANUS RF device to communicate with access points. All devices in the same subnetwork must have the same domain and the same security ID. Security IDs are optional. Use different domains on devices if they are in the same area and you want the devices to communicate to different hosts.

Each domain (subnetwork), must have one acting master to coordinate communications from the various stations. For most network operating systems, the access point is the master. If the master unit is turned off or is out of range, then one of the other access points configured as an alternate master becomes the master. For most network operating systems, the JANUS RF devices are stations.

If the inactivity settings are exceeded and your radio is placed into Sleep mode, you can wake up the radio by either answering yes to the Wake Up on Broadcast parameter, or you can physically suspend and resume the JANUS RF device (press the  button twice) when the device is running.

**Note:** Intermec recommends that you keep the default settings for Inactivity Minutes and Inactivity Seconds. The default setting ensures that you will receive optimum battery life on JANUS devices with removable batteries.

Radio Parameters

Station Type:	Station
Master Name:	
Channel:	1
Subchannel:	1
Domain:	0
Inactivity Minutes:	0
Inactivity Seconds:	5
Wakeup on Broadcast:	No

---

**Radio Parameters Screen Field Descriptions**

Field	Description
Station Type	<p>You can choose master, alternate master, or station as your station type. The default is station.</p> <p>Alternate masters act either as a master or a station. If an alternate master unit is unable to locate any other master within range, it acts as a master. If a master station is already present, then the alternate master acts as a station.</p>
Master Name	<p>Masters and alternate masters. This optional parameter can be up to 11 alphanumeric characters. Each master name specifies a name that simplifies the identification of each master in your network.</p>
Channel	<p>Masters and alternate masters. Enter the channel (1 to 15) through which the master communicates with its stations.</p> <p>For each domain (subnetwork), select a different channel for each master to communicate with all the stations. The channels are 1 to 15. The default is 1.</p> <p>Each channel separates communications for each subnetwork to allow for a higher data rate transmission capability in the same airspace. Each channel provides 1.6 Mbps, for a maximum total bandwidth of 24 Mbps in a particular area.</p>
Subchannel	<p>Masters only. Enter the subchannel (1 to 15) through which the master communicates with its stations.</p> <p>If you have more than 15 masters in the same area, change the subchannel to a different value to separate the various networks. The subchannels are designated 1 to 15. The default is 1.</p>
Domain	<p>Enter the domain (0 to 15) of the subnetwork.</p> <p>If you want stations to be able to roam between masters in a subnetwork, all station types (master, alternate master, station) require the same domain number. The domain is a number from 0 to 15. The default is 0.</p>
Inactivity Minutes	<p>This parameter, with inactivity seconds, defines the length of time that the device stays on when there is no activity. If this time is exceeded, the radio is placed in a Sleep mode. The maximum amount of inactivity time you can set is 21 minutes, 15 seconds. The default and recommended setting is 0.</p>

Field	Description
Inactivity Seconds	<p>This parameter, with inactivity minutes, defines the length of time that the device stays on when there is no activity. If this time is exceeded, the radio is placed in a Sleep mode. Inactivity seconds can be from 0 to 60, in multiples of 5. The default and recommended setting is 5, which means that the radio will enter the Sleep mode after five seconds of inactivity.</p> <p>If you specify a number of seconds greater than 0, but less than 5, this parameter will automatically jump to 5 seconds.</p>
Wakeup on Broadcast	<p>Choose Yes if you want the radio to wake up and receive a broadcast packet when it is sent through the network. The default is No.</p>

After you JANUS radio enters Sleep mode, it enters a Standby mode where the clock power is lessened to save power. Also, you may want to use the automatic shutoff feature on your JANUS RF device to save power. The automatic shutoff command defines the length of time of inactivity on the JANUS device before it enters Suspend mode.

## ***Shelling Out to DOS***

---

When the Installation Utility has uploaded the JANUS images to the host PC, you can shell out to DOS if you need to perform any of these tasks.

- Create a custom JANUS.INI file. If you are installing Novell TNVTxxx or NetWare Client for DOS on your JANUS device you need to create this file. For help, see "Creating a JANUS.INI File" in Appendix B.
- Modify the J24TE.INI file. If you are installing Intermec terminal emulation on your JANUS device you may want to customize this file to permanently change your JANUS operating environment. For help, see "Customizing the J24TE.INI File" in Appendix B.
- Add your data collection application.

**Note:** *Intermec recommends that you do not run any other applications, such as Windows, from the DOS command line. Only use the DOS file editor or DOS commands to edit the files or directories.*

If the files you want to copy to drive C exceed the capacity of the drive, the following messages appear when you type `exit` at the DOS prompt.

```
ERROR: C:\IM_FLASH\DRIVEC files require 761 more cluster(s)
      than are available on JANUS drive C:

JANUS drive C:

      512 bytes/sector
       1 sector/cluster
    1016 total clusters

Press any key to continue
```

Do you want to shell out to DOS and reduce number of files? (Y/N)

To correct this problem, choose **Y** to shell out to DOS. Delete files from \IM\_FLASH\DRIVEC. This message will keep repeating each time you type `exit` until you create enough free disk space for the drive C image.

## ***Configuring Multiple JANUS RF Devices***

---

After the Installation Utility has configured your first JANUS device, a message box asks you if you want to do another installation.

At this point, you can:

- Configure another JANUS RF device.
- Save your drive images so that you can configure another JANUS device later.

Intermec recommends that you test the device before you exit the Installation Utility or before you configure other JANUS RF devices. If the device is not configured correctly, proceed with another installation and change the parameter that is causing the failure (for example, incorrect domain, IP address, etc.).

If you choose to configure another JANUS device, a message box asks you to confirm the type of installation you want to perform. If you choose **Y**, the Installation Options screen appears again. You are not be able to change the options in the first four fields. During the same installation, each device must be configured for the same network software, version, path, and flash image drive. Depending on your network software, you can change the following parameters:

**If you are installing**

NetWare Client for DOS

LAN WorkPlace for DOS

- Intermec TNVTxxx Emulation
- Intermec 3270 Emulation
- Intermec 5250 Emulation
- Novell TNVTxxx Emulation

FTP PC/TCP

**You can change**

Novell User Name  
Novell Server Name  
Bindery Emulation  
Preferred Tree  
Name Context

For an explanation of these parameters, refer to "NetWare Client for DOS Parameters" earlier in this chapter.

Station IP Address  
Unix User Name  
Subnet Mask  
Default Router  
Host IP Address or Host Name

For an explanation of these parameters, refer to "LAN WorkPlace for DOS Parameters" earlier in this chapter.

Station IP Address  
Subnet Mask  
Default Router

If you press N, you can change the type of terminal emulation software that you want to install before going to the Installation Options screen. If you change the terminal emulation, you will need to insert the TE Applications disk so the Installation Utility can get the necessary terminal emulation software.

# 3

## *Running the Installation Utility*



*This chapter explains how to use the Installation Utility to configure one or more JANUS RF devices. For more detailed information about these procedures, see Chapter 2, "Preparing to Run the Installation Utility."*

## Starting the Installation Utility

---

- At the DOS prompt of your host PC, type this command and press **Enter**.

```
a:install
```

## Configuring the First JANUS RF Device

---

For help understanding any of the processes or parameters, see Chapter 2, "Preparing to Run the Installation Utility."

### Choosing the Configuration Parameters

- The Choose a Device to Configure screen is the first to appear. Use the arrow key to select the type of JANUS RF device that is connected to your host PC and press **Enter**.

```

Choose a Device to Configure
-----
JG2010 <Intermec 4 Meg Hand Held>
JG2020 <Intermec 4 Meg Hand Held>
JG2050 <Intermec 4 Meg Vehicle Mount>

```

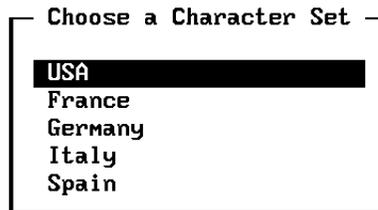
- The Select a Network/Protocol screen appears. Use the arrow key to select the type of software that you want to install on the device and press **Enter**.

```

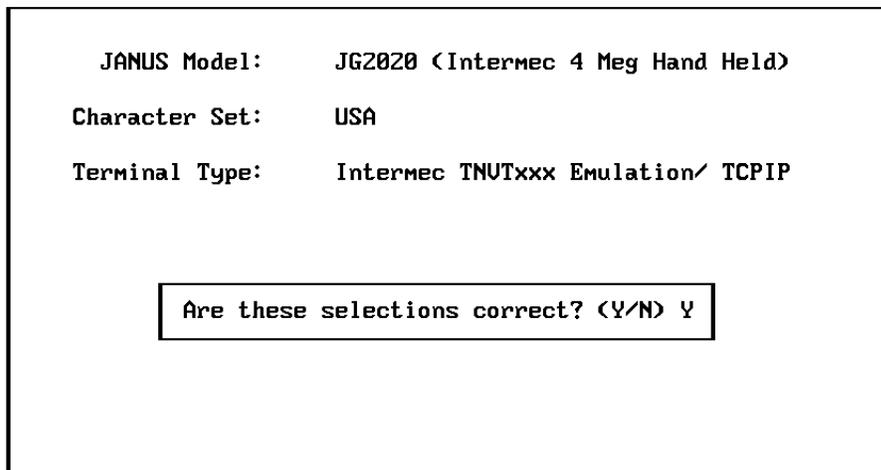
Select a Network / Protocol
-----
FTP Customer Application / PC/TCP
Intermec TNUTxxx Emulation / TCPIP
Intermec 3270 Emulation / TCPIP
Intermec 5250 Emulation / TCPIP
Intermec TNUTxxx Emulation / UDP+ <200 Controller>
Intermec 3270 Emulation / UDP+ <200 Controller>
Intermec 5250 Emulation / UDP+ <200 Controller>
Novell TNUTxxx Emulation / TCPIP
Netware Client / SPX/IPX

```

3. The Choose a Character Set screen appears for TNVT and Netware Client installations only. Use the arrow key to select the appropriate character set and press **Enter**.



4. A message box appears with your selections. Choose **Y** if the selections are correct and you want to proceed to Step 5.  
Or, choose **N** to return to the first configuration screen. Go to Step 1.



5. The Installation Options screen appears.
  - If you specified Intermec terminal emulation or Novell TNVTxxx on the Select Network/Protocol screen, the Novell Product to Install is LAN WorkPlace for DOS.
  - If you specified FTP Customer Application on the Select Network/Protocol screen, the product to install is FTP PC/TCP for DOS.

A message box appears when you tab out of the Drive that will be used to build new flash images field on the Installation Options screen, if there is an existing C:IM\_FLASH subdirectory.

OK to delete subdirectory C:\IM\_FLASH (Y/N)? Y

If you choose N, a message box appears asking if you want to copy the files to another directory. Choose Y to shell out to DOS and use DOS command to copy the files to another directory. Or, choose N.

Shell out to DOS and copy files to another directory? (Y/N)

If you choose N, a message box appears informing you that the files have been saved and then the Installation Utility will start over.

Save the files in C:\IM\_FLASH, then re-run the Install Program.

Enter the information in the Installation Options screen.

```
----- Installation Options -----
Product to Install:  Novell LAN Workplace for DOS  Version:  PROVIDED
Path to LAN Workplace Installation:
A:\NOUELL\
Drive that will be used to build new flash images:  C:
Station IP Address:
Unix User Name....:
Subnet Mask.....:
Default Router....:
Host IP Address or Host Name:
0200 Controller IP Address:
```

— Installation Options —

Product to Install: **Novell NetWare Client for DOS**      Version: **4.1**

Path to Netware Client Installation:  
**C:\NWCLIENT**

Drive that will be used to build new flash images: **C:**

Novell User Name: **[REDACTED]**

Novell Server Name: **[REDACTED]**

Bindery Emulation? **No**

Preferred Tree: **[REDACTED]**

Name Context: **[REDACTED]**

— Installation Options —

Product to Install: **FTP PC/TCP for DOS**

Path to Network Installation:  
**A:\**

Temporary drive for flash images: **C:**

Install Novell compatibility shim:

Station IP Address: **[REDACTED]**

Subnet Mask: **[REDACTED]**

Default Router: **[REDACTED]**

For help with LAN WorkPlace for DOS, see “LAN WorkPlace for DOS Parameters” in Chapter 2.

For help with NetWare Client for DOS, see “NetWare Client for DOS Parameters” in Chapter 2.

For help with FTP PC/TCP for DOS, see “FTP PC/TCP for DOS Parameters” in Chapter 2.

- Press **F10** to accept your selections. A message box prompts you to enter the JANUS 2020 Boot Utilities companion disk. Insert the disk and press any key to continue.

Insert the Boot Utilities Companion Disk in A: or B:

- A message box prompts you to confirm the letter of the drive containing the disk. Use the **spacebar** to toggle between drives A and B. Press **Enter** to confirm the disk location.

Boot Utilities Companion Disk is in Drive A:

- A message box appears prompting you to insert the Installation Utility disk. Insert the disk and press any key to continue.

Insert the Installation Utility Disk in A:

- The Radio Parameters screen appears. Enter the information in the fields.

**Radio Parameters**

Station Type: **Station**

Master Name:

Channel: **1**

Subchannel: **1**

Domain: **0**

Inactivity Minutes: **0**

Inactivity Seconds: **5**

Wakeup on Broadcast: **No**

- Press **F10** to exit the screen and save your changes. The Installation and Configuration Tasks screen indicates the progress of the installation.

If you are doing an FPT Customer Application, a message box will appear prompting you to insert the FTP stack disk. Insert the disk and press any key.

Please Insert the "FTP Stack Disk" in Drive A.

---

### ***Shelling Out to DOS to Modify the JANUS Drive Images***

When the Installation Utility has created the new drive C and drive D file structures, the following message appears.

Shell out to DOS before JANUS images built? (Y/N)

If you need to modify your JANUS images to create custom .INI files, add your application, or set a security ID, choose **Y**.

If you do not need to modify your JANUS images, choose **N**.

To use the shell out feature

1. Press any key on your PC keyboard. You go to a DOS prompt on your host PC.
2. Use DOS commands or a DOS file editor to modify your files in \IM\_FLASH\DRIVEC and \IM\_FLASH\DRIVED.
3. When you have modified the files for your JANUS drive images, type `exit` and press **Enter** to return to the Installation Utility.

If the files you want to add to the directories exceed the capacity of the JANUS drive C or drive D, this message appears when you type `exit` at the DOS prompt.

Too many files, Shell out to reduce ? (Y/N)

To correct this problem, choose **Y** to shell out to DOS and delete files from \IM\_FLASH\DRIVEC to create enough free disk space.

---

## ***Downloading the Modified JANUS Drive Images***

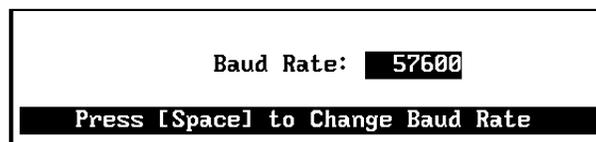
The Installation Utility creates and then downloads the modified JANUS drive C and drive D images. This process can take from 5 to 10 minutes.

To download the modified JANUS images

1. On the host PC, a message box appears asking if you want to change the baud rate for the Interlnk connection. Choose **Y** to change the baud rate to 19200, 38400, or 115200. Choose **N** to keep the baud rate at 57600.

Set Baud Rate for Loader (Default = 57600)? (Y/N)

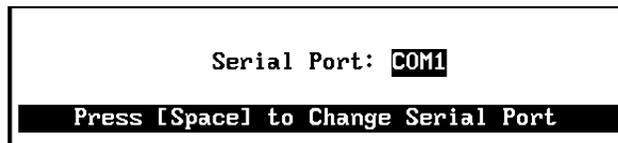
If you choose **Y**, select the baud rate. Use the **spacebar** to toggle the options. Press **Enter** to confirm the baud rate selection.



2. Another message box appears asking if you want to change the serial port where the JANUS device is connected to the host PC. Choose **Y** to change the serial port. Choose **N** to keep the same serial port you selected when you downloaded the default drive images.

Change Serial Port ? (Y/N)

If you choose **Y**, select the COM port. Use the **spacebar** to toggle between COM1, COM2, COM3, and COM4. Press **Enter** to confirm the serial port selection.



3. If the Boot Loader menu is not on the JANUS screen, use these steps.
  - a. Press  $\odot$  to place the JANUS device in a suspend state.
  - b. Press  $\text{FS}$   $\boxed{2}$   $\leftarrow$ .
  - c. Press  $\boxed{2}$ .
  - d. Press  $\odot$  to turn the JANUS device on again.
4. From the Boot Loader menu, select LOAD and press  $\text{enter} \leftarrow$ .
5. If the password is set, the Password screen prompts you to type in the password. You are allowed three tries to enter the password.

*Note: The JANUS device comes from the factory with the password disabled.*

6. Press any key on your PC keyboard. The Janus 2000 Flash Loader screen appears. This screen provides status information on the download process.

On the JANUS screen, you see the same status information.

When the Installation Utility finishes downloading the new images, a flashing message box on the host PC informs you that the flash programming on the JANUS device is complete.

This message appears on the JANUS screen.

```
Calculating Checksum
Checksum Good
```

7. Press any key on your PC keyboard to continue. Another message box informs you that the installation process was successful.
8. Press any key on your PC keyboard to continue.

9. A message box asks you if you want to do another installation. Choose **Y**, if you want to configure another JANUS device. Follow the instructions for "Configure Multiple JANUS RF Devices" in the next section.

Or, choose **N**, if you have no more JANUS devices to configure and you want to exit the Installation Utility. Follow the instructions for "Restoring the Host PC to the Original Configuration" later in this chapter.

***Note:** Test the device to make sure it is configured correctly before exiting the Installation Utility or configuring another JANUS device. If the device is not configured correctly, choose **Y** and make the necessary changes.*

If you configure your JANUS device to run terminal emulation software, a terminal emulation session will start after installation is completed and you reboot the device.

## ***Configuring Multiple JANUS RF Devices***

---

1. A message box appears asking you if you want to install the same network/protocol. Choose **Y** to install the same TE application or SPX/IPX protocol. Choose **N** to install another application.

For example, if you installed Intermec TNVTXXX TE on your JANUS device, the message box contains this message:

```
Another Intermec TNVTxxx TE Installation? (Y/N)
```

2. If you choose **N**, the Select a Network/Protocol screen appears. Use the arrow key to select the type of software that you want to install on the device and press **Enter**.
3. In the Installation Options screen, make any necessary changes to the fields. Press **F10**. The Radio Parameters screen appears.
4. In the Radio Parameters screen, make any necessary changes to the fields. Press **F10**.
5. A message box appears asking if you want to use the shell out feature. Choose **Y** if you need to make changes to your JANUS drive images. When you are finished modifying the files for your JANUS drive images, type `exit` and press **Enter** to return to the Installation Utility. Or, choose **N**.  

```
Shell out to DOS before JANUS images built? (Y/N)
```
6. Make sure the next JANUS device that you want to configure is connected to the host PC.
7. Follow Steps 1 through 9 in the previous procedure, "Downloading the Modified JANUS Drive Images."

## ***Restoring the Host PC to the Original Configuration***

---

1. When you finish configuring JANUS devices, choose **N** when a message box asks you if you want to do another installation.
2. A message box asks you if you want to delete files generated by the install. If you want to delete all of the files that were created by the Installation Utility, choose **Y**.

If you want to save these files in the subdirectories on the host PC, choose **N**. The Installation Utility creates batch files in these subdirectories that will facilitate further modification to the JANUS drive images. For help using these batch files, see “Configuring Multiple JANUS RF Devices Using Batch Files” in Appendix B.

Do you want to delete the files generated by the install?  
(Y/N)

You have successfully installed the network software on your JANUS devices.



# 4

## *Troubleshooting*



*The troubleshooting chapter provides you with information on how to troubleshoot the Installation Utility.*

## General Problems

---

This table lists general troubleshooting problems you may have while using the Installation Utility. Use the problem and solution columns to help you correct the problem.

Symptom	Problem	Solution
<p>The JANUS device is overheating.</p> <p>Or,</p> <p>The JANUS device seems to be working better in a cold environment than a warm environment.</p>	<p>The application you are running on the JANUS device is sending too many packets to the host.</p>	<p>Try reducing the number of packets sent to 2 or 3 packets per second.</p>
<p>The Novell network software on your device is not running properly.</p>	<p>You may not have loaded all the Novell network software subdirectories.</p>	<ol style="list-style-type: none"> <li>1. Make sure the Novell network software on your host PC has the correct directory structure.</li> <li>2. Reinstall the Novell network software on your host PC and rerun the Installation Utility.</li> </ol>
<p>You have too many files in your Novell network software subdirectories.</p>	<p>You may have answered 'Yes' to Windows support when loading the Novell network software on your host PC.</p>	<p>Reinstall the Novell network software and answer 'No' to Windows support.</p>
<p>You are missing some of the files on the backup copy of the Installation Utility disk or the Boot companion disk.</p>	<p>You may not have copied all the subdirectories when you were making the backup copy of the Installation Utility disk.</p>	<p>Recopy the disks using DISKCOPY.</p>
<p>You created a custom configuration file and it disappeared.</p>	<p>You may have saved the custom JANUS.INI file to drive E and performed a cold boot on the device.</p>	<p>Recreate the custom configuration file and save the file to drive C.</p> <p>Change the pathname to the JANUS.INI in your AUTOEXEC.BAT file.</p>
<p>You saved a custom configuration file to drive C and the device cannot find it.</p>	<p>You may not have updated the path for the JANUS.INI in your AUTOEXEC.BAT.</p>	<p>Change the pathname to the JANUS.INI in your AUTOEXEC.BAT file.</p>

## Error Messages

---

You may encounter error messages while running the Installation Utility. This table lists the error messages in alphabetical order. If an error message appears on your screen, locate it in the table and use the problem and solution columns to help you correct the error.

Error Message	Problem	Solution
C: is an Invalid Drive (where C: is scratch drive specified by user).	You did not specify a valid drive for your scratch drive.	Make sure that the drive letter that you specify is a valid physical hard drive.
Channel must be a number between 1 and 15.	You did not select a valid channel.	Select a number between 1 and 15 for the channel.
Creattemp() ERROR: Path or file name not found.	The system could not find the \NWCLIENT\NLS directory on the scratch drive of the host PC. You may not have loaded all the Novell network software subdirectories.	<ol style="list-style-type: none"><li>1. Make sure the NetWare Client for DOS software on the scratch drive of your host PC has the directory structure listed in the section "Modifying the JANUS Drive Images" in Chapter 1.</li><li>2. Reinstall NetWare Client for DOS on your host PC and rerun the Installation Utility.</li></ol>
Creattemp() ERROR: Permission denied.	You should not get this error.	Call Intermec Technical Support.
Creattemp() ERROR: Too many open files.	Your system is out of file handles.	Modify the CONFIG.SYS file on the Installation Utility disk and increase the FILES= parameter.
DEVICE ERROR! (hardware error on a non-disk device.)	<ul style="list-style-type: none"><li>• Serial link error.</li><li>• System error, bad COM port or cable.</li></ul>	<ul style="list-style-type: none"><li>• Restart the Installation Utility.</li><li>• Replace the bad port or cable.</li></ul>
Domain must be a number between 0 and 15.	You did not select a valid domain.	Select a number between 0 and 15 for the domain. The domain must be the same for all devices in the subnetwork.
Error, IP address is a special case IP address.	You have entered a special case IP address (host, broadcast, or loopback address) on the Installation Options screen.	To enter a special case IP address, leave the IP address field blank on the Installation Options screen. Use the Shell Out option to edit the NET.CFG file and enter the special case address in the NET.CFG.

Error Message	Problem	Solution
ERROR:JG20xx selected, JG20xx platform detected	You have specified a JANUS model number that is different from the device that you are configuring. xx is the 10, 20, or 50 as appropriate.	The JANUS model number you specify during the installation must match the device that is connected to the host PC. Retry running the Installation Utility and specify the correct model number.
ERROR:JG20xx selected, J2010 w/a PCMCIA back detected	You have specified a JANUS model number that is different from the device that you are configuring. xx is the 10, 20, or 50 as appropriate.	The JANUS model number you specify during the installation must match the device that is connected to the host PC. Retry running the Installation Utility and specify the correct model number.
Error Loading RL2OEM.COM.	If you get this message when the JANUS device boots, it indicates that the radio failed to initialize because of a hardware problem.	Contact Intermec Technical Support.
Error, This IP address is the same as the 0200 Controller IP address.	You are using a duplicate IP address.	Verify that you are using the correct IP address.
Error, This IP address is the same as the Host IP address.	You are using a duplicate IP address.	Verify that you are using the correct IP address.
Error, This IP address is the same as the Router IP address.	You are using a duplicate IP address.	Verify that you are using the correct IP address.
Error, This IP address is the same as the Station IP address.	You are using a duplicate IP address.	Verify that you are using the correct IP address.
External AC Power was not Plugged In, Try Again?	External AC power supply was not plugged into the JANUS device.	<ol style="list-style-type: none"> <li>1. Make sure you have an external AC power supply plugged into the JANUS device.</li> <li>2. Choose Yes to try programming flash memory again.</li> </ol>
Failure Copying C:\NET\TCP\PROTOCOL to D:\NET\TCP D:\NET\TCP\PROTOCOL successfully created	A file required for the installation was missing and the Installation Utility created the file.	Acknowledge the message by pressing any key and continue with the installation.
Flash Loader Aborted by User, Try Again?	You pressed <b>Ctrl-Break</b> to interrupt the Flash Loader program.	Choose Yes if you want to restart the JANUS 2000 Flash Loader program. Choose No if you do not want to complete the installation.
Flash Loader Reported a Communication Failure Error, Try Again?	Serial link failed.	<ul style="list-style-type: none"> <li>• Choose Yes to try programming flash memory again.</li> <li>• Restart the Installation Utility.</li> </ul>

Error Message	Problem	Solution
Flash Loader Reported a General Failure Error, Try Again?	General failure.	<ul style="list-style-type: none"> <li>Choose Yes to try programming flash memory again.</li> <li>Restart the Installation Utility.</li> </ul>
Host must be running DOS 5.0 or above.	You are not running DOS 5.0 or above on your host PC.	<ul style="list-style-type: none"> <li>Install DOS 5.0 or above on your host PC.</li> <li>Use a different host PC that is running DOS 5.0 or above.</li> </ul>
INSTALL.EXE Error: Command line parameter error.	Software error.	Contact your Intermec representative.
INSTALL.EXE Error: File is Wrong Size.	Software error.	Contact your Intermec representative.
INSTALL.EXE Error: File not Found.	Software error.	Contact your Intermec representative.
INSTALL.EXE Error: Unable to Open File.	Software error.	Contact your Intermec representative.
Installation Disk MUST be in Drive A.	<ul style="list-style-type: none"> <li>You are trying to run PCSETUP from drive B.</li> <li>The Installation Utility disk is no longer in drive A.</li> </ul>	Place the Installation Utility disk in drive A of your host PC and type <code>a:\install</code> .
Insufficient Memory.	System error.	<ul style="list-style-type: none"> <li>Restart the Installation Utility.</li> <li>Perform diagnostics on the host PC.</li> </ul>
Invalid Port, LOAD Not Selected, or Cable Unplugged, Try Again?	<ul style="list-style-type: none"> <li>You may have selected the wrong serial port on your host PC (COM1, COM2, COM3, or COM4).</li> <li>You may not have selected LOAD and pressed  on your JANUS device.</li> <li>You may not have the host PC and the JANUS device connected with a null modem cable.</li> </ul>	<ul style="list-style-type: none"> <li>Make sure that you selected the correct serial port on your host PC where your JANUS device is connected. Choose Yes to try again.</li> <li>Make sure you selected LOAD and pressed  on your JANUS device. Choose Yes to try again.</li> <li>Connect a null modem cable from your host PC to the serial port on the JANUS. Choose Yes to try again.</li> </ul>
Manufacturing ID not Received, Try Again?	Manufacturing ID not received.	Answer Yes to try programming flash memory again.

Error Message	Problem	Solution
<p>Need at least rK of Extended Memory, only have iK.                      r = Total kilobytes of extended memory required                      i = Total kilobytes of extended memory installed</p>	<ul style="list-style-type: none"> <li>You do not have enough extended memory on your host PC.</li> <li>You are running the Installation Utility on a host PC that does not follow the established CMOS standards.</li> </ul>	<p>Make sure that your host PC has at least 4MB of RAM.</p>
<p>Only X bytes available on C:, Need Y.                      X = Total bytes available.                      C: = Scratch drive specified by user.                      Y = Total bytes required.</p>	<p>You must have at least 14MB of free space on your scratch drive.</p>	<ul style="list-style-type: none"> <li>Make sure that you specify a valid physical hard drive.</li> <li>Remove or move files from the drive you are using for the scratch drive until you have 14MB of free space.</li> </ul>
<p>Path must include a drive specifier.</p>	<p>You did not type a drive letter when you specified the pathname.</p>	<p>Add a drive letter, colon, and back slash to the pathname. For example: C:\</p>
<p>Subchannel must be a number between 1 and 15.</p>	<p>You did not select a valid subchannel.</p>	<p>Select a number between 1 and 15 for the subchannel.</p>
<p>Unable to Create New JANUS Drive C Image!</p>	<p>System error. You may have copied too many files to the \IM_FLASH\DRIVEC directory.</p>	<p>Restart the Installation Utility.</p>
<p>Unable to Create New JANUS Drive D Image!</p>	<p>System error.</p>	<p>Restart the Installation Utility.</p>
<p>Unable to Find Application Image in Archive File.</p>	<p>Bad companion disk 1.</p>	<p>Make another copy of the Boot Utilities companion disk from the original disk.</p>
<p>Unable to Find Specified Block in 4MEG2_4.INI.</p>	<p>Software error. You may have modified this .INI file.</p>	<p>Contact your Intermecc representative.</p>
<p>Unable to Find System Image in Archive File.</p>	<p>Bad boot utilities disk.</p>	<p>Make another copy of the Boot Utilities companion disk from the original disk.</p>
<p>Unable to Find User Image in Archive File.</p>	<p>Bad boot utilities disk.</p>	<p>Make another copy of the Boot Utilities companion disk from the original disk.</p>
<p>Unable to Free Enough Drive D Space.</p>	<p>You have too many files in the NetWare Client or LAN WorkPlace subdirectories.</p>	<p>Review the source subdirectories and eliminate unnecessary files. If the software was installed using Windows support, delete the Windows files and reinstall the software without Windows support.</p>

Error Message	Problem	Solution
Unable to Update Flash, Try Again?	Unknown flash loader error.	Contact your Intermec representative.
Unable to Verify Installation Path.	You specified an installation path that does not exist.	Enter the name of an installation path that does exist.
v1.31 detected, must be v4.00 - v4.99	The JANUS software you are using is an older version and can't be installed.	Make sure you follow the procedure to download the default drive images from the Installation Utility disk to the JANUS device.
VPP Programming Voltage not Present, Try Again?	AC adapter bad, not plugged in, or loose.	<ul style="list-style-type: none"> <li>• Connect an external AC power supply to the JANUS device (or make sure it is pushed in all the way).</li> <li>• Choose Yes to try programming the JANUS flash memory again.</li> </ul>
WARNING, current IP address matches previous IP address. Do you want to change the current IP address?	On additional installations, the Installation Utility provides this warning message if you use a duplicate IP address	Verify you are using the correct IP address and continue. You have the option of changing the IP address at this time.
Warning, HOSTS Too Large or Not Found, Continue?	Your HOSTS file must be less than 50K.	<ul style="list-style-type: none"> <li>• Ignore this message if you do not have a HOSTS file and answer Yes to continue.</li> <li>• Reduce the number of alias lists in your HOSTS file and answer Yes to continue.</li> </ul>

## ***Drive A Error Messages***

---

These disk drive error messages refer to the current drive being accessed. This table lists the error messages in alphabetical order. If an error message appears on your screen, locate it in the table and use the problem and solution columns to help you correct the error.

Error Message	Problem	Solution
Error: data error (CRC) on the A: Drive.	<p>DOS was unable to read or write the data correctly.</p> <p>This error is usually caused by a defective area on the disk.</p>	<ul style="list-style-type: none"> <li>• Retry the operation.</li> <li>• Replace the disk.</li> <li>• Check your disk using the CHKDSK command.</li> </ul>

Error Message	Problem	Solution
Error: general failure on the A: Drive.	<ul style="list-style-type: none"> <li>• The disk is incompatible with your host PC drive.</li> <li>• The drive door is open or the disk is not in the drive.</li> <li>• Disk is not properly formatted.</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure that you are not using a high density disk in a low density drive.</li> <li>• Properly insert the disk and close the drive door.</li> <li>• Reformat the disk.</li> <li>• Replace the disk.</li> </ul>
Error: invalid disk change on the A: Drive.	You changed disks before all the files were closed.	Reinsert the original disk so the files can be closed.
Error: read fault on the A: Drive.	<ul style="list-style-type: none"> <li>• Drive media error.</li> <li>• DOS was unable to read data from the disk.</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure that the disk is properly seated in the drive and retry the operation.</li> <li>• Replace the disk.</li> </ul>
Error: sector not found on the A: Drive.	<ul style="list-style-type: none"> <li>• Drive media error.</li> <li>• DOS could not find the disk sector containing the requested data.</li> </ul>	<ul style="list-style-type: none"> <li>• Retry the operation.</li> <li>• Make a copy of the bad disk and reformat the bad disk.</li> <li>• Make another copy of the Installation Utility disk from the original Installation Utility disk.</li> </ul>
Error: seek error on the A: Drive.	The disk drive could not find the specified disk cylinder.	<ul style="list-style-type: none"> <li>• Retry the operation.</li> <li>• Replace the disk.</li> <li>• Perform diagnostics to determine the type of failure.</li> </ul>
Error: unknown media type on the A: Drive.	Drive media error.	<ul style="list-style-type: none"> <li>• Replace the disk.</li> <li>• Reformat the disk.</li> </ul>
Installation Disk w/file 4MEG2_4.INI MUST be in Drive A.	The Installation Utility cannot find the 4MEG2_4.INI file.	<ul style="list-style-type: none"> <li>• Make sure that you inserted the Installation Utility disk in drive A.</li> <li>• Make sure the Installation Utility disk in drive A contains the 4MEG2_4.INI file. If you cannot find the file, contact Intermec Technical Support.</li> </ul>





***Deleted, Modified, and New Files***



*This appendix lists the files that the Installation Utility deletes from the JANUS devices. It provides printouts of the modified CONFIG.SYS and AUTOEXEC.BAT files and the new NET.CFG, NET.BAT, APP.BAT, GO.BAT, UNNET.BAT, PCTCP.INI, and UDPPLUS.INI files. It also lists the minimum required files for a LAN WorkPlace for DOS installation.*

## **Deleted Files**

---

This section lists the files that are deleted from the JANUS drives C and D. If you use the shell out feature, you can restore selected files that the Installation Utility removes. You can also add the application that you will be running to drive C or D. Use DOS commands to choose which files you want to keep and which ones you want to delete.

---

### **Files Removed From Drive C**

The Installation Utility removes the following files from drive C on the JANUS device. These files are stored in \IM\_FLASH\DRIVECX.

CARDINFO.EXE  
 COMMAND.COM  
 INITENV.EXE  
 JANUS.MRF  
 MCFORMAT.EXE

---

### **Files Removed From Drive D**

To fit the Intermec or Novell software on the JANUS device, the Installation Utility needs at least 700K of free space.

The Installation Utility removes these files from drive D on the JANUS device. These files are stored in the \IM\_FLASH\DRIVEDX directory.

ANSI.SYS	LABEL.EXE
ATTRIB.EXE	PHIMEC.EXE
DEBUG.EXE	PHPCSTD.EXE
EDLIN.EXE	RFPH.EXE
FC.EXE	SETVER.EXE
INTERSVR.EXE	SORT.EXE
IRL.BAT	SUBST.EXE
IRL001.DAT	UNDELETE.EXE
IRLDESK.EXE	

These files are conditionally deleted from drive D if additional space is required. Files are deleted in the order listed.

ANSI.SYS  
PHPCSTD.EXE  
PHIMEC.EXE  
INTERSVR.EXE  
CHKDSK.EXE  
FORMAT.COM  
MEM.EXE  
MORE.COM  
XCOPY.EXE  
DOSKEY.EXE

## ***Modified CONFIG.SYS File***

---

The Installation Utility modifies the CONFIG.SYS file that was on the JANUS device. The following are examples of the new files.

---

### ***JG2010 CONFIG.SYS***

```
REM *  
REM * FILENAME: CONFIG.SYS  
REM *  
REM * PROD ID: J2010  
REM *  
REM * VERSION: 4.04H  
REM *  
REM * SETUP BOOT MENU ITEMS  
[MENU]  
MENUITEM=SRAM, SRAM PCCARD  
MENUITEM=ATA, ATA PCCARD  
MENUITEM=FLASH, FLASH PCCARD  
MENUITEM=IO, I/O PCCARD  
MENUITEM=NO, NO PCCARD  
MENUCOLOR=15,0  
MENUDEFAULT=SRAM, 20  
  
[COMMON]  
REM * COMMON TO ALL CONFIGURATIONS  
  
REM * SET ENVIRONMENT SIZE  
SHELL=COMMAND.COM /E:2000 /P
```

---

*JG2010 CONFIG.SYS (continued)*

```
DEVICE=D:\HIMEM.SYS /TESTMEM:OFF
DOS=HIGH
```

```
REM * LOAD APM POWER MANAGEMENT
DEVICE=D:\POWER.EXE /LOW
```

```
REM * LOAD DRIVE E: RAMDISK
DEVICE=D:\SRAMDISK.SYS 256 512 /E
```

```
REM * REQUIRED TO RESUME PCCARD CONTROLLER
INSTALL=D:\CARD_SR.EXE
```

```
[SRAM]
REM * MEMORY CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=MTSRAM.EXE
DEVICE=MTDDR.V.EXE
```

```
[ATA]
REM * ATA CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=D:\ATADRV.EXE /S:2
DEVICE=MTDDR.V.EXE
DEVICE=D:\CARDID.EXE
```

```
[FLASH]
REM * FLASH CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=D:\MTI1.EXE
DEVICE=D:\MTI2P.EXE
DEVICE=MTDDR.V.EXE
DEVICE=D:\FTL.EXE
```

```
[IO]
REM * I/O AND MEMORY CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=MTSRAM.EXE
DEVICE=MTDDR.V.EXE
DEVICE=D:\CARDID.EXE
```

```
[NO]
REM * NO PCCARD CARDS
```

---

***JG2010 CONFIG.SYS (continued)***

```
[COMMON]
REM * AUTO LOADER HOOK IF ACTIVE
DEVICE=D:\INTERLNK.EXE /DRIVES:5 /NOPRINTER /COM:1 /AUTO

BUFFERS=10

REM * FOR INTERMEC IRL SUPPORT.
FILES=50

STACKS=9,256
```

---

***JG2020 CONFIG.SYS***

```
REM *
REM * FILENAME: CONFIG.SYS
REM *
REM * PROD ID: J2020
REM *
REM * VERSION: 4.01D
REM *
REM * SETUP BOOT MENU ITEMS
[MENU]
MENUITEM=SRAM, SRAM PCCARD
MENUITEM=ATA, ATA PCCARD
MENUITEM=FLASH, FLASH PCCARD
MENUITEM=IO, I/O PCCARD
MENUITEM=NO, NO PCCARD
MENUCOLOR=15,0
MENUDEFAULT=SRAM, 20

[COMMON]
REM * COMMON TO ALL CONFIGURATIONS

REM * SET ENVIRONMENT SIZE
SHELL=COMMAND.COM /E:2000 /P

DEVICE=D:\HIMEM.SYS /TESTMEM:OFF

DOS=HIGH

REM * LOAD APM POWER MANAGEMENT
DEVICE=D:\POWER.EXE /LOW

REM * LOAD DRIVE E: RAMDISK
DEVICE=D:\SRAMDISK.SYS 256 512 /E
```

---

*JG2020 CONFIG.SYS (continued)*

```
REM * REQUIRED TO RESUME PCCARD CONTROLLER
INSTALL=D:\CARD_SR.EXE

[SRAM]
REM * MEMORY CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=MTSRAM.EXE
DEVICE=MTDDRIV.EXE

[ATA]
REM * ATA CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=D:\ATADRV.EXE /S:2
DEVICE=MTDDRIV.EXE
DEVICE=D:\CARDID.EXE

[FLASH]
REM * FLASH CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=D:\MTI1.EXE
DEVICE=D:\MTI2P.EXE
DEVICE=MTDDRIV.EXE
DEVICE=D:\FTL.EXE

[IO]
REM * I/O AND MEMORY CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=MTSRAM.EXE
DEVICE=MTDDRIV.EXE
DEVICE=D:\CARDID.EXE

[NO]
REM * NO PCCARD CARDS

[COMMON]
REM * AUTO LOADER HOOK IF ACTIVE
DEVICE=D:\INTERLNK.EXE /DRIVES:5 /NOPRINTER /COM:1 /AUTO
BUFFERS=10

REM * FOR INTERMEC IRL SUPPORT.
FILES=50

STACKS=9,256
```

## JG2050 CONFIG.SYS

```
REM *
REM * FILENAME: CONFIG.SYS
REM *
REM * PROD ID: J2050
REM *
REM * VERSION: 4.01F
REM *
REM * SETUP BOOT MENU ITEMS
[MENU]
MENUITEM=SRAM, SRAM PCCARD
MENUITEM=ATA, ATA PCCARD
MENUITEM=FLASH, FLASH PCCARD
MENUITEM=IO, I/O PCCARD
MENUITEM=NO, NO PCCARD
MENUCOLOR=15,0
MENUDEFAULT=SRAM, 20

[COMMON]
REM * COMMON TO ALL CONFIGURATIONS

REM * SET ENVIRONMENT SIZE
SHELL=COMMAND.COM /E:2000 /P

DEVICE=D:\HIMEM.SYS /TESTMEM:OFF
DOS=HIGH

REM * LOAD APM POWER MANAGEMENT
DEVICE=D:\POWER.EXE /LOW

REM * LOAD DRIVE E: RAMDISK
DEVICE=D:\SRAMDISK.SYS 256 512 /E

REM * REQUIRED TO RESUME PCCARD CONTROLLER
INSTALL=D:\CARD_SR.EXE

[SRAM]
REM * MEMORY CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=MTSRAM.EXE
DEVICE=MTDDR.V.EXE
```

---

*JG2050 CONFIG.SYS (continued)*

```
[ATA]
REM * ATA CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=D:\ATADRV.EXE /S:2
DEVICE=MTDDR.V.EXE
DEVICE=D:\CARDID.EXE

[FLASH]
REM * FLASH CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=D:\MTI1.EXE
DEVICE=D:\MTI2P.EXE
DEVICE=MTDDR.V.EXE
DEVICE=D:\FTL.EXE

[IO]
REM * I/O AND MEMORY CARDS
DEVICE=D:\CS.EXE /POLL:1
DEVICE=D:\CSALLOC.EXE D:\CSALLOC.INI
DEVICE=MTSRAM.EXE
DEVICE=MTDDR.V.EXE
DEVICE=D:\CARDID.EXE

[NO]
REM * NO PCCARD CARDS

[COMMON]
REM * AUTO LOADER HOOK IF ACTIVE
DEVICE=D:\INTERLNK.EXE /DRIVES:5 /NOPRINTER /COM:1 /AUTO

BUFFERS=10

REM * FOR INTERMEC IRL SUPPORT.
FILES=50

STACKS=9,256
```

## Modified AUTOEXEC.BAT File

---

The Installation Utility modifies the AUTOEXEC.BAT file installed on the JANUS device. The following are examples of the new files.

---

### JG2010 AUTOEXEC.BAT

```
@ECHO OFF
CLS
:*
:* FILENAME: AUTOEXEC.BAT
:*
:* PRODUCT: J2010
:*
:* VERSION: 4.04H
:*
:* ----- ! AUTO-INTERROGATING DRIVE C: INSTALLATION ! -----
:*
:* INTERMEC AUTOMATIC DRIVE C: INSTALLER HOOK; (DO NOT REMOVE!)
:*
ECHO OFF
CLS
IF NOT EXIST AUTOINST.BAT GOTO T2
CALL AUTOINST
GOTO T3
:T2
IF EXIST D:\AUTOINST.BAT CALL D:\AUTOINST
:T3
:*
:* ----- AUTO-INTERROGATING DRIVE C: INSTALLATION ENDS -----
SET PROMPT=$P$G
PATH=C:\;D:\;E:\

REM * REQUIRED FOR MORE.COM TO WORK ON ROM DRIVES
SET TEMP=E:\

REM * USED BY READER SERVICES
SET IM_ERRPATH=E:\

D:

REM * REQUIRED TO RESUME IF NO APM_4M
D:\IPM_4M.EXE

REM * LOAD FOR PCMCIA CARD DETECT ON RESUME
REM D:\APM_4M.EXE
```

---

**JG2010 AUTOEXEC.BAT (continued)**

```
REM * LOAD BARCODE READER FUNCTIONALITY
IF EXIST D:\LOADUMA.EXE D:\LOADUMA

REM * REQUIRED FOR COMPLETE DISPLAY FUNCTION
D:\IM_DISP.EXE

REM * SET READER CONFIG
D:\IC /L C:\J24TE.INI

REM * CONFIGURE BARCODE WEDGE (DEFAULT DISABLE)
REM * 0= DISABLE WITH EXKBD
REM * 1= ENABLE WITH EXKBD
REM * 2= ENABLE WITHOUT EXKBD
REM * 3= DISABLE WITHOUT EXKBD
REM * 4= DISPLAY STATUS
REM D:\KWC.COM
REM * LOADS ONLY IF RF BACK INSTALLED
REM RFPH 4
REM * IF FTA EXISTS CALL TO DETERMINE IF HOST TRANSFER
REM * NOTE: THE RAMDRIVE E: IS USED SO FILES CAN BE
REM * ACCESSED WITHOUT SPECIFYING THE FULL PATH.
IF NOT EXIST C:\FTA.EXE GOTO DOS_PROMPT
E:
FTA.EXE CHECKHOST; EXIT

REM * START POSSIBLE HOST SET IM_APPLICATION
REM * TO EXECUTE A DOWNLOADED APPLICATION
%IM_APPLICATION%

:DOS_PROMPT
REM * END AT C: DOS PROMPT
C:
CLS
D:
CD \NET\BIN
C:
PATH=%PATH%;D:\NET\BIN;D:\NET\DRIVERS
IF EXIST C:\DOS_NLS.BAT CALL C:\DOS_NLS.BAT
D:\NET\DRIVERS\MINIPM.EXE
D:\KWC.COM 0
@ECHO.
@ECHO.
CHOICE /C:YN /TY,5 Run Network?
IF ERRORLEVEL 2 GOTO PROMPT
CALL NET.BAT
IF EXIST APP.BAT CALL APP.BAT
IF EXIST UNNET.BAT CALL UNNET.BAT
:PROMPT
```

---

## JG2020 AUTOEXEC.BAT

```
@ECHO OFF
CLS
:*
:* FILENAME: AUTOEXEC.BAT
:*
:* PRODUCT: J2020
:*
:* VERSION: 4.01D
:*
:* ----- ! AUTO-INTERROGATING DRIVE C: INSTALLATION ! -----
:*
:* INTERMEC AUTOMATIC DRIVE C: INSTALLER HOOK; (DO NOT REMOVE!)
:*
ECHO OFF
CLS
IF NOT EXIST AUTOINST.BAT GOTO T2
CALL AUTOINST
GOTO T3
:T2
IF EXIST D:\AUTOINST.BAT CALL D:\AUTOINST
:T3
:*
:* ----- AUTO-INTERROGATING DRIVE C: INSTALLATION ENDS -----
SET PROMPT=$P$G
PATH=C:\;D:\;E:\

REM * REQUIRED FOR MORE.COM TO WORK ON ROM DRIVES
SET TEMP=E:\

REM * USED BY READER SERVICES
SET IM_ERRPATH=E:\

D:

REM * REQUIRED TO RESUME IF NO APM_4M
D:\IPM_4M.EXE

REM * LOAD FOR PCMCIA CARD DETECT ON RESUME
REM D:\APM_4M.EXE
REM * LOAD BARCODE READER FUNCTIONALITY
IF EXIST D:\LOADUMA.EXE D:\LOADUMA
```

---

**JG2020 AUTOEXEC.BAT (continued)**

```
REM * REQUIRED FOR COMPLETE DISPLAY FUNCTION
D:\IM_DISP.EXE

REM * SET READER CONFIG
D:\IC /L C:\J24TE.INI

REM * CONFIGURE BARCODE WEDGE (DEFAULT DISABLE)
REM * 0= DISABLE WITH EXKBD
REM * 1= ENABLE WITH EXKBD
REM * 2= ENABLE WITHOUT EXKBD
REM * 3= DISABLE WITHOUT EXKBD
REM * 4= DISPLAY STATUS
REM D:\KWC.COM

REM * LOADS ONLY IF RF BACK INSTALLED
REM RFPH 4

REM * IF FTA EXISTS CALL TO DETERMINE IF HOST TRANSFER
REM * NOTE: THE RAMDRIVE E: IS USED SO FILES CAN BE
REM * ACCESSED WITHOUT SPECIFYING THE FULL PATH.
IF NOT EXIST C:\FTA.EXE GOTO DOS_PROMPT
E:
FTA.EXE CHECKHOST; EXIT

REM * START POSSIBLE HOST SET IM_APPLICATION
REM * TO EXECUTE A DOWNLOADED APPLICATION
%IM_APPLICATION%

:DOS_PROMPT
REM * END AT C: DOS PROMPT
C:
CLS
D:
CD \NET\BIN
C:
PATH=%PATH%;D:\NET\BIN;D:\NET\DRIVERS
IF EXIST C:\DOS_NLS.BAT CALL C:\DOS_NLS.BAT
D:\NET\DRIVERS\MINIPM.EXE
D:\KWC.COM 0
@ECHO.
@ECHO.
CHOICE /C:YN /TY,5 Run Network?
IF ERRORLEVEL 2 GOTO PROMPT
CALL NET.BAT
IF EXIST APP.BAT CALL APP.BAT
IF EXIST UNNET.BAT CALL UNNET.BAT
:PROMPT
```

## JG2050 AUTOEXEC.BAT

```
@echo off
cls
:*
:* Filename: autoexec.bat
:*
:* Product: J2050
:*
:* Version: 4.01f
:*
:* ----- ! AUTO-INTERROGATING DRIVE C: INSTALLATION ! -----
:*
:* Intermec automatic Drive C: installer hook; (DO NOT REMOVE!)
:*
ECHO OFF
CLS
IF NOT EXIST AUTOINST.BAT GOTO T2
CALL AUTOINST
GOTO T3
:T2
IF EXIST D:\AUTOINST.BAT CALL D:\AUTOINST
:T3
:*
:* ----- AUTO-INTERROGATING DRIVE C: INSTALLATION ENDS -----
set prompt=$p$g
path=c:\;d:\;e:\

REM * required for more.com to work on rom drives
set temp=e:\

REM * used by reader services
set IM_ERRPATH=e:\

d:

REM * required to resume if no apm_4m
d:\ipm_4m.exe

REM * load for PCMCIA card detect on resume
REM d:\apm_4m.exe

REM * load barcode reader functionality
IF exist d:\loaduma.exe d:\loaduma

REM * required for complete display function
d:\im_disp.exe

REM * set reader config
d:\ic /l e:\janus.ini
```

---

*JG2050 AUTOEXEC.BAT (continued)*

```
rem * configure barcode wedge (default disable)
rem * 0= Disable with Exkbd
rem * 1= Enable with Exkbd
rem * 2= Enable without Exkbd
rem * 3= Disable without Exkbd
rem * 4= Display Status
d:\kwc.com 0

REM * loads only if RF back installed
RFPH 4

rem * IF FTA exists call to determine if host transfer
rem * Note: The Ramdrive e: is used so files can be
rem * accessed without specifying the full path.
IF not exist c:\fta.exe goto DOS_PROMPT
e:
fta.exe CheckHost; Exit

rem * Start possible host set IM_APPLICATION
rem * to execute a downloaded application
%IM_APPLICATION%

:DOS_PROMPT
rem * End at c: dos prompt
c:
cls
```

## NET.CFG File

---

The Installation Utility creates a NET.CFG file based on the software you are using and the network parameters you set. The following are examples of what the NET.CFG files may look like.

---

### JG2010 NET.CFG

#### LINK SUPPORT

```
BUFFERS 8 1500
MEMPOOL 4096
MAX STACKS 8
```

#### PROTOCOL TCPIP

```
PATH LANG_CFG      D:\NET\LANG
PATH SCRIPT        D:\NET\SCRIPT
PATH PROFILE       D:\NET\PROFILE
PATH LWP_CFG       D:\NET\HSTACC
PATH TCP_CFG       D:\NET\TCP
```

```
IP_ROUTER          192.9.175.0
IP_NETMASK         255.255.255.0
IP_ADDRESS         192.9.175.235
```

#### PROTOCOL IPXODI

```
SPX LISTEN TIMEOUT 5400 ;WAIT TIME IN TICS BEFORE IT REQUESTS A SEND

SPX VERIFY TIMEOUT 5400 ;FREQ IN TICKS THAT SPX SENDS A PACKET
```

#### NETWARE DOS REQUESTER

```
FIRST NETWORK DRIVE = H
USE DEFAULTS = OFF
VLM = CONN.VLM
VLM = IPXNCP.VLM
VLM = TRAN.VLM
VLM = SECURITY.VLM
VLM = NDS.VLM
VLM = BIND.VLM
VLM = NWP.VLM
VLM = FIO.VLM
VLM = GENERAL.VLM
VLM = REDIR.VLM
VLM = PRINT.VLM
VLM = NETX.VLM
```

---

**JG2010 NET.CFG (continued)**

```
LINK DRIVER RL2OEM
  FRAME ETHERNET_802.2
  FRAME ETHERNET_II
  INT 7
  PORT 270
  SNIFF_TIME 0           ;KEEP-ALIVE PACKET DISABLED
  PEER_TO_PEER N       ;BRIDGING ONLY
  RADIO_MODE 0         ;800KBS MODE
  ROAM_CONFIG 0        ;SLOW ROAMING

  STATION_TYPE 0
  DOMAIN 0
  INACTIVITY_MIN 0
  INACTIVITY_SEC 5
```

---

**JG2020 NET.CFG**

```
LINK SUPPORT
  BUFFERS 8 1500
  MEMPOOL 4096
  MAX STACKS 8

PROTOCOL TCPIP
  PATH LANG_CFG      D:\NET\LANG
  PATH SCRIPT        D:\NET\SCRIPT
  PATH PROFILE       D:\NET\PROFILE
  PATH LWP_CFG       D:\NET\HSTACC
  PATH TCP_CFG       D:\NET\TCP

  IP_ROUTER          192.9.175.0
  IP_NETMASK          255.255.255.0
  IP_ADDRESS          192.9.175.235

PROTOCOL IPXODI
  SPX LISTEN TIMEOUT 5400 ;WAIT TIME IN TICS BEFORE IT REQUESTS A SEND

  SPX VERIFY TIMEOUT 5400 ;FREQ IN TICKS THAT SPX SENDS A PACKET
```

---

***JG2020 NET.CFG (continued)***

```
NETWARE DOS REQUESTER
    FIRST NETWORK DRIVE = H
    USE DEFAULTS = OFF
    VLM = CONN.VLM
    VLM = IPXNCP.VLM
    VLM = TRAN.VLM
    VLM = SECURITY.VLM
    VLM = NDS.VLM
    VLM = BIND.VLM
    VLM = NWP.VLM
    VLM = FIO.VLM
    VLM = GENERAL.VLM
    VLM = REDIR.VLM
    VLM = PRINT.VLM
    VLM = NETX.VLM
LINK DRIVER RL2OEM
    FRAME ETHERNET_802.2
    FRAME ETHERNET_II
    INT 7
    PORT 270
    SNIFF_TIME 0           ;KEEP-ALIVE PACKET DISABLED
    PEER_TO_PEER N       ;BRIDGING ONLY
    RADIO_MODE 0         ;800KBS MODE
    ROAM_CONFIG 0        ;SLOW ROAMING

    STATION_TYPE 0
    DOMAIN 0
    INACTIVITY_MIN 0
    INACTIVITY_SEC 5
```

---

***JG2050 NET.CFG***

```
LINK SUPPORT
    BUFFERS 8 1500
    MEMPOOL 4096
    MAX STACKS 8

PROTOCOL TCPIP
    PATH LANG_CFG      D:\NET\LANG
    PATH SCRIPT        D:\NET\SCRIPT
    PATH PROFILE       D:\NET\PROFILE
    PATH LWP_CFG       D:\NET\HSTACC
    PATH TCP_CFG       D:\NET\TCP
```

---

*JG2050 NET.CFG (continued)*

```
IP_ROUTER      192.9.175.0
IP_NETMASK     255.255.255.0
IP_ADDRESS     192.9.175.235

PROTOCOL IPXODI
  SPX LISTEN TIMEOUT 5400 ;WAIT TIME IN TICS BEFORE IT REQUESTS A SEND

  SPX VERIFY TIMEOUT 5400 ;FREQ IN TICKS THAT SPX SENDS A PACKET

NETWARE DOS REQUESTER
  FIRST NETWORK DRIVE = H
  USE DEFAULTS = OFF
  VLM = CONN.VLM
  VLM = IPXNCP.VLM
  VLM = TRAN.VLM
  VLM = SECURITY.VLM
  VLM = NDS.VLM
  VLM = BIND.VLM
  VLM = NWP.VLM
  VLM = FIO.VLM
  VLM = GENERAL.VLM
  VLM = REDIR.VLM
  VLM = PRINT.VLM
  VLM = NETX.VLM

LINK DRIVER RL2OEM
  FRAME ETHERNET_802.2
  FRAME ETHERNET_II
  INT 7
  PORT 270
  SNIFF_TIME 0 ;KEEP-ALIVE PACKET DISABLED
  PEER_TO_PEER N ;BRIDGING ONLY
  RADIO_MODE 0 ;800KBS MODE
  ROAM_CONFIG 0 ;SLOW ROAMING
  STATION_TYPE 0
  DOMAIN 0
  INACTIVITY_MIN 0
  INACTIVITY_SEC 0
```

---

## About the NET.CFG Parameters

Depending on how you filled in the fields in the Installation Options screen, the following parameters are added to the NET.CFG file.

**IP Address, Default Router, Subnet Mask** When the TCP/IP protocol stack is loaded, it checks for values for the IP address, default router, and subnet mask.

If it does not find values for these parameters, the TCP/IP stack generates a RARP packet to be processed by a BOOTP server or an RARP server.

If you specified values for these parameters in the Installation Options screen, the Installation Utility adds the following lines under the subroutine Protocol TCPIP:

```
ip_router      defaultrouter
ip_netmask     subnetmask
ip_address     ipaddress
```

---

## PCTCP.INI File

The PCTCP.INI file is used to configure the FTP stack. PCTCP.INI is provided on the FTP stack disk and is modified by the Install Tool to incorporate the IP address information.

```
[[pctcp time]
time-zone-subsection = us-pst
dst-begins = 94
dst-ends = 305
```

```
[pctcp time us-pst]
time-zone-name = PST
time-zone-full-name = US/Pacific Standard Time
time-zone-offset = 8:00
dst-rule = US Federal
dst-name = PDT
dst-offset = 7:00
dst-begin-day = M4.1.0
dst-end-day = M10.5.0
dst-begin-time = 2:00
dst-end-time = 2:00
```

```
[pctcp ifcust 0]
ip-address =
subnet-mask =
router =
interface-type = PKTDRV
frame-type = DIX-Ethernet
```

---

*PCTCP.INI File (continued)*

```
[pctcp general]
etc-dir = c:\
user = PQM
name-resolution = dns
time-zone-name = PST
time-zone-offset = 480
```

```
[pctcp kernel]
interface = ifcust 0
kernel-does-dns = yes
mtu-discovery = yes
multicast = no
pktdrv-loopback = yes
router-discovery = no
```

```
[pctcp language]
dll = enu
```

```
[pctcp idrive]
map-character = ~
```

```
[pctcp netbios]
cache-elements = 10
names = 16
```

```
[pctcp vpctcp]
MinimumCopySpace = 12
HiTSRFenceSegment = A000h
```

```
[pctcp pctcpnet]
use-advanced = yes
```

## **NET.BAT File**

---

The installation utility creates a NET.BAT file for the Novell software you are using. The NET.BAT file loads the radio and network files.

---

### ***JG2010 NET.BAT for NetWare Client***

```
C:CD \  
SET NWLANGUAGE=ENGLISH  
D:\NWCLIENT\LSL.COM  
D:\NWCLIENT\RL2OEM.COM  
IF NOT ERRORLEVEL 1 GOTO CARD_OK  
ECHO *  
ECHO * ERROR LOADING  
ECHO * RL2OEM.COM  
ECHO *  
PAUSE  
:CARD_OK  
D:\NWCLIENT\IPXODI.COM  
D:\NWCLIENT\VLM.EXE /MX
```

---

### ***JG2010 NET.BAT for LanWorkplace***

```
C:  
CD \  
D:\NET\DRIVERS\LSL.COM  
D:\NET\DRIVERS\RL2OEM.COM  
IF NOT ERRORLEVEL 1 GOTO CARD_OK  
ECHO *  
ECHO * ERROR LOADING  
ECHO * RL2OEM.COM  
ECHO *  
PAUSE  
:CARD_OK  
SET NAME=renaldo  
BREAK ON  
D:\NET\DRIVERS\TCPIP.EXE
```

---

## ***JG2010 NET.BAT for FTP Application***

```
C:
CD \
D:\NET\DRIVERS\LSL.COM
D:\NET\DRIVERS\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
:CARD_OK
SET PCTCP=C:\PCTCP.INI
BREAK ON
D:\NET\BIN\ODIPKT.COM
D:\NET\BIN\ETHDRV.EXE
D:\NET\BIN\LWPE
```

---

## ***JG2020 NET.BAT for NetWare Client***

```
SET NWLANGUAGE=ENGLISH
D:\NWCLIENT\LSL.COM
D:\NWCLIENT\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
:CARD_OK
D:\NWCLIENT\IPXODI.COM
D:\NWCLIENT\VLM.EXE /MX /PS=Newone
```

---

## ***JG2020 NET.BAT for LAN WorkPlace***

```
D:\NET\DRIVERS\LSL.COM
D:\NET\DRIVERS\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
: CARD_OK
SET NAME=Yourname
BREAK ON
D:\NET\DRIVERS\TCPIP.EXE
```

---

## ***JG2020 NET.BAT for FTP Application***

```
C:
CD \
D:\NET\DRIVERS\LSL.COM
D:\NET\DRIVERS\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
: CARD_OK
SET PCTCP=C:\PCTCP.INI
BREAK ON
D:\NET\BIN\ODIPKT.COM
D:\NET\BIN\ETHDRV.EXE
D:\NET\BIN\LWPE
```

---

## ***JG2050 NET.BAT for NetWare Client***

```
SET NWLANGUAGE=ENGLISH
D:\NWCLIENT\LSL.COM
D:\NWCLIENT\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
: CARD_OK
D:\NWCLIENT\IPXODI.COM
D:\NWCLIENT\VLM.EXE /MX /PS=waldron
```

---

## ***JG2050 NET.BAT for LAN WorkPlace***

```
D:\NET\DRIVERS\LSL.COM
D:\NET\DRIVERS\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
: CARD_OK
SET NAME=Yourname
BREAK ON
D:\NET\DRIVERS\TCPIP.EXE
```

---

## ***JG2050 NET.BAT for FTP Application***

```
C:
CD \
D:\NET\DRIVERS\LSL.COM
D:\NET\DRIVERS\RL2OEM.COM
IF NOT ERRORLEVEL 1 GOTO CARD_OK
ECHO *
ECHO * ERROR LOADING
ECHO * RL2OEM.COM
ECHO *
PAUSE
: CARD_OK
SET PCTCP=C:\PCTCP.INI
BREAK ON
D:\NET\BIN\ODIPKT.COM
D:\NET\BIN\ETHDRV.EXE
D:\NET\BIN\LWPE
```

---

### ***About the NET.BAT Parameters***

Depending on how you filled in the fields in the Installation Options screen, the following parameters are added to the NET.BAT file.

**Novell User Name** The Installation Utility adds the Novellusername to the LOGIN.EXE command line.

**Novell Server Name** The Installation Utility adds /PS=Novellservername to the VLM.EXE command line.

**Bindery Emulation** If you answer **Yes** to enable bindery emulation, the Installation Utility adds /b to the LOGIN.EXE command line.

**Preferred Tree** If you specify a preferred tree, the Installation Utility adds /PT=PreferredTree to the VLM.EXE command line.

**Unix User Name** If you specify a UNIX user name, the Installation Utility adds set name=UnixUserName.

## ***Other Useful Files***

---

Several other files are installed on the JANUS when you run the installation utility program.

- APP.BAT calls the network application.
- GO.BAT can be run from the DOS command line. It reloads the network drivers, and then calls the application.
- UNNET.BAT file unloads the radio and network drivers. Unloading the network drivers is performed to maximize battery life, and to provide the maximum amount of conventional memory on the JANUS device.
- IMLOGIN.BAT changes to the network drive and logs in to the NetWare network.
- IMLOGOUT.BAT unloads the radio and network drivers and logs out of the NetWare network
- UDPPLUS.INI contains the IP address of the Model 200 controller and the JANUS device.

The following are examples of these files.

---

### ***APP.BAT for LAN WorkPlace for DOS***

```
@echo off
c:\tnvt 192.9.175.1
c:
cd \
```

---

### ***APP.BAT for NetWare Client for DOS***

```
@echo off
call c:\imlogin.bat
c:
cd \
```

---

### ***APP.BAT for FTP Application***

An APP.BAT file is not automatically generated for FTP. If you are using the FPT stack, you will need to create this file to call a network application.

---

### ***GO.BAT for LAN WorkPlace for DOS and FTP Application***

```
@echo off
c:
cd \
call net.bat
call app.bat
call unnet.bat
```

---

### ***GO.BAT for NetWare Client for DOS***

```
@echo off
c:
cd \
call net.bat
call imlogin.bat
```

---

### ***UNNET.BAT for LAN WorkPlace for DOS***

```
@echo off
d:\net\drivers\tcpip u
d:\net\drivers\rl2oem u
d:\net\drivers\ls1 u
```

---

### ***UNNET.BAT for NetWare Client for DOS***

```
@echo off
d:\nwclient\vlm u
d:\nwclient\ipxodi u
d:\nwclient\rl2oem u
d:\nwclient\ls1 u
```

---

## ***UNNET.BAT for FTP Application***

```
@echo off
d:\net\bin\lwpe -u
d:\net\bin\inet unload
d:\net\bin\odipkt unl
d:\net\drivers\rl2oem u
d:\net\drivers\lsl u
```

---

## ***IMLOGIN.BAT***

```
@ECHO OFF
H:\LOGIN WALDRON/Yourname /B
```

---

## ***IMLOGOUT.BAT***

```
@LOGOUT
c:
cd \
if exist unnet.bat call unnet.bat
```

---

## ***UDPPLUS.INI***

```
Controller:      192.9.175.5
Terminal:        192.9.175.235
```

## ***Minimum Files for LAN WorkPlace Installations***

---

Intermec recommends that you install LAN WorkPlace for DOS on a host PC that does not already have other copies/versions of LAN WorkPlace installed and perform a full LAN WorkPlace installation. Then, you can use the host PC with the full copy of LAN WorkPlace as the host PC.

When you install LAN WorkPlace for DOS on a host PC that already has other copies/versions of LAN WorkPlace, Novell's LAN WorkPlace installation procedure may not perform a full installation. If this occurs, this may cause the Installation Utility to fail. When you specify a LAN WorkPlace installation to the Installation Utility, it checks for certain files in certain directories and the existence of the HSTACC directory. For example, if you specify that you are installing LAN WorkPlace v5.0 and C:\NET as the LAN WorkPlace directory to for the installation, the Installation Utility verifies that the following paths exist:

C:\NET\BIN\TCPIP.EXE (file)

C:\NET\BIN\LSL.COM (file)

(Or, have C:\NET\BIN\STARTNET.BAT start with *path\LSL.COM*)

C:\NET\BIN\FTP.EXE (file)

C:\NET\BIN\FTP.MSG (file)

C:\NET\BIN\TNVT220.EXE (file)

C:\NET\BIN\TNVT220.MSG (file)

C:\NET\BIN\LWP.MSG (file)

C:\NET\BIN\TELAPI.EXE (file)

C:\NET\BIN\TELAPI.MSG (file)

C:\NET\BIN\TELSVC.EXE (file)

C:\NET\BIN\TELSVC.MSG (file)

C:\NET\HSTACC\EXTMAP.BIN (file)

C:\NET\HSTACC\HOSTTOPC.MAP (file)

C:\NET\HSTACC\PCTOHOST.MAP (file)

C:\NET\HSTACC\T4\_DEF.PAR (file)

C:\TCP\HOSTS (optional file, but will generate message if it does not exist)

C:\TCP\SERVICES (directory)

C:\TCP\NETWORKS (directory)

C:\TCP\PROTOCOL (directory)

If you specify that you are installing LAN WorkPlace v4.2 and C:\NET4.2 as the LAN WorkPlace directory for the installation, the Installation Utility verifies that the following paths exist:

C:\NET4.2\NWCLIENT\LSL.COM (file)

C:\NET4.2\BIN\TCPIP.EXE (file)

C:\NET4.2\BIN\FTP.EXE (file)

C:\NET4.2\BIN\FTP.MSG (file)

C:\NET4.2\BIN\TNVT220.EXE (file)

C:\NET4.2\BIN\TNVT220.MSG (file)

C:\NET4.2\BIN\LWP.MSG (file)

C:\NET4.2\BIN\TELAPI.EXE (file)

C:\NET4.2\BIN\TELAPI.MSG (file)

C:\NET4.2\HSTACC (directory)

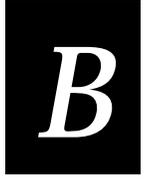
C:\TCP\HOSTS (optional file, but will generate message if it does not exist)

C:\TCP\SERVICES (directory)

C:\TCP\NETWORKS (directory)

C:\TCP\PROTOCOL (directory)





*Helpful Information*



*This appendix explains the login procedures for NetWare servers and describes ARP table entries for TCP/IP applications. It also provides information for setting a security ID, for creating or modifying JANUS.INI files, and for configuring multiple JANUS devices using special batch files.*

## ***NetWare Client User Information***

---

If you are a NetWare Client user, you must type IMLOGIN instead of LOGIN on your JANUS RF device when logging into a NetWare server.

When you reboot your JANUS device, it automatically runs IMLOGIN. You will usually type IMLOGIN in these situations:

- You roam out of range of an access point for an extended period of time and the NetWare server logs your device out. When you return within range of an access point, you need to type IMLOGIN to log back onto the server.
- You do not transmit any packets using your device for an extended period of time. Your device may be placed in a suspend state, and the NetWare server will log your device out. When you press the  button to resume using the device, you must type IMLOGIN to log back onto the network.

## ***ARP Table Entry for TCP/IP Applications***

---

Intermec recommends that you create permanent entries for all your JANUS RF devices in the ARP (Address Resolution Protocol) table of all the hosts the devices may communicate with. For help on creating ARP tables, see your TCP/IP manual.

**Note:** *If the TCP/IP application is running on the device and it initiates an ARP packet to the host, the ARP packet from the device automatically forces an entry into the ARP table.*

The ARP table maps the IP address to the physical Ethernet address. To make a permanent entry for your JANUS device in an ARP table, you need to know its host name (for example, janus1, janus2), or the IP address, along with the physical Ethernet address of the JANUS device.

During installation, the IP address is entered into a HOSTS file along with the host names and any aliases.

---

### ***Example of HOSTS file***

```
192.9.299.154    accesspoint
192.9.200.155    janus1
192.9.200.156    janus2
192.9.200.157    janus3
```

To find out the physical Ethernet address, also called the node address, for a JANUS device internal RF card, load the RL2OEM driver (normally executed in NET.BAT).

---

*Example Showing the Node Address*

```
C:\>rl2pcm

ROM Version V1.41e
Node Type STA, Domain 15
Inactivity Time Out 5 seconds
Sniffing On Standby Is: Enabled
Int 3, Port 360, Mem 0B00,
Node Address 20A6101021 L
Max Frame 1514 bytes,
Board 1, Frame ETHERNET_II, LSB Mode
Board 2, Frame ETHERNET_802.2, LSB Mode
```

Instructions for making permanent entries into the ARP table are dependent on the host platform (for example UNIX, DOS, OS/2) and the TCP/IP stack being used.

For example, if you are using UNIX TCP/IP, you may enter the following command lines.

```
> arp -s janus1 00:20:A6:10:10:21
> arp -s janus2 00:20:A6:10:12:CF
> arp -s janus3 00:20:A6:10:12:DC
```

The first line shows the first entry host name=janus1 with Ethernet address=00:20:A6:10:10:21.

## Setting the Security ID on Your JANUS RF Devices

As an added security measure, you can set a security ID on all JANUS devices and access points in a 2.4 GHz RF network. All devices must have the same security ID to communicate. Setting the security ID is optional. Run this utility when you have finished configuring each JANUS device.

Use the Security ID Configuration disk to:

- set or remove a security ID on a JANUS RF device.
- identify the JANUS device node address.
- verify that the JANUS device can synchronize with an access point.

There are two ways to run this utility:

- Connect the JANUS device to a host PC and use Interlnk. The RF setup utility copies the files to the host PC. Your host PC will need 500KB of free disk space on drive C. The utility deletes these files when you exit the program. Follow the procedure to start the utility using Interlnk and then follow the procedure to set the security ID.
- Copy the entire contents of the Security ID Configuration disk to an SRAM card. Follow the procedure to start the utility using an SRAM card and then follow the procedure to set the security ID.

***Note:** You need to perform these steps on the JANUS device. You can only see one section of a PC-size screen on the smaller display of a JG2010 or JG2020. Use the viewporting feature to move around the screen.*

### To start the utility using Interlnk

1. Connect your JANUS RF device to the host PC using a null modem cable. To connect a JG2010 or JG2020, you also need a communications dock or optical link adapter. Refer to your JANUS user's manual for more information.
2. Insert the Security ID Configuration disk in drive A on the host PC.
3. At the DOS prompt on the host PC, type this command and press **Enter**.

```
a:rfsetup
```

***Note:** If the optical link adapter supports the baud rate set to 115200, at the DOS prompt, type `rfsetup /h`.*

The utility copies the files from the disk to the drive C on the host PC.

4. Press any key on the host PC keyboard.
5. Reboot the JANUS device by pressing    .

To start the utility using an SRAM card

1. Insert the Security ID Configuration disk in drive A on the host PC.
2. Insert a formatted SRAM card into a PCMCIA (PC) drive on the host PC.
3. At the DOS prompt, type this command and press Enter.

```
a:sramset drive
```

where *drive* is the drive letter of the PC drive on the host PC.

4. Reboot the JANUS device by pressing    .

**Note:** You can press  to skip the memory test and save time.

On the JANUS screen, when you see the MS-DOS 6.2 Startup screen, choose  and press .

5. On the JANUS device, this prompt appears.

Network?

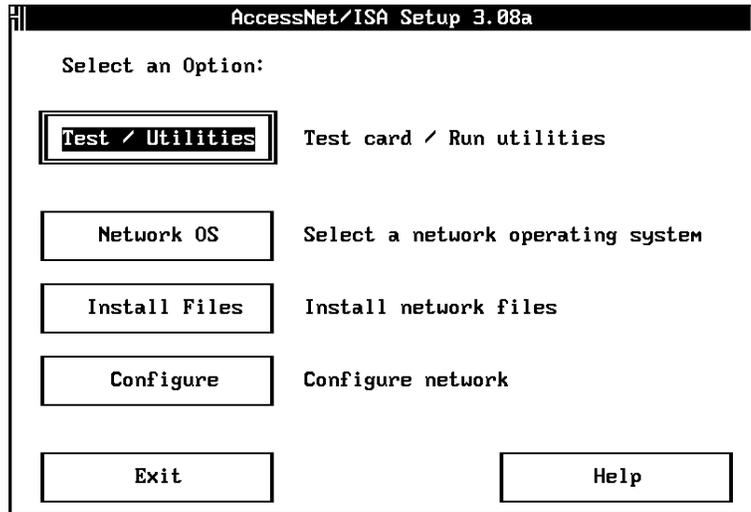
Type  and press .

6. Type    and press .
7. Type      and press .

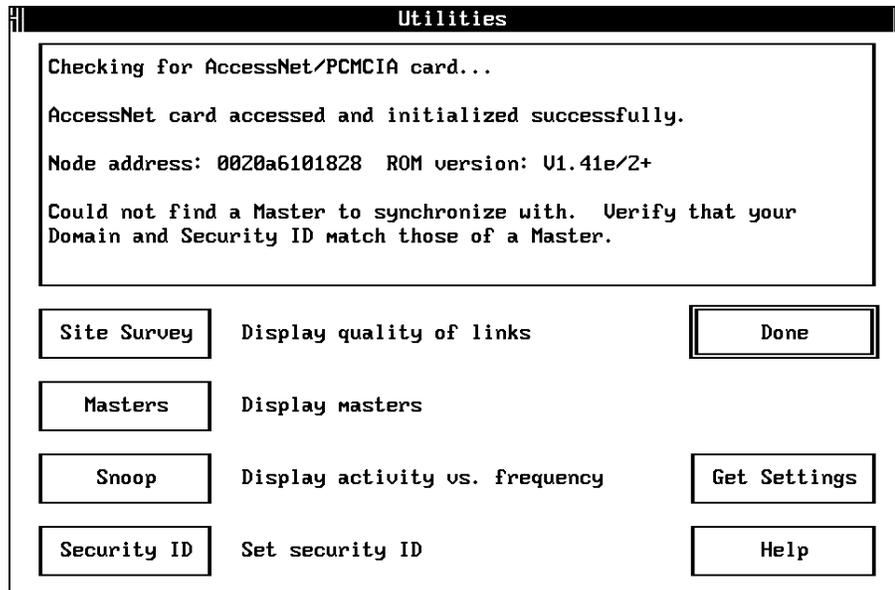


To set the security ID

1. On the JANUS device, choose the Test/Utilities button and press `enter`.



2. Press `f` `space` (tab) to choose the Security ID button and press `enter`.



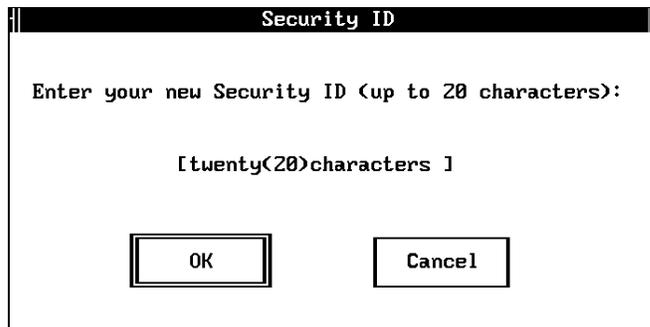
3. A warning message about the security ID option appears

Warning: AccessNet cards communicate only with other AccessNet cards with the same Security ID. Be sure to set the Security ID on all AccessNet cards in the same subnetwork to the same value.

Press  to choose the Continue button.

4. Enter the security ID and press . You can use up to 20 alphanumeric characters. The security ID is case-sensitive.

Or, delete the security ID if you no longer want to use this feature.



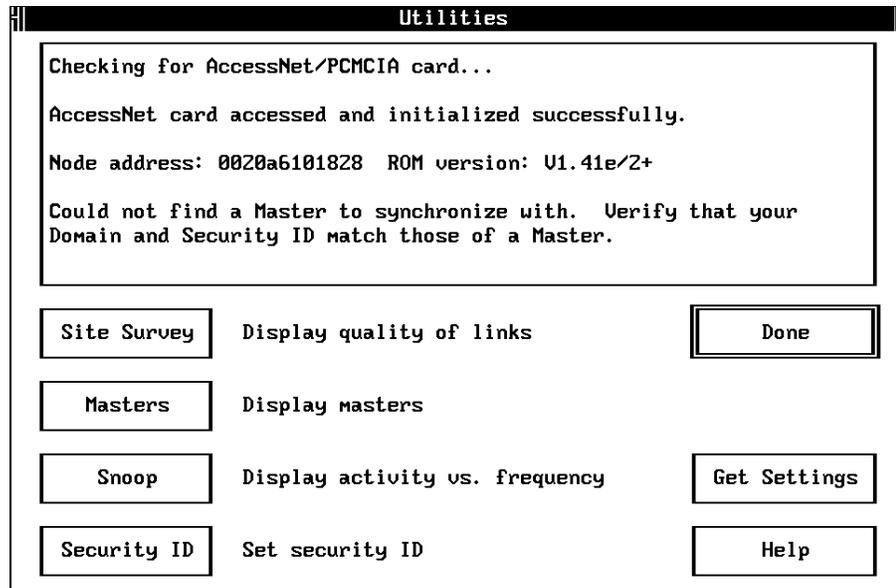
5. A message informs you that your security ID has been updated.

Your AccessNet security ID has been updated.

Press  to continue.

6. A message informs you that the operation was successful. The message box also informs you of the JANUS device node address.

If you are not within range of an access point with the security ID set, you can ignore the message that the JANUS device could not find a Master to synchronize with.



However, if you are within range of an access point and the security ID is correct, the message box informs you that the JANUS device is synchronized to the access point and provides the node address of the access point. For example:

Synchronized to 0020a63051df

7. Press **⇧** **space** (tab) to choose the Done button and press **↵**.
8. Press **⇧** **space** (tab) to select the Exit button and press **↵**.
9. On the host PC, press **Alt-F4** to exit Interlnk. The utility deletes the files it copied to drive C.

If you installed terminal emulation software on the JANUS device, it will try to start a session with the host.

## Customizing the J24TE.INI File

---

For Intermec terminal emulation installations, the J24TE.INI file is copied from the TE Applications disk to a subdirectory on your host PC. You may want to customize the J24TE.INI file to permanently change your JANUS operating environment. You can customize the J24TE.INI file to enable or disable supported symbologies or to change other operating parameters such as beep volume, display, viewport size and movement.

To customize the J24TE.INI file

1. Shell out to DOS during the installation process.
2. Type the following command from a DOS prompt on the host PC to start Intersvr on the host.  

```
a:intersvr
```
3. After Intersvr is running, remove the Installation Utility disk from drive A.

**Note:** Drive A must be empty or this process **will not** work.

4. Reboot the JANUS device by pressing    . When the JANUS device boots, the Microsoft Interlnk Server Version Intermec menu appears along with the server/client drive mapping screen.

**Note:** If you do not reboot the JANUS device while Intersvr is running on the host PC, Interlnk will not load on the JANUS device and you will not be able to access the drives on the host PC.

5. At the JANUS DOS prompt, type   and press  to start the configuration application (IC.EXE).
6. Select the LOAD option from the File menu.
7. Select the IM\_FLASH\ directory and press .
8. Select the DRIVEC\ directory and press .
9. Select J24TE.INI and press .
10. Use IC.EXE to make your configuration changes. See your JANUS user's manual for more information on IC.EXE.

11. Select SAVE from the File menu and press  .

*Note: You can omit steps 8-11 if you can type X:\IM\_FLASH\DRIVEC\J24TE.INI at the NAME prompt and save the file. Where X is the drive letter on the host PC that you are mapping to.*

12. Select EXIT from the File menu.
13. Select No when you are prompted to update the online configuration on the JANUS device.
14. Reinsert the Installation Utility disk in drive A on the host PC.
15. Press **Alt-F4** on the host PC to exit Intersvr.
16. Type     at the DOS prompt on the JANUS device and press  .  
You can now continue with the installation.

## Creating a JANUS.INI File

For Novell TNVTxxx and NetWare Client for DOS installations, you may want to create a JANUS.INI file to permanently change your JANUS operating environment. You can use a JANUS.INI file to enable or disable supported symbologies or to change other operating parameters such as beep volume, display, viewport size and movement.

To create a JANUS.INI file

1. Shell out to DOS during the installation process.
2. On the host PC , edit the \IM\_FLASH\DRIVEC\AUTOEXEC.BAT file to change:

```
d:\ic /l e:\janus.ini
```

to

```
d:\ic /l c:\janus.ini
```

3. Save the changed AUTOEXEC.BAT file.
4. At the DOS prompt on the host PC, type this command to start Intersvr.  
a:intersvr
5. After Intersvr is running, remove the Installation Utility disk from drive A.

*Note: Drive A must be empty or this process **will not** work.*

6. Reboot the JANUS device by pressing     . When the JANUS device boots, the Microsoft Interlnk Server Version Intermec menu is displayed along with the server/client drive mapping screen.

*Note: If you do not reboot the JANUS device while Intersvr is running on the host PC, Interlnk will not load on the JANUS device and you will not be able to access the drives on the host PC.*

7. At the JANUS DOS prompt, type   and press  to start the configuration application (IC.EXE).
  8. Use IC.EXE to make your configuration changes. See your JANUS user's manual for more information on IC.EXE.
  9. Select the SAVE AS option from the File menu. Type the drive letter on the host PC that you are mapping to (refer to the server/client drive mapping screen) and       at the NAME prompt and press  .
  10. Select the IM\_FLASH\ directory and press  .
  11. Select the DRIVEC\ directory and press  .
  12. Save the configuration you created as JANUS.INI and press  . You are saving the .INI file you created using the configuration application to the drive on the host PC where the JANUS drive C image will be built. This file is written to the JANUS flash memory and becomes a permanent part of your configuration.
- Note: You can omit steps 9-12 if you type X:\IM\_FLASH\DRIVEC\JANUS.INI at the NAME prompt and save the file. Where X is the drive letter on the host PC that you are mapping to.*
13. Select EXIT from the File menu.
  14. Select No when you are prompted to update the online configuration on the JANUS device.
  15. Reinsert the Installation Utility disk in drive A on the host PC.
  16. Press **Alt-F4** on the host PC to exit Intersvr.
  17. Type     at the DOS prompt on the JANUS device and press  . You can now continue with the installation.

## Configuring Multiple JANUS RF Devices Using Batch Files

The Installation Utility disk contains five batch files that can help you easily configure multiple JANUS devices if you have exited the Installation Utility. You can quickly edit a file in the DRIVEC or DRIVED subdirectory and then use the batch files to create the JANUS drive image and download it.

These batch files exist after you have run the Installation Utility once AND you have saved your files that were created by a previous install. That is, during the first install, you need to choose N when prompted with this question:

```
Do you want to delete the files created by the install? (Y/N)
```

When the files created by the install are saved, the applicable batch files are also copied from the Installation Utility disk to the \IM\_FLASH directory. If you performed a complete installation, that is if you did not use any switches after you typed the pcsetup command, all batch files are copied to this directory. If you used the /drivec or /drived switch, only the applicable batch files are copied.

**MKC.BAT** Creates the JANUS drive C image on the host PC from the files in the \IM\_FLASH\DRIVEC directory.

**LOADC.BAT** Downloads the JANUS drive C image to the connected JANUS device.

**MKD.BAT** Creates the JANUS drive D image on the host PC from the files in the \IM\_FLASH\DRIVED directory.

**LOADD.BAT** Downloads the JANUS drive D image to the connected JANUS device.

**LOADALL.BAT** Downloads the JANUS drive C image, drive D image, and the system images to the connected JANUS device.

### To create and download a modified drive C image

1. Make any changes to the files in the \IM\_FLASH\DRIVEC directory.
2. Connect your JANUS RF device to the host PC using a null modem cable. To connect a JG2010 or JG2020, you also need a communications dock or optical link adapter. Refer to your JANUS user's manual for more information.
3. On the host PC, go to the \IM\_FLASH directory.
4. On the host PC, type `mkc` and press **Enter**. The batch file runs the JANUS drive image builder utility and creates the binary image file \IM\_FLASH\DRIVE\_C.IMG.

5. On the JANUS device, use these steps to bring up the Boot Loader menu.
  - a. Press  $\text{⏻}$  to place the JANUS device in a suspend state.
  - b. Press  $\text{F9}$   $\text{2}$   $\text{↵}$ .
  - c. Press  $\text{2}$ .
  - d. Press  $\text{⏻}$  to turn the JANUS device on again.
6. From the Boot Loader menu, select LOAD and press  $\text{enter}$ .
7. On the host PC, type `loadc` and press **Enter**.

The Janus 2000 Flash Loader screen appears and downloads the modified JANUS drive C image to the connected JANUS device.

#### To create and download a modified drive D image

1. Make any changes to the files in the `\IM_FLASH\DRIVED` directory.
2. Connect your JANUS RF device to the host PC using a null modem cable. To connect a JG2010 or JG2020, you also need a communications dock or optical link adapter. Refer to your JANUS user's manual for more information.
3. On the host PC, go to the `\IM_FLASH` directory.
4. On the host PC, type `mkd` and press **Enter**. The batch file runs the JANUS drive image builder utility and creates the binary image file `\IM_FLASH\DRIVE_D.IMG`.
5. On the JANUS device, use these steps to bring up the Boot Loader menu.
  - a. Press  $\text{⏻}$  to place the JANUS device in a suspend state.
  - b. Press  $\text{F9}$   $\text{2}$   $\text{↵}$ .
  - c. Press  $\text{2}$ .
  - d. Press  $\text{⏻}$  to turn the JANUS device on again.
6. From the Boot Loader menu, select LOAD and press  $\text{enter}$ .
7. On the host PC, type `loadd` and press **Enter**.

The Janus 2000 Flash Loader screen appears and downloads the modified JANUS drive D image to the connected JANUS device.

#### To create and download modified drive C and drive D images

1. Make any changes to the files in the `\IM_FLASH\DRIVEC` directory.
2. Connect your JANUS RF device to the host PC using a null modem cable. To connect a JG2010 or JG2020, you also need a communications dock or optical link adapter. Refer to your JANUS user's manual for more information.

3. On the host PC, go to the \IM\_FLASH directory.
4. On the host PC, type `mkc` and press **Enter**. The batch file runs the JANUS drive image builder utility and creates the binary image file \IM\_FLASH\DRIVE\_C.IMG.
5. Make any changes to the files in the \IM\_FLASH\DRIVED directory.
6. On the host PC, type `mkd` and press **Enter**. The batch file runs the JANUS drive image builder utility and creates the binary image file \IM\_FLASH\DRIVE\_D.IMG.
7. Verify that the \IM\_FLASH directory contains a file `systemx.xxx` where `x.xxx` is the version of a valid unarchived JANUS system image.
8. On the JANUS device, use these steps to bring up the Boot Loader menu.
  - a. Press  $\text{I/O}$  to place the JANUS device in a suspend state.
  - b. Press  $\text{FS}$   $\boxed{2}$   $\leftarrow$ .
  - c. Press  $\boxed{2}$ .
  - d. Press  $\text{I/O}$  to turn the JANUS device on again.
9. From the Boot Loader menu, select LOAD and press  $\boxed{\text{enter} \leftarrow}$ .
10. Type `loadall` and press **Enter**.

The Janus 2000 Flash Loader screen appears and downloads the modified JANUS drive D image, drive C image, and system image to the connected JANUS device.





## ***Glossary***



*This glossary contains definitions for terms specific to this manual and the Novell software network user environment.*

***Access Point***

Intermec's wireless bridge that allows RF packets to go from an Intermec 2.4 GHz RF network to Token Ring or Ethernet network.

***alphanumeric***

Character set containing letters, numbers, and other characters, such as punctuation marks.

***API (application programming interface)***

A set of routines that an application program uses to request and carry out lower-level services performed by a computer's operating system.

***bandwidth***

The size in Hertz of the frequency range that a signal transmission occupies. Typical narrow band signals occupy a 25 KHz bandwidth. The 2.4 GHz radio frequency signal occupies a 1 MHz bandwidth.

***bindery emulation***

NetWare 4.0 feature that lets you emulate the bindery database system that was available in all previous versions.

***BOOTP (Bootstrap Protocol) server***

A device that assigns an IP address in response to a query from an IP node. In this query, the IP node supplies its physical address. The BOOTP server then checks its tables to determine the corresponding IP address.

***bridge***

An internetworking device connects two LAN segments at the data link layer of the OSI model

***broadcast***

A type of transmission in which a message sent from the host is received by all devices on the system.

***buffer***

An area of storage used to hold data being transferred from one device to another.

***channel***

The path for transmitting data from a device to the host computer. In RF networks, it is the frequency hopping sequence the card follows. The 2.4 GHz bandwidth can be divided into 15 different channels.

***controller***

An electronic device that interfaces between the data collection devices and the system computer.

***CSMA/CD (Carrier Sense Multiple Access/Collision Detection)***

CSMA is a protocol in which each node senses whether or not a channel is in use before attempting to transmit information. CD is an algorithm by which channel time is reserved to avoid collisions.

***data collection device***

A device used with a scanner to collect data from scanned bar codes and send it to a host computer.

***data transmission***

An event in which a block of data is transmitted from one device to another.

***device***

Any physical item that is attached to a computer. A terminal, a printer, a reader, and a controller are all devices.

***device address***

A type of address that is used by the host to identify a particular data collection device.

***domain***

The area within a LAN that defines a region administered by a controller or server. The domain is also called a subnetwork.

***driver***

A software module that controls an input/output port or external device.

***Ethernet***

A type of LAN that allows the transmission of computer data, audio data, and video data. Ethernet uses the access method known as Carrier Sense Multiple Access with Collision Detection (CSMA/CD). See IEEE 802.3 standard for the specifications.

***frequency hopping***

A spread spectrum technique by which the band is divided into a number of channels and the transmissions hop from channel to channel in a prespecified sequence.

***hand-held scanner***

A scanner held and operated by a human. The scanner is moved to the object to be scanned, instead of moving the object close to the scanner.

***host computer***

If several computers are connected together on a network, the controlling computer is the host computer. A host computer can be a desktop, laptop, or notebook PC.

***HOSTS file***

A database that contains a list of remote hosts' IP addresses and their logical names (aliases) that any device on the network can reach.

***interference***

A situation that occurs when an unwanted RF signal occupies the same frequency band as a desired signal.

***IP (Internet Protocol)***

This protocol provides a method for transmitting blocks of data (IP datagrams) between hosts.

***IP address***

This address is a network level address assigned to each device in a TCP/IP network.

***IPX (Internet Packet eXchange)***

This protocol provides a means for message packets to be exchanged on an internetwork.

***LAN (Local Area Network)***

A group of intelligent workstations that are hooked together to allow them to share data, printers, and other devices. LANs are usually used over a small geographic area.

***LSL (Link Support Layer)***

This layer serves as an intermediary between ODI and the link driver that supplies an interface between the network board and the rest of the operating system.

*network*

A collection of devices that can store and manipulate electronic data, interconnected in such a way that its users can store, retrieve, and share information with each other.

*network node*

An end point in a network to which or from which you can route data. Usually this is a workstation or host computer.

*Novell user name*

This parameter identifies the user to the Novell software running on a remote host.

*operating system*

Refers to the code that operates a computer by managing its file systems, handling user input and output, and running programs. DOS, Windows, and UNIX are all operating systems.

*OSI model*

Open Systems Interconnection reference model. A framework developed by the International Standards Organization (ISO) to provide worldwide standards for computer communications.

*packet*

The unit of information by which the network communicates. A packet consists of a single network message with its associated header, addressing information, data, and optional trailer. A packet can also be called a frame or datagram.

*port*

The physical place where devices connect to each other for communication purposes.

*preferred tree*

The tree you specify that you first want to connect to in a NetWare 4.X network if you have multiple trees. If this tree has a server with a free connection, the NetWare DOS Requester attaches to it.

*protocol stack*

A group of drivers that work together to span the layers in the network protocol hierarchy.

***RAM (Random Access Memory)***

A memory that can be written into, or read, by locating any data address. A device that permits individual interrogation of any memory cell in a completely random sequence.

***RFDC system***

This term (radio frequency data collection system) refers to a data collection system in which the individual components communicate with each other by radio signals.

***router***

A software and hardware connection between two or more networks that permits traffic to be routed from one network to another on the basis of the intended destinations of that traffic.

***scratch drive***

The physical hard drive that you use to build the JANUS device's drive images.

***serial***

A communications scheme in which the bits of a byte are transferred one at a time. Often serial transmission is used to link host computers to terminals and PCs to printers.

***server***

A computer that is configured to provide services to the network.

***shell out feature***

This feature allows you to go to the DOS command line without exiting the Installation Utility.

***spread spectrum***

A radio data transmission modulation technique by which the transmitted signal is spread over a bandwidth wider than the information bandwidth.

***SNMP (Simple Network Management Protocol)***

A protocol used to manage network activity.

***SPX (Sequenced Packet eXchange)***

This protocol provides a method for two workstations or applications to communicate across the network. SPX works with IPX to deliver the messages. However, SPX guarantees the delivery of the messages and maintains the order of messages on the packet stream.

*subnet mask*

This mask is used in the IP protocol to differentiate between the subnet address and the host address.

*subnetwork*

A section of a large network that functions as an independent network, but does not appear separate to remote networks.

*TCP (Transport Control Protocol)*

This protocol provides a method for creating a connection-oriented, reliable, error-free, full-duplex, byte-stream communication between two processes. See also IP.

*UNIX user name*

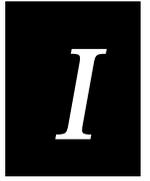
This parameter is a variable in the DOS environment. The UNIX user name identifies the user to the Novell software running on a remote host.

*UDP*

User datagram protocol. UDP is an alternative to TCP. This protocol is the Internet standard for wireless devices. You can use UDP when you do not need a guaranteed delivery. You can also use UDP when you do not require all of the services of TCP.

*UDP Plus*

This Intermec-designed protocol is based on UDP. UDP Plus improves the performance of devices in a mobile wireless environment. Intermec uses this protocol to communicate with the Model 200 Controller.



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