



VRC-Win

*Installation and
Operations Manual*

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VRC-Win Installation and Operations Manual
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Introduction ≡

Congratulations on purchasing VRC-Win. The latest and most versatile software remote-control package for your VRC-2000. VRC-Win is designed to work with any 386 (with a math coprocessor), 486DX or better computer system. VRC-Win supplements the VRC-2000 and allows all information to be entered via computer and displayed on a monitor in the Windows environment.

This manual explains how to install and set up the VRC-Win software.

If any problem arise, or you need assistance, please contact Gentner Communications Corporation at the location noted below. We welcome and encourage your comments so we can continue to improve our products.

Gentner Communications Corporation

1825 Research Way
Salt Lake City, Utah 84119

TEL: Worldwide (801) 975-7200 In U.S.A. (800) 945-7730

FAX: Worldwide (801) 977-0087 In U.S.A. (800) 933-5107

**Warranty
Registration** ≡

Please register your VRC-Win software by completing the self-addressed, postage prepaid warranty registration card and return it to Gentner by mail. You may also FAX it to the above listed fax number or call Gentner. When your product is properly registered, Gentner will be able to serve you better should you require technical assistance or desire information on a product, upgrades or new products as they become available.

Unpacking ≡

Ensure you received the following components which make up VRC-Win:

VRC-Win Diskette

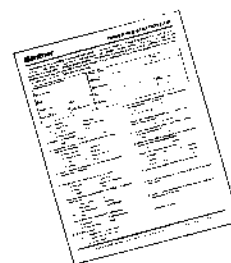
VRC-Win Installation
and Operations ManualWarranty
Registration Card

Figure 1. Equipment diagram

SHIPPING NOTE:

Gentner Communications is not responsible for product damage incurred during shipment. You must make claims directly with the carrier. Inspect your shipment carefully for obvious signs of damage. If the shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

Benefits ≡

VRC-Win software supplements the VRC-2000's standard operation. VRC-Win makes the VRC-2000 an even more powerful remote-control system allowing you to see all data through the intuitive, Windows interface. The following is a preview of the features that VRC-Win offer. To take full advantage of this power also refer to the VRC-2000 Installation and Operations Manual.

Before You Install ≡

Windows Requirements

To function correctly, VRC-Win requires Windows version 3.1 or later and DOS version 5.0 or later. Mouse support is required for maximum ease in use.

PC Hardware Requirements

For best performance, your PC (minimum 386DX/33 with math coprocessor, 486DX or better) should have a minimum of 4MB RAM (8MB if running Windows 95), 2MB of free hard-disk space (more if "disk logging" is used) and a 100-percent Hayes compatible modem (must provide hardware response to Ring and Carrier Detect). For best visual performance, a monitor with 800x600 resolution (Super VGA, 256 color preferred) is recommended. VRC-Win will function on standard 640x480 VGA screens, but the screen and words will be compressed.

VRC-2000 Requirements

To function normally with VRC-Win, your VRC-2000 must have firmware version 1.2 with a data-interface card. A VRC-1000 may be used if it has been equipped with appropriate VRC-2000 firmware.

Installation ≡

To install VRC-Win software, run Windows, then insert the VRC-Win diskette into your 3.5-inch disk drive (typically drive A: or B:).

- 1) Go to Windows Program Manager.
- 2) Pull down the FILE menu to select the RUN option.
- 3) In the RUN menu, type:
A:\setup
- 4) Click OK or press <ENTER>.

At this point, VRC-Win will display a series of installation options (i.e. how and where you want the program loaded). Typically, standard installation is adequate for most systems. Setup will install all necessary files on your hard drive.

Overview ≡

The VRC-2000 is a versatile remote-control device with thousands of configuration options. Setting up the VRC-2000 using a touch-tone telephone can be a time-consuming task. VRC-Win makes programming or changing your VRC-2000 set up much easier and faster, be it a first-time set up or an upgrade from a previously configured VRC-2000 (using the current SetupVRC *.cfg file).

You must have a VRC-2000 unit (or a VRC-1000 unit upgraded with VRC-2000 firmware) in order to use VRC-Win. In order to use VRC-Win to take readings from the metering and status channels, your VRC-2000 must be equipped with the VRC Data Interface.

VRC-Win provides several security levels. Each security level allows access (with a correct access code) to either operator or set-up functions.

If you are upgrading from SetupVRC and importing the existing configuration file, VRC-Win will assign all metering, status and control items as previously configured. A TERMINAL display is available to present information as seen in SetupVRC for DOS.

To get the most out of VRC-Win, please read these help file instructions thoroughly before attempting to use the software with your VRC-2000.

Operation ≡**VRC-Win Program Layout****Title Bar**

Indicates the name of the current active site. The title bar (top of the screen) will display a blank line if the site is not yet programmed. The date and time from the VRC-2000 is appended to the site ID when connected.

The rest of the VRC-Win screen is divided into three areas: Function Bar, Main Screen and Status Bar.

Function Bar

These buttons (top of the screen, below the title bar) allow you to select the active site, dial, disconnect, print log, print alarms or exit the program.

Main Screen

The center of the VRC-Win screen contains the ten display pages used to operate and program your VRC-2000. Individual pages are accessed by clicking on the desired tab.

Status Bar

Located at the bottom of the screen, the status bar displays the current time, date and VRC-2000 conditions (when connected).

Operation
Continued ≡

Function Bar

Selects the active VRC-2000 site, dials, disconnects, manually prints logs and alarms, or exits the program.

Location: Top row of buttons on screen, just under the title bar.

Site Selection

The first six buttons bring up the desired site. Unused positions may have their buttons turned off. The highlighted site button will dial and access the VRC-2000 (if already set up). When the program starts up, the first active button will be loaded. If all buttons are disabled, the number one site will be loaded. When auto logging is active on multiple sites, the active site will change to the site that most recently called in with a alarm or log reading

Dialing

The dial button (telephone with modem) is used to call the active remote site by telephone. This button is NOT used when setting up or programming the VRC-2000. The SETUP page will initiate the call when programming. If you are connected locally to the VRC-2000, the button will display "local." To connected to the VRC-2000, press the red VRC-2000 front-panel button, wait for the greeting to play, then click the local button on the screen. The button's dial or local mode is determined by the *contents* of the site phone-number field in SITES page. When empty, local mode is selected.

Disconnect (Hang Up)

The DISC (disconnect) button (telephone with a red X through it) is used to terminate the call at any point. It is always active. This selection will disconnect the telephone line between your PC's modem and the VRC-2000. Use this selection to hang up the line after you are finished accessing the VRC-2000. An hourglass symbol will display for the duration of the five-second disconnect sequence.

Manual Log Printing

Click on the log button (button with a printer symbol) on the top on the screen. When you are online with the VRC and the normal data display is on the screen, this will send a terminal-screen snapshot to the printer.

Manual Alarm Printing

Click on the alarm button (button with a printer symbol) on the top of the screen. When you are online with the VRC and the normal data display is on the screen, this will send the contents of the alarm page to the printer. All 32 positions will be printed. Ensure that you have previously viewed the ALARM page to download all of the alarms from the VRC-2000.

MANUAL PRINTING NOTE:

You do not have to be on the page to invoke this function.

Exiting

Click on the exit button on the top right corner of the screen. This selection drops the connection (if present), terminates VRC-Win and returns you to Windows.

Main Screen

Contains all display pages needed to operate and program your VRC-2000.

The information is laid out in the form of multiple pages which are accessed by clicking on the desired tabs at the top of each page.

Location: center of screen

User Mode

The first row of tabs contain the three pages needed by the user or operator: Graphic Display, Alarms and Terminal

Setup Mode

This is used to access seven additional tabs for programming the VRC-2000 and VRC-Win: Sites, Metering, Status, Command, Mute, Time-Of-Day and Program VRC

Status Bar

Presents the current time, date and VRC-2000 conditions.

Location: bottom of screen

Modem Status

The first box indicates the current modem condition (i.e. online, offline or programming mode). Valid modem connections are indicated with a green background.

VRC Status

The second box indicates the current VRC-2000 status. The current VRC-2000 data being sent is shown as user, alarm or setup. The box's background color sweeps from left to right, indicating the progress of the download.

DOWNLOAD NOTE:

Refrain from changing functions or issuing commands to the VRC-2000 until the download finishes and the background color is solid.

Date and Time

The current computer date and time are shown in the next two positions. This may differ from the VRC-2000 internal time, displayed next to the site title when connected.

Alarm Status

The blue VRC-Win logo on the right side will change to a flashing red/yellow ALARMS when the VRC-2000 has alarms to report. This message is cleared from the ALARM page.

ALARM DISPLAY NOTE:

High-resolution screens will display ALARMS PENDING.

Help

This button brings up the help-system main menu (also accessible by pressing F1). From this screen, you can search for a specific topic or click on any green word to bring up information on that topic.

VRC-Win Operational Modes

VRC-Win has two major modes of operation: User and Setup

User Mode

This mode allows the operator to dial the remote site. This allows the operator to take meter readings and status conditions, and to activate the command channels on the VRC-2000.

Setup Mode

This mode allows the operator to program the functions and parameters of the VRC-2000. The unique operating features of VRC-Win, such as status colors, meter colors and levels are set here.

Setup Mode

In set-up mode, six pages are used for specifying the functions and parameters of your VRC-2000. The seventh page is used to determine what is actually uploaded or programmed into the VRC-2000. Access to the set-up pages may be password restricted.

Sites

The common information for up to six separate sites is entered here. This includes site ID, logging, phone numbers, modem, output sequence, password and system identification. If you already have a SetupVRC configuration file, much of this data can be imported and loaded automatically.

Metering

This page sets up everything related to the 16 metering channels. This includes naming, calibration, alarms, ranges and colors. VRC-Win displays the metering data on the top third of the graphic-display page. Each channel is represented with a curved analog meter dial and a digital numeric display of the value. The meter dial may be divided up into up to five segments which may be assigned colors to clarify the indication.

Status

This page specifies the behavior of the status channels. This includes voice ID, low/high input and screen text. VRC-Win displays the status channels in the middle of the screen. For each high/low state, you can specify the box text, background color and text color for.

Command

This page sets the operation of the control buttons. This includes voice ID, switch voice, output, verification and screen text. For each channel, you assign the name and the type of output closure.

Mute

On this page, you assign and enable up to 40 mute events. These events fire based on predefined conditions of the status channels.

Time-Of-Day

On this page, you may assign and enable up to 64 time-of-day events. These commands activate automatically at user-programmed times.

Program VRC

On this page, you choose any and all items that you want to program into the VRC-2000. Whenever an item is changed that requires an update, the check marks are automatically placed on this page. When you are ready to start the programming process, the VRC-2000 is also dialed from here.

Graphic Display Page

Displays metering, status, command and send commands channels.

To View: click on GRAPHIC DISPLAY page

DISPLAY NOTE:

The graphic displays (metering, status, control) are read only. Clicking on any meter or reading will have no effect.

Metering

VRC-Win displays the metering data on the top third of the graphic-display page. They are arranged as channels 1–8 on the first row, 9–16 on the second row. Each channel is represented with a curved analog meter dial and a digital display of the value. The meter dial may have been divided into up to five segments which may be assigned colors to clarify the reading. These meter colors are set independently of the VRC-2000 alarms.

Status

VRC-Win displays the status channels in the middle of the page. Each of the 16 status channels has its own display box. They are arranged as channels 1–8 on the first row, 9–16 on the second row. There are two states possible for each box. The box text, background color and text color can be used to make scanning and identifying the current status easier.

Control

To send a command, click on any of the 32 buttons. The last command issued (for each channel) is indicated as button text that is both red and underlined. This is true for buttons pushed manually or automatically by the VRC-2000. However, this confirmation requires several seconds to update, longer if running on a slower modem. There is a “safety valve” which can be turned on (in setup) for each channel. When active and a command button is pressed, a box will appear asking for confirmation. At this point, you have the option of executing the command immediately or canceling it.

Alarms Page

Displays and clears alarm information for up to 32 separate events.

To View: click on ALARMS page

Operation
Continued ≡

When connected to a site, going to this page requests the current alarms from the VRC-2000. If there are no alarms pending, the alarms will not be downloaded and the alarm page will remain empty.

ALARM DISPLAY NOTE:

High-resolution screens will display ALARMS PENDING.

When alarms are present, ALARMS will display on the bottom of the screen until all alarms have been cleared. At this time, two buttons on the page are functional: delete oldest alarm and delete all alarms.

Delete Oldest Alarm

Removes the last alarm on the page and requests a new set of alarms from the VRC-2000.

Delete All Alarms

Removes all alarms on the page and waits. Go to the graphic-display page to get back to your current readings.

Returning to the graphic-display page returns your current readings and keeps the list of previous alarms (if they have not been cleared). When any new alarms have been tripped, you will be notified with a message box on the screen. You will need to go back to the ALARMS page to receive details on the new alarm(s). If there are no alarms pending, the ALARM page will not be downloaded from the VRC-2000.

Terminal Page

Makes your PC act like a standard communications terminal.

To View: click on TERMINAL page

Terminal mode is, in fact, a "terminal emulation" program. All data displayed on your computer screen in the terminal mode is actually generated by the VRC-2000 and the VRC Data Interface. To use the terminal mode, you must first establish a connection with the VRC-2000 using either the remote connection or local connection. The terminal mode may also be used to directly control and troubleshoot the modem.

TERMINAL PAGE NOTE:

All buttons (found at the bottom of the terminal screen) are to be used only when online with the VRC-2000.

VRC-2000 Control

Terminal mode allows you to take readings from the status channels and metering channels, and activate your VRC-2000 command channels. You can also use the terminal mode to activate the command channels on your VRC-2000 remote control unit. Although this is not the usual method to operate VRC-Win, it does provide users of SetupVRC with a point of reference and aids in troubleshooting the modem.

The (A) or (B) switches for any of the command channels are activated by using key combinations similar to the ones you use with a touch-tone telephone. For example, to activate switch (A) for command channel 5, you would enter "0 5 *" from the Main Terminal Display. To activate the (B)

switch for command channel 14, you must enter "14 #". To clear all pending alarms, enter "C C C". You must use all CAPITAL letters to clear all pending alarms. To clear the oldest pending alarm, enter "# # #".

Main Screen button

This button will start a new download of current readings.

Alarm 1 Button

This button will start a new download of alarms 1-16. If there are no alarms, there will be no additional information to the right of the numbers.

Alarm 2 Button

This button will start a new download of alarms 17-32. If there are no alarms, there will be no additional information to the right of the numbers.

Clear Last Button

This button will clear the oldest alarm, if present.

Setup Pages

Defines all set-up parameters for the VRC-2000 and VRC-Win.

The programming for each status, metering and command channel, as well as the programming for mute functions, time-of-day functions and sequence outputs can be set up. Access to the set-up information is easily restricted by enabling the system password.

Seven SETUP pages define all the set-up parameters for the VRC-2000 and VRC-Win:

SITES	METERING	MUTE
STATUS	TIME-OF-DAY	COMMAND
PROGRAM VRC		

Preparation

Before attempting to use VRC-Win to set up your VRC-2000, be sure you understand how each VRC-2000 function operates and the parameters you need to enter for each VRC-2000 function. Refer to the VRC-2000 Installation and Operations Manual for a complete description of each VRC-2000 function and each function's allowable parameters.

VRC-Win set-up screens are used to enter and store the functions and parameters you want to program into your VRC-2000. Use the last PROGRAM VRC page to actually dial and transfer the data to the VRC-2000.

Entering Information

Use a mouse or other pointing device. Data is entered directly on the grid of each page. Most fields will provide you with a valid number of choices. When there is a large number of choices available, a small arrow will appear in the grid box. Clicking on this arrow will open a list which will allow you to scroll through a large number of items to choose from. You may move

from one grid box to another by directly clicking, pressing the <Tab> key or pressing <Enter> following a text entry.

Entering new programming information or importing an existing SetupVRC configuration (.CFG) file is easy. When VRC-Win is loaded for the first time, all six sites are set to their default values. Next, you may set up the data from scratch or import an existing SetupVRC * CFG configuration file. If you import a CFG file, the information from that file will be placed in their respective areas of VRC-Win. You will then need to set the colors for the status channels and setup the metering graphics.

Entering or changing the configuration for any item involves direct entry of the correct information in the selected grid parameter's field. Refer to the VRC-2000 Installation and Operations Manual for detailed information on how to configure each parameter or function. VRC-Win will try to not let you make invalid entries, but it is not infallible. Be sure you understand how the VRC-2000 operates before attempting to use VRC-Win.

If an obviously incorrect item is typed into a grid box, the program will *not let you move on* to the next item until either the correct value is entered or <ESC> is pressed to restore the previous value. You can press the ESC key on your computer at any time while you are editing a grid selection. It will restore the original value to the box prior to editing. To restore an entire page to previous values, press the CANCEL button. To keep all of the updates, press the SAVE button.

SAVING SETTINGS NOTE:

Once changes have been saved, they cannot be undone by pressing CANCEL!

**Modem
Troubleshooting** 

When VRC-Win starts up, it places your modem in auto-answer mode by issuing a ATSO=1 command. When a call is received, the modem will pick up the call and attempt to make a connection. If successful, it signals the computer that a connection has been made. If this is not happening, you must make sure that your modem is compatible and that the correct initialization string has been defined. If you are having difficulties we will be using the Terminal mode of VRC-Win to test the configuration and try to find a solution.

Compatible Modems

If an external modem is used, you must be sure that the modem cable contains all of the standard RS232 serial lines, in particular the ring indicate (RI) and carrier detect (CD).

Modern modems have many features including very high speeds, compression and protocol negotiation. *All of these work against the VRC-2000 and must be disabled.* Older modems that do not have these features may lack in other areas, such as not supporting CD or always staying off-hook. In most cases, you will have to work closely with the modem's manual to come up with the correct initialization string to make it work with the VRC-2000's data interface. It is possible to get most modems to work properly, but there may be some that have to be abandoned for VRC-2000 use.

Step 1 — Check Modem-VRC-Win Communication

Go to the TERMINAL page. Place the cursor on the blue terminal screen. Type

AT <Enter>

If you get an "OK" response from the modem, modem-VRC-Win communication is adequate. Go to Step 2.

If the terminal screen is blank, make sure that you have a correct configuration.

If modem is external:

- Confirm that you are plugged into the correct COM port.
- Verify that the modem cable is functional.
- Ensure that the modem is plugged in and turned ON.
- Confirm the COM port settings in SITES Setup.
- Verify selection of the correct baud rate.
- Ensure that the modem can operate at the set baud rate.

Step 2 — Check Modem-Site Communication

Press the DIAL button on the function bar. VRC-Win will dial the site, pause and enter the user access code. If you have system password check enabled on the SITES page, you will not see the actual numbers on the terminal screen.

Modem Troubleshooting
Continued ≡

If you receive a screen filling up with good readings, everything is fine. You are finished modem troubleshooting.

If the modem does not dial the site phone number, verify the site phone number field in SITES setup.

SITE PHONE NUMBER NOTE:

For a local connection, this number is left blank and only the access code is sent.

If the VRC-2000 ignored the access code, ensure that the access code you are using is the the same as the one programmed into the VRC-2000.

If the Access Code is sent too early or too late, it will not be accepted. To remedy this, change the dial-delay time.

If the modem dials properly, but the screen remains blank long after the modem tones start, go to Step 3.

If you receive a screen filling up with jumbled readings, there could be either the wrong baud rate selected, a bad phone line in use or a bad modem. Check and try again.

Step 3 — Check Data Connection With VRC-2000

Inspect your VRC-2000 data interface:

- Is it installed properly?
- Is it jumpered properly for the baud rate you are using?

If not, the modem and VRC data interface cannot communicate.

If the data interface is installed and running at the correct baud rate, you must force the modem into the protocol used by the VRC-2000. This will require study of your modem manual and experimentation to find the right sequence. There is no "magic bullet" — modems are vastly different and each requires a unique solution.

Here are some examples and hints:

- 300 baud. Turn off all error checking, protocol negotiation.
Use the Bell 103, CCITT V21 protocol.
- 1200 baud. Turn off all error checking, protocol negotiation.
Use the Bell 212A, CCITT V22 protocol.
- 2400 baud. Turn off all error checking, protocol negotiation.
Use the CCITT V22bis protocol.

If all else fails, replace the modem with a completely different model and try again.

**Modem
Initialization** 

Since the modem must auto-answer to automatically log, the modem command to pick up on the first ring (ATS0=1) is always sent by VRC-Win. It is not necessary to add it to the modem initialization string.

If you cannot make data contact with the VRC-2000, you may need to define a unique initialization string for your modem. Please consult your modem manual for the correct code sequence.

Below are some examples of initialization strings that have been successfully used:

Default AT&F&C1&D2	Supra FAXModem, 300 baud AT+MS=64,0,300,300
Supra FAXModem, 1200 baud AT+MS=64,0,1200,1200	US Robotics AT&F&C1&D2E1

Warranty 

Gentner Communications Corporation (Manufacturer) warrants that this product is free of defects in both materials and workmanship. Should any part of this equipment be defective, the Manufacturer agrees, at its option, to:

A. Repair or replace any defective part free of charge (except transportation charges) for a period of one year from the date of the original purchase, provided the owner returns the equipment to the Manufacturer at the address set forth below. No charge will be made for parts of labor during this period;

B. Furnish replacement for any defective parts in the equipment for a period of one year from the date of original purchase. Replacement parts shall be furnished without charge, except labor and transportation.

This Warranty excludes assembled products not manufactured by the Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

THIS WARRANTY IS VOID IF:

A. The equipment has been damaged by negligence, accident, act of God, or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,

B. The equipment has been altered or repaired by other than the Manufacturer or an authorized service representative of the Manufacturer; or,

C. Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the equipment which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the equipment; or,

D. The equipments original serial number has been modified or removed.

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Gentner Communications Corporation, 1825 Research Way, Salt Lake City, Utah 84119

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E. Warranty: We warrant that all components of this Product will be free of defects of materials and workmanship for one year from the date of acquisition. If such a defect occurs, return it to us at the address below and we will replace it free. This remedy is your exclusive remedy for breach of this warranty.

F. Limitation of warranties and liability: Except for the express warranty above, this Product is provided on an "as is" basis, without any other warranties or conditions, expressed or implied, including but not limited to warranties of merchantable quality, merchantability or fitness for a particular purpose, or those arising by law, statute, usage of trade or course of dealing. The Product's entire performance risk is assumed by you. Neither we nor our dealers or suppliers have any liability to you or any other person or entity for any indirect, incidental, special or consequential damages whatsoever, including but not limited to loss of revenue or profit, lost or damaged data or other commercial or economic loss, even if we have been advised of the possibility of such damages or they are foreseeable; or for claims by a third party. Our maximum aggregate liability to you and that of our dealers and suppliers shall not exceed the amount paid by you for the Product. The limitations in this section apply whether or not the alleged breach or default is a breach of a fundamental condition or term, or a fundamental breach. Some states/countries do not allow the exclusion or limitation of liability for consequential damages so the above limitation may not apply to you.

G. General: This license is the entire agreement between us, supersedes any other agreements or discussions, oral or written, and may not be changed except by a written signed agreement. This license shall be governed by and construed in accordance with the laws of Salt Lake City, Utah. If any provision of this license is declared by a court of competent jurisdiction to be invalid, illegal, or unenforceable, such provision shall be severed from the license and the other provisions shall remain in force and effect.

Gentner Communications Corporation, 1825 South Research Way, Salt Lake City, UT 84119, TEL: Worldwide (801) 975-7200 In U.S.A. (800) 945-7730, FAX: Worldwide (801) 977-0087 In U.S.A. (800) 933-5107