VIEWNET 3000

TECHNICAL MANUAL

by

The Technical Staff of

Nida Corporation
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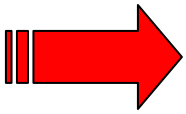
Melbourne, FL 32904

Part Number 95703000

April 2000

For your convenience, copy the Registration Number from your ViewNet Registration Form in the space below.

It will come in handy if you need to contact Nida for technical support or re-install your software.



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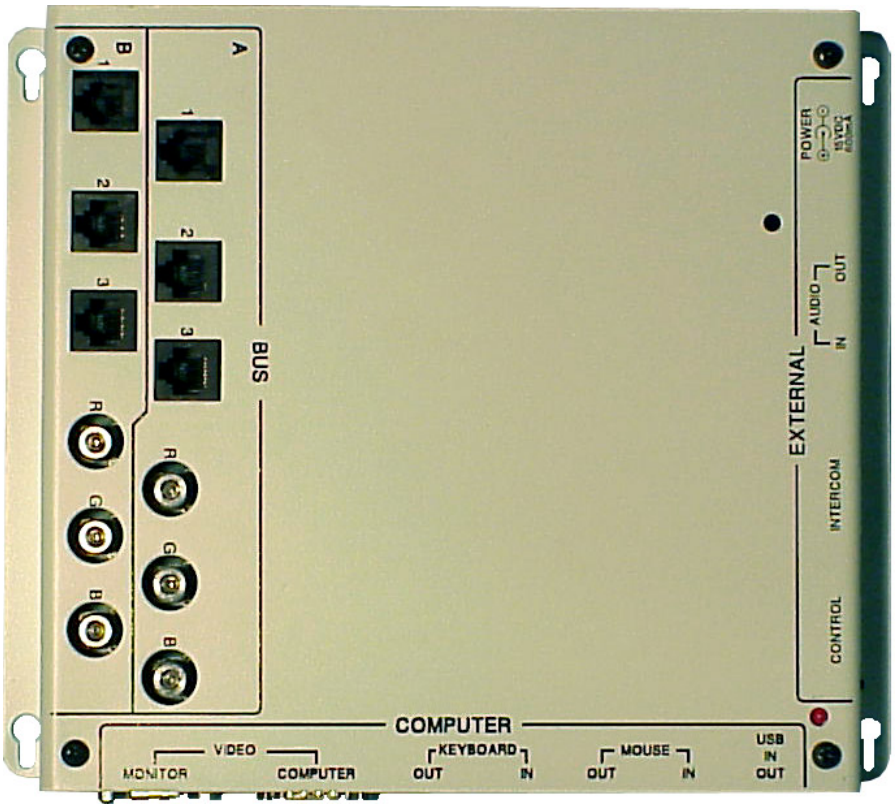


VIEWNET 3000 CONTROL UNIT

Intercom Module

ViewNet 3000 Computer Management System

VIEWNET 3000 COMPUTER MANAGEMENT SYSTEM OVERVIEW

The ViewNet 3000 blends the power of the computer with the world of multimedia to provide the ultimate learning experience. This state-of-the-art system is cost effective and remarkably easy to operate. Use it to revolutionize your classroom and energize your presentations, as you reach your exact audience with exactly the lesson material they need.

Revolutionize Your Classroom

- Broadcast subject matter to individuals, groups, or the entire audience
- From your computer workstation, take over any individual's keyboard and mouse for personalized attention
- Share one individual's discovery or questions with another, with specific groups, or with everyone

Energize Your Presentations

- Deliver subject matter to your audience from any source (hard drive, CD-ROM, camera, TV and countless others)
- Work with prepared material on a real-time "chalk board"
- Connect to the Internet and project a web site to each participant's computer screen
- Analyze presentation effectiveness through instantaneous assessment of population responses

Reach Your Exact Audience

- Interact with individuals or define groupings of unlimited number and variety
- Provide a totally confidential environment that allows individuals to participate freely in the learning process
- Invisibly monitor audience attention and progress
- Extend your physical classroom with distance learning opportunities

ENJOY YOUR VIEWNET 3000 COMPUTER MANAGEMENT SYSTEM

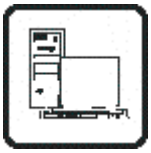
Your satisfaction is important to us.
Contact your local Nida representative with questions or comments.

INTRODUCTION TO THE SECTIONS OF THIS MANUAL

OPERATION

This section describes how to use the ViewNet 3000. It provides you with the details you need to tap all of the available functions and derive the maximum advantage from your system

If a Nida representative has completed your installation and setup (including addressing and testing), you are ready to begin operating your ViewNet 3000 system. Start with the BASICS on Page 5 or the DETAILS on Page 40.



SETUP

This section describes how to configure your system. It details the settings that need to be in place for establishing the controls necessary to operate the ViewNet 3000.

INSTALLATION

This section identifies all the system components and describes in detail the connections that must be made to get you started with your ViewNet 3000.

BASICS

Experienced users may need only the basic steps of a process to accomplish a specific task with their ViewNet 3000. BASICS are presented at the front of the manual for easy access to the most frequently used processes.

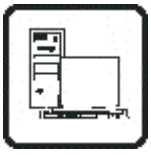
DETAILS

For full understanding of the ViewNet 3000 system functions, users may find in-depth explanations of the components and functions to be helpful. DETAILS are provided to elaborate on the steps that are outlined in BASICS.

Because the ViewNet 3000 is designed to satisfy many user needs, some functions of the system may not be required by all users. Please contact your local representative if you have questions about your ViewNet 3000 configuration.

To realize the full potential of your ViewNet 3000 system, it is important to perform all of the following steps in the order shown below:

SEQUENCE FOR OPTIMUM RESULTS

STEP	ACTION	BASICS	DETAILS
	**INSTALLATION**		
1.	Install your system hardware	n/a	Page 62
2.	Install the ViewNet software	Page 17	n/a
	**SETUP**		
3.	Create a ViewNet Layout file	Page 12, then 13	Page 21
4.	Create a ViewNet Control file	Page 14	Page 36
5.	Address your ViewNet units	Page 15	Page 37
6.	Test your ViewNet system	Page 16	Page 38
	**OPERATION**		
7.	Operate the ViewNet system	Page 5	Page 40

VIEWNET SOFTWARE

The ViewNet software consists of two separate applications: ViewNet Layout and ViewNet Control.

VIEWNET LAYOUT is used to set up a graphical representation of your classroom that serves as your control panel in ViewNet Control.

VIEWNET CONTROL enables you to operate the ViewNet 3000 system. From ViewNet Control, you can broadcast, scan, monitor, or take over networked Student workstations.

The ViewNet Control software should be installed on any computer that will be used as a controlling computer. Normally, only one computer, referred to as the Instructor computer, is designated as the controlling computer.

HARDWARE REQUIREMENTS

- VGA Monitor and Adapter
- PS/2 Mouse*
- PS/2 Keyboard**

* PS/2 Mouse is recommended; however, a serial mouse may be used with an adapter. **Important Note:** If any one of your computer stations uses a serial mouse, all the other stations must also use serial mice.

** PS/2 Keyboard is recommended; however, a standard keyboard may be used with an adapter. Keyboard style may differ from station to station without adversely affecting system operation.

VIEWNET OPERATION – MAJOR FUNCTIONS

ViewNet Control software is installed on the computer(s) that will direct the activity of classroom workstations at which individual, self-paced study is being pursued. Normally, there is only one controlling unit. We use the term Instructor when referring to the controlling workstation and Student when referring to the supervised units.

The major functions that can be performed with the ViewNet 3000 are:

- **BROADCAST**
- **TAKEOVER**
- **MONITOR/SCAN**

VIEWNET OPERATION MAJOR FUNCTIONS

FUNCTION NAME	ACTION
BROADCAST	Allows a selected display to be sent to any designated workstation monitor(s), temporarily replacing the display that was in the process of being viewed.
TAKEOVER	Allows the Instructor workstation to control the keyboard and mouse functions of any designated Student workstation.
MONITOR	Allows the display of any designated workstation to be shown on the Instructor monitor.
SCAN	Allows the display of each Student workstation to be shown in turn on the Instructor monitor, cycling through the classroom in a pre-determined order at a designated rate.

These functions can be configured in various ways, depending on the menu options selected. Processes are outlined in the following Operation BASICS.

OPERATION BASICS: 1. BROADCAST

BROADCAST INSTRUCTOR DISPLAY TO EVERYBODY

STEP		COMMENTS
1.	Right-click the Instructor icon.	The Instructor menu will appear.
2.	Select **Broadcast** from the Instructor menu.	If the default settings are unchanged, the display on the Instructor monitor will be sent to all Student workstations.
3.	Click the **Stop** button on the ViewNet Control toolbar. 	System status will return to **Ready**. Monitors of all Student workstations will return to the displays that appeared when **Broadcast** was activated.

For further information:
See Page 48 to customize a menu and restrict **Broadcast** to an individual monitor or to specific groups instead of everyone. See Page 53 to reconfigure the system parameters for the **Broadcast** toolbar button.

Alternate selection method:
If default settings are unchanged, double-click the Instructor icon to activate the **Broadcast, Everybody** function. To reassign the double-click, see Page 51.

BROADCAST FROM ONE STUDENT STATION TO EVERYBODY

STEP		COMMENTS
1.	Right-click the Student icon representing the selected monitor display.	The Student menu will appear.
2.	Select **Broadcast** from the Student menu.	If the default settings are unchanged, the display on the selected Student monitor will be sent to all other Student monitors as well as to the Instructor monitor.
3.	Click the **Stop** button on the ViewNet Control toolbar.  or Press [**IR**] on the keypad. 	System status will return to **Ready**. Monitors of all Student workstations will return to the displays that appeared when **Broadcast** was activated.

For further information:
See Page 48 to customize a menu and restrict **Broadcast** to an individual monitor or to specific groups instead of everyone. See Page 53 to reconfigure the system parameters for the **Broadcast** toolbar button.

OPERATION BASICS: 2. TAKEOVER

	STEP	COMMENTS
1.	Right-click the selected Student icon.	The Student menu will appear.
2.	Select **Monitor** from the Student menu.	If the default settings are unchanged, the display on the selected Student monitor will appear on the Instructor monitor. The process will be accomplished without disturbing the selected student's activity.
3.	When the selected Student display appears on the Instructor monitor: Select **Takeover** from the toolbar.  or Press [**4**] on the keypad. 	The Instructor mouse will control the pointer on the Student display. The Instructor keyboard will enter text or commands on the Student workstation.
	Select **Takeover** from the toolbar. or Press [**4**] on the keypad.	Toggle off the **Takeover** function, returning control of the mouse and keyboard to the Student workstation. The Student display will remain on the Instructor monitor.

Note:

See subsequent Operation Basics for details on when the **Takeover** function may be applied.

OPERATION BASICS: 3. MONITOR A STUDENT WORKSTATION

STEP		COMMENTS
1.	Right-click the selected Student icon.	The Student menu will appear.
2.	Select **Monitor** from the Student menu.	If the default settings are unchanged, the display on the selected Student monitor will appear on the Instructor monitor. The process will be accomplished without disturbing the selected student's activity.
Takeover and **Secondary Broadcast** functions are available.		
3a.	Select **Takeover** from the toolbar.  or Press [**4**] on the keypad. 	The Instructor mouse will control the pointer on the Student display. The Instructor keyboard will enter text or commands on the Student workstation.
3b.	Select **Takeover** from the Student menu. or Press [**4**] on the keypad.	Toggle off the **Takeover** function, returning control of the mouse and keyboard to the Student workstation. The Student display will remain on the Instructor monitor.
4a.	Select **Secondary Broadcast** from the Student menu.  or Press [**B**] on the keypad. 	If the default settings are unchanged, the display on the selected Student monitor will appear on all the Student workstations as well as on the Instructor monitor.
4b.	Select **Secondary Broadcast** from the Student menu. or Press [**B**] on the keypad.	Toggle off the function, returning all Student monitors to their original displays.

Continued on next page

OPERATION BASICS: 3. MONITOR A STUDENT WORKSTATION, CONTINUED

	STEP	COMMENTS
5.	Before toggling off the **Takeover** function from Step 3b, select **Secondary Broadcast**.	The mouse and keyboard commands displayed on the selected Student station will also appear on all other Student monitors.
6.	Click the **Stop** button on the ViewNet Control toolbar.  or Press [**IR**] on the keypad. 	System status will return to **Ready**. The monitor of the selected Student workstation will return to the display that appeared when **Monitor** was activated.

Alternate selection method:

If default settings are unchanged, double-click the Student icon to activate the **Monitor** function.

For further information:

See Page 48 to customize a menu and restrict the **Secondary Broadcast** to an individual monitor or to specific groups instead of everyone.

See Page 53 to reconfigure the system parameters for the **Broadcast** toolbar button.

OPERATION BASICS: 4. SCAN

STEP		COMMENTS
1.	Right-click the Instructor icon.	The Instructor menu will appear.
2.	Select **Scan** from the Instructor menu.	If the default settings are unchanged, each Student display will appear in sequence on the Instructor monitor.
3.	Modify the sequence of the scan if desired:	
3a.	Select **Start Over** on the toolbar. or Press [**1**] on the keypad. 	The number 1 Student monitor display will be shown on the Instructor monitor and the scan sequence will resume in order from there.
3b.	Select **Reverse** on the toolbar. or Press [**3**] on the keypad. 	The scan sequence will descend in Student workstation order from the display that is on the Instructor monitor when **Reverse** is activated.
3c.	Select **Forward** on the toolbar. or Press [**A**] on the keypad. 	Resume the scan sequence in ascending Student workstation order from the display that is on the Instructor monitor when the **Forward** function is activated.
The **Pause** function is available.		
4a.	When the selected Student display appears on the Instructor monitor: Select **Pause** from the toolbar. or Press [**2**] on the keypad. 	The scan sequence will freeze temporarily, with the selected Student display remaining on the Instructor monitor.
Note: All **Navigation buttons** are active during **Pause** and can be used to choose a different Student workstation for the paused display on the Instructor monitor.		

Continued on next page

OPERATION BASICS: 4. SCAN, CONTINUED

STEP		STEP
4b.	Press **Forward** or **Reverse** to resume the scan from where it was stopped.	**Forward** will cause the scan to resume in ascending order; **Reverse**, in descending order.
Takeover and **Secondary Broadcast** functions are available.		
5a.	Select **Takeover** from the toolbar.  or Press [**4**] on the keypad. 	The Instructor mouse will control the pointer on the Student display. The Instructor keyboard will enter text or commands on the Student workstation.
5b.	Select **Takeover** from the toolbar. or Press [**4**] on the keypad.	Toggle off the function, returning control of the mouse and keyboard to the Student workstation. The Student display will remain on the Instructor monitor.
6a.	Select **Secondary Broadcast** from the toolbar.  or Press [**B**] on the keypad. 	If the default settings are unchanged, the display on the selected Student monitor will appear on all the Student workstations as well as on the Instructor monitor.
6b.	Select **Secondary Broadcast** from the toolbar. or Press [**B**] on the keypad.	Toggle off the function, returning all Student monitors to their original displays.
6c.	Before toggling off the **Takeover** function from Step 5b, select **Secondary Broadcast**.	The mouse and keyboard commands displayed on the selected Student station will also appear on all other Student monitors.
7.	Click the **Stop** button on the toolbar.  or Press [**IR**] on the keypad. 	System status will return to **Ready**.

For further information:

See Page 26 to resequence the scan order and Page 54 to alter the scan rate system parameter.

SETUP BASICS: 1. CREATE A VIEWNET LAYOUT FILE

STEP	ACTION	COMMENTS
1.	Open **ViewNet Layout** from your desktop.	
2.	Open a **New** layout dialog box.	Select **File**|**New**. or Click the **New** button on the toolbar.
3.	Click the red **Add** button to create a unit icon. 	The new icon will be displayed in the upper left hand corner of your layout dialog box.
4.	Drag the icon to the desired position on the layout.	The dialog box grid will assist you in lining up icons and organizing your layout.
5.	Click the red **Add** button to create additional unit icons.	Highlight an icon and click **Add** to duplicate the icon in the highlighted icon's position. Click **Add** without first highlighting an icon to place a new icon in the upper left corner of the dialog box.
6.	Arrange all the icons to represent your classroom layout.	
7.	Set the icon properties.	See Setup Basics #2.

For further information:

See Page 20 for the Toolbar description.

Begin on Page 18 for more information on the ViewNet Layout function.

SETUP BASICS: 2. SET ICON PROPERTIES

STEP	ACTION	COMMENTS
1.	On the ViewNet layout created in Setup Basics #1, right-click the first icon in your classroom layout.	The Properties dialog box will appear, with the Appearance tab displayed.
2.	Enter a unique name for the icon in the **Label** field.	
3.	Set the **Border** and **Fill** parameters as desired.	
4.	Ensure the **Default Type** is correct and matches the **Image**.	
5.	Select the **ViewNet** tab and place a checkmark in the **Active ViewNet Unit** block.	Ensure the box is activated for ViewNet units. Deselect if the icon is an empty placeholder.
6.	Click **OK**.	
7.	Right-click each icon and repeat Steps 2-6.	**Note:** To change the label only, left-click the icon label. Left-click a second time to activate the Rename function.
8.	Select **View**|**Addresses**.	The ViewNet addresses will be displayed on each unit icon.
9.	Highlight the desired unit icon, hold down the CONTROL key, and click the **Bring to Front** or **Send to Back** button until the desired number is displayed.	When you are satisfied with your layout and address flow, proceed to Step 10.
10.	Save the graphical layout.	Select **File**|**Save As** from the File menu. or Click the **Save** button.
11.	Select **File**|**Exit**.	The ViewNet Layout application will close. Go on to create a ViewNet Control file as directed by Setup Basics #3 on Page 14.

For further information:

Begin on page 24 for more information on the Icon Properties function.

SETUP BASICS: 3. CREATE A VIEWNET CONTROL FILE

STEP	ACTION	COMMENTS
1.	Open **ViewNet Control** from your desktop.	
2.	Open a **New** file.	Select **File**|**New**. or Click the **New** button on the toolbar.
3.	Highlight the .VNL file created in ViewNet Layout.	
4.	Click **Open**.	The .VNL file representing a graphical layout of your classroom will be displayed.
5.	Save the file as a .VNC file.	Select **File**|**Save As**. or Click the **Save** button on the toolbar.
6.	If the file already exists, Windows will prompt you about replacing it. Click **Yes** to continue.	The .VNC file will be displayed.
7.	Click **Close**.	

For further information:

Begin on Page 36 for more information on the ViewNet Control file function.

SETUP BASICS: 4. ADDRESS YOUR VIEWNET UNITS

STEP	ACTION	COMMENTS
1.	Open **ViewNet Control** from your desktop.	
2.	Open the desired .VNC file.	Select **File**|**Open**. or Click the **Open** button on the toolbar.
3.	Select **Mode**|**Address**.	The Address menu will appear on the menu bar.
4.	Select **Address**|**Start**.	The number 1 unit icon will flash an alternating yellow and green border.
5.	Attach a keypad to the number 1 workstation if there is not one already connected.	If your ViewNet system has only one keypad, move it in turn from the Instructor station to each unit being addressed during this process.
6.	Press [**IR**] on the keypad that is attached to the number 1 workstation. 	A beep will sound from the keypad, indicating that addressing is complete. In the ViewNet Control file window on the Instructor monitor, the number 1 icon border will change to blue. **Note:** If your ViewNet system has been previously addressed, you may have to reset each unit by removing power from the unit or pushing the Reset switch (#9, shown on Page 58).
7.	Repeat Steps 5 and 6 for each workstation.	Use the Navigation buttons to reverse, skip, or stop the addressing process.
8.	Select **Address**|**Stop** or click the **Stop** button on the toolbar.	
9.	Select **Mode**|**Idle**.	Idle mode puts the system in a standby status, which allows time to set up for the test.

For further information:

See Pages 34 and 35 for the ViewNet Control Toolbar and Keypad descriptions.

Begin on Page 37 for more information on the Addressing function and the status indicated by the icon border color.

SETUP BASICS: 5. TEST YOUR VIEWNET SYSTEM

STEP	ACTION	COMMENTS
1.	Open **ViewNet Control**.	Use the icon on your desktop.
2.	Open the desired .VNC file.	Select **File**|**Open**. or Click the **Open** button located on the toolbar.
3.	Select **Mode**|**Test**.	The test routine systematically moves from one ViewNet unit to the next.
4.	Examine the display on the Student workstation for correct RGB color.	Mismatched color indicates crossed or disconnected video cables.
5.	Press the keys on the ViewNet keypad.	Characters will be displayed in the Whiteboard area of the test screen. You may want to increase the test rate to 30 sec in **Options**|**System** to be able to test the entire keypad.
6.	To pause the test: Press [**2**] on the Instructor keypad.  or Select **Pause** on the toolbar. 	To continue: Press [**A**] on the Instructor keypad.  or Select **Forward** on the toolbar. 
7.	To stop the test: Press [**IR**] on the Instructor keypad.  or Select **Address**|**Stop**.	If [**IR**] is used, the system will be set to **Mode**|**Idle** after 5 seconds. If **Stop** is used, the process will stop immediately.
8.	Select **Mode**|**Normal Operation**.	You are now ready to operate your ViewNet. Refer to Page 5 for Operation Basics.

For further information:

See Pages 34 and 35 for the ViewNet Control Toolbar and Keypad descriptions.

Begin on Page 38 for more information on the Testing function.

SOFTWARE INSTALLATION

The ViewNet Control software is installed on the computer(s) that will direct the activity of classroom workstations at which individual, self-paced study is being pursued.

Normally, only one computer, referred to as the Instructor computer, is designated as the controlling computer.

SOFTWARE INSTALLATION

STEP	ACTION	COMMENTS
1.	Insert the ViewNet CD ROM into your CD ROM drive.	If your CD ROM is not set up to autorun, select **Start**|**Run** and enter **X:\install.exe** (where X = the drive letter of your CD ROM). **Note:** For Windows NT and Windows 2000 workstations, log in as an administrator and run **X:\install /admin** so that the registration information will be available to all users.
2.	Click the **ViewNet Installation Wizard**.	The Nida Installation Wizard dialog box will be displayed.
3.	Click the **ViewNet 3000 Control** icon.	
4.	Read the Software License Agreement and click **Accept** if you agree to the terms of the agreement.	If you do not accept the terms, click **Exit** to end the installation routine. **Accept** will display the Directory Setup dialog box.
5.	Enter the path of the directory where the ViewNet Control software will be loaded, and click **Next**.	The Installation Wizard sets a default path of C:\Nida98.
6.	Enter the registration information and click **Next**.	The installation routine will begin. **Note**: The Registration number is found on your Nida Registration Information Sheet.
7.	When the installation is complete, click **OK**.	The Nida Installation Wizard dialog box will be displayed.
8.	Click **Exit**.	The ViewNet software will be installed. ViewNet Layout and ViewNet Control icons will be displayed on the desktop.

VIEWNET LAYOUT

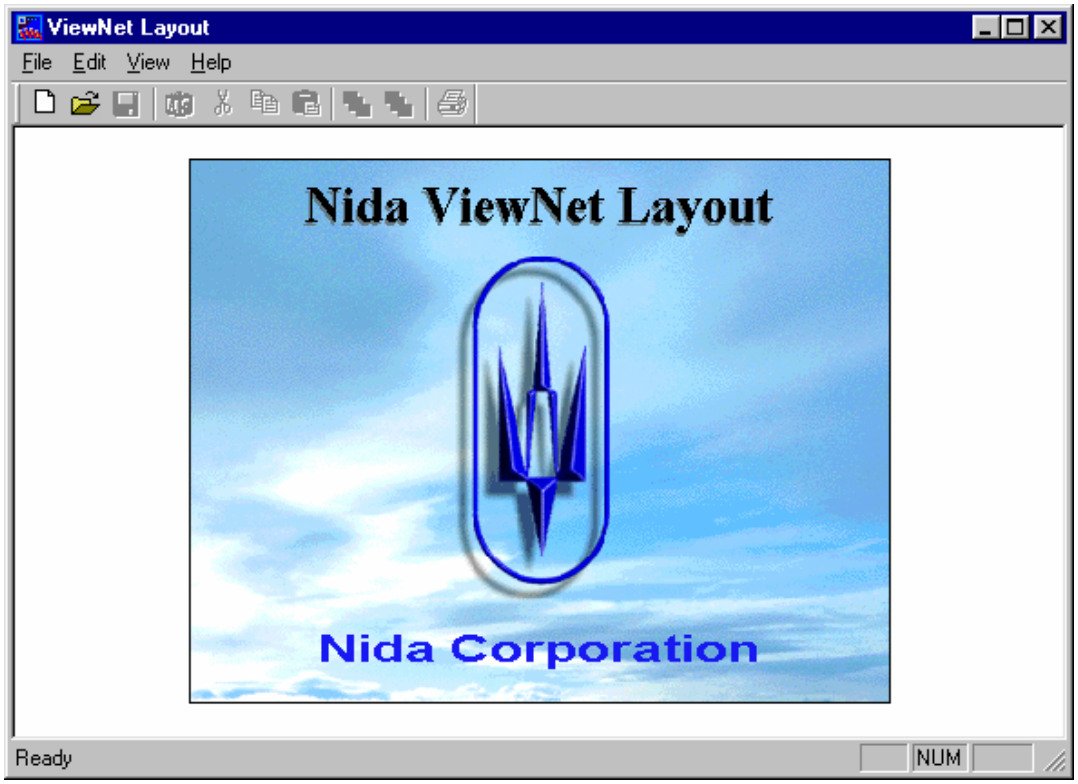
Before you can run ViewNet 3000, you must use ViewNet Layout to create a file that graphically represents your classroom.

This file:

- has a .VNL extension (VNL for **V**iew**N**et **L**ayout).
- provides you with a "control panel" for operating ViewNet 3000 from ViewNet Control.

You will need to create one layout file for each classroom or ViewNet system, and from that one file, you can build any number of additional control files. We will discuss control files in the next section.

Double-click the ViewNet Layout icon to open the ViewNet Layout application. The title screen of the program contains a menu and tool bars for creating the graphical files.



VIEWNET LAYOUT WINDOWS

Menu Bar

The ViewNet Layout menu bar contains the File, Edit, View, and Help drop-down menus.

The Edit menu is disabled until a file is opened or created.

File

The File menu is a basic Windows menu that allows you to create, open, close, and save files.

One additional item included in this menu is **Layout Properties**. The Layout function is used to load alternate icon libraries available from Nida.

Edit

The Edit menu is similar to a word processor edit menu. When a file is open, the functions of copy, cut, and paste are active.

View

The View menu enables and disables the display of the Toolbar and Status Bar.

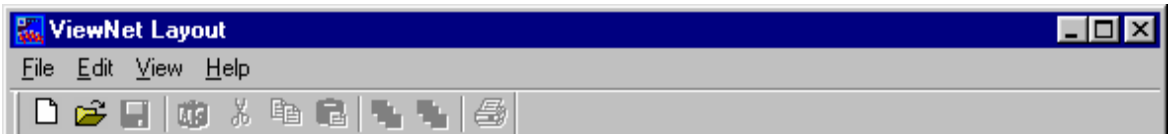
When the menu item **Addresses** is checked, ViewNet addresses are displayed on the classroom icons. We will discuss this in detail later in this manual.

Help

The Help menu displays the ViewNet Layout version number and registration information. Nida personnel may ask you for these details during a technical support call.

VIEWNET LAYOUT WINDOWS, continued

Toolbar



The ViewNet Layout toolbar contains buttons for accessing or performing certain operations. Only the New and Open buttons are active until a file is opened.

New button

The New button performs the same function as the selection of **File**|**New** from the menu bar. It acts as a shortcut to open a clean work window for creating a classroom layout file.

Open button

The Open button is also a shortcut for an item on the File menu. When selected, it displays the Open dialog box where the existing .VNL files are listed.

Save button

This button saves the current file with its current file name. If selected when a new file is on the screen, it will automatically open the Save As dialog box.

Add ViewNet Unit button

This button is used to add graphic icons to your classroom layout that represent the various ViewNet units on your system.

Cut, Copy, and Paste buttons

These shortcut buttons perform the same standard word processor functions that are found on a typical Edit menu. Highlight an item on your screen and select a button to apply the function to the item.

Send To Back and Bring To Front buttons

These buttons move a highlighted item either to the top of a group of items (Bring to Front) or to the bottom of a group of items (Send to Back). They are used for assigning an address sequence to a classroom layout.

Print button

The Print button is used as a standard shortcut to the Print dialog box.

CREATING A VIEWNET LAYOUT FILE

You will need to build one classroom layout for each classroom or ViewNet system.

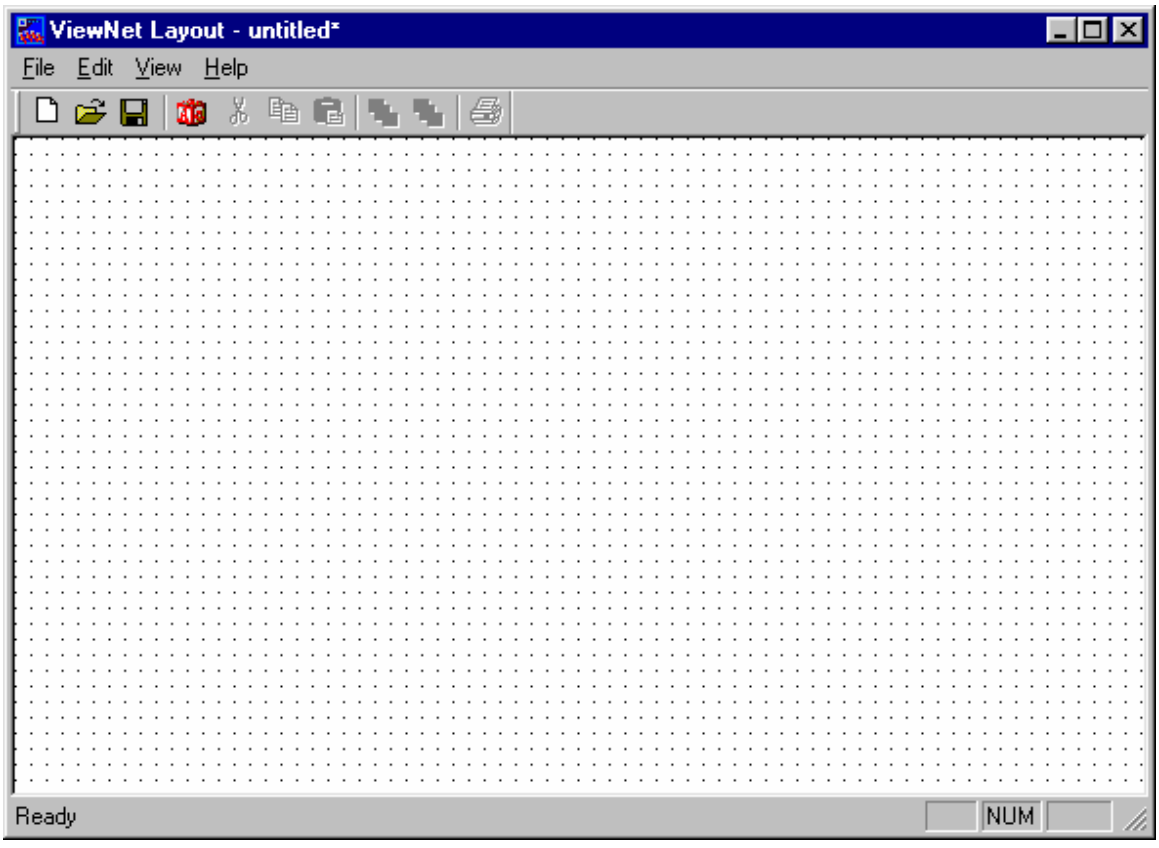
Once a layout is created, one or more control files can be built from it.

VIEWNET LAYOUT WINDOW

Click **File**|**New** or the **New** button on the toolbar to access the ViewNet Layout window.

The grid for laying out your classroom will be displayed.

The Toolbar buttons will activate as needed.



Notice that the Add button has been activated.

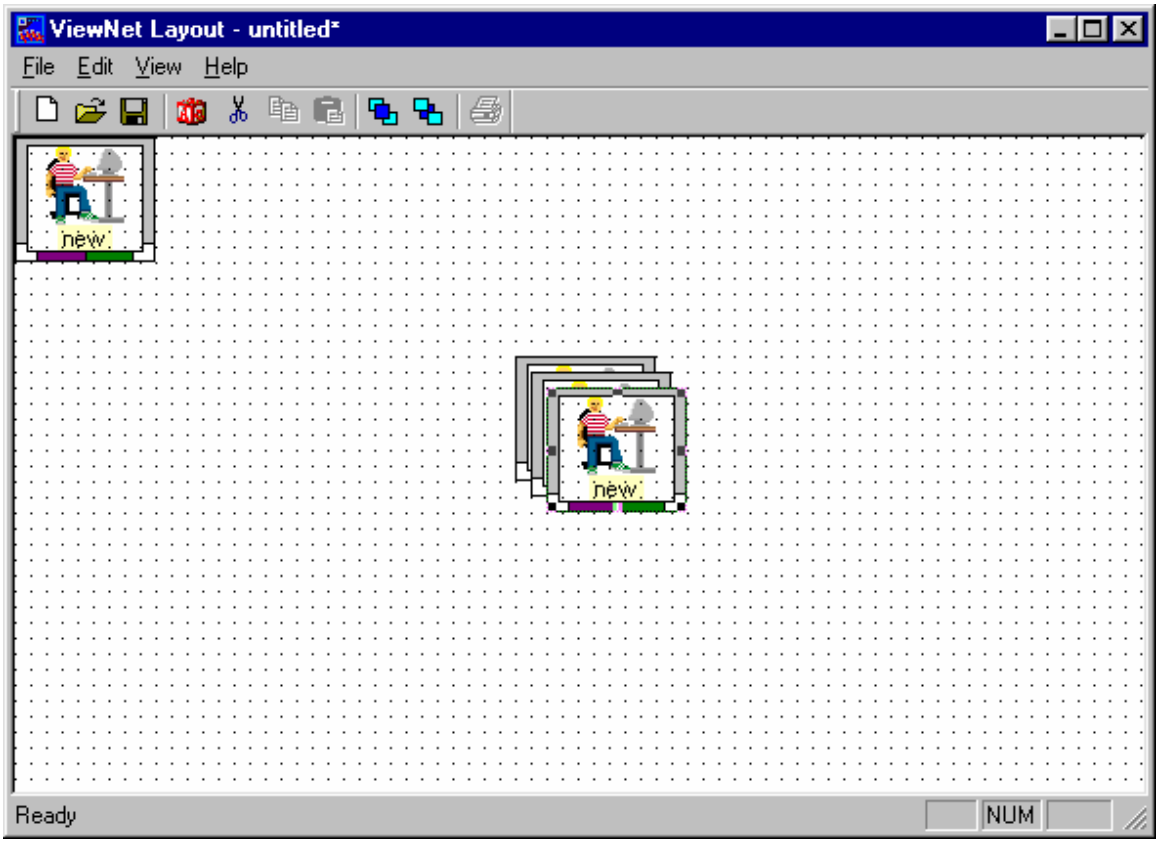
CREATING A CLASSROOM LAYOUT FILE, continued

ADD ICONS TO THE GRID

Click the red **Add** button to create new unit icons in the upper left corner of the window or to duplicate highlighted icons.

Click the **Add** button multiple times to add more icons.

Because your classroom will most likely include many more Student stations than other types of ViewNet stations, the ViewNet Layout default is set to create icons for Student units. Create each icon you need as a Student unit first, and then follow the steps that will be provided later to change the appropriate icons to non-Student units.

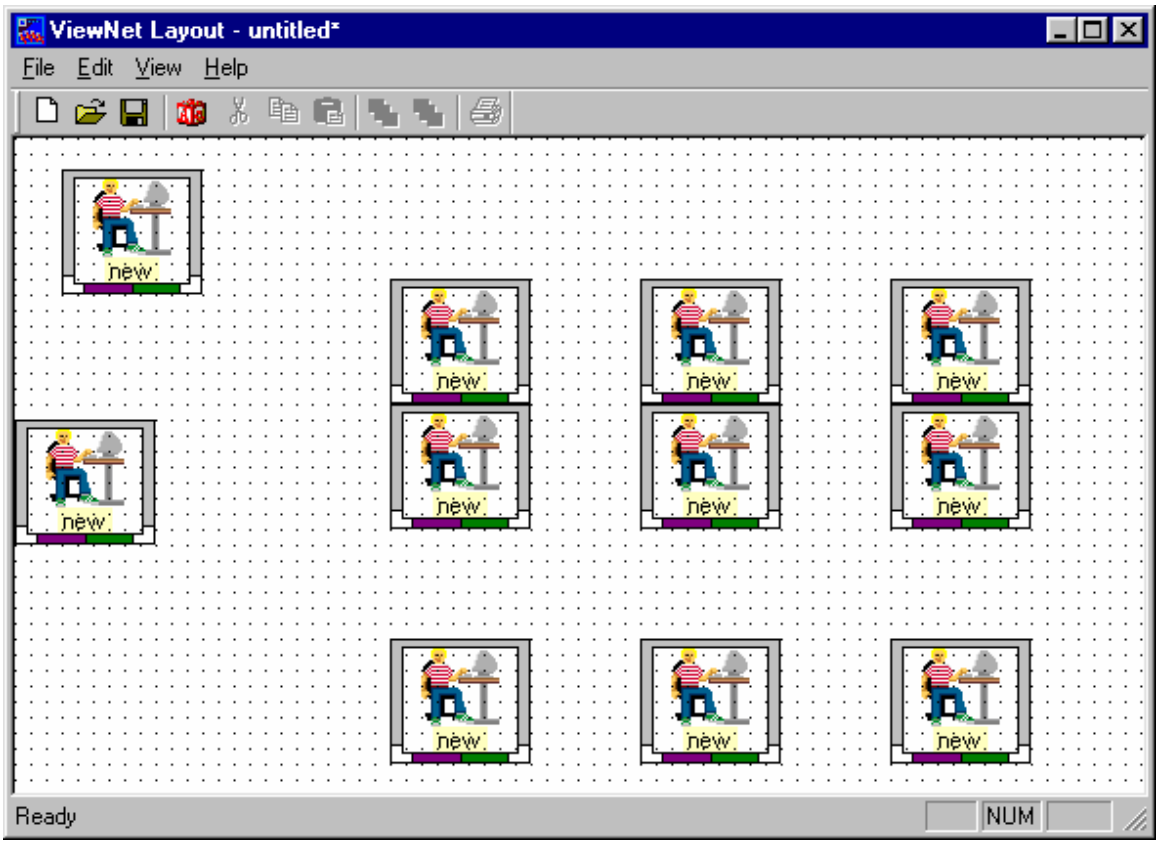


CLASSROOM LAYOUT

Place your pointer over an icon and hold down the left mouse button to drag the icon to the desired position on the grid. Release the mouse button to drop the icon in place.

Use the **Cut**, **Copy**, and **Paste** buttons to assist you in creating your layout.

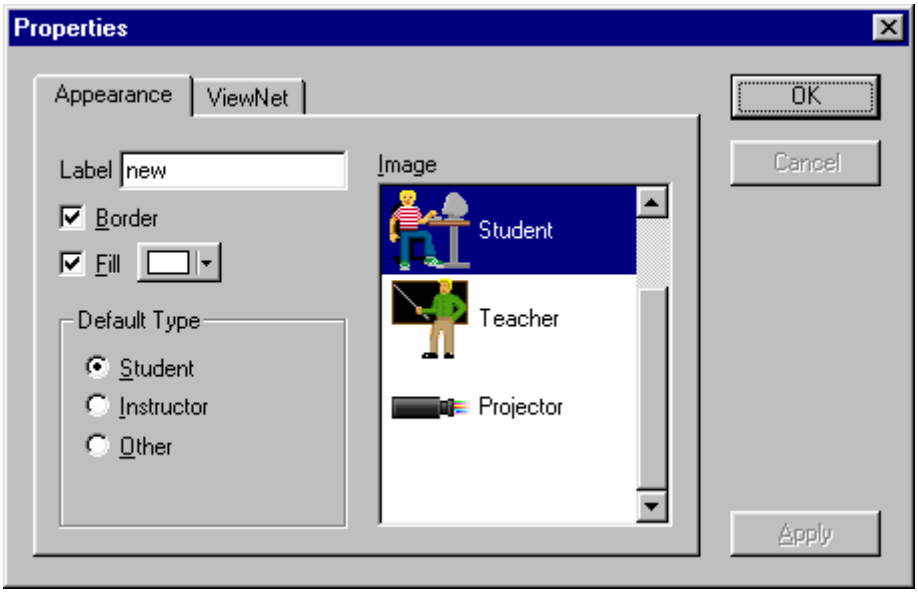
Highlight an icon and use the sizing handles on the box to customize the dimensions of the icon.



ICON PROPERTIES

Now that you have created a preliminary simulation of your classroom, some of the icons must be changed to reflect their proper ViewNet unit.

Place the cursor over the icon to be changed and right-click to display the icon's Properties dialog box:



The Properties dialog box contains an Appearance tab and a ViewNet tab.

Appearance Tab

The majority of the icon properties are changed from the **Appearance** tab. The following paragraphs describe the properties in this tab.

Label

The icon label is displayed on the bottom edge of the icon. The label field can be filled in with a generic name or individual student name.

Each icon unit must have a unique name. There are a few names that are reserved by Nida and cannot be used. These names are All, This, Current, and Control.

Border and Fill

The border checkbox displays or hides the line around the icon.

The Fill check box adds color or shading to the icon's background. The default for Fill is transparent.

Appearance Tab, continued

Default Type

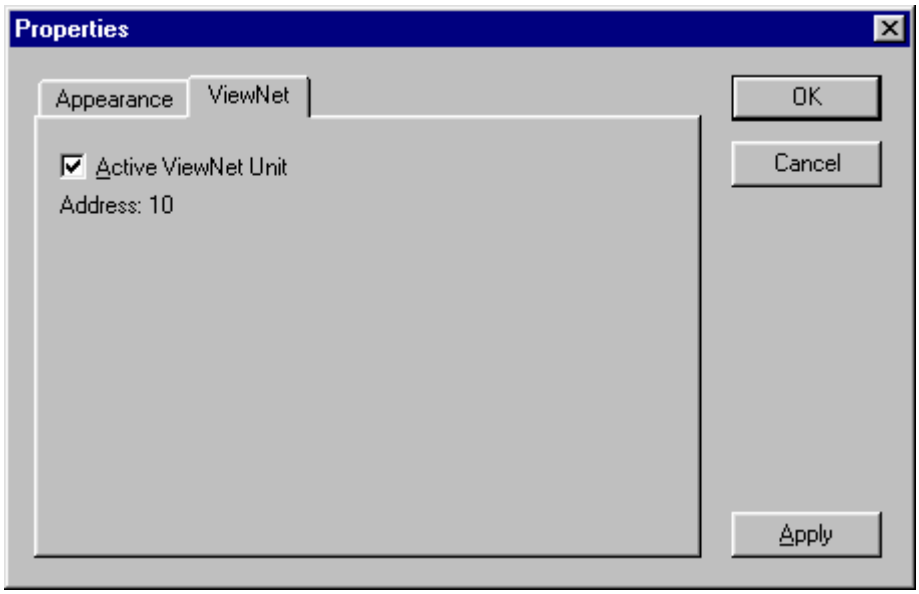
The Default Type box contains three radio buttons for identifying the type of icon. The Type identification is used by ViewNet to categorize the icon for filing and enabling certain features. The Default Type should match the Image.

Image

The Image box provides the icon graphic. This selection should coincide with the Default Type.

ViewNet Tab

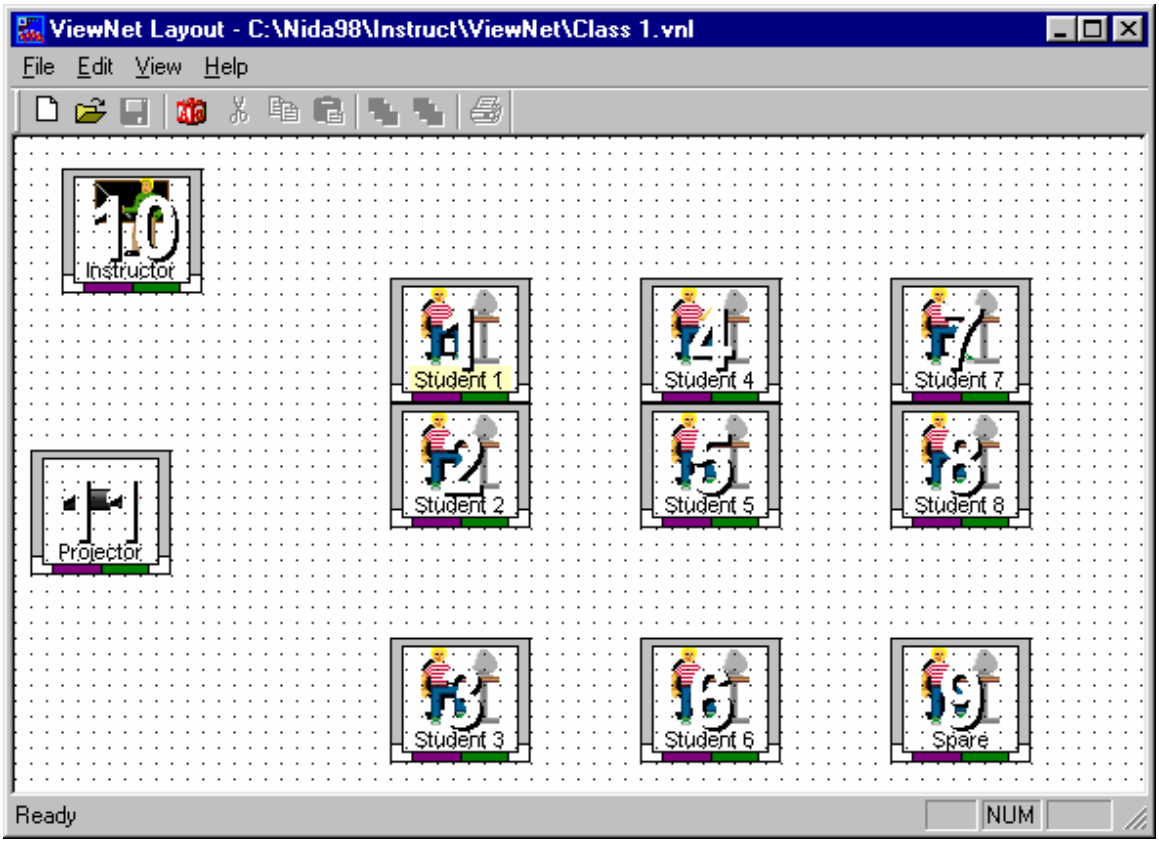
The ViewNet tab allows you to activate or deactivate the icon for your ViewNet "control panel". It also displays the icon address.



ADDRESS FEATURE

When your classroom layout is complete with each unit assigned the proper label and image, the icons can be addressed.

The address sequence will establish the Z-Order, that is, the order in which the units are viewed during the **Scan** routine in ViewNet Control.



ADDRESS FEATURE, continued

Click **View**|**Addresses** to display the unit address on each icon.

Highlight the icon that represents the first station you will want to view during the ViewNet Control **Scan** routine.

Hold down the CONTROL key while you click the **Bring to Front** or **Send to Back** button.

When the desired address number is displayed in the icon label, move to the next icon. Repeat the process until all unit icons are numbered with an address.

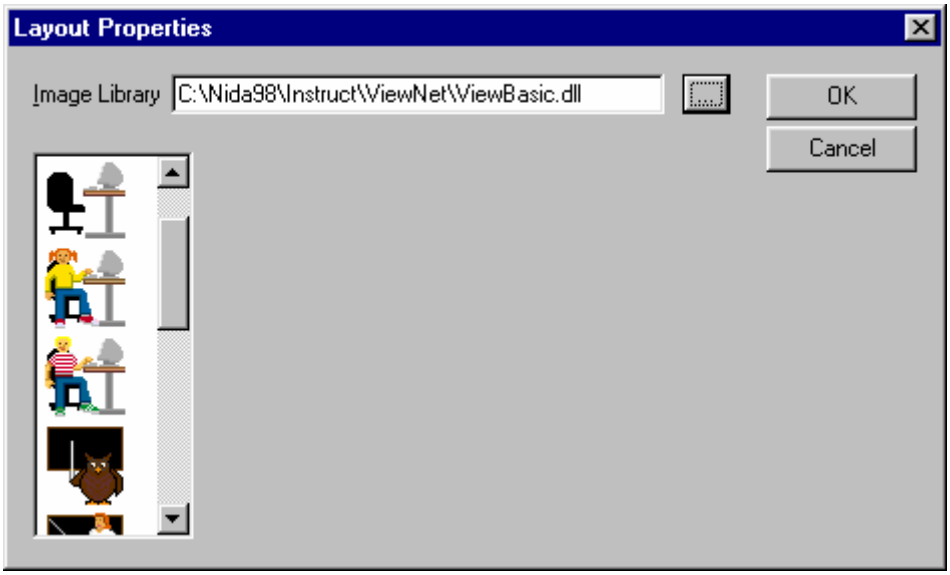
SAVING THE VIEWNET LAYOUT

Click the **Save** button or select **File**|**Save As** to start a typical Windows save routine. The layout will be saved with the extension .VNL to the default ViewNet directory.

ALTERNATE ICON SET

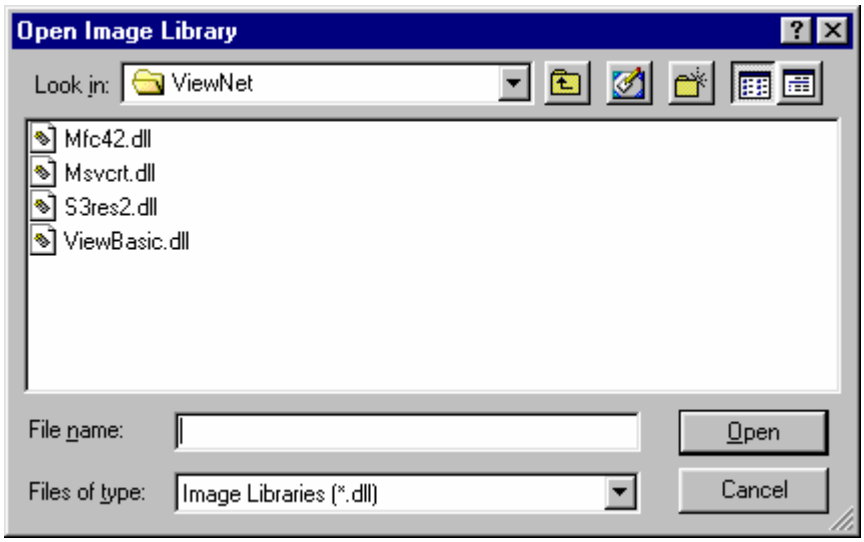
You can use an alternate set of icons for creating your graphical layout by selecting a new image library.

Click **File**|**Layout Properties**. The Layout Properties dialog box will appear. In the Image Library field, the path to the current library of icons is displayed.



The Image Library field is defaulted to the standard Nida icons. Click the dotted button next to the field to access the Open Image Library dialog box.

ALTERNATE ICON SET, continued



The alternate libraries carry an extension of .DLL.

The library included with the ViewNet software, called ViewBasic.dll, is located in the ViewNet directory.

Highlight the library file and click the **Open** button. The Layout Properties dialog box will appear with the new library entered in the Image Library field.

The new icons will be displayed in the window on the left side of the Layout Properties dialog box.

Click **OK** to enable the new library. All icons previously added to the dialog box will be changed to match the images of the new library's icons.

DESELECTING THE ALTERNATE ICON LIBRARY

To return to the Nida default icon library, select **File**|**Layout Properties** and clear the Image Library field.

Click **OK** to return your icons to the default parameters.

Icons assigned images outside of the default list will be displayed with a green question mark. Right-click these icons to change the properties back to a recognized default image.

VIEWNET CONTROL

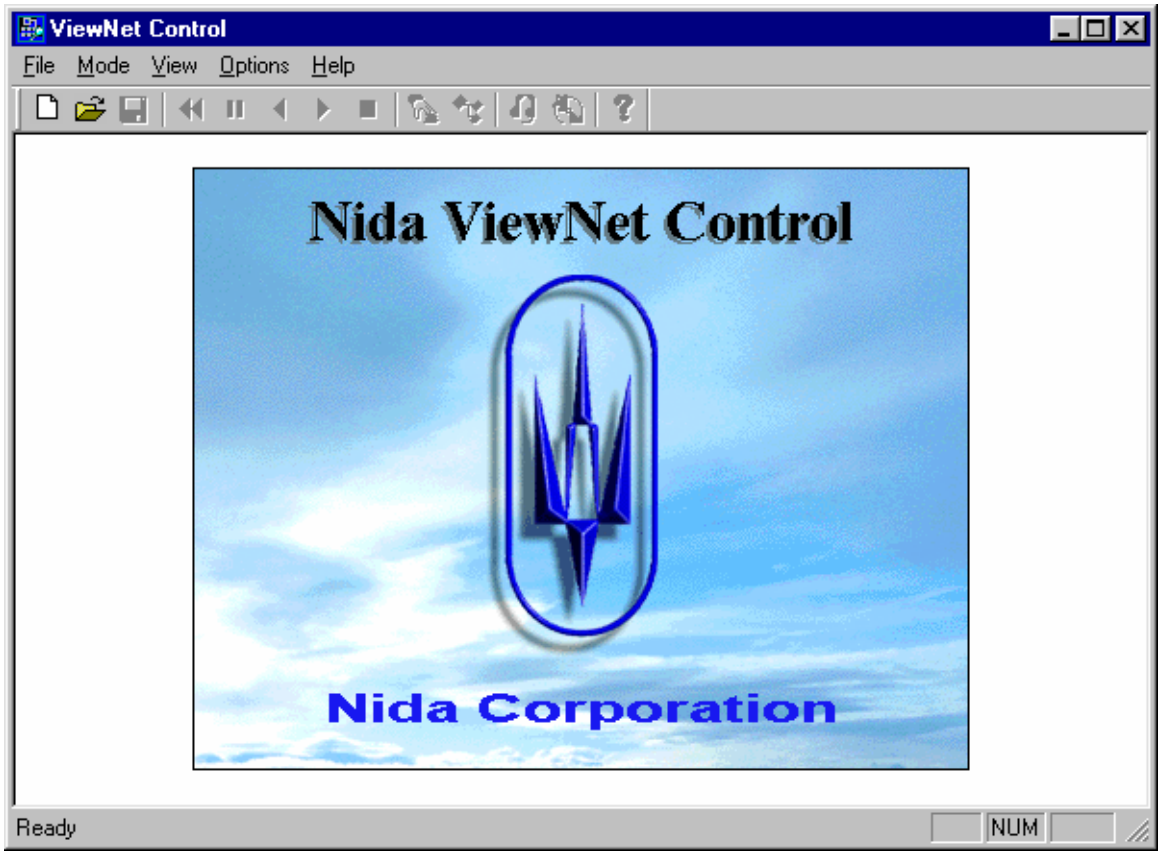
ViewNet Control is the operations center of the ViewNet system.

From ViewNet Control, the instructor can:

- monitor Student stations
- broadcast to all or select Student monitors
- from the Instructor station, take over an individual Student station
- show an individual Student monitor display to the class or group of students

VIEWNET CONTROL WINDOWS

Double-click the **ViewNet Control** icon to open the ViewNet Control application. The windows of this program contain a menu, toolbar, and status bar for operating your ViewNet system.



VIEWNET CONTROL WINDOWS, continued

Menu Bar

The menu bar contains the File, Mode, View, Options, and Help drop-down menus.

File

The File menu is a basic Windows menu that allows you to create, open, close, and save files.

Mode

The Mode menu is disabled until a file is opened or created. See the following page for a description of the activated menu.

View

The View menu enables and disables the display of the Toolbar and Status Bar.

Options

The Options menu contains two menu options, System and Restore Factory Defaults.

The **System** option accesses the System Options dialog box that contains the Com Port settings; Scan, Test, and Status Rate settings; and activation options for Automatic Intercom and Ask for Secondary Group.

The **Restore Factory Defaults** option resets your ViewNet units to the Nida defaults.

Help

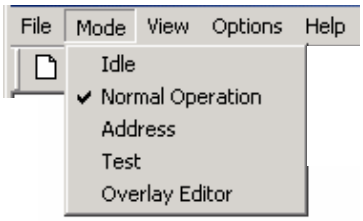
The Help menu displays the ViewNet Control version number and registration information. Nida personnel may ask you for these details during a technical support call.

VIEWNET CONTROL WINDOWS, continued

Menu Bar, continued

Mode

When enabled, the Mode menu makes additional options available for performing key functions of the ViewNet 3000 system.



Idle

In this mode, the system is not active and the Overlay Editor is disabled.

Normal Operation

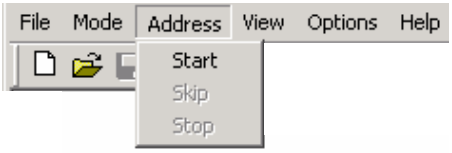
When enabled, the Normal Operation mode activates the Broadcast, Scan, Monitor, and Takeover functions on the menus and toolbar.

Address

When enabled, the Address mode makes the **Address** functions available.

Address

This menu starts and stops the addressing process and also provides a skip option used during addressing.

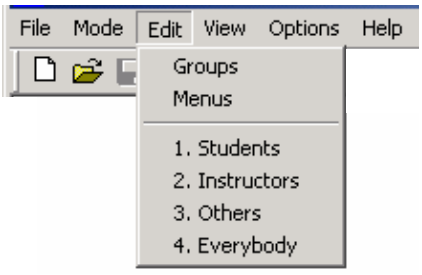


Overlay Editor

When enabled, the Overlay Editor makes the **Edit** functions available.

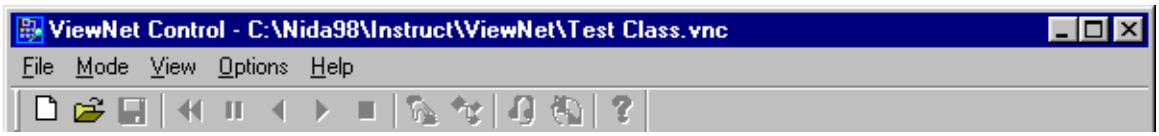
Edit

The Edit menu is displayed only when a file is open and the mode is set to Overlay Editor. This menu is used to build groups and menus and to assign menus to icons.



VIEWNET CONTROL WINDOWS, continued

Toolbar



The ViewNet Control toolbar contains buttons for accessing or performing certain operations. Only the New and Open buttons are active until a .VNC file is opened.

New button

The New button performs the same function as the selection of **File**|**New** from the menu bar. It acts as a shortcut to open the Select Layout dialog box that displays the .VNL files created in ViewNet Layout.

Open button

The Open button is also a shortcut for an item on the File menu. When selected, it displays the Open ViewNet Class dialog box where the .VNC files are listed.

Save button

This button saves the current file with its current file name. If selected when a new file is on the screen, it will automatically open the Save As dialog box.

Navigation buttons

The Navigation buttons are used during addressing, testing, and scanning to allow the instructor the commands of Start Over, Pause, Reverse, Forward, and Stop.

Takeover button

When **Mode**|**Normal Operation** is selected, the Takeover button is used to assume control of the keyboard and mouse functions of a designated workstation.

Secondary Broadcast button

There may be times when the instructor wants the entire class to see the information that is displayed on a specific Student workstation. The Secondary Broadcast button allows the instructor to take over a workstation's display and broadcast it to the rest of the class. This button is always used in conjunction with the Takeover button.

Headset and Music buttons

The Headset and Music buttons are disabled at this time.

Help button

The Help button accesses the online help and information windows.

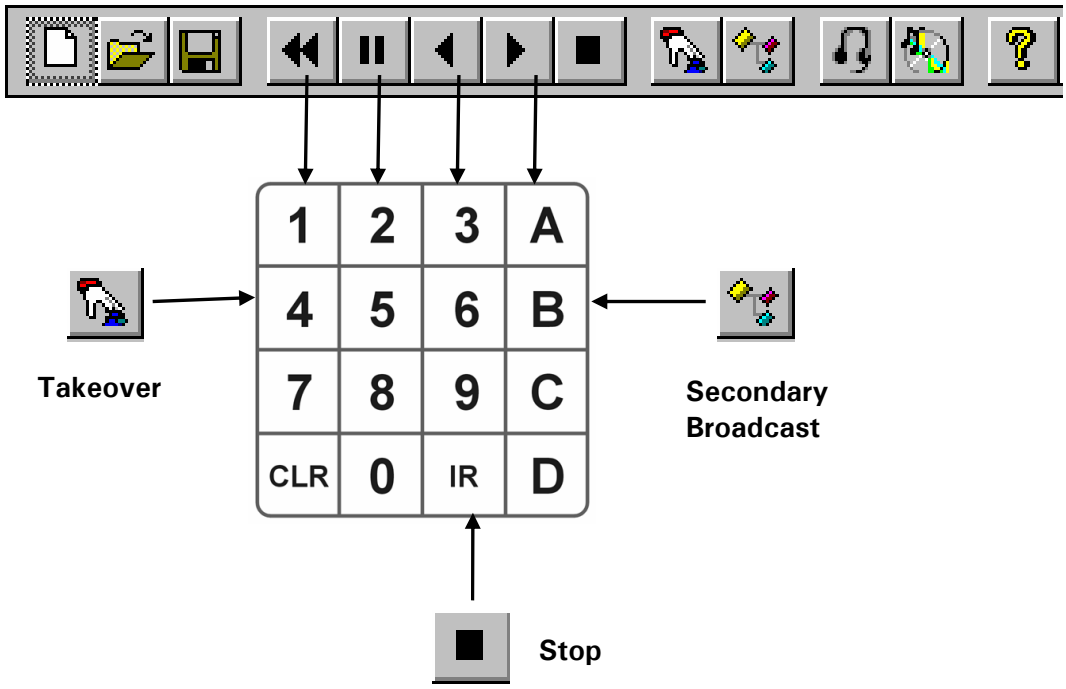
VIEWNET CONTROL WINDOWS, continued

Status Bar

The ViewNet Control Status Bar, located at the bottom of the ViewNet Control window, displays the current control system status and activated mode.

It will display “Ready” when no functions are activated.

ViewNet Control Toolbar/Keypad Correlation



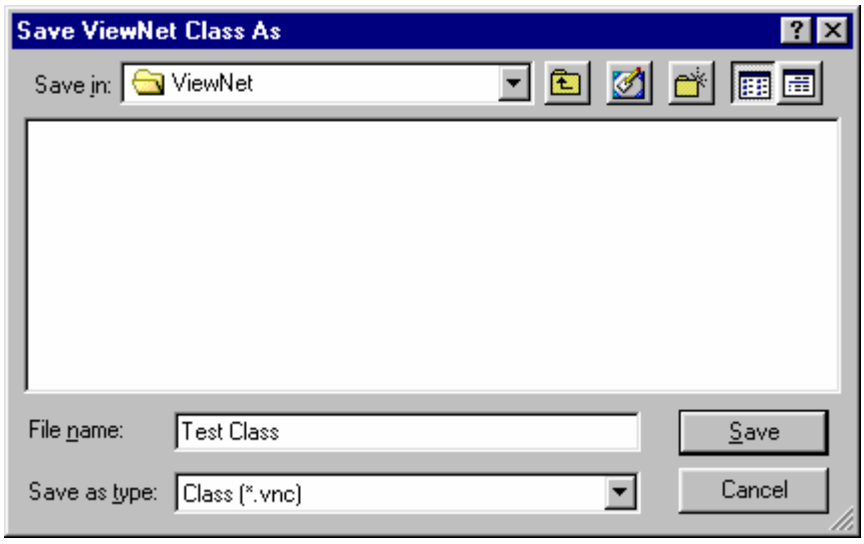
CREATING A VIEWNET CONTROL FILE

The first task required for using the ViewNet Control application is to make a ViewNet Control file (.VNC) from the ViewNet Layout file (.VNL) that was created in the ViewNet Layout program.

The ViewNet Control file contains the layout and all the special control commands for operating the ViewNet 3000.

To create the control file, open ViewNet Control and select **File**|**New**. You will be prompted to select the .VNL file created in ViewNet Layout.

It is recommended that you run the ViewNet 3000 with the Nida-provided default parameters until you become familiar with the system. To enable the default parameters, immediately save the file as a .VNC file. For easier retrieval, save the file in the ViewNet directory.



ADDRESSING YOUR VIEWNET UNITS

Each ViewNet unit icon was assigned an address during the creation of the classroom layout. The ViewNet units must now be addressed to provide the instructor with control over the classroom.

ADDRESS MENU

Select **Mode**|**Address** to add the Address menu to the menu bar.

If changes were made to the layout file, a prompt will also be displayed reminding you to save the file before addressing.

The Address menu contains three options: Start, Skip, and Stop.

During the address process, you can use  for Skip  and for Stop.

ADDRESS PROCESS

The address process will begin at the unit icon identified as number 1. This icon should match the physical location of your number 1 workstation. If the location is different, return to the ViewNet Layout file and reassign the icon address order to reflect your classroom.

During the address process, the icon borders will change colors to indicate the icon's addressing status. The border colors and their indications are:

Grey	Station Idle
Alternating Yellow/Green	Station Ready To Be Addressed
Blue	Station Addressing Complete

To address a workstation unit, press [**IR**] on the workstation keypad (see Component #29 on Page 60) when the icon is displaying the alternating yellow/green border. The border will then change to blue.

Use the **Forward** navigation button to skip a unit during the addressing process. A skipped unit will retain its address number; however, it will not be activated.

For classrooms utilizing a keypad on the Instructor station only, the keypad must be moved from one ViewNet workstation unit to the next during the addressing process.

TESTING THE VIEWNET SYSTEM

Select **Mode**|**Test** to display the test pattern window and begin the test routine.

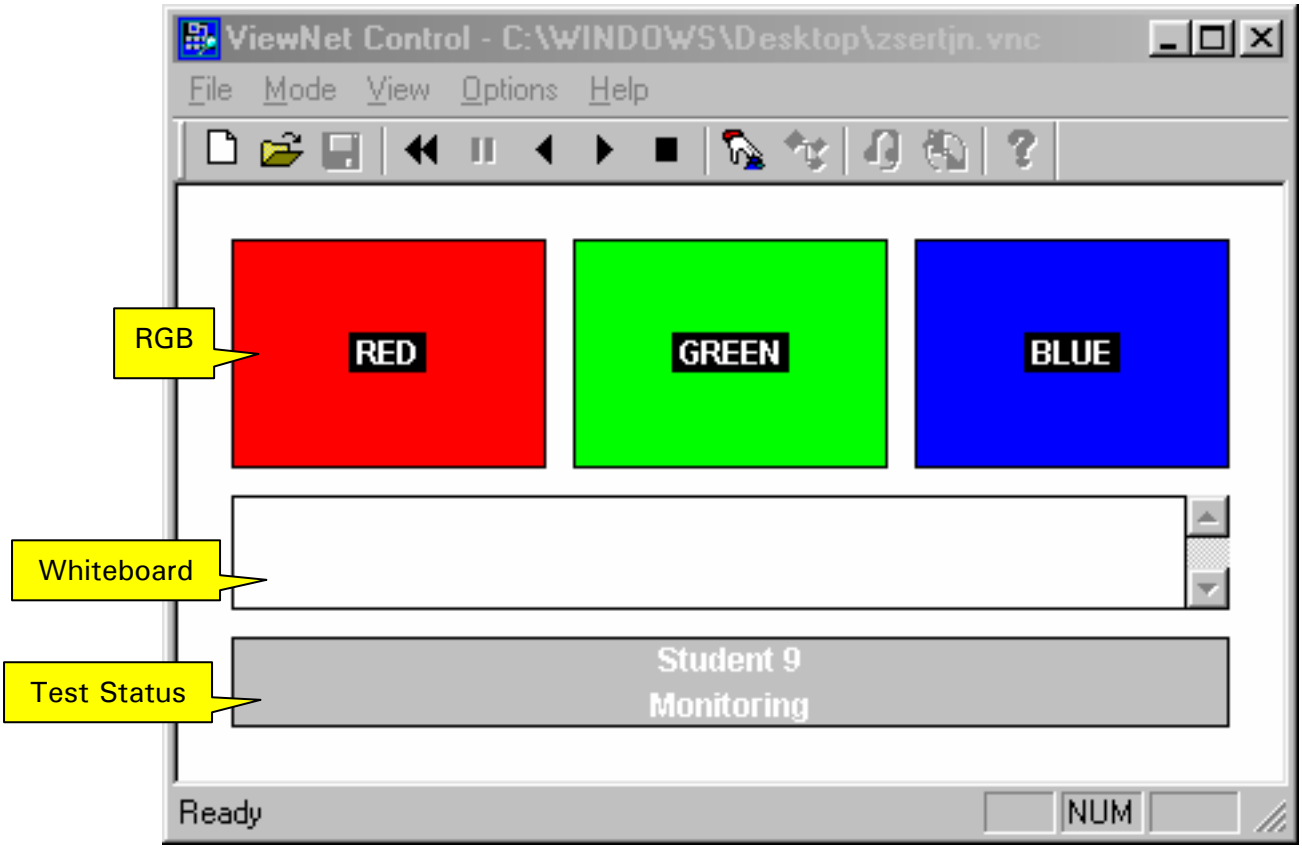
The test routine systematically moves from one ViewNet unit to the next, determining if the ViewNet system is connected correctly. It first enables the Monitor function at each workstation and then the Takeover function.

During the routine, a test pattern is displayed on the workstation under test, allowing the instructor or technician to check the ViewNet parameters for proper operation.

TEST PATTERN WINDOW

The Test Pattern window is divided into three sections:

- RGB
- whiteboard
- test status



TEST PATTERN WINDOW, continued

RGB SECTION

The RGB section is used to determine if the Red/Green/Blue video cables of the ViewNet system are connected correctly. (See #5, #6, and #7 on Pages 56 and 57.)

The colors on the monitor of the workstation under test should reflect the word in the color box. Crossed or disconnected cables will cause a wrong color to be displayed in the associated color box.

WHITEBOARD

The Whiteboard section is used to test the ViewNet keypad.

Test the keypad by pressing the keys. The characters, with spaces separating them, will appear on the whiteboard at the Instructor station if the system is connected correctly.

STATUS SECTION

The Status section displays which workstation is undergoing testing and the test cycle currently being performed. In the Monitor cycle, the instructor has full control over the Instructor keyboard and mouse. During the Takeover cycle, the workstation under test has control of the Instructor keyboard input and mouse pointer.

TOOLBAR BUTTONS

The Navigation buttons on the toolbar are activated to assist the instructor or technician in moving from one workstation to another for testing.

The **Pause** button can be used to halt the test on a specific workstation for troubleshooting.

The Toolbar buttons cannot be accessed by the Instructor workstation when the test is in the Takeover cycle on a Student workstation. Press [**2**] on the Instructor station keypad to pause the test during Takeover.

VIEWNET CONTROL NORMAL OPERATION

The ViewNet software assists the classroom instructor by providing the ability to:

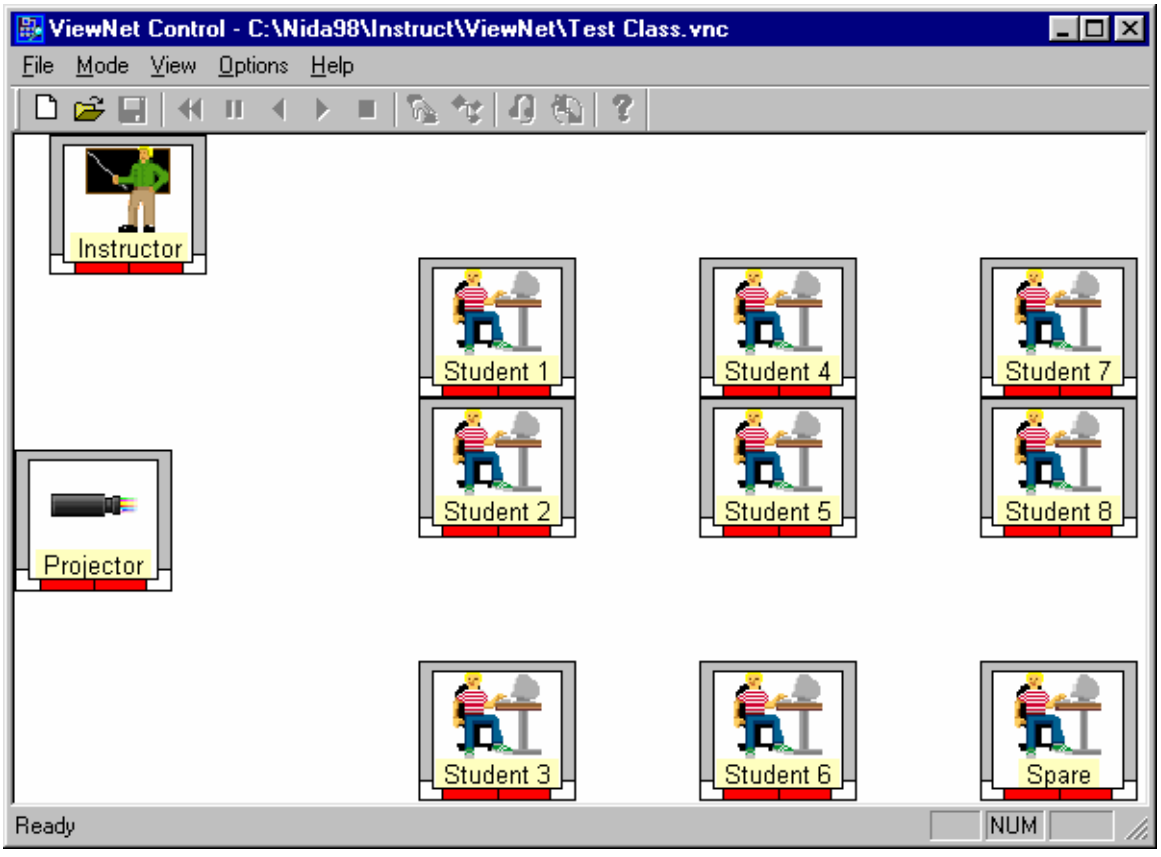
- broadcast information to students
- scan the classroom to monitor student progress
- take over a workstation for demonstration or providing assistance
- broadcast a Student workstation display to other students in the class
- send the Instructor display to a projection system for a full multi-media presentation

All of these functions are accomplished from the ViewNet Control window with **Mode | Normal Operation** selected.

NOTE:

Ensure that Steps 1-6 in the recommended sequence on Page 3 have been accomplished.

VIEWNET CONTROL CLASSROOM REPRESENTATION



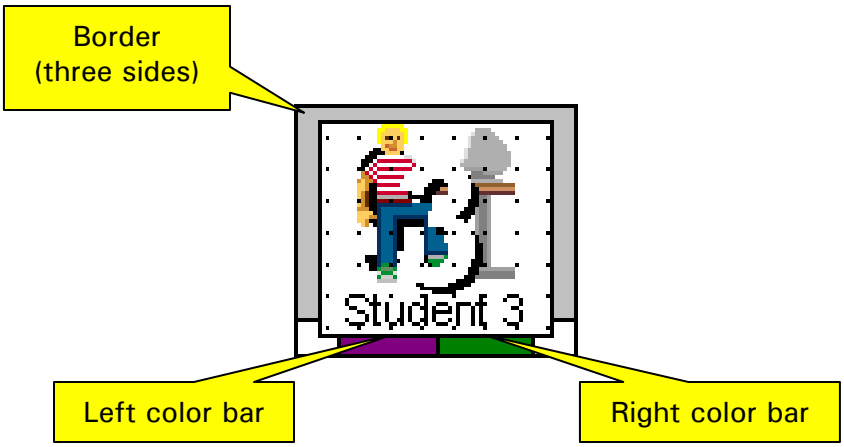
VIEWNET CONTROL CLASSROOM REPRESENTATION, continued

The ViewNet Control window's graphic display is a duplication of the layout screen created in the ViewNet Layout program. This screen should match the actual classroom configuration.

To access function menus for operation of the ViewNet 3000 system, select **Mode**|**Normal Operation** and double-click or right-click an icon. The toolbar buttons and the keypad will be activated as needed.

ICON COLOR SCHEME

The unit icon for each ViewNet station displays specific colors in the border and lower color bars to depict specific operation functions. The following explanation describes the icon color scheme and the functions it indicates.



ITEM	COLOR	FUNCTION
Border	Grey	ViewNet station is inactive
Border	Cyan	Station is in sending mode
Border	Blue	Station is in receiving mode
Left color bar	Dark Purple	Waiting for command
Left color bar	Light Purple	Takeover in progress
Right color bar	Bright Green	Intercom ON
Right color bar	Dark Green	Intercom OFF
Both color bars	Red	Communication loss

VIEWNET CONTROL ACCESS TO FUNCTIONS

With **Mode**|**Normal Operation** selected, double-click or right-click an icon to access the functions of the ViewNet 3000 system. A menu of options will be displayed.

DOUBLE-CLICK AN ICON

Double-click an icon to automatically start the assigned function.

The Instructor unit icon is defaulted to the **Broadcast** function.

This configuration enables the instructor to send the display on the Instructor workstation to all Student workstations by simply double-clicking the Instructor icon.

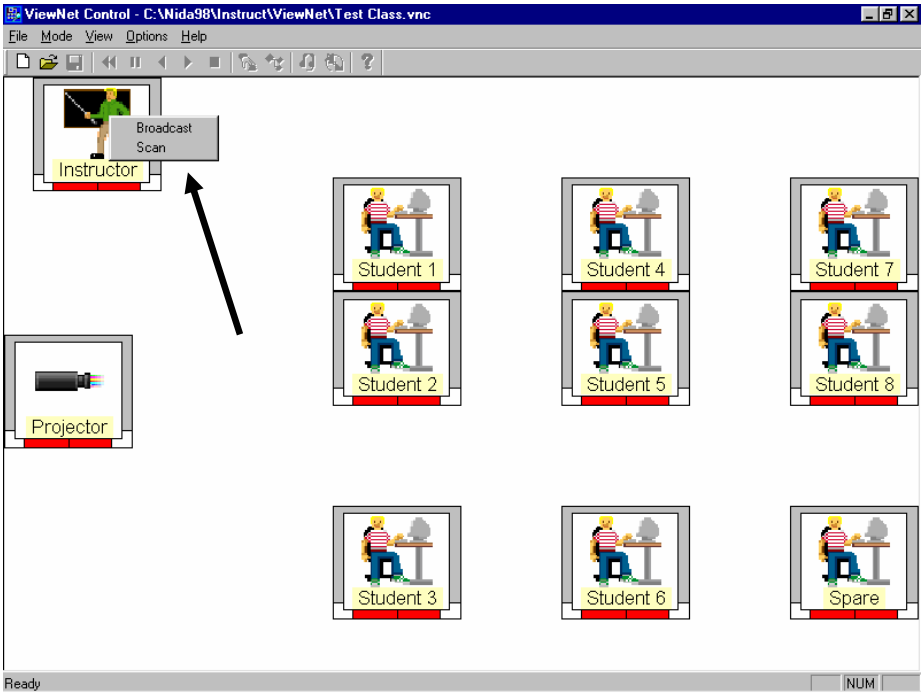
The Student unit icon is defaulted to the **Monitor** function.

This configuration allows the instructor to view the Student display on the Instructor workstation by simply double-clicking the Student icon.

The double-click assignment is fully customizable. (See Page 51.)

VIEWNET CONTROL ACCESS TO FUNCTIONS, continued

RIGHT-CLICK AN ICON



Right-click an icon to display a function selection menu. Select an option from the menu to start the function routine.

The Instructor unit icon menu is defaulted to the Broadcast and Scan functions, as shown above.

The Student unit icon menu is defaulted to the Broadcast, Monitor, and Takeover functions.

Menus are fully customizable. (See Page 48.)

For both methods of accessing ViewNet functions (double-clicking or right-clicking), the **Stop** button on the toolbar or [**IR**] on the keypad will stop the function.

Icons assigned the "Other" type in ViewNet Layout do not have ViewNet functions attached; however, they can receive broadcast and scan signals. The projector is an example of an icon assigned an "Other" type designator.

CUSTOMIZING YOUR VIEWNET CONTROL PANEL

OVERLAY EDITOR

The Overlay Editor mode allows customization of the control function of the ViewNet system. Customizing menus and groups allows the instructor greater flexibility in monitoring and providing feedback to groups of students.

Open a ViewNet Control (.VNC) file to activate the Mode option on the toolbar. (This function is disabled until a file is opened or created.)

Select **Mode**|**Overlay Editor** to display the Edit menu on the ViewNet menu bar.

EDIT MENU

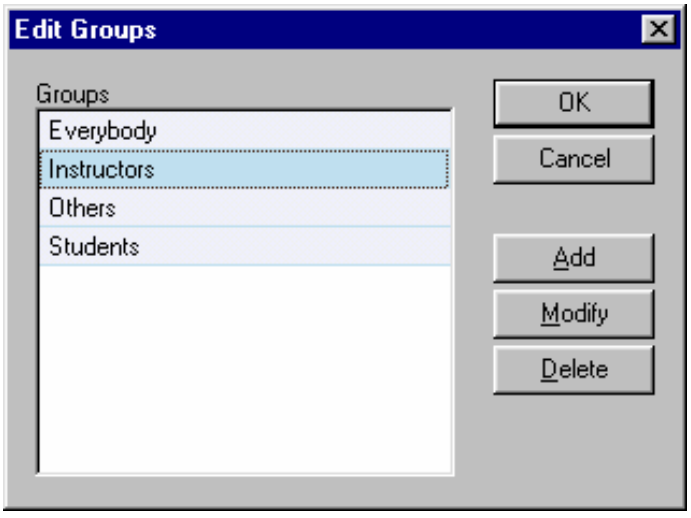
The Edit menu:

- provides options for customizing Groups and Menus
- lists the names of all of the groups currently active
- allows changes to be made to the layout of any active group

Customizing Groups

Groups are customized in two different ways: by name and by layout.

Select **Edit**|**Groups** to display the Edit Groups dialog box. This is where you can add, modify, or delete the names of groups.



Customizing Groups, continued

Add a Group Name

To add a group, click the **Add** button of the Edit Groups dialog box. The Add New Group dialog box will be displayed.

Enter the new name (Automotive) in the Group Name field of the Add New Group dialog box and click **OK** to add the new name to the Groups list.

Modify a Group Name

To change the name of a group, highlight a group in the Edit Groups dialog box and click the **Modify** button.

The Modify Group dialog box will be displayed. Change the name and click **OK**.

Delete a Group Name

To delete a group, highlight a name in the Edit Groups dialog box and click the **Delete** button.

This option will only remove the particular group identified. The main ViewNet Control layout will remain available for defining further groups as required.

Customizing Groups, continued

Create or Change a Group Layout

To change the make-up of a group, select **Edit|XXX** from the menu bar (where XXX = the name of the group you want to modify).

Remember, for the Edit function to be enabled, a .VNC file must have been opened or created. When you select the group name from the Edit menu, the layout grid for the file will be displayed, with icons representing the complete classroom.

Icons that have already been included in the group have green borders.

Icons that are available to be included in the group have gray borders.

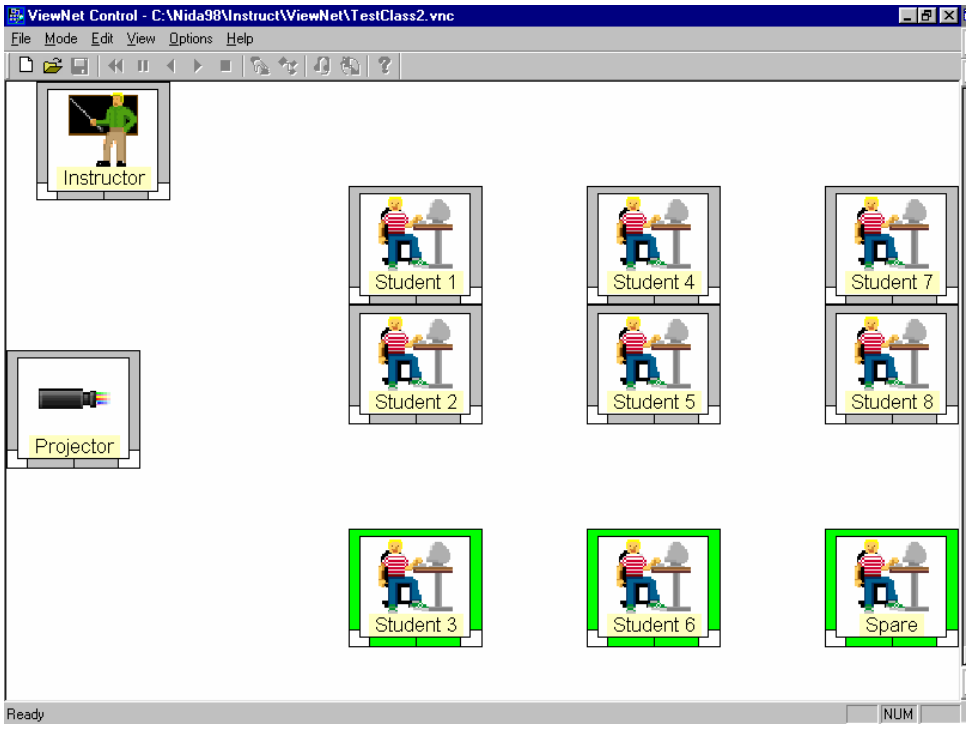
Double-click a unit icon either to add it to or delete it from the group.

When you change modes or exit, you will be prompted to save your changes. Alternatively, you can select **Save** or **Save As** at any time to save your current changes.

See the following page for an illustration of customizing a group layout.

Illustration: Customizing a Group Layout

Consider the classroom layout below for an electronics class, which appears when we open our .VNC file, TestClass2.vnc. We want to select the members to be included in the Automotive group we created in the previous section.



Edit is enabled on the menu bar because we have opened the .VNC file. We select **Edit**|**Automotive** to identify the group we are customizing. All of the icons appear with a gray border, because we have not yet identified any members for this new group. We double-click the icons that represent the three stations we want to include in the Automotive group:

- Student 3
- Student 6
- Spare (The spare workstation is an automotive bench that needs to be part of the group.)

The borders on the icons we select turn green to indicate entry into the group.

We have now defined our group of automotive/electrical workstations, and we can interact with them as a separate unit, without affecting the rest of the electronics class.

Customizing Menus

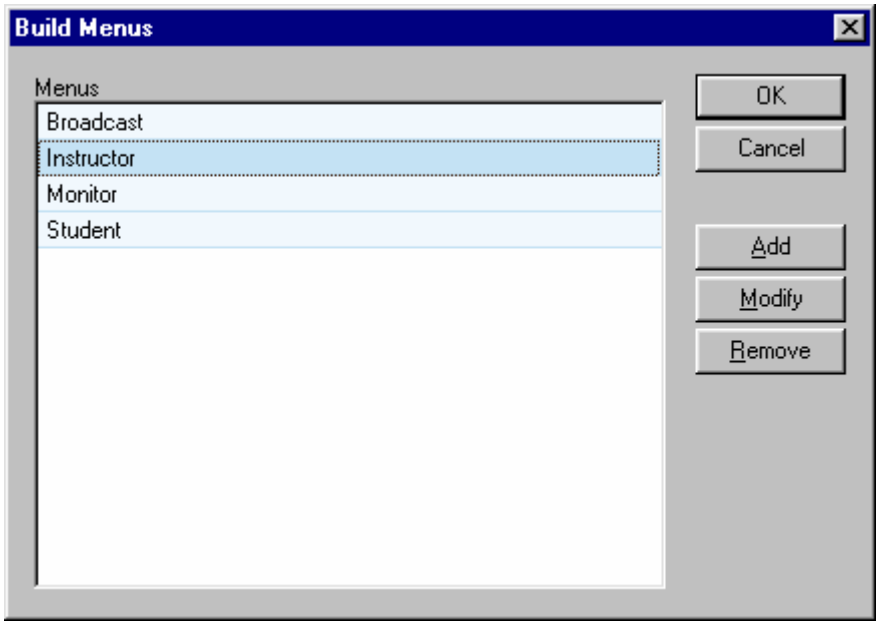
When you double-click or right-click an active unit icon, you access the function menu which is assigned to that icon.

The default menus that are automatically created when you make a new .VNC file have only a single item on the Double Click menu. A menu with a single item is never displayed; it is immediately executed.

The icon function menus are completely customizable.

Select **Mode**|**Overlay Editor** to display the Edit menu on the ViewNet menu bar.

Select **Edit**|**Menus** to display the Build Menus dialog box. This box lists all of the menus available and allows you to add, modify, or remove a menu.

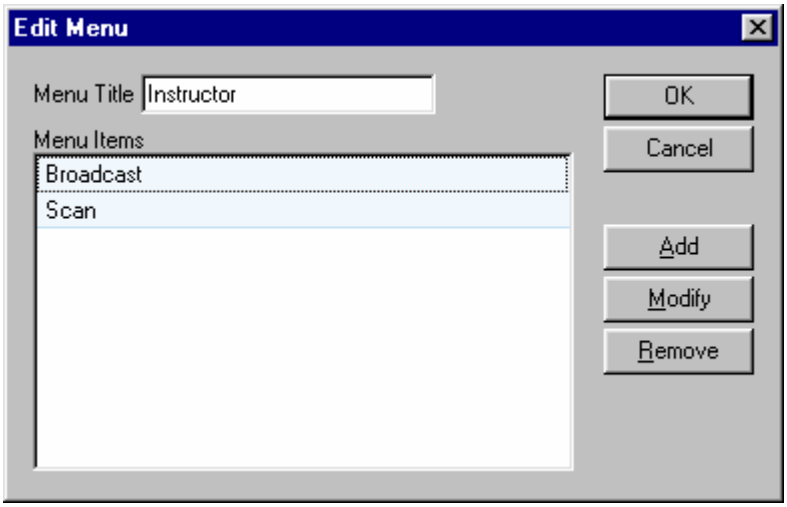


For example, let's use the Automotive group we created. We will customize the Instructor menu so that we can easily broadcast a display from the Instructor station to only the workstations in the Automotive group.

Access the Build Menus dialog box, highlight **Instructor**, and click **Modify**.

The Edit Menu dialog box is displayed.

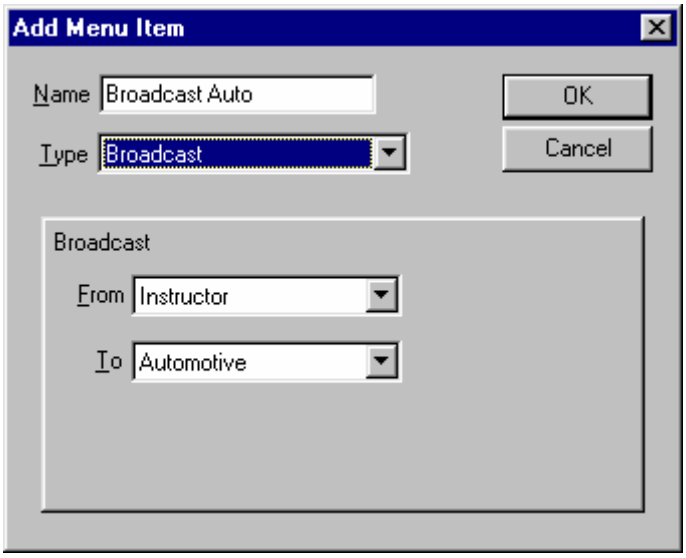
Customizing Menus, continued



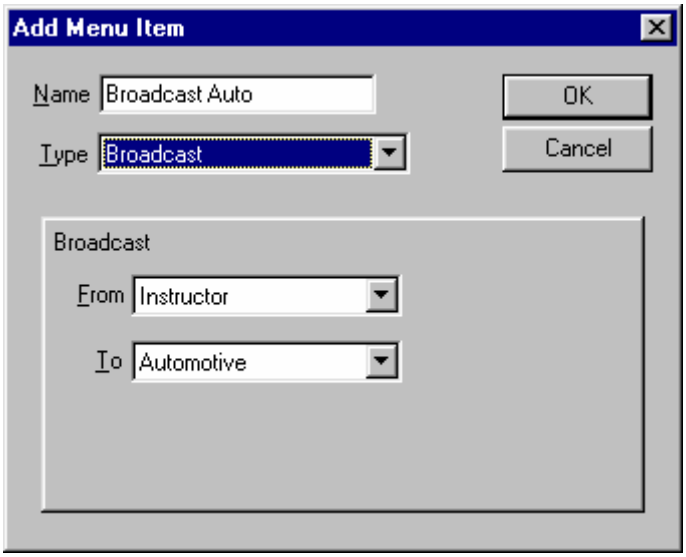
The Edit Menu dialog box lists the functions that can be accessed through the menu named in the Menu Title field. In the instance above, the Instructor menu includes two functions: Broadcast and Scan. You can add, modify, or remove menu items from this list by clicking the appropriate button.

Add Menu Item

To add the Automotive item for our current example, we would click **Add** to access the Add Menu Item dialog box.



Add Menu Item, continued



Fill out the Add Menu Item dialog box:

- Enter the title of your new menu item in the Name field (**Broadcast Auto**).
- Move to the Type field, and click the down arrow. Make a selection from the drop-down list to assign a type (**Broadcast**).
- Assign a Broadcast parameter in the From field by clicking the down arrow and making a selection from the drop-down list (**Instructor**).
- Assign a Broadcast parameter in the To field by clicking the down arrow and making a selection from the drop-down list (**Automotive**).

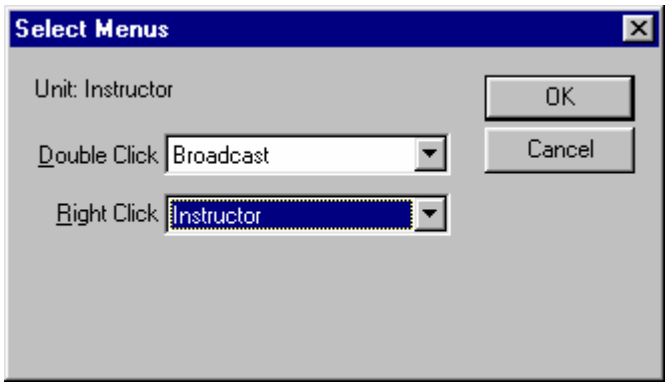
In the case illustrated above, we created an item called Broadcast Auto, which is a Broadcast type that transmits from the Instructor workstation to the group we created called Automotive.

Now, whenever **Mode**|**Normal Operation** is selected and the Instructor icon is right-clicked, Broadcast Auto will be listed in the function menu that appears.

Assign Menus to the Mouse

Right-clicking a unit icon accesses the function menu of that icon, and double-clicking the unit icon performs an assigned function.

The mouse clicks for any individual icon can be customized to exact specifications. Select **Mode|Overlay Editor** and right-click the icon to access the Select Menus dialog box.



This box assigns menus to the Double Click or Right Click operation for the unit identified in the box.

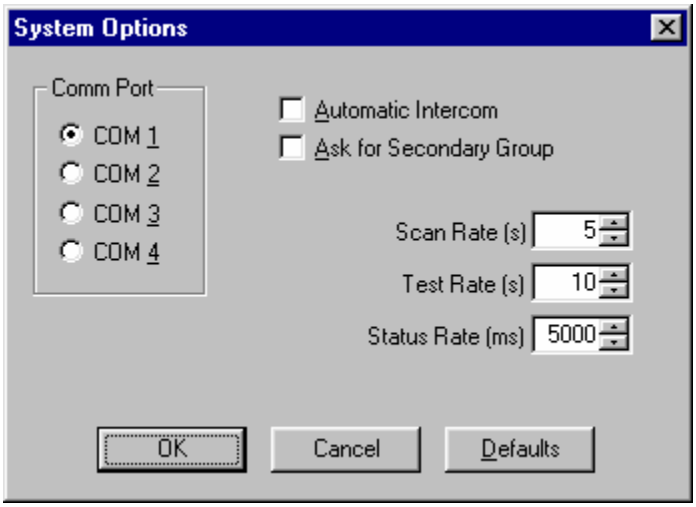
Click the down arrow at the right of each list box to display the available options. The options include all the functions that have been created, either automatically (as a process of the .VNC file) or specifically (by an individual user).

Since the double-click is usually a speed click to access your most utilized function, it is recommended that the Double Click field be limited to single item menus. In our example above, the default of **Broadcast** remains as the Double Click assignment.

By default, right-clicking the Instructor icon produces a function menu with the options of Broadcast and Scan. However, we modified our Instructor menu to include the Broadcast Auto item. With the Instructor menu assigned as above, when you right-click the Instructor icon, you will see Broadcast, Scan, and Broadcast Auto.

Customizing System Parameters

To customize system parameters, select **Options**|**System** from the ViewNet Control menu bar. The system parameters can be changed in any mode.



The System Options dialog box contains access for:

- selecting the COM Port
- enabling or disabling the Automatic Intercom and Ask for Secondary Group options
- setting the number of seconds for Scan Rate and Test Rate
- setting the number of milliseconds for the Status Rate

Systems Options Dialog Box

Com Port

The Com Port box contains radio buttons to enable the desired COM port that will interface with the ViewNet system from the Instructor or controller computer.

Automatic Intercom

☐ When the Automatic Intercom box is **Deselected** (not checked):

The Automatic Intercom is deactivated. The Intercom function must be manually enabled when required for the Instructor workstation to communicate privately with another location.

☑ When the Automatic Intercom box is **Selected** (checked):

The intercom connection is automatically activated between the instructor and a particular workstation when that workstation is placed in **Monitor**|**Takeover**. The two locations can communicate privately without disturbing the rest of the class.

This workstation intercom is automatically disabled when the instructor deselects the **Monitor**|**Takeover** function.

Ask for Secondary Group

☐ When the Ask for Secondary Group box is **Deselected** (not checked):

The **Broadcast** button on the ViewNet Control toolbar automatically uses the **Everybody** parameter.

Clicking the toolbar button sends the monitor display to everybody in the classroom.

☑ When the Ask for Secondary Group box is **Selected** (checked):

The **Broadcast** button on the toolbar first offers a choice of parameters. Before the operation is performed, a selection is made from the menu that appears, listing all the groups (including **Everybody**).

Clicking the toolbar button and selecting a group sends the monitor display to specific workstations as designated.

Systems Options Dialog Box, continued

Scan Rate (s)

The Scan Rate indicates, in seconds, the pause time at each Student workstation during the Scan function.

This rate may be increased or decreased with the spin button adjacent to the Scan Rate field.

The Scan Rate is defaulted to 5 seconds per workstation.

Test Rate (s)

The Test Rate indicates, in seconds, the pause time at each Student workstation during the Test function.

This rate may be increased or decreased with the spin button adjacent to the Test Rate field.

The Test Rate is defaulted to 10 seconds per workstation.

Status Rate (ms)

The Status Rate indicates, in milliseconds, the rate at which the system queries the workstations to determine if they are connected to the ViewNet system and functioning.

This rate may be increased or decreased with the spin button adjacent to the Status Rate field.

Defaults

Click the Defaults button to reset your ViewNet Control configuration to the Nida-provided parameters indicated in the example of the Systems Options dialog box shown on Page 52.

The Defaults button will not affect the COM Port setting.

RESTORE FACTORY DEFAULTS

Select **Options**|**Restore Factory Defaults** from the ViewNet Control menu bar to return the individual ViewNet unit EPROMs to their factory-installed default settings.

This option is available when **Mode**|**Normal Operation** is selected. Basically, it restores unit settings that may have been tripped by another software program.

If a unit or units appear unresponsive, select this option to clear the EPROM and reset the default parameters.

COMPONENT IDENTIFICATION

The ViewNet 3000 is pictured and described below to facilitate your installation process and maximize your use of the system.

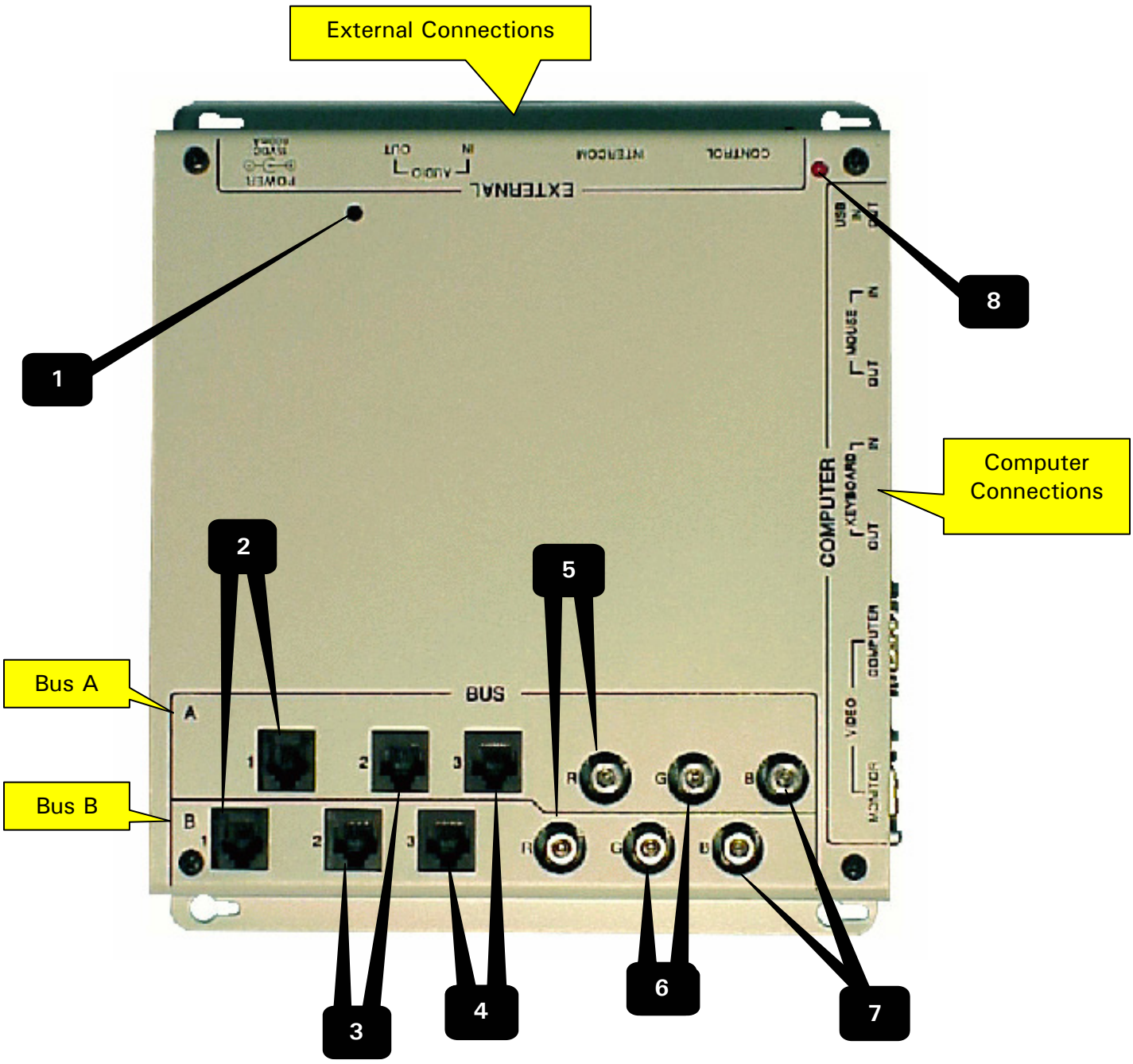


Figure 2. ViewNet 3000 Control Unit (Top View)

Reminder: Receptacles are the same on both Bus A and Bus B (see #2-#7). However, for consistency and troubleshooting ease, it is recommended that you connect all Bus A receptacles on one unit to Bus B receptacles on the next unit.

#1. **AUDIO ADJUSTMENT:** This adjustment controls the signal level from AUDIO IN (see #12) and AUDIO OUT (see #13). It is the only adjustment on the ViewNet 3000, and the default level is set at the factory.

#2. **INTERCOM:** This is the Main Intercom cable. It uses a standard 4-wire cable with RJ11 connectors and is marked with the number **1**. There are two connectors on the ViewNet 3000 marked with the number **1**.

#3. **CONTROL CABLE 2:** Control Cable 2 carries keyboard, mouse, takeover, and monitor signals. It uses a standard 8-wire cable with RJ45 connectors and is marked with the number **2**. There are two connectors on the ViewNet 3000 marked with the number **2**.

#4. **CONTROL CABLE 3:** Control Cable 3 carries video control and video switching signals. It uses a standard 8-wire cable with RJ45 connectors and is marked with the number **3**. There are two connectors on the ViewNet 3000 marked with the number **3**.

#5. **VIDEO CABLE "RED":** This video cable carries the red color signal and uses a standard 75-ohm coaxial cable with crimped-on connector. The cable is marked with **red** color. There are two connectors on the ViewNet 3000 marked with the letter "**R**".

#6. **VIDEO CABLE "GREEN":** This video cable carries the green color signal and uses a standard 75-ohm coaxial cable with crimped-on connector. The cable is marked with **green** color. There are two connectors on the ViewNet 3000 marked with the letter "**G**".

#7. **VIDEO CABLE "BLUE":** This video cable carries the blue color signal and uses a standard 75-ohm coaxial cable with crimped-on connector. The cable is marked with **blue** color. There are two connectors on the ViewNet 3000 marked with the letter "**B**".

#8. **LED:** When illuminated, this LED indicates the power is "ON".

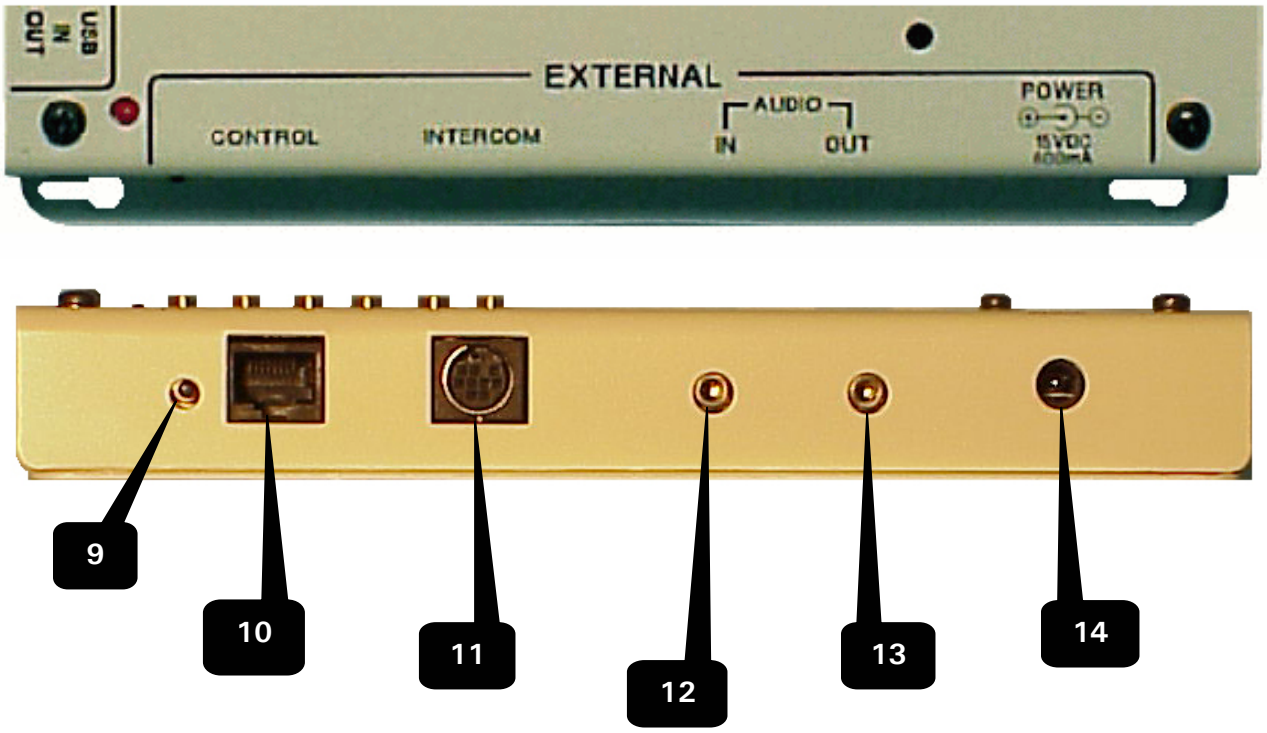


Figure 3. ViewNet Control Unit – External Connections (Top and Side Views)

#9. **RESET SWITCH**: This function allows for the readdressing of the unit and also eliminates a "system lock-up" condition.

#10. **MAIN STATION CONTROL CABLE**: The Main Station Control cable is connected to the ViewNet 3000 unit that will be designated as the main control station. The opposite end of this cable will connect to the RS232 port on the computer containing the control software.

#11. **INTERCOM CONTROL BUS**: The Intercom connector allows inputs from the Keypad. This connection carries keyer response, intercom, and monitor reset signals.

#12. **AUDIO IN**: The Audio In connector is supplied for the purpose of feeding audio signals to the ViewNet 3000 from an external source.

#13. **AUDIO OUT**: The Audio Out connector is supplied for the purpose of feeding audio signals to an external device (e.g., speaker, headphone).

#14. **MAIN POWER**: This is the Main Power connector.

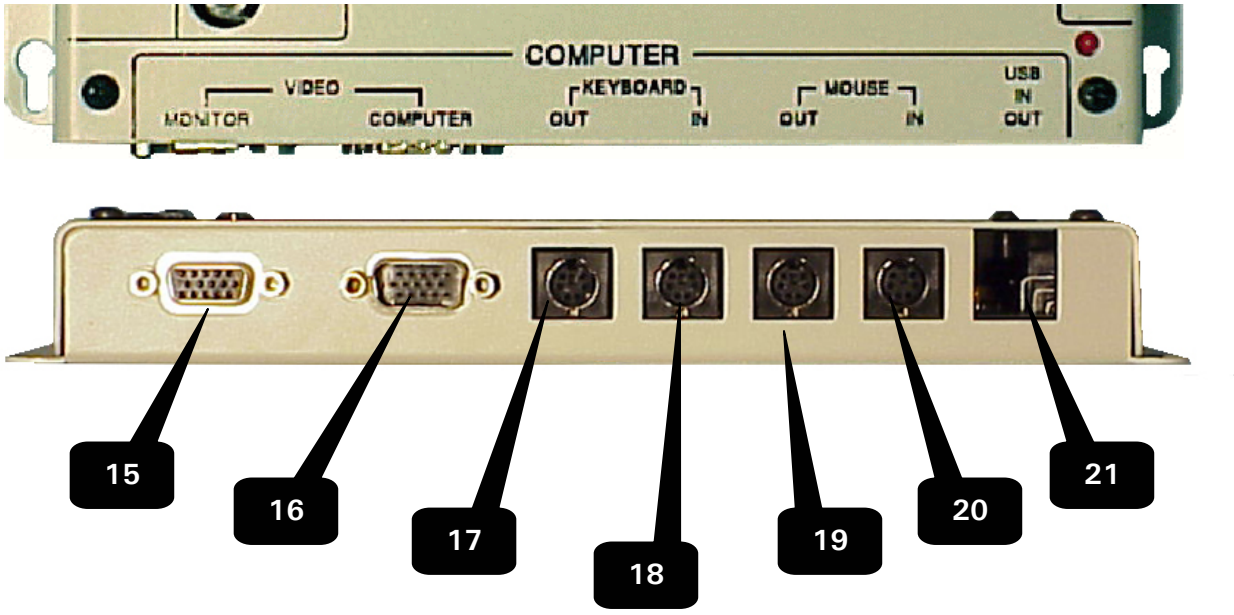


Figure 4. ViewNet Control Unit – Computer Connections (Top and Side Views)

#15. **VIDEO MONITOR:** The Monitor cable is connected to the monitor at the local station.

#16. **VIDEO COMPUTER:** The Computer cable is connected to the video card connector on the local computer.

#17. **KEYBOARD OUT:** The Keyboard Out cable is connected to the keyboard input on the local computer with the supplied PS/2-to-PS/2 cable.

#18. **KEYBOARD IN:** The Keyboard In connector accepts the cable from your local keyboard.

#19. **MOUSE OUT:** The Mouse Out cable is connected to the mouse input on the local computer with the supplied PS/2-to-PS/2 cable.

#20. **MOUSE IN:** The Mouse In connector accepts the cable from your local mouse.

#21. **USB IN OUT:** Not used at this time.

***NOTE*:**

If repair parts are required, please contact your local ViewNet 3000 representative.

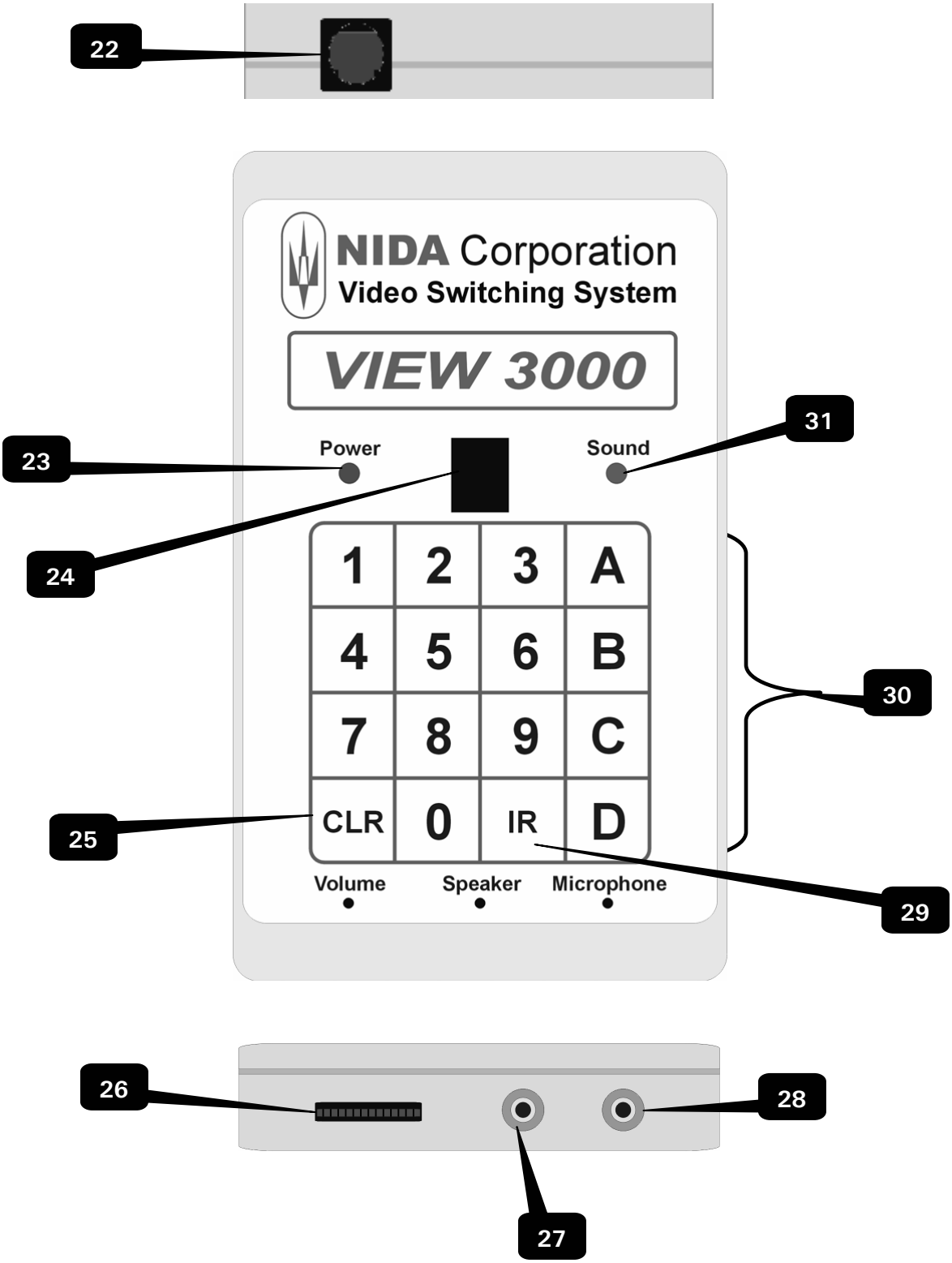


Figure 5. Alphanumeric Keypad (Top and Side Views)

#22. **VIEWNET UNIT INTERFACE CABLE CONNECTION:** This is the receptacle for ViewNet Interface cable.

#23. **POWER INDICATOR LIGHT:** This red light illuminates to indicate that power is applied to the unit.

#24. **FUNCTION/ANSWER DISPLAY:** This display indicates the letter or number entered via the keypad.

#25. **CLEAR ENTRY KEY:** This key clears the last entry entered via the keypad.

#26. **VOLUME CONTROL:** This wheel adjusts the volume of the headset earphones and microphone.

#27. **HEADSET EARPHONE CONNECTIONS:** This is the connection point for an optional headset.

#28. **MICROPHONE:** This is the connection point for an optional microphone.

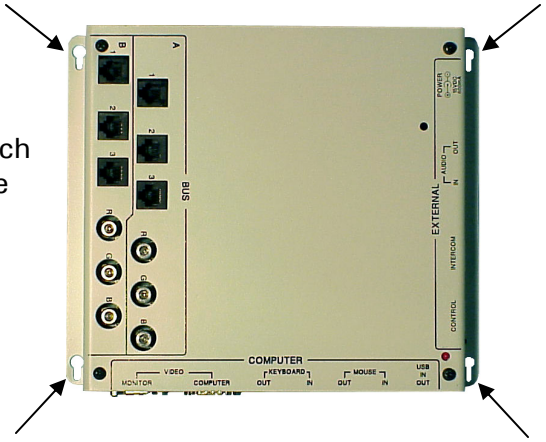
#29. **IR KEY:** The functions of this key vary according to the operating mode that is in effect when the key is pressed:

- In **Normal Mode**, the IR Key is used to signal the instructor that a student has a request.
- In the **Addressing Mode**, the IR Key is used to identify the workstation to the Control program.
- From the **Instructor's Keypad**, the IR Key is used to stop any activated function.

#30. **ALPHANUMERIC ENTRY KEYPAD:** This 10-number, 4-letter, 2-command keypad allows the entry of function commands or student answers in response to lesson questions.

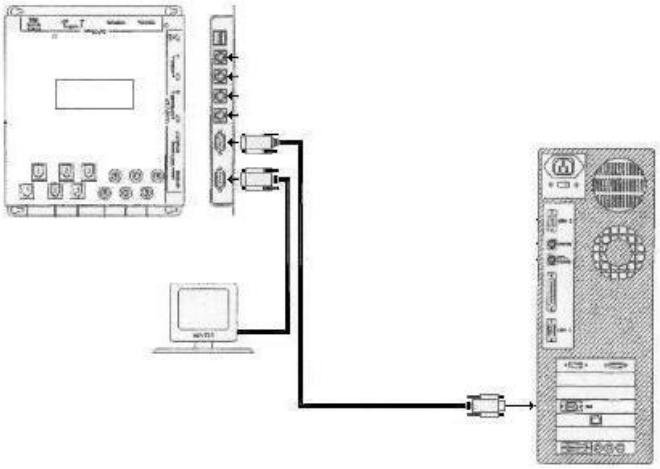
#31. **INTERCOM QUERY:** This green light illuminates to indicate that the intercom is active.

HARDWARE INSTALLATION



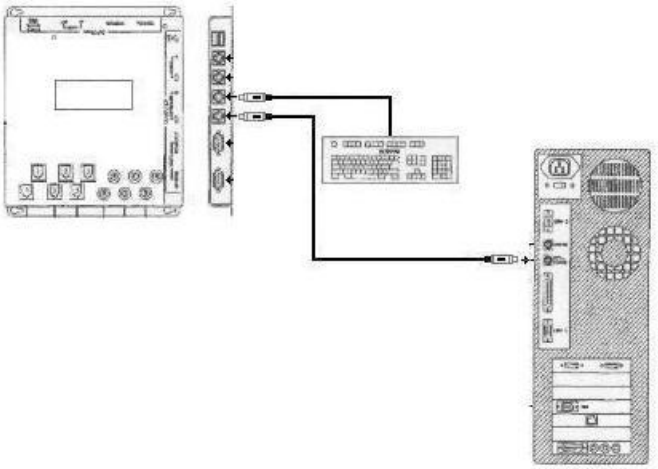
I-1. Using the four mounting holes, install the ViewNet 3000 unit close to the computer and monitor at each station. Good locations are on the underside of the workstation or on the wall directly behind the workstation if the workstation is against a wall.

I-2. On all workstation computers, remove the monitor video cable from the computer and connect it to the ViewNet 3000 **Monitor** connector (see #15).



I-3. Attach the supplied VGA cable between the computer VGA connector and the ViewNet 3000 **Computer** connector (see #16).

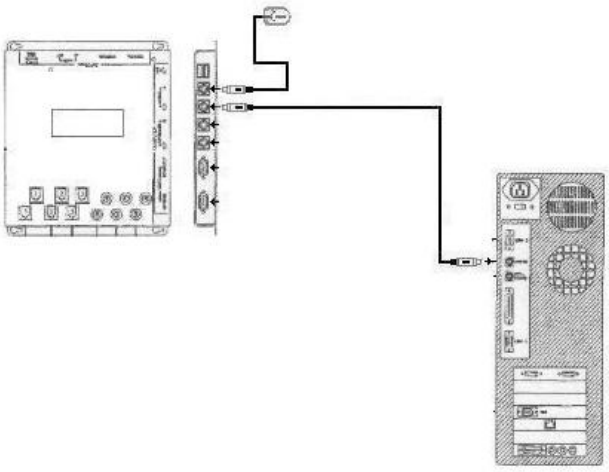
I-4. On all workstation computers, remove the keyboard cable and connect the keyboard to the ViewNet 3000 **Keyboard In** connector (see #18).



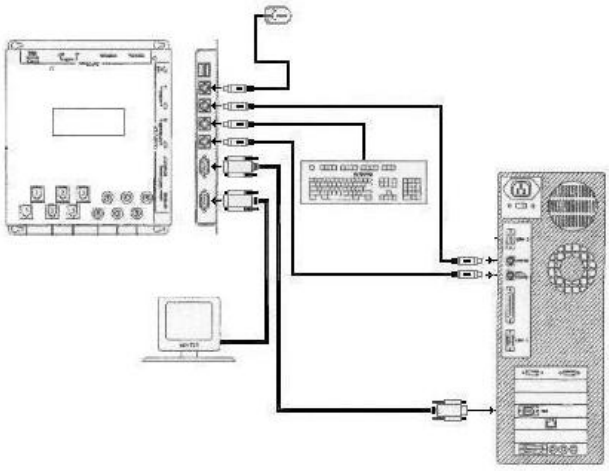
I-5. Attach the supplied PS/2 cable between the computer keyboard connector and the ViewNet 3000 **Keyboard Out** connector (see #17).

I-6. On all workstation computers, remove the mouse and attach the mouse to the ViewNet 3000 **Mouse In** connector (see #20).

I-7. Connect the supplied PS/2 cable between the computer mouse PS/2 connector and the ViewNet 3000 **Mouse Out** connector (see #19).



I-8. Check connections between all of the workstation computers and the ViewNet 3000 units. The connections should be as shown.



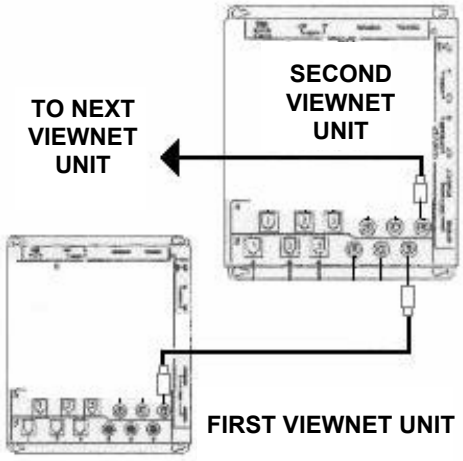
NOTE:

Receptacles are the same on both Bus A and Bus B (see #2-#7). However, for consistency and troubleshooting ease, it is recommended that you connect all Bus A receptacles on one unit to Bus B receptacles on the next unit.

I-9. Attach one coaxial cable between the first ViewNet 3000 connector marked **B** and the second ViewNet 3000 connector marked **B** (see #7).

I-10. Attach another coaxial cable between the **B** connectors on the second and third ViewNet 3000 units.

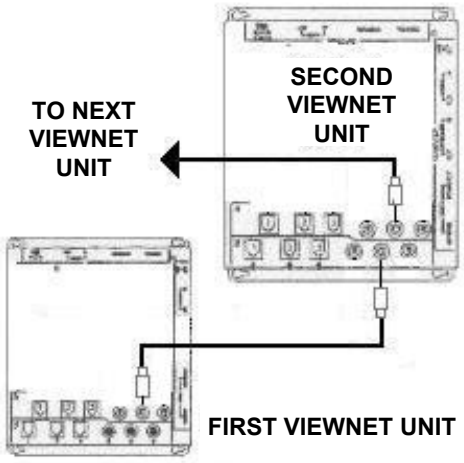
I-11. Continue until coaxial cables are attached between all **B** connectors on all of the ViewNet 3000 units in a daisy chain configuration.



I-12. Attach one coaxial cable between the first ViewNet 3000 connector marked **G** and the second ViewNet 3000 connector marked **G** (see #6).

I-13. Attach another coaxial cable between the G connectors on the second and third ViewNet 3000 units.

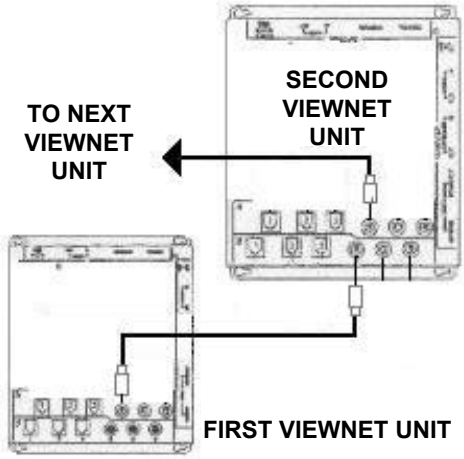
I-14. Continue until coaxial cables are attached between all G connectors on all of the ViewNet 3000 units in a daisy chain configuration.



I-15. Attach one coaxial cable between the first ViewNet 3000 connector marked R and the second ViewNet 3000 connector marked R (see #5).

I-16. Attach another coaxial cable between the R connectors on the second and third ViewNet 3000 units.

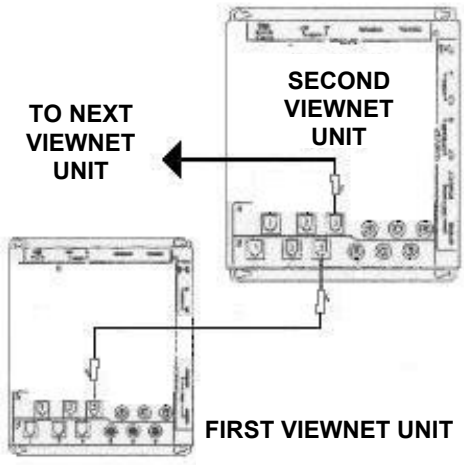
I-17. Continue until coaxial cables are attached between all R connectors on all of the ViewNet 3000 units in a daisy chain configuration.



I-18. Attach one 8-conductor flat cable between the first ViewNet 3000 8-conductor connector marked 3 and the second ViewNet 3000 8-conductor connector marked 3 (see #4).

I-19. Attach another 8-conductor cable between the connectors marked 3 on the second and third ViewNet 3000 units.

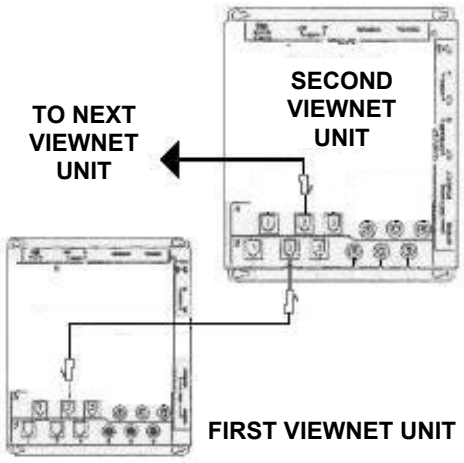
I-20. Continue until 8-conductor flat cables are attached between all connectors marked 3 on all of the ViewNet 3000 units in a daisy chain configuration.



I-21. Attach one 8-conductor flat cable between the first ViewNet 3000 8-conductor connector marked 2 and the second ViewNet 3000 8-conductor connector marked 2 (see #3).

I-22. Attach another 8-conductor cable between the connectors marked 2 on the second and third ViewNet 3000 units.

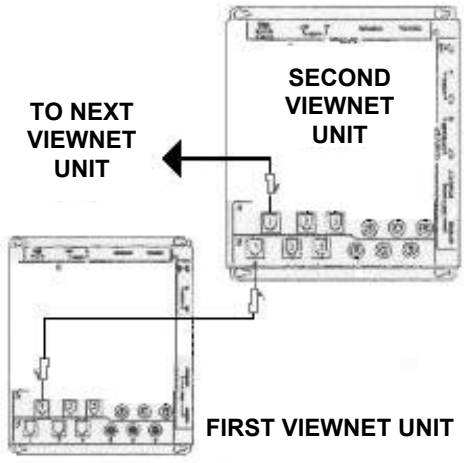
I-23. Continue until 8-conductor flat cables are attached between all connectors marked 2 on all of the ViewNet 3000 units in a daisy chain configuration.



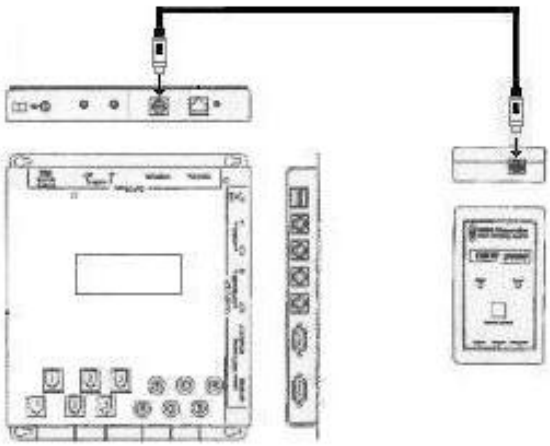
I-24. Attach one 4-conductor flat cable between the first ViewNet 3000 4-conductor connector marked 1 and the second ViewNet 3000 4-conductor connector marked 1 (see #2).

I-25. Attach another 4-conductor cable between the connectors marked 1 on the second and third ViewNet 3000 units.

I-26. Continue until 4-conductor flat cables are attached between all connectors marked 1 on all of the ViewNet 3000 units in a daisy chain configuration.

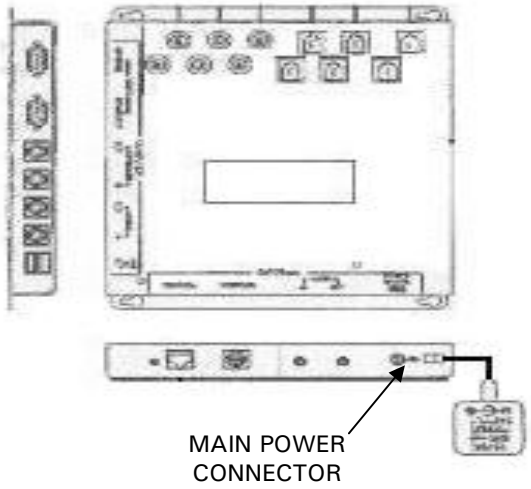


I-27. Attach the supplied round 9-pin connector between the Keypad and the Intercom connector on each ViewNet 3000 unit (see #11). If only one Keypad was supplied, it must be connected to the main station during normal operation.

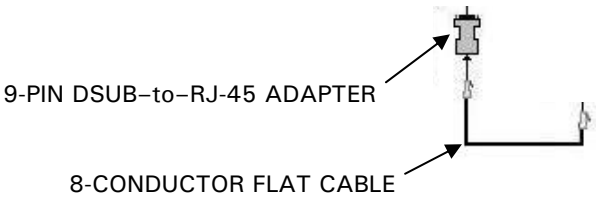


I-28. Attach the provided power supplies to all the Power connectors on all the ViewNet 3000 units (see #14).

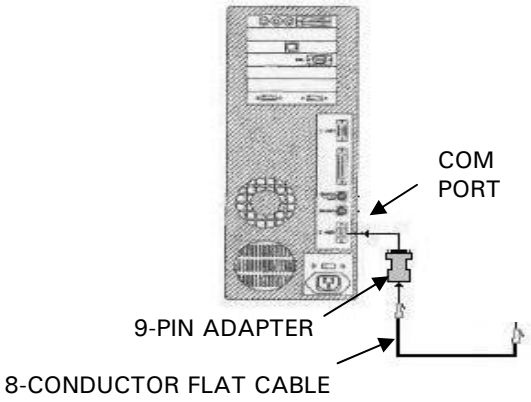
I-29. Connect all the power supplies to 110 VAC outlets.



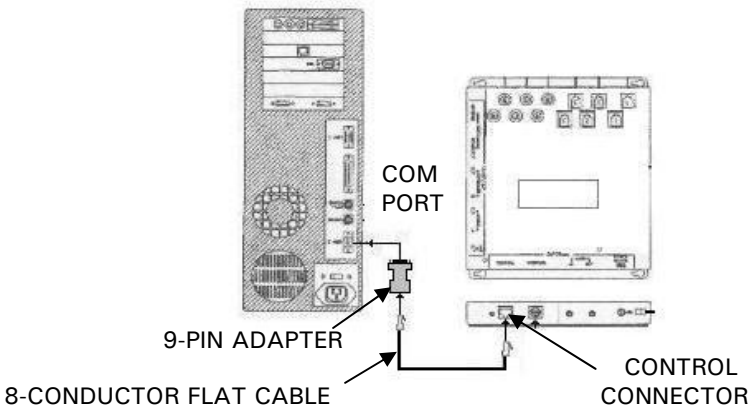
I-30. Connect the supplied 8-conductor flat cable to the 9-pin DSUB–to–RJ-45 adapter.



I-31. Connect the 9-pin adapter to the main station computer serial port (Com 1 or Com 2).



I-32. Attach the 8-conductor flat cable to the main station ViewNet 3000 Control connector (see #10).



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