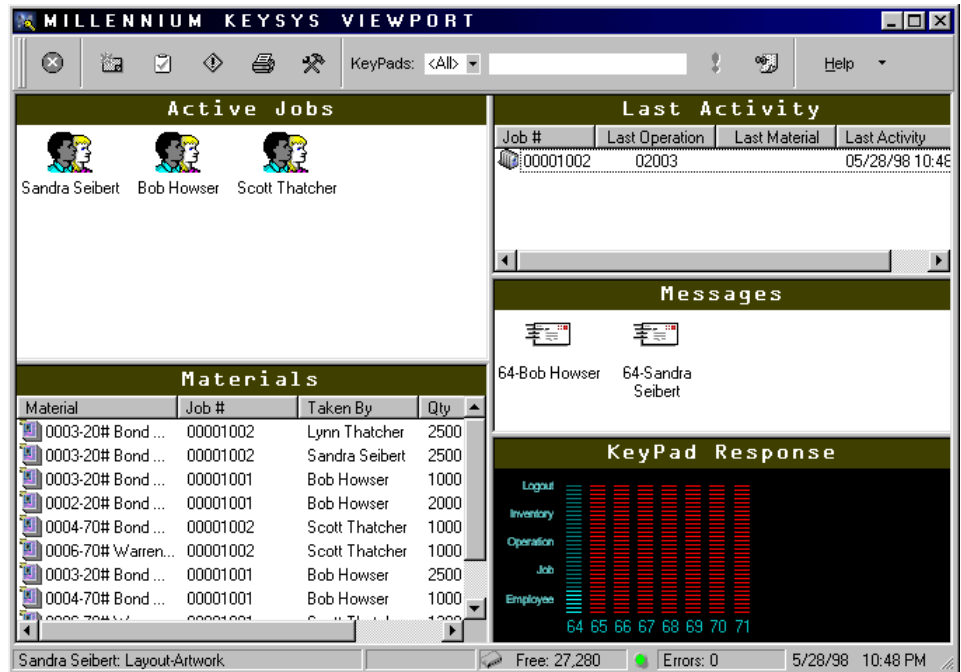


Millennium KeySys



By GraphiTech Computer Systems

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Contents

- Overview** **1**
- What's Inside 1
 - KeyPads 1
 - KeySys Server 1
 - Network 2
 - Data Modes 2
- Installing Millennium KeySys 2
 - License Agreement 2
 - About Your Company 2
 - Destination Folder 3
 - Data Folder 3
 - Sample Files 3
 - Program Folder 3
 - Ready to Install 3
 - Installation Complete 3
- Technical Support 3

- The KeySys ViewPort** **4**
- What is the ViewPort 4
- ViewPort Server Configuration 5
- ViewPort Functions 5
 - Keypad Response Window 5
 - Keypad Messages 6
 - Last Activity Window 6
 - Materials Window 6
 - Active Jobs Window 7
 - ViewPort Status Bar 7
 - ViewPort Toolbar 7
- Defining the ViewPort Settings 9
 - KeySys Summary Settings 9
 - Polling List 9
 - Communications Settings 10
 - TNET Registry 10
 - Keypad Departments 11
 - Preferences 11
 - Intervals 12
 - Verifications 12
 - Main Window 12
 - KeyPads 13
 - Other 13
 - Messages 13
 - Access Codes 14
 - Data Folders 15
 - Employee PIN 15

Parameters Menu and Toolbar Options	16
Using KeySys as a Time Clock	17
Overview	17
See Also:	17
Starting a Shift	17
Logging Out for Lunch and Breaks.....	17
Ending the Shift	18
Employee Shift Data	18
Glossary of Terms	19
Index	20

Overview

What's Inside

The Millennium KeySys Shop Control System is a State-of-the-Art, Windows95/NT compatible program designed to provide for real time data collection of both materials and labor. It must be interfaced to GraphiTech's Job Costing Module and may be further interfaced to modules such as Estimating, Inventory, etc.

KeyPads

The data is collected through the use of sealed membrane keypads (see Figure 1 below) located strategically around the plant. An employee may use both manual or bar coded data entry, as desired. The data is automatically collected through the use of a Multi-Drop Network, which is provided by GraphiTech. As each piece of data is retrieved from the various keypads, it is sent to the Server through the Server's COM port as either a temporary storage file or as a final storage file.



Figure 1. Membrane KeyPad Data Collection Device

KeySys Server

A Server PC is required in order to provide a means to collect the data. This workstation has a minimum configuration as follows:

- 200 MHz Pentium
- 48 MB of Ram
- 1 GB Hard Drive.

This server does not have to be dedicated. It may be used for other applications as well.

Network

Various networks may be used with KeySys. These include Novell, NT, and others, which will support Win95/NT.

Data Modes

The system can be set to either Database Mode or Compatible Mode. Both modes store received and processed data into a relational database model. However, if your network is running in Compatible Mode, the data is also processed using the old format from the MS-DOS version of KeySys. If you are using other MS-DOS GraphiTech products like Job Costing, TermSys, Estimator, etc., it is suggested to run in Compatible Mode.

The disadvantage of Compatible Mode is speed. KeySys will save processed data twice in Compatible Mode. If you do not have any other MS-DOS versions for GraphiTech products or modules, it is strongly suggested to set the mode to Database Mode for improved efficiency, reliability and speed.

Please call GraphiTech Technical Support at 800-634-TECH for further assistance on selecting the appropriate mode.

Installing Millennium KeySys

To load the Millennium KeySys, place either your first diskette or CD into the appropriate drive. If you are using the CD to load the program, simply insert the CD into your drive and close the door. This will start the loading process. If it does not load however, click START followed by RUN. Type the drive letter followed by the word SETUP (for example A:SETUP). If you have a sound card, then a short melody will be heard prior to the start up screen. After reading the short Welcome, click Next. Note: you can also click on the Back button to step back to the previous screen. Also at any time you can click the Cancel button to terminate the installation.

The following clarify the screens you will encounter during the installation process. Please follow these steps.

License Agreement

After reading the License Agreement, click I Agree. This is a standard license agreement except that it provides a broader definition of where and how you may use the software.

About Your Company

If the shown box is empty, please enter your company name. Click on the Next button to proceed.

Destination Folder

Here you will want to provide the location of the Millennium Folder, which is the location to be used for the programs. It is assumed that you are operating under Windows 95/NT, thus long filenames are used for default entries. In fact, the computer you are installing this program into must have a Windows 95/NT operating system. The destination folder may however, be limited to 8 characters if you desire. Once such name would be Millenia.

This screen also identifies the amount of free space available and the amount of space after installation. If this number is small or negative, you should not install until after freeing up additional space. Click Next to continue.

Data Folder

If you are using a stand-alone computer, then the data folder will remain on your C: drive as shown in the text box. If you are operating on a network, then you must identify the drive of your network. If desired, you may click the browse button in order to select the network drive. In either case, the Destination folder must be identified as created above. Click Next to continue.

Sample Files

Not recommended if you already have live data. Accept the default No, and click Next. If you wish to use sample files with KeySys, then select the appropriate option followed by Next.

If you select Yes, then a screen will display asking for the sample folder where you want to copy these sample files. Select the desired folder as in the previous steps.

Program Folder

This will specify the program folder name where you want the application icons to reside when you click the Windows Start button on the Windows taskbar.

The default name for the Program Folder will appear at the top of the list box (GraphiTech MILLENNIUM). It is recommended to have the box checked which allows an icon to be created also on the desktop. Click Next to proceed.

Ready to Install

Simply click the Start button and Millennium KeySys will install itself.

Installation Complete

Once all data has been loaded, click Finish to view the Readme File. Once this is complete, you may need to re-boot the computer if the installation indicates so or if you experience some difficulty getting your serial port to function with KeySys.

Technical Support

If you need further assistance, please call our technical support hotline at 800-634-TECH. Or visit our web site at www.graphitech.com for the latest news, updates, questions and answers.

The KeySys ViewPort

What is the ViewPort

All KeyPads are connected to a single workstation called the ViewPort by means of a black box called the TNET Interface Module or TIM for short. The TIM is programmed to perform the functions of a multi-drop network by systematically scanning for activity on all keypads. As data arrives from the keypads, it is processed by the ViewPort and sent to the server or local drive for storage as various job files, daily activity files and standards files. Figure 2 below shows a sample ViewPort screen with various activities logged and being processed.

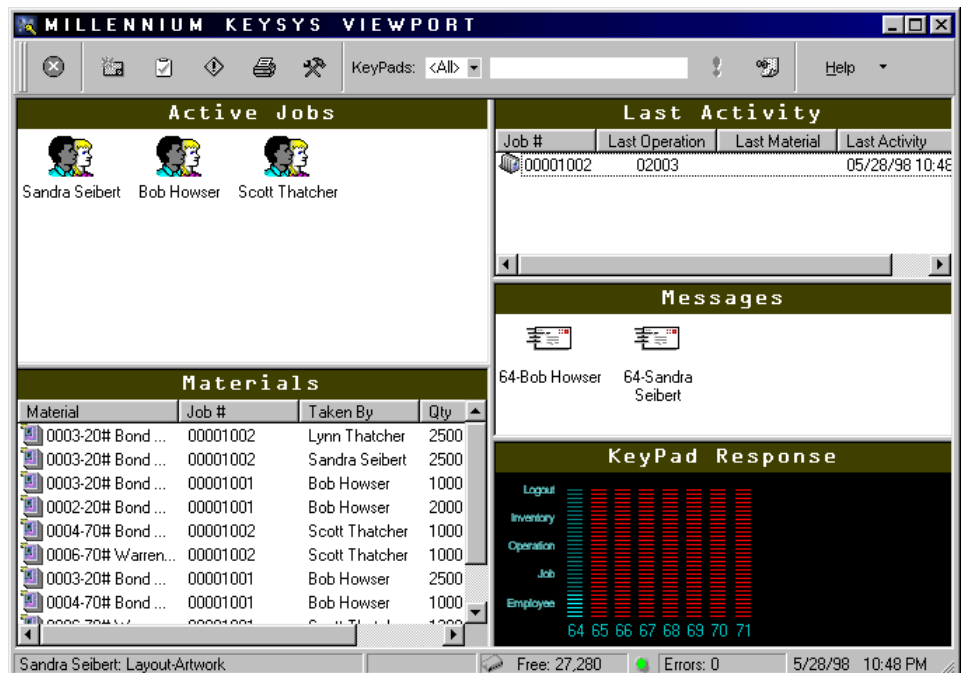


Figure 2. Sample ViewPort Screen

ViewPort Server Configuration

As mentioned previously, the ViewPort may be a standalone computer or part of a larger network. Either way, the minimum configuration for the ViewPort server is a Pentium 200 MHz with 48 MB of RAM and at least 1GB of disk space, not including the data. In previous versions of KeySys, it was required that you use a dedicated workstation for KeySys. Now, however, KeySys may be minimized while you work on other projects. (Note that it is 100% functional when running in the task bar and recognizes messages and data being sent from the floor). In other words, it is now a true multi-tasking program with its ability to perform the work of two or more computers. For example, you may wish to have KeySys running in the background while you are also providing estimates.

In addition, you may at times wish to provide Shift Reports, employee payroll data on demand or even a variance analysis, all at the same time! To have KeySys become the main focus again, simply click on the KeySys icon in the system tray to the right of the task bar (usually located close to the volume control or time display).

ViewPort Functions

The ViewPort is the engine that drives the entire Millennium KeySys Shop Control System. By means of a very user friendly interface, either the systems administrator or the employees may view who is logged on, materials used, messages received, last activity, last employee logged and the status of the entire TNET network.

Each window on the ViewPort is capable of having the list format modified (including the width of each column). Also, the color of the background may be modified as well. These are accomplished by right-clicking with the mouse inside the desired section and selecting the appropriate menu item.

You can resize and reposition the ViewPort windows by dragging the window separators.

Note: no modifications of the Keypad Response window can be made.

The following explains the main areas of the ViewPort.

Keypad Response Window

In the lower right corner of the ViewPort is located a series of vertical bar graphs. Each bar represents a department where a Keypad is located.

The light blue bars indicate active Keypads and the red bars are inactive Keypads (either no Keypad is located there or is not communicating).

When there is activity in a certain department, the bar associated with that department will rise or fall, depending upon the type of activity. In a plant where there is significant employee activity, the bars will be moving to different locations rapidly thus providing a visual insight into the plant activity.

Each bar is calibrated to show employee login, job number, operation codes, inventory, and logout request. Figure 3 shows a sample Keypad response window. Here, for example, shows that the Keypad for department 64 is active waiting for an Employee ID entry. The others are inactive.

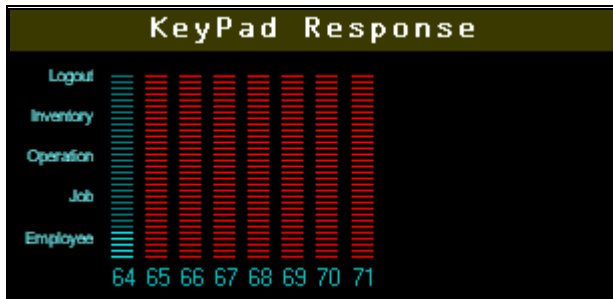


Figure 3. KeyPad Response Window

KeyPad Messages

During the course of collecting data, an employee may be required to send a message to the ViewPort to obtain the administrator's attention. Such messages (e.g., Equipment Down, Customer Approval, etc.) are custom defined and are displayed on the ViewPort as a scrolling "ticker" message box as well as in the Message window. By right clicking on the mouse when pointing at this window, you may select customized lists as well as being able to clear the window. Figure 4 shows a sample ViewPort message window

From	Dept	Date	Message
64-Bob Howser	Type	05/28/98 22:47	Need Assistance
64-Sandra Seibert	Type	05/28/98 22:47	Material Requested
64-Sandra Seibert	Type	05/29/98 00:11	Material Requested

Figure 4. ViewPort Message Window

Last Activity Window

This area provides a list of the very last completed transaction for each active Job. As each employee logs out of one job operation and into another, the Last Activity box displays this transaction on the first line of the list (see Figure 5).

Job #	Last Operation	Last Material	Last Activity
00001002	02003		05/28/98 10:48:05 pm
00001001		0003	05/28/98 11:32:26 pm

Figure 5. ViewPort Last Activity Window

Materials Window

As shown in Figure 6 below, the lower left of the ViewPort the displays the materials used. This display may be cleared as desired by right clicking on the mouse and selecting clear contents.

Material	Job #	Taken By	Qty	Date
0001-20# white bond 23x35	00001001	Sandra Seibert	30	05/28/98
0003-20# Bond White Mountie 11x17	00001001	Bob Howser	2500	05/28/98
0003-20# Bond White Mountie 11x17	00001002	Lynn Thatcher	2500	05/28/98
0003-20# Bond White Mount 11x17	00001002	Sandra Seibert	2500	05/17/98
0003-20# Bond White Mount 11x17	00001001	Bob Howser	1000	03/06/98
0002-20# Bond White Mount 8.5x11	00001001	Bob Howser	2000	03/06/98
0004-70# Bond White Mount 11x17	00001002	Scott Thatcher	1000	03/06/98
0006-70# Warren Enamel 17.5x22.5	00001002	Scott Thatcher	1000	03/06/98

Figure 6. ViewPort Materials Window

Active Jobs Window

All job logins are placed into this window on a real time basis (see Figure 7). In addition, the last login is always shown first in the list. Should the system administrator need to log out an employee, he/she would simply place the cursor over the desired listing, right click and select, "Logout Employee".

Employee	Date	Time	Job #	KeyPa...
Scott Thatcher	04/01/98	7:19 pm	00001001	66
Sandra Seibert	05/28/98	10:48 pm	00001002	64
Bob Howser	04/02/98	8:46 pm	00001002	64

Figure 7. ViewPort Active Jobs Window

ViewPort Status Bar

Along the bottom edge of the ViewPort, the Status Bar (see Figure 8) identifies the last person to log in along with their activity. To the right is also shown: the number of bytes of free memory on the TNET network controller, the data transfer indicator (green: no transfer, red: transferring) the size of the error log (which you can double-click if any errors to see the details), the date, and the time.



Figure 8. ViewPort Status Bar

ViewPort Toolbar



Figure 9. ViewPort Tool Bar

Along the top of the ViewPort is the Toolbar. The perform the following actions as you click them from left to right (as shown in Figure 9 above):

1. **Close ViewPort.** This may also be accomplished clicking the Windows control box (the gray box with an X in the upper right side of

the ViewPort). A third method is to use press Alt-F4. All of these methods will result in a request for the exit password.

2. **Refresh Screen.** If you have difficulty seeing any window or if data is obscured somehow, simply click this icon.
3. **Set Parameters.** This password protected area of the program allows you access to:
 - **Summary Settings:** identifies TNET version, general COM settings, Active & Inactive Keypads, etc.
 - **Polling List**
 - **Communication Parameters:** Modify Baud rate, COM Port, etc.
 - **TNET Registry:** Change basic registry within TNET polling unit. Ideal should static disrupt EPROM.
 - **Department Table:** Identify each department where a keypad is resident.
 - **Preferences:** Used to change items such as tick sound, compatibility mode, standard deviation, use of system tray, etc.
 - **Messages:** Create your own messages here for use by employees when using keypad.
 - **Passwords:** Easily change existing passwords here.
 - **Data Folders & Old Data Directory.**
4. **Trace KeyPads.** Identifies last activity on each keypad connected to the network.
5. **Print Log.** This This new feature allows the employee to obtain a copy of the hours they worked within any desired date range. Numerous ranges may be specified including employee, dates, job plus numerous sort commands.
6. **Repair Data File.** Should any data get corrupted for any reason, always repair data here first.
7. **KeyPad Message Station.** Allows the System Administrator to send messages to various departments. May specify individual keypads as well as all keypads.
8. **Reset KeyPads.** Uses the range specified in Message Station. Resets the keypad due to any errors which may have occurred due to static electricity, brownouts, etc.
9. **Post Message.** Use this key to actually send the message specified in the Message Station.
10. **Help.** This area provides information on Registration of your Millennium KeySys as well as System Information. A full help index with cross references is included.

Defining the ViewPort Settings

Defining the ViewPort settings is the first important step for running a stable KeySys network. These are modified through the KeySys Settings window. It allows you to set the behavior and rules of how KeySys will operate.

To call this window, click on the ViewPort Settings icon on the toolbar.

Note: this is a password protected feature. The password for this type of access is defined as Code 1 within this window also. Please call GraphiTech Technical Support at 800-634-TECH to obtain the initial passwords. It is strongly suggested to change them immediately when you start KeySys for the first time.

KeySys Summary Settings

Displays the current hardware and communication settings for the network controller.

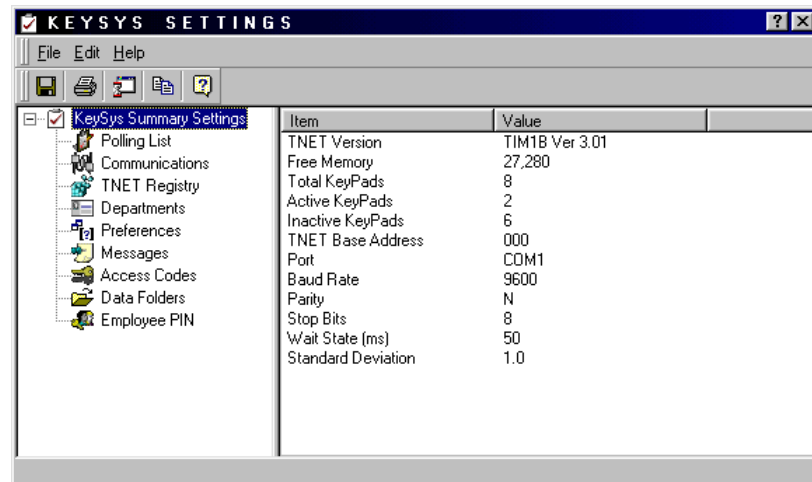


Figure 10. KeySys Summary Settings

Polling List

Displays and allows you to specify what KeyPads the system should track. KeyPad numbers range from 64 to 99. Active KeyPads are shown in blue on the KeyPad Response window of the ViewPort.

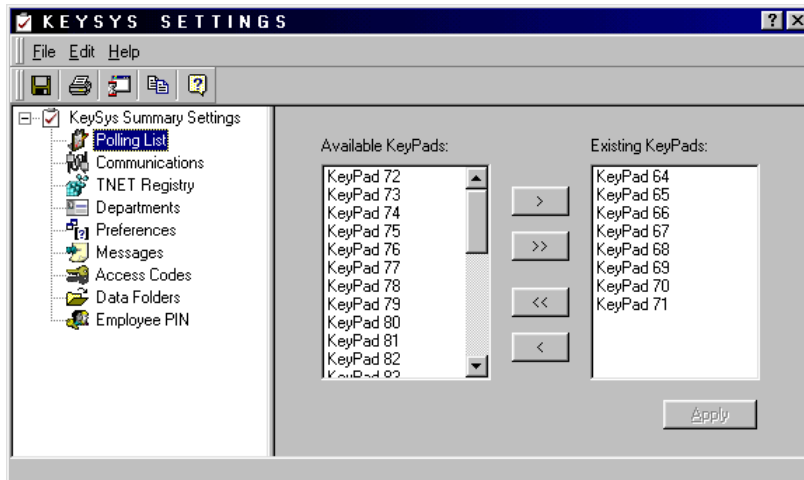


Figure 11. Polling List

Communications Settings

This displays the communication settings between the TNET network controller and the ViewPort.

WARNING: Changing these parameters may cause instability and unpredictable results throughout the KeySys network. Use these settings with extreme caution. Please call GraphiTech Technical Support at 800-634-TECH for further assistance.

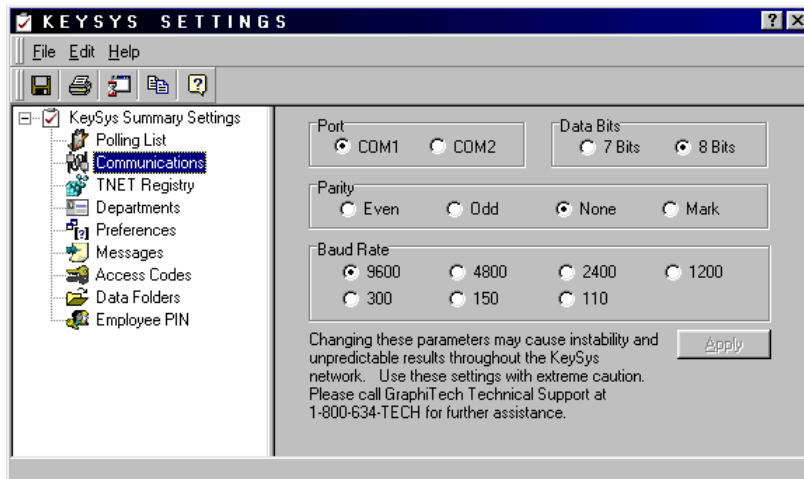


Figure 12. Communications Settings

TNET Registry

The TNET registry stores important settings for the network controller. Changes made on this screen will be saved permanently inside the network, even when the power is shut down. Changes to these settings can only be achieved through this screen.

WARNING: Changing these parameters may cause instability and unpredictable results throughout the KeySys network. Use these settings with extreme caution. Please call GraphiTech Technical Support at 800-634-TECH for further assistance.

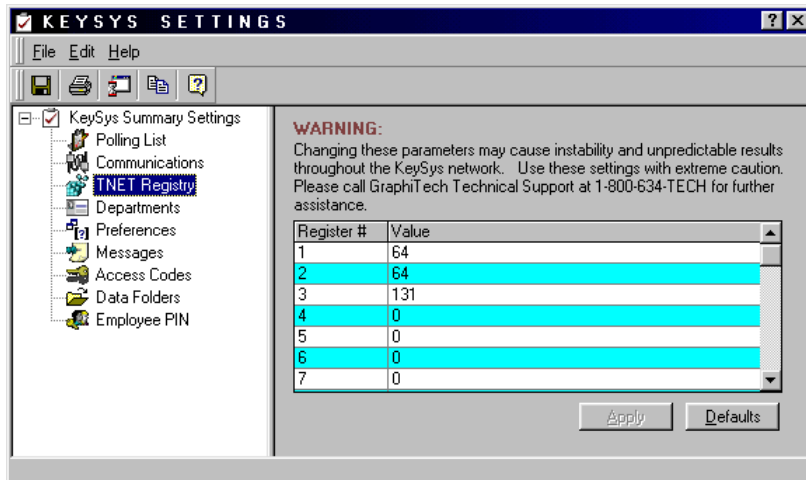


Figure 13. TNET Registry

Keypad Departments

This screen allows you to define the Keypad and its associated department for your company. Normally there is one Keypad per department.

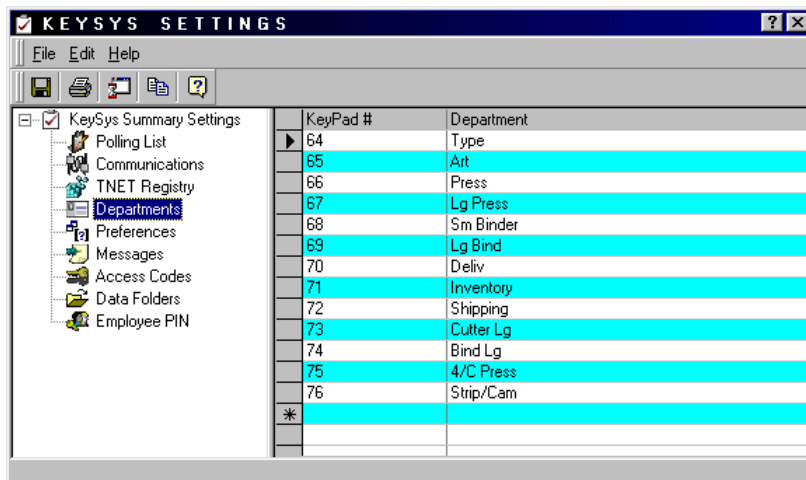


Figure14. Keypad Departments

Preferences

Here is where you will set the behavior parameters of the ViewPort. The settings are shown in the screen below.

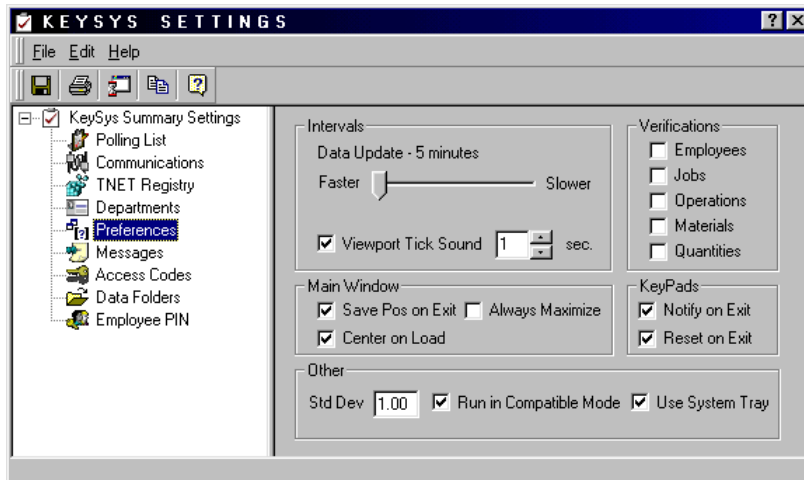


Figure 15. ViewPort Preferences

Intervals

This section consists of two parts: Data Updates and ViewPort Tick Sounds.

Data Updates specifies how often the data is refreshed from the system to verify any changes in jobs, employees, etc. It can range from every 5 minutes (fastest) to every 10 minutes (slowest). It is adjusted by dragging the slider to the appropriate value. The value chosen is displayed above the slider.

The ViewPort "tick" sound is used as an audio cue to indicate the "health" of the network. In short, if it is ticking it's alive and running. You have the option to turn it off (by clicking on the check box until the check mark is off) or to turn it on (by clicking on the check box until the check mark is visible). In addition to this, if it is on, you can adjust the interval of the tick sound from every second to every 5 seconds. You do this by clicking on the "up-down" buttons next to the value field. Changes take into effect immediately.

Verifications

Verifications are used optionally as a secondary confirmation step during data entry throughout the KeyPad network. These include verifications for:

- **Employees** - Will ask for the employee PIN for confirmation
- **Jobs** - Will display the job description after entering a job number and ask for confirmation.
- **Operations** - Will display the operation name after entering the operation code and ask for confirmation.
- **Materials** - Will display the stock description after entering the material code and ask for confirmation.
- **Quantities** - Will display any deviations from the allowed tolerances (calculated using the standard deviation figure also entered in this screen) if any and ask for confirmation.

Main Window

These are optional settings for aesthetic and convenience. The options are:

- **Save Pos on Exit** - Saves the current ViewPort position and size when exiting so when KeySys is launched again, the ViewPort returns to the previous position and size.
- **Always Maximize** - This option will always launch and display the ViewPort in a "maximized" state. In other words, it will cover the entire display.
- **Center on Load** - It will always center the ViewPort to the center of the screen.

KeyPads

- **Notify on Exit** - Will send an audible signal and a message to all active KeyPads when the ViewPort shuts down.
- **Reset on Exit** - Will reset all active KeyPads when the ViewPort shuts down.

Other

These are miscellaneous settings that affect different areas.

- **Standard Deviation** - This figure is used throughout the application to calculate variances on several key figures. Value can range from 0.00 to 5.00.
- **Run in Compatible Mode** - This extremely important setting determines how the data is obtained and saved. Compatible mode allows the system to utilize the data format from the DOS version of KeySys. While there are advantages in keeping this mode, it slows the system because of the extra overhead of reading and writing to the old format files while also reading and writing in the new format. If you are a new user of KeySys and you are not using any DOS version of the GraphiTech applications (Job Costing, Estimator, etc.) it is highly recommended that you turn this feature off.
- **Use System Tray** - If this option is on, you can minimize the ViewPort and have the system run completely in the background without showing in the task bar. It will display on the System Tray located on the bottom right hand side of the display.

Please call GraphiTech Technical Support at 800-634-TECH for further assistance.

Messages

As shown in Figure 16, this screen will allow you to enter the different message codes. The message code is a 3 digit code that the employee can send through their KeyPads to the ViewPort to obtain the KeySys administrator's attention.

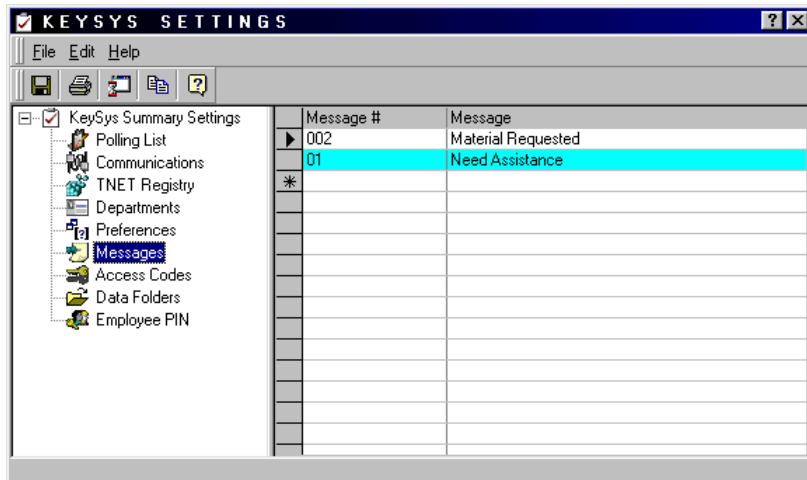


Figure 16. KeyPad Messages

If a message is sent to the ViewPort, it will activate a ticker box on the ViewPort with a distinctive audible signal. See Figure 17 below.



Figure 17. Urgent Message from KeyPad

Access Codes

There are two access codes used with KeySys.

Access Code 1 is the code that allows you to perform the following functions:

- Changing the ViewPort Settings and Parameters
- Repair the Data Files
- Exit the viewPort

Access Code 2 is the code that allows you to log out an employee from an active job right from the ViewPort (which is done by right-clicking the Active Jobs section of the ViewPort and selecting Logout Employee from the Popup menu). See Figure 18.

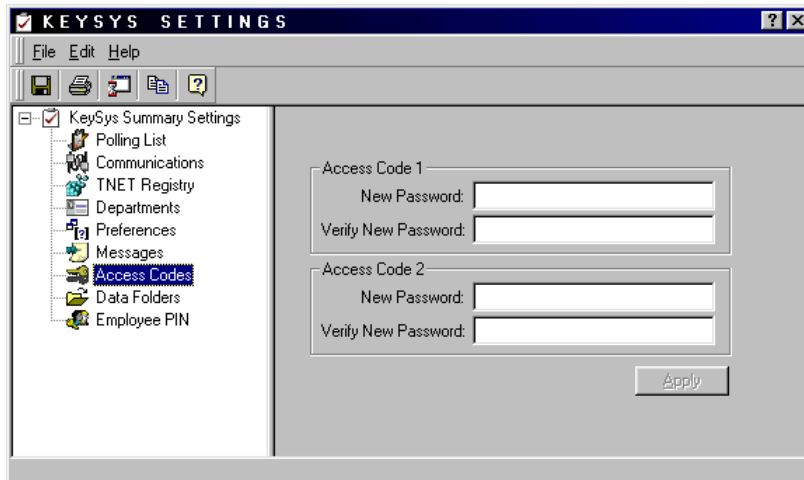


Figure 18. Access Codes

Data Folders

This screen (Figure 19) allows you to change where the data files are located.

WARNING: Changing these locations may cause instability and unpredictable results throughout the KeySys network until it is re-started. Use these settings with extreme caution. Please call GraphiTech Technical Support at 800-634-TECH for further assistance.

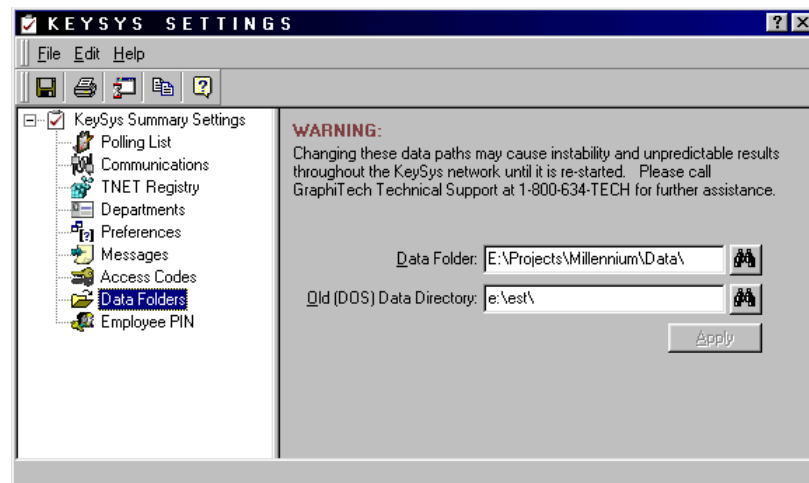


Figure 19. Specifying the Data Folders

Employee PIN

These PINs are the codes that the employees must enter when a KeyPad is requesting the Employee ID verification. These codes are 4 digits and can be modified, added or deleted in the screen shown below. When KeySys starts for the first time, it creates these entries with the Employee ID as the PIN, but expanded to 4 digits (i.e., Employee ID 02 has PIN 0002)

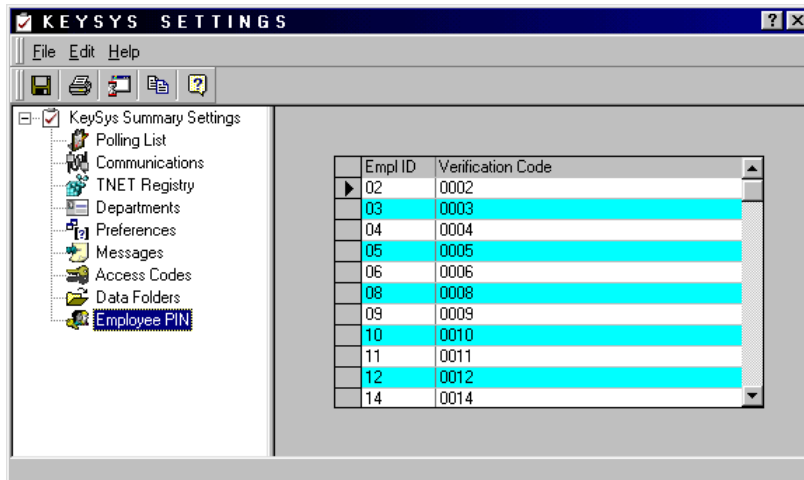


Figure 20. Employee PIN Entry Screen

Parameters Menu and Toolbar Options

Along the top of the KeySys settings screen there is a menu and a toolbar (see Figure 21 below). They have actions that can: Save the settings to a text file, print settings, run system information, copy settings to the Windows clipboard and display the Help.



Figure 21. KeySys Settings Toolbar

- **Saving the Settings** - Click this option to save the current system settings into a file. GraphiTech technical support may request you to send this file for troubleshooting.
- **Print Settings** - Instead of saving, you can also print the same information to your default printer.
- **System Information** - By clicking this option you will run Microsoft's System Information utility if available in your system. We do not provide this utility and it comes with several Microsoft applications like Word, Excel, etc. GraphiTech technical support may request you to run this for troubleshooting.
- **Copy to Clipboard** - You can also copy the settings into the Windows clipboard. This allows you to then "paste" the information into any application.

Using KeySys as a Time Clock

Overview

The KeySys system allows to track shift start and shift end times for each employee in the shop floor and have several reports displayed or printed for all or selected employees.

See Also:

Starting a Shift

Logging Out for Lunch and Breaks

Ending the Shift

Employee Shift Data

Starting a Shift

Each employee logs into KeySys at the start of the day by scanning the start shift barcode or by pressing the start shift key on the Keypad. Once pressed, the employee is then requested to enter their employee number (also called employee ID), which may also be scanned or entered manually.

If employee verification is off, the employee will be logged into their shift and a greeting will appear on the display to let the employee know that they have in fact logged in.

If verification is on, then the employee must confirm his/her name displayed on the Keypad screen.

Logging Out for Lunch and Breaks

Prior to going to lunch, the employee enters their employee number at which time they are requested to either log out of their current job or to enter their next job number. If they scan the lunch or break code, then they will be immediately logged into lunch or a break. A message (Have a nice lunch/break employee name) appears on the keypad to advise them that their entry was keyed in correctly.

KeySys identifies all persons that are logged into lunch or breaks by displaying their activity on the ViewPort, in exactly the same manner as if they were logged into a job.

When the employee is finished with lunch or their break, they simply scan or manually enter their employee code which will cause the employee to be immediately logged out of lunch and a keypad request is then made to enter the next job.

Ending the Shift

At the conclusion of the day, the employee scans or enters the End Shift key followed by their employee code. This has the effect of logging that employee out of all jobs they are in as well as concluding their shift. A message (Good bye employee name) appears on the keypad to let the employee know that the end shift was activated.

Employee Shift Data

If an employee desires to obtain information regarding their attendance on a particular day, week, month, etc., then they simply request the system administrator to make a print out of their desired time sheet for review. The employees may also perform the request themselves, should they desire.

Glossary of Terms

ViewPort

GraphiTech's name for Millennium KeySys display screen.

TNET Interface Module

The black box used to provide a Multi-Drop Network. Also known as TIM.

System Tray

Windows Desktop's right side of the Taskbar

PIN

Personal Identification Number. A 4 digit numeric code used for employee confirmation purposes. Also known as Verification Code.

Multi-Drop Network

A Star Topology Network in which stations are polled sequentially.

Compatible Mode

Means for providing both Database and DOS based data structures.

COM

Communications port. Also known as serial or RS-232 port. Usually has 9 or 25 pin connections. Standard ports are numbered from 1 to 4. Some older PC's use COM1 for the mouse.

Index

A

Access Codes, 14–15
Active Jobs, 7, 14
Administrator, 5–8, 13, 18
Attendance, 18

B

Breaks, 17–18

C

Communications Settings, 10
Compatible Mode, 2, 13

D

Data Folder, 3
Data Modes, 2
Data Updates, 12
Database Mode, 2
Departments, 8, 11
Destination Folder, 3

E

Employee PIN, 12, 15–16
Employees, 5, 8, 12, 15, 17–18
Ending the Shift, 17–18

I

Installing, 2–3
Intervals, 12

J

Jobs, 7, 12, 14, 18

K

KeyPad Messages, 6, 14

KeyPad Response Window, 5–6, 9
KeyPads, 1, 4–5, 8–9, 13
KeySys Server, 1

L

Last Activity, 5–6, 8
Lunch, 17–18

M

Materials, 1, 5–7, 12
Message Station, 8
Multi-Drop Network, 1, 4

N

Network, 1–5, 7–10, 12, 15

O

Operations, 12

P

Parameters, 8, 10, 14, 16
Polling List, 8–10
Post Message, 8
Preferences, 8, 11–12
Print Log, 8
Program Folder, 3

Q

Quantities, 12

R

Repair Data File, 8
Reset KeyPads, 8

S

Sample Files, 3
Settings, 8–10, 12–16
Standard Deviation, 8, 12–13
Starting a Shift, 17
Status Bar, 7
System Information, 8, 16
System Tray, 5, 8, 13

T

Technical Support, 2–3, 9–10, 13, 15–16
Time Clock, 17
TNET Interface Module, 4
TNET Registry, 8, 10
Toolbar, 7–9, 16
Toolbar Options, 16

Trace KeyPads, 8

V

Verifications, 12

ViewPort, 4–9, 11–13, 18

ViewPort Tick Sounds, 12

W

Web Site, 3