

VIKING COMPONENTS

56K PC CARD

WINMODEM

USER'S GUIDE



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1 Introduction

Congratulations on purchasing your Viking Components 56K PC Card WinModem for your computer. To turn your notebook computer into a communications center, all you need is your Viking WinModem and a standard analog phone line.

Viking Components 56K PC Card WinModem Specifications:

- 56K Auto Detect/V.90 ITU and K56Flex support
- ITU-T V.34 extended rates: 33600 bit/s-2400 bit/s V.32terbo, V32bis and fallbacks
- 14.4kbps Group III Fax send and receive
- Data Compression V.42bis and MNP Class 5
- Error Correction: V.42 (LAPM and MNP 2-4)
- Auto Answer; Tone and Pulse dial
- Telephone answering machine support
- Supports Caller ID
- Enhanced low-power modes
- True Plug and Play
- Data Communication Standards:
V.90, K56Flex, V.34, V.32bis, V.32, V.23, V.22bis, V.22, V.21, Bell 212A, Bell 103
- FAX Communication Standards:
V.17, V.29, V.27ter, V.21CH 2, Class 1 Fax
- Operating System Support:
Windows 95/98 & Windows 2000
- RJ-11 cable and communications software included
- Regulatory Standards:
FCC Part 15, Class B and Part 68, DOC

2 Before You Install

Locate the PCMCIA (PC Card) Type II slot on your system. If you are not familiar with its location, please refer to your computer's "Owner's Guide." Also it is recommended to read any additional information in your system's "Owner's Guide" regarding the PCMCIA (PC Card) slots.

System Requirements

Computer:

- Any computer with a PCMCIA 2.1 compliant Type II card slot

Compatible Operating Systems:

- Windows 95, Windows 98, Windows NT 4.0, Windows 2000

Computer Memory:

- 4MB of free RAM

Hard Disk Space:

- 2MB or more

Phone Line:

- Standard residential (analog) RJ-11

Phone Line Requirements

The phone line required by the Viking Components fax/modem is an analog RJ-11. This is a standard residential phone line.

Warning: Do not use a PBX or digital phone line. These phone lines may damage the Viking Components PC Card fax/modem or phone equipment.

PBX or digital lines are used by many businesses for their phone systems. To determine if the line you wish to use is analog, look on the jack or the phone. If it says "*analog*," "*computer*," "*data*" or "*modem*," it is an analog line. If you are in an office and the phone is not labeled, check with the phone system administrator. If you are in a hotel, call the hotel operator for more information.

Communications Software Requirements

Please refer to the communication software "*User Guide*" for additional system requirements for installing the communication software.

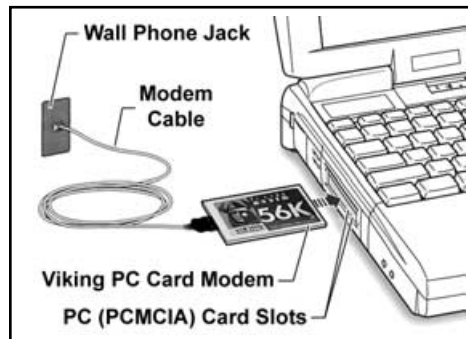
3 Installation

This chapter contains instructions on installing your Viking PC Card WinModem.

Hardware Installation

The hardware installation is the same for all operating systems unless otherwise noted.

1. With your computer on, insert the Viking PC Card WinModem into the desired PC Card (PCMCIA) slot (either the upper or lower). Insert the corresponding end of the supplied cable into the wall phone jack, and the other end of the cable into the Viking modem. Be sure that the word "TOP" on the connector that inserts into the modem is facing up.



Software Installation

Once the Viking WinModem is installed, you will need to install the software necessary to communicate with the Viking WinModem. This section will cover the steps necessary to configure each of the operating systems. It includes instructions for the following operating systems:

- Windows 95
- Windows 98
- Windows NT 4.0
- Windows 2000

Windows 95 Software

Note: It is recommended to make backup diskettes prior to installation.

1. You will be prompted with the "New Hardware Found" message. Click the "OK" button.

2. The "Update Device Wizard" window will appear, stating "This wizard will complete the installation of: Standard PCMCIA Card Modem." Insert the "Viking WinModem Drivers" diskette that was included with your modem. (If the diskette was not included or lost, the drivers can be downloaded from our Web site at: www.vikingcomponents.com). Then click the "Next" button.



Windows 95 Software (Continued)

3. Note that the "Device Found" has changed from "Standard PCMCIA Card" to "Viking LT Win Modem." Then click the "Finish" button.



4. Since this is a controllerless modem, the driver installation is not finished. A new "Add New Hardware Wizard" should appear stating, "This wizard searches for new drivers for: Wave Device for Voice Modem." Click the "Next" button to continue.



Windows 95 Software (Continued)

5. To install the drivers needed for the "Voice Modem Serial Wave Device" and to complete the driver installation for this modem, click the "Finish" button.



Your driver installation is now complete.

Windows 98 Software

1. You will be prompted with the "New Hardware Found" message. Then "Add New Hardware Wizard" window will appear. A message in the window will read, "This wizard searches for new drivers for: Standard PCMCIA Card Modem." Click the "Next" button.



2. A new message inside the "Add New Hardware Wizard" window will read, "What do you want Windows to do?" Select "Search for the best driver for your device. (Recommended)." Then click the "Next" button.



Windows 98 Software (Continued)

3. The next message that should appear in the "Add New Hardware Wizard" is "Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search." Select "Floppy disk drives." Insert the "Viking WinModem Drivers" diskette that was supplied with your modem into the floppy drive. (If the diskette was not included or lost, the drivers can be downloaded from our Web site at: www.vikingcomponents.com). Then click the "Next" button.



4. The next message should read "Windows driver file search for the device: Viking LT Win Modem." The bottom of the window will show your drive A:\ or diskette drive as the location of the modems driver. Click the "Next" button.



Windows 98 Software (Continued)

5. The next message in the "Add New Hardware Wizard" should be "Windows has finished installing the software that your new hardware device requires." Click the "Finish" button.



6. Since this is a controllerless modem, the driver installation is not finished. A new "Add New Hardware Wizard" should appear, stating "This wizard searches for new drivers for: Wave Device for Voice Modem." Click the "Next" button to continue.



Windows 98 Software (Continued)

7. A new message inside the "Add New Hardware Wizard" window will read, "What do you want Windows to do?" Select "Search for the best driver for your device. (Recommended)." Then click the "Next" button.



8. The next message that should appear in the "Add New Hardware Wizard" is "Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search." Select "Floppy disk drives." Then click the "Next" button.



Windows 98 Software (Continued)

9. The next message should read, "Windows driver file search for the device: Voice Modem Serial Wave Device." The bottom of the window will show your drive A:\ or diskette drive as the location of the modems driver. Click the "Next" button.



10. The next message in the "Add New Hardware Wizard" should be "Windows has finished installing the software that your new hardware device requires." Click the "Finish" button.

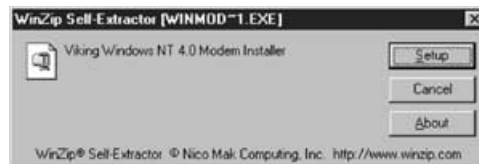


Your driver installation is now complete.

Windows NT 4.0

Note: Before installing your PC Card modem, "Service Pack 3" must be installed on your system. Also RAS (Remote Access Services) must not be installed. Please refer to your operating systems "Owner's Manual" for more information.

1. Insert the "Viking WinModem Drivers" diskette that was included with your modem. (If the diskette was not included or lost, the drivers can be downloaded from our Web site at: www.vikingcomponents.com)
2. From "My Computer" on your computer's desktop, locate and open your diskette drive. Locate the file "winmodem.exe" and double-click on it to launch the application. Click the "Setup" button to begin the software installation.

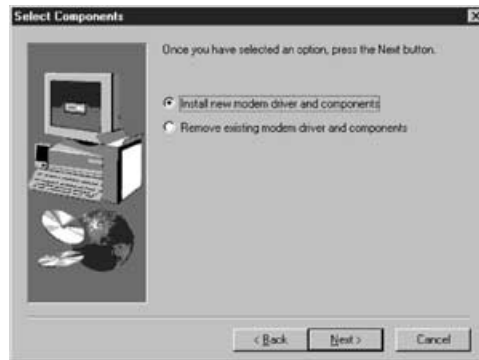


3. The "Modem Installation" program will launch. If there are any other programs open, close them at this time. Click the "Next" button to continue.



Windows NT 4.0 (Continued)

4. Select *"Install new modem driver and components"* and then click the *"Next"* button.



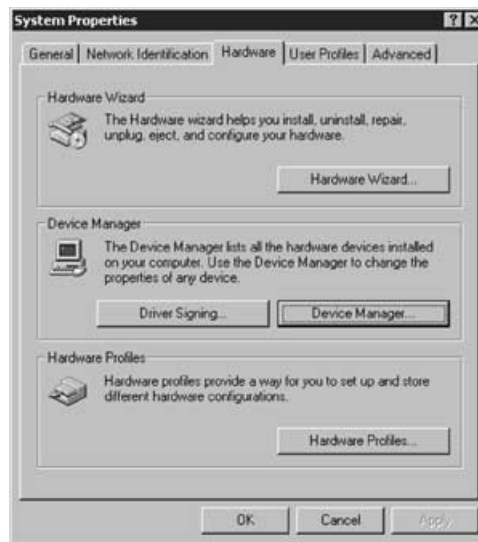
5. You should receive a message stating, *"Setup has finished installing the modem driver and components onto your computer. Before you can use the modem, you must restart your computer."* Select *"Yes, I want to restart my computer now"* and click the *"Finish"* button.



Your driver installation is now complete.

Windows 2000

1. The "Update Device Driver Wizard" will load "Standard PCMCIA Card Modem" driver for your Viking WinModem. When asked "Do you what to restart?" click the "No" button.
2. Insert the supplied "Viking WinModem Drivers" diskette into your system. From "My Computer" on your computer's desktop, locate and open the floppy diskette. Double click on the file "w2k.exe" to launch the application. Click the "Unzip" button and the driver files will be extracted to "C:\viking."
3. On your computer's desktop, right click on "My Computer" and select "Properties." Click the "Hardware" tab and then click the "Device Manager" button.



Windows 2000 (Continued)

4. In the "Device Manager" window, locate "Modems" and expand it by clicking on the "+" symbol. Double click the "Standard PCMCIA Card Modem."



5. Click the "Driver" tab and then click the "Update Driver..." button.



Windows 2000 (Continued)

6. In the "Welcome to the Upgrade Device Driver Wizard" window, click the "Next" button to begin updating the modem driver.



7. In the "Install Hardware Device Drivers" window, under "What do you want the wizard to do?" select, "Search for a suitable driver for my device (recommended)." Then click the "Next" button.



Windows 2000 (Continued)

8. In the "Locate Driver Files" window, under "Optional search locations:" select "Specify a location" and deselect the other options. Then click the "Next" button.



9. Under "Copy manufacturer's files from:" type: "C:\viking" and click the "OK" button.



Windows 2000 (Continued)

10. In the "Driver Files Search Results" window, the driver in the location "C:\viking\lhw2kg.inf" should have been found. Click the "Next" button.



11. The "Digital Signature Not Found" window will appear asking, "Do you want to continue the installation?" Click the "Yes" button. Notice the name of the modem has changed from "Standard PCMCIA Card Modem" to "Viking Win Modem."



Windows 2000 (Continued)

12. The "Completing the Upgrade Device Driver Wizard" states, "Windows has finished installing the software for this device." Click the "Finish" button.



13. Windows will ask you to restart your computer. Click "Yes."

Your driver installation is now complete.

Using Data and Fax Communication Software

Usually, most communication software installation programs will automatically detect your Viking fax/modem and perform the appropriate configurations. In some cases, you may find it necessary to configure the software so it can send the appropriate commands to the fax/modem.

Although most applications have many different modems already programmed into the software application, sometimes you may not be able to find the exact match for your modem. For the best compatibility, select a "*Hayes Compatible*" modem from the list of modems. If this is unavailable, change the modem initialization string. To change the string, please see the section below.

Changing the Modem Initialization String

If you can not find a matching modem listed, you can modify the modem initialization string. Please refer to the data and communication software "User's Guide" for details on making this change. The best initialization string to use is:

AT&F&C1&D2

4 Technical Notes

This chapter covers COM port and IRQ settings information necessary when the system does not automatically configure the fax/modem properly. This chapter is broken up by operating systems sections. Go to the sections covering your operating system.

Checking and Changing COM Port IRQs

1. Determine your modem's COM port and IRQ configuration (refer to the previous section).
2. In the *"Program Manager,"* select the *"Main Group."*
3. Select the *"Control Panel."*
4. Double click on *"Ports."*
5. Double click on your modem's COM port.
6. Choose the *"Settings"* button, then choose *"Advanced."*
7. In the *"Advanced Settings"* window, make sure the IRQ number is matching the current IRQ setting.
8. Select the *"OK"* button.
9. If you changed the number, select *"YES"* you want to reboot now. If you did not change the number, select *"Cancel"* to get out.

Windows has now been configured to match your modem's configuration.

Changing the IRQ Settings (Windows 95 & 98)

1. Click on the "Start" button and select "Settings," then "Control Panel."
2. In the "Control Panel," select "System."
3. Select "Device Manager."
4. In the "Device Manager," select "Modem."
5. Highlight the Fax/Modem and then select "Properties."
6. In the "System Properties," select "Resources."
7. In Fax/Modem "Property Resources," deselect or remove the "check mark" from the "Use Automatic Settings."
8. Double click on the "Interrupt Request."
9. Use the up and down arrows to select an IRQ without a conflict.

Note: The "Conflict Information Box" will display any conflicts with the IRQ you just chose.

5 Troubleshooting

This chapter will cover some solutions to some common problems you may experience when installing your Viking PC Card modem. Some solutions may not apply to your operating system or may not be listed. If your problem is not answered in the following sections, please proceed to page 33 on contacting Viking for support. For software problems, please refer to the communication software "User Guide" for solutions.

General

Problem	Solution
<p>Modem does not respond, modem communication error or modem not found.</p>	<ul style="list-style-type: none"> • Did you select the correct modem type? If the Viking modem is not listed, try a Hayes compatible modem. • Is the PC Card completely plugged in to the PC Card slot and are all of the connections secure? • Check your computer's BIOS setup. You may need to disable a built-in COM port to prevent conflict. • Is your operating system set to the correct Com port and IRQ? Please refer to chapter 4, "Technical Notes" for detailed information. • Did you select the correct COM port? Usually, the communication software selects the COM port automatically during installation. Be sure that the COM port setting in your communication software matches the setting used in your "Card and Socket Services" software. • Check your computer for conflicting COM port settings. • Does the "Card and Socket Services" recognize your Viking PC Card modem?

General (Continued)

Problem	Solution
Modem does not respond, modem communication error or modem not found. (continued)	<ul style="list-style-type: none"> • If the modem stops after the computer enters power-saving mode, disabling this feature is recommended.
Modem does not fit.	<ul style="list-style-type: none"> • Be sure the correct end of the modem is in the PC Card slot. Refer to the arrow on the modem. • Check the pins inside your PC Card slot to make sure none of them are damaged or bent. • Be sure that the PC Card slot in your computer is Type II or larger.
Can not hear the speaker or the modem.	<ul style="list-style-type: none"> • Is the computer's speaker turned on? • Do you need to increase the speaker volume?
Modem does not dial or it dials incorrectly.	<ul style="list-style-type: none"> • Are your cable and phone line connections secure? • Is there another phone extension on the same line in use? • Are you using a standard analog phone line? Digital phone lines will not work with this modem. • Is the telephone number correct? • Did you enter a "1" before the area code when dialing long distance? • Are you required to enter a prefix, such as a "9" in your settings? • Is the other line busy or not answering? Make sure it is available before calling. • Is the modem plugged into a splitter? Try connecting directly to the wall jack.

General (Continued)

Problem	Solution
Modem does not fax	<ul style="list-style-type: none">• Did you select the correct fax class? Check your software, select another fax class and try again.• Do you have another communications program open? If so, close it.• Did you select the correct printer in your application? For example, fax/modem.
No dial tone message	<ul style="list-style-type: none">• Are all of the cable connections secure?• Is the phone line in use by someone else?• Are you using a standard analog phone line?• Test the line by connecting a standard phone and listening for a dial tone.• Is the modem plugged into a splitter? Try connecting directly to the wall jack.

6 Basic AT Commands

From terminal mode or command line, AT commands allow you to control your modem. If you are using your communications software to operate your modem, the software menus configure the AT commands. Follow the instructions in this chapter, to operate your modem directly from the terminal mode.

Guidelines

"AT" precedes most commands. Enter the AT commands exactly as they appear in the following command column. The commands can be typed in either upper or lower case letters, but cases should not be mixed. There can be up to a total of 40 characters in one command and spaces are not necessary. To activate a complete command string, press the "Enter" key.

Basic AT Command Set

Command	Function
A/	Repeat last command.
A	Answer command.
B	Communication standard setting.
C	Carrier control.
D	Dial command.
E	Echo command.
F	On-line data character echo command.
H	Hook control.
I	Request ID information.
L	Monitor speaker volume.
M	Monitor speaker mode.
N	Modulation handshake.
O	Return to online data mode.

Basic AT Command Set (Continued)

Command	Function
P	Select pulse dialing.
Q	Result code control.
T	Select tone dialing.
V	DCE response format.
W	Result code option.
X	Result code selection and call progress.
Y	Long-space disconnect.
Z	Reset and recall stored profile.
&B	V.32 auto retain.
&C	Data carrier detect (DCD) control.
&D	Data terminal ready (DTR).
&F	Local factory settings.
&G	V.22bis guard tone control.
&J	Auxiliary relay options.
&K	Local flow control selection.
&M	Asynchronous communications mode.
&Q	Asynchronous communications mode.
&S	Data set ready (DSR) option.
&T	Self-test commands.
&V	View the active configuration.
&W	Store current configuration.
&Y	Select stored profile for hard reset.
&Z	Store telephone number.
\A	MNP block size.
\B	Send break.
\G	Modem port flow control.
\J	Adjust bits/s rate control.
\K	Set break control.
\N	Error control mode selection.
\Q	Local flow control selection.

Basic AT Command Set (Continued)

Command	Function
\R	Ring indicator off after answer.
\T	Inactivity timer.
\W	Protocol result code.
\X	XON/XOFF pass through.
%B	View numbers in blacklist.
%C	Data compression control.
%E	Automatic rate change.
-C	Data calling tone.
-V90	Enable/disable V.90 settings.

Caller ID

Command	Function
+VC1D=0	Disable Caller ID.
+VC1D=1	Enable Caller ID.

Basic AT Command Set (Continued)

+FTM=<m> Transmit FAX Data with <m> Carrier

This command causes the modem to transmit data at the modulation specified by <m>. The following table shows the values you can enter for this command and the meaning of those values.

Command Option	Modulation	Speed (bits/s)
+FTM=3	V.21 Channel 2	300
+FTM=24	V.27ter	2400
+FTM=48	V.27ter	4800
+FTM=72	V.29	7200
+FTM=96	V.29	9600
+FTM=73	V.17	7200
+FTM=74	V.17 (short train)	7200
+FTM=97	V.17	9600
+FTM=98	V.17 (short train)	9600
+FTM=121	V.17	12000
+FTM=122	V.17 (short train)	12000
+FTM=145	V.17	14400
+FTM=146	V.17 (short train)	14400

Basic AT Command Set (Continued)

+FRM=<m> Receive FAX Data with <m> Carrier

This command causes the modem to receive data at the modulation specified <m>.

Command Option	Modulation	Speed (bits/s)
+FRM=3	V.21 Channel 2	300
+FRM=24	V.27ter	2400
+FRM=48	V.27ter	4800
+FRM=72	V.29	7200
+FRM=96	V.29	9600
+FRM=73	V.17	7200
+FRM=74	V.17 (short train)	7200
+FRM=97	V.17	9600
+FRM=98	V.17 (short train)	9600
+FRM=121	V.17	12000
+FRM=122	V.17 (short train)	12000
+FRM=145	V.17	14400
+FRM=146	V.17 (short train)	14400

7 Modem Driver & Firmware Upgrades

Your Viking PC Card modem can be upgraded by updating its drivers and through firmware upgrades. These upgrades can be downloaded from Viking Components Web page at:

www.vikingcomponents.com

Once you have reached Viking's Web site, select "Support." Then select "Modem Drivers" and finally select "Viking PC Card WinModem" under "Viking Components PC Card Modems." Scroll down to your modem and select the file you wish to upgrade your modem with.

Note: If your unfamiliar with driver updates and firmware upgrades, it is recommended to contact our Technical Support Department before starting these procedures. If the modem is upgraded incorrectly, it can be damaged. For information on contacting Technical Support, please proceed to Chapter 8, page 33.

8 Contacting Technical Support

If your questions have not been answered or if you are unable to solve a problem with your modem by using this guide, Viking Components has Technical Support available 7 days a week and 24 hours a day.

Before calling Technical Support, please prepare to have the following available:

- Modem part number or Viking bar code on the modem.
- Machine type.
- Operating system.
- Detailed descriptions of questions and/or problems.

Viking Components Technical Support

Phone Number: **888.801.9181**

E-mail: **techsupport@vikingcomponents.com**

9 Communication Regulations

INDUSTRY CANADA (IC) NOTICE

"NOTICE: The Industry Canada (IC) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements documents(s). The department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by a user to this equipment, or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection, that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate."

"NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the device does not exceed 5."

REN: 1.0B

PART 68 REQUIREMENTS

This equipment complies with Part 68 of the FCC Rules. On this equipment there is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

This equipment uses RJ11 jack.

An FCC compliant telephone cord and modular plug are provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See installation instructions for details.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all those devices ring when your telephone number is called. In most, but not all areas, the sum of all the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

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

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact Viking Components, Inc., Customer Support at (888) 801-9181 for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains a margin at the top or bottom of each transmitted page or on the first page of the Transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, or entity, or individual. (The telephone number provided may not be a 900 number or any the number for which charges exceeds local or long-distance transmission charges.)

In order to program this information into your fax software, you should complete the steps described in the communications software manual.

10 Warranty & Disclaimers

5 YEAR WARRANTY

All Viking Components products have been thoroughly tested free of defects in material and workmanship. If any malfunction should occur while used in its recommended environment, Viking, at its option, will repair or replace this product at no charge, provided the product or any part thereof has not been abused, misused, neglected, replaced, repaired or modified. Viking shall make the final determination as to the existence and cause of any defect. Viking will not repair or replace products designated as having a "Limited Lifetime" which fail solely because their estimated life has expired. No warranty is made with respect to customer products produced to original purchaser specifications except as specifically stated in writing by Viking.

All shipping costs shall be the responsibility of the purchaser.

Except as provided herein, there are no express or implied warranties of merchantability or fitness for a particular purpose. Under no circumstances will Viking Components be liable in any way to any purchaser for any damages, including but not limited to lost revenue, lost wage, or any other incidental or consequential damages arising out of the use of or inability to use this product. Viking reserves the right to make modifications in both hardware and software without prior notifications.

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