Installing UNITY

Version 5.8

JOHNSON CONTROLS

TEC DOC # LIT-TD-1027 09/2002

JOHNSON CONTROLS

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Revised 09/2002
Printed in U.S.A.

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Chapter 1: Installation Overview

Chapter Overview

This chapter of Installing UNITY will tell you:

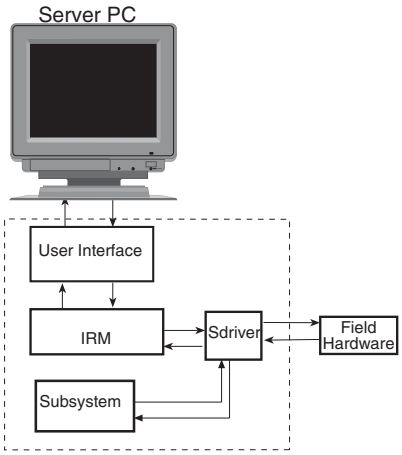
- How the UNITY Software and Hardware work together
- About the UNITY Software Components
- How the UNITY Hardware connects

1 UNITY Software/Hardware

As a complete Building Automation, Fire, and Security Control System, UNITY has many components, both software and hardware, that may appear somewhat confusing. In reality, each element of UNITY has a specific set of tasks, and when viewed one at a time, is easier to understand.

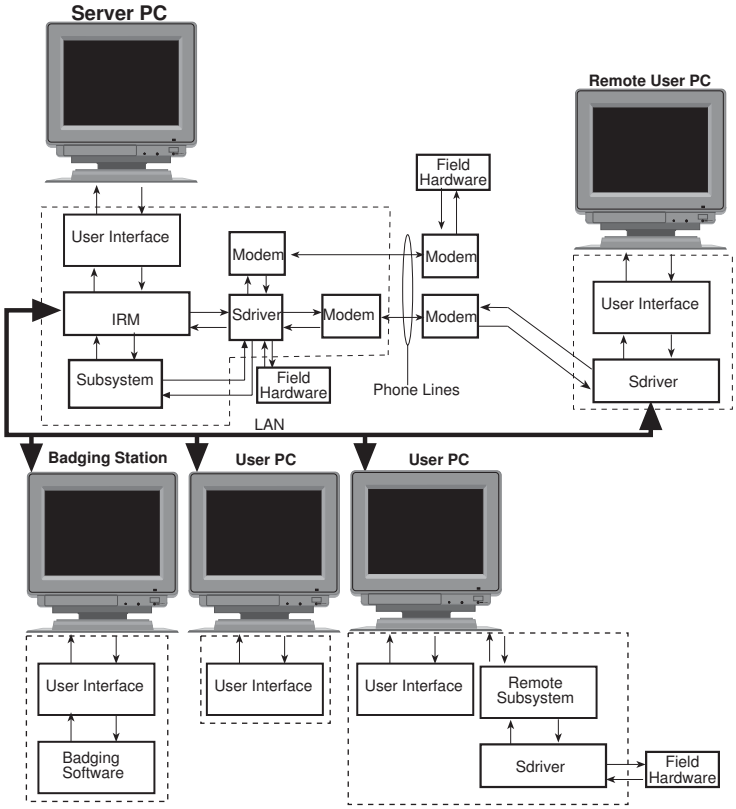
1.1 Typical Single User/Subsystem Installation

Below is a block diagram of the simplest UNITY Installation: One PC (one User), and one Subsystem.



1.2 Typical Multiple User/Subsystem Installation

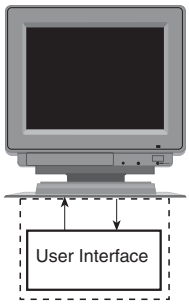
Below is a block diagram of a more complex UNITY Installation: Five PCs (the Server, Badging Station, two LAN Users, and a Remote User), and three Subsystems.



2 UNITY Software Components

While UNITY appears to be a single computer program, in reality it is many programs working together as a team.

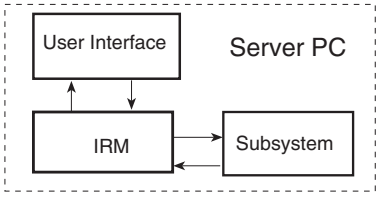
2.1 User Interface



The User Interface is the computer program that users will use to view information, control field devices, and program management strategies. The User Interface provides the Logical Group Tree™, menus, and dialog boxes that run on each personal computer in the UNITY system. If your UNITY system has three PCS, the User Interface programs run on all three PCs.

Note: Since the User Interface is the only "visible" element of the UNITY software, most users will think of "UNITY" and the User Interface as being the same thing.

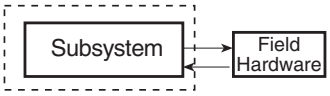
2.2 Information Routing Manager



The Information Routing Manager (IRM) program controls the flow of data and commands between the User Interface(s) and the Subsystem(s). There is only one active IRM in a UNITY system. If a Hot Backup PC is set up, there could be multiple IRMs, but only one will function at any given time. The presence of the IRM makes its PC the "Server PC." See Appendix G for information on Hot Backup.

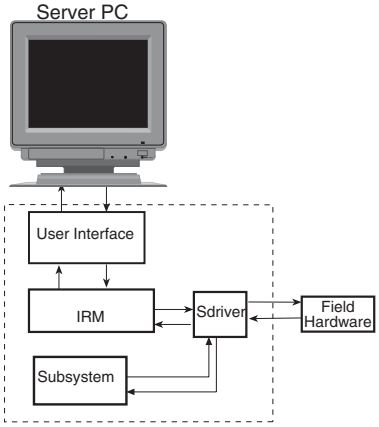
Since it is the "hub" around which UNITY communicates, the IRM must know which serial port to use to communicate with each "User PC." This applies to the User Interface program, as well as any "Remote Subsystems" (see 2.3 Subsystems). You will specify these serial ports during the Software Setup phase of installation.

2.3 Subsystems



Each type of field hardware that connects to UNITY has its own Subsystem program. Normally, the Subsystem(s) will be installed and run on the same PC as the IRM. However, this is not a requirement, and on large systems, any or all of the Subsystems can be distributed to any of the PCS to improve performance (Remote Subsystems).

2.4 Sdriver



The Sdriver program controls serial communications between the field devices and the subsystem software. It is also used to communicate via modem with remote workstations or field devices. The Sdriver is only used when serial communications are used.

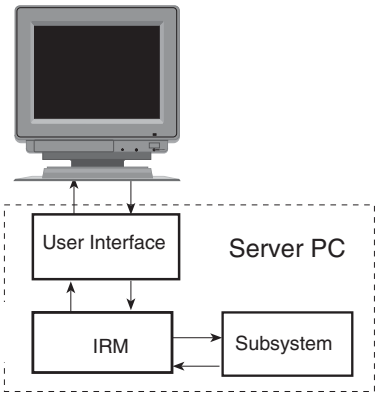
3 UNITY Hardware Connections

All UNITY communication between PCs or with field equipment is via RS-232 or LAN connections at the PCs. PCs can communicate via the LAN, but field equipment must be wired to a PC via a serial port. NexSys is the exception. It is the only subsystem to talk on the LAN via a PC LONTalk Adapter (PCLTA). When more than one (or two if your PC has two COM ports) serial connection is required (e.g., two Subsystems; one Subsystem and one User PC) some type of multiple serial port expansion board is used in that particular PC.

Note: Due to the complexity created by distributing Subsystems to the different PCS and the fact that you may need to install serial expansion boards in multiple PCs for such a system, most systems should have the IRM, Subsystem(s), and one User Interface installed at the Server PC.

For small systems a four-port DigiBoard Expansion card will provide four additional RS-232 ports. For larger systems, an eight-port DigiBoard Expansion card will provide eight additional RS-232 ports. For the largest systems, two eight-port DigiBoard Expansion cards or a 16 port DigiBoard expansion card will provide sixteen additional RS-232 ports.

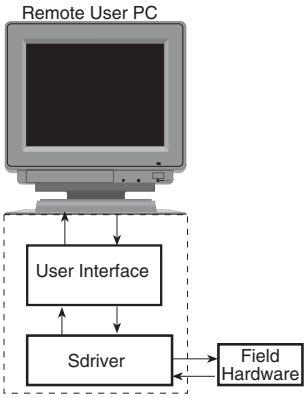
3.1 Server PC



As described above, the Server PC is the one that has the IRM installed. Typically this is the first PC in the system, but once again it does not have to be. You will determine which PC will have the IRM installed during the Software Setup phase of installation.

Note: There is always a Server PC even if it is the only PC in the system.

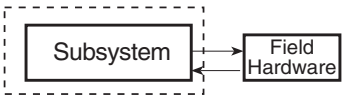
3.2 User PCs



Any UNITY PC that does not have the IRM installed during the software setup phase will be a User PC. You will specify the User PC communications port, the Server PC communications port, the baud rate, and whether or not a modem will be used, for each User PC.

There is no direct communication between a Remote Subsystem and the User Interface on the PC on which it is installed. The Remote Subsystem transmits the information it receives from the field to the IRM in the Server PC. The IRM then transmits the information back to the User Interface on the User PC. If communication between the Server and the User PC is lost, the User PC will have no way to access the information gathered by the Remote Subsystem.

3.3 Subsystem Interfaces



Depending on the field hardware connected there may or may not be an intermediate hardware interface for a particular Subsystem. For example, Honeywell Delta 1000 and Delta 2000 systems use a proprietary CPU that UNITY replaces with an intelligent interface. The Delta 1000 or 2000 interface in turn communicates with UNITY via an RS-232 serial port.

Other Subsystems, such as EST, Trane Tracer 100, or CSI, already provide a RS-232 communication port and therefore do not require an interface.

Chapter 2: Hardware Installation

Chapter Overview

This chapter of Installing UNITY will tell you:

- How to install expansion cards in your UNITY PCs (if necessary)
- How to install optional hardware devices
- How to connect the PC(s) and field devices

1 Locate the UNITY Hardware

This chapter describes the location, preparation, and installation of the PC hardware, and any equipment located inside the PC enclosure(s). Because UNITY is a PC based system, it can be installed in a variety of places and still perform well. However, for best performance (e.g., minimum downtime), you should inspect the proposed installation site and make sure it meets the requirements in this section. The four main enemies of electronic/computer equipment are temperature, moisture, airborne dirt/dust, and electrical noise.

1.1 Environmental Considerations

The temperature of the installation site should not exceed 80° F. Also, provide adequate ventilation for **ALL** equipment (don't surround the PC with other equipment/boxes). You should avoid placing anything within four inches (4") of the vents on the PC, and never place anything on top of, or within eight inches (8") of the top of the monitor. If you want to rack-mount the equipment, make sure that the PCs and monitors are designed for this, and that the rack cabinet provides forced-air ventilation for the enclosed equipment. The installation site should not be near anything requiring water for maintenance. A hanging plant above the PC/keyboard is unacceptable. To safeguard against damage from airborne particles, avoid installing UNITY near manufacturing equipment (lathes, mills, polishing equipment, etc.).

1.2 Electrical Considerations

First and foremost, make sure that the electric service provided is adequate for *all* of the related equipment. This is particularly true when you are adding equipment to an existing system (e.g., Adding CSI DDC panels to a Delta 1000 system). Also, avoid having a significant number of other devices powered from this AC service. Make sure that no large electric motors or other noise generating sources are within 20 feet of the installed equipment. This is particularly true in building automation environments where large AC motors in air handlers, compressors, and boilers are being switched regularly.

Caution! Do not run the UNITY serial communications cables in the same conduit with power cables of any kind!

Store all floppy disks (installation, software, and backup data) *away* from the PC and monitor, and away from any electrical/magnetic source. Extending the connections between the monitor, mouse, and keyboard to a PC is possible. However, noise problems in the industrial/commercial environment make this unadvisable for a UNITY installation.

1.3 Physical Considerations

Make sure the fixtures supporting the PC and/or the monitor are appropriate for the size and weight of the equipment. This is especially true if you are using monitors that are 19" or larger, where the weight of the monitor may exceed that of the PC. When examining a proposed installation site, think about its location with respect to other equipment/systems. Are there other computers or office equipment in the room the UNITY operator(s) will be using? If so, you may want them close enough for the operator to simply turn his/her chair to use that equipment. Is the room a high traffic area? Accidents are more likely to occur with more people walking past the system every day (spilled coffee, dislodged cables, etc.).

2 General Disassembly/Reassembly Procedures

Use the following procedures any time you need to install expansion cards or optional devices, like the cooling fan sensor.

Warning! Make sure that power is removed any time devices or expansion cards are installed or removed.

2.1 Remove the PC Cover Assembly (Pentium 180)

1) Position the PC cabinet so that you have easy access to the rear.

When you are looking at the back of the PC, there should be two screws visible at the top of the rear panel.

2) Loosen the cover screws (Figure 2-1).

Using a screwdriver, turn the screws counter-clockwise to loosen.

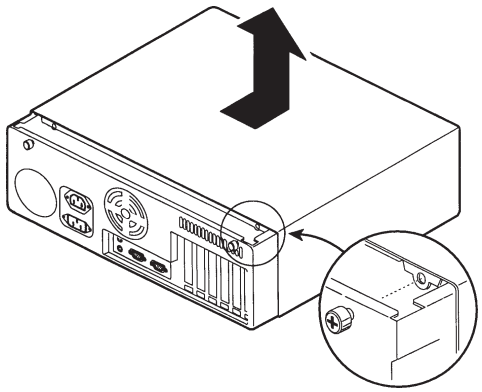


Figure 2-1. Removing the cover.

3) Remove the cover (Figure 2-1).

Grasp the cover at the back and pull up and to the front. The cover should come off easily. On some covers, you must remove four screws and lift up in the back to remove the cover.

2.2 Replace the PC Cover Assembly (Pentium 180)

1) Replace the cover (Figure 2-2).

Insert the front of the cover into the main chassis by holding the cover at a slight angle above the PC. With the front edge in place, pivot the top closed, and push toward the rear to seat the cover fully.

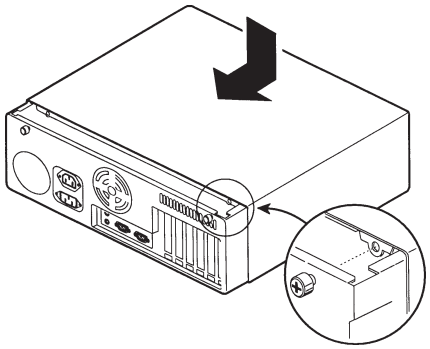


Figure 2-2. Replacing the cover.

2) Tighten the cover screws.

Using a large screwdriver, turn the screws clockwise until they are tight.

3) Reposition the PC cabinet in its original position.

Move the PC carefully to avoid damaging the cables/connectors.

3 Install Expansion Cards

3.1 Install a DigiBoard

1) Remove the cover of the PC.

Use the step-by-step instructions in the previous section.

2) Remove the slot cover from the next available slot (Figure 2-3).

Find the first unused ISA expansion slot. Do not use the PCI slots. Loosen the screw at the top of the slot cover, and gently pull the slot cover straight out.

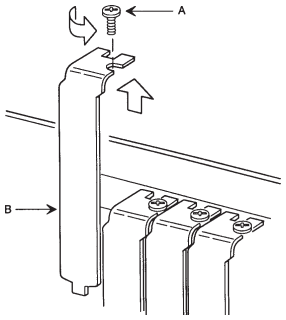


Figure 2-3. Removing the slot cover.

3) Position the card in the slot.

The forked end of the card slot cover should be able to slide under the slot cover screw. The board's connector should be lined up with the slot connector in the PC chassis.

Note: Make sure the guide running along the front edge of the card slot is aligned with the edge of the expansion card.

4) Press the expansion board in place (Figure 2-4).

With one hand at the slot cover end and the other hand at the end of the expansion board, press the board into the slot, rocking it slightly from the front to rear as it seats.

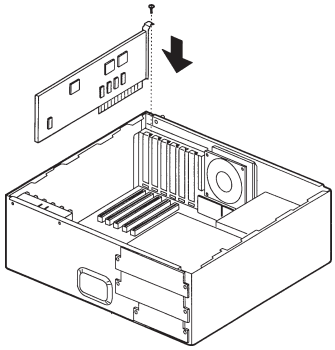


Figure 2-4. Inserting a DigiBoard.

5) Tighten the slot cover screw.

6) Replace the cover of the PC.

Use the step-by-step instructions in section 2.2.

7) Attach the multi-port cable.

Plug the DB-25 multiple cable into the expansion board connector, and tighten the screws at the top and bottom of the connector. Some DigiBoards connect via RJ 45 phone type plug. In this case you would need a RJ45/DB-25 converter cable and a DB-25 card.

3.2 Modify CONFIG.SYS for a DigiBoard

1) Open an OS/2 window.

Double click on the **OS/2 Window** icon on the Desktop (Figure 2-5). An OS/2 window appears (Figure 2-6).

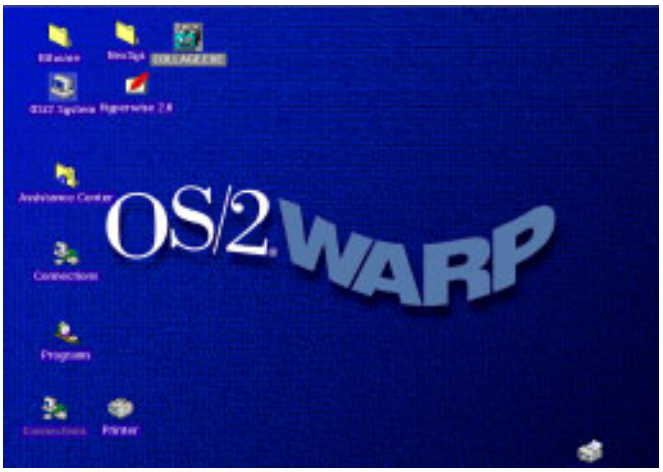


Figure 2-5. OS/2 Desktop.

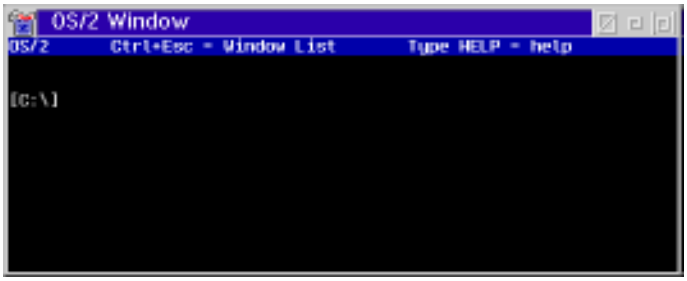


Figure 2-6. OS/2 Window.

2) Open the CONFIG.SYS file with the System Editor.

Type "E CONFIG.SYS" and press the return key. The System Editor window (Figure 2-7) appears with the CONFIG.SYS file open.

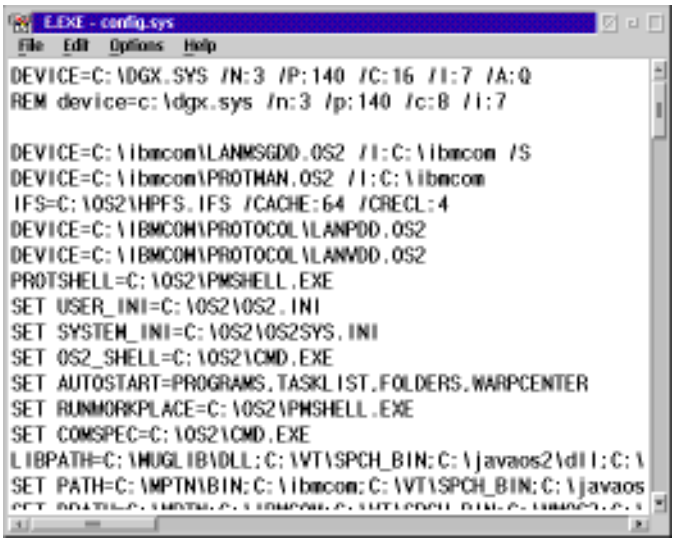


Figure 2-7. System Editor Window.

3) Move the cursor to the end of the file.

Use the scroll bar on the right side of the window to display the end of the file. Using the mouse, click below the last line of text.

3.2 Modify CONFIG.SYS for a DigiBoard - *continued*

4) Enter the DigiBoard configuration text.

The text will differ, depending on the type of DigiBoard, PC, etc. Consult DigiBoard manual or Electronic Systems, USA support personnel if you are uncertain.

5) Save the changes to the CONFIG.SYS file.

Select "Save" from the File menu. The Save notification dialog box appears (Figure 2-8).

Figure 2-8. Save notification dialog box.

6) Click Type....

The Type dialog box appears. See Figure 2-9.

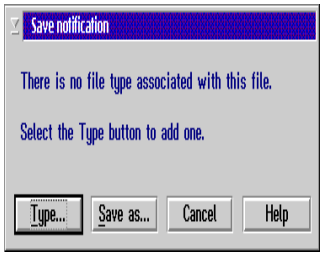


Figure 2-9. Type dialog box with OS/2 Command File selected.

7) Highlight OS/2 Command File and click Set.

8) Exit the System Editor.

Double click on the window box (the one in the upper left-hand corner of the window).

9) Close this OS/2 window.

Select Close from the Window menu.

4 UNITY PC Serial Connections

The most complex aspect of installing UNITY is connecting the Server PC to the other PCs or Subsystems. Most of the interconnections use serial RS-232 cables, and are subject to the limitations of RS-232 (cable runs less than 50 feet, maximum baud rate of 19,200, etc.), as well the advantages (standard interface on many types of hardware, modem compatibility, etc.).

This section will assume:

- That any one serial data cable is less than 50 feet in length.
- That short-haul modems or telephone modems will be used for connecting equipment more than 50 feet apart.
- That none of the serial data cables are run in close proximity to power conducting cables or electromagnetic interference (EMI) sources.

4.1 LAN Connections

LAN connections are made by connecting the computer to a Local Area Network. The computer must be equipped with a network interface card such as an Ethernet card. Network connections vary greatly. Refer to the manufacture's instructions to install these cards and making connections.

4.2 Modem Connection Procedures

The following procedures describe the steps necessary to install and connect short-haul or telephone modems for use as part of a serial data connection to and from UNITY.

In this discussion short-haul modems and line drivers are considered the same. These devices are used whenever the serial data connection extends beyond 50 feet but is less than 5000 feet.

As far as the UNITY software is concerned, a short-haul modem or line driver does not exist. UNITY never "knows" about these devices (there are no numbers to dial), and therefore doesn't care (as long as all of the connections are working).

If, however, a telephone modem is used, UNITY needs to know how to establish and maintain this connection (what number to dial, what baud rate the modem can handle, etc.).

4.2.1 Install Telephone Modems

1) Connect the telephone system to the Server PC's modem.

Using an appropriate RJ-11 cable, connect the phone jack and the modem together.

2) Connect the telephone system to the remote equipment's modem.

Using an appropriate RJ-11 cable, connect the phone jack and the modem together.

3) Connect power to each modem.

Locate the appropriate AC outlet (probably the same source as the Server PC and remote equipment), and connect the AC power cord.

4.2.2 Install Short-Haul Modems

Refer to Figures 2-10 and 2-11 for diagrams of a Short Haul Modem board and a wiring diagram for two short haul modems. The short haul modem is connected to the PC via a standard RS-232-C cable and 25 pin connector. S1 should be in the DCE position. The jumper setting should be the same on all the modems. Usually it is enabled (EN).

1) Route the modem's twisted pair wires.

Locate the wires from the Server PC's location to the remote equipment's location.

2) Connect the twisted pairs to the Server PC's modem.

For each twisted pair, determine which wire is going to be the positive one, and connect it to the modem's positive Transmit connection (Tx+) terminal. Then, connect the other wire to the modem's negative Transmit connection (Tx-) terminal.

Repeat this with the positive Receive connection (Rx+) and the negative Receive connection (Rx-) using the other twisted pair.

3) Connect the twisted pairs to the remote equipment's modem.

Connect the wire from the server PC modem's positive Transmit connection (Tx+) to the remote modem's positive Receive connection (Rx+) terminal. Then, connect the other wire to the remote modem's negative Receive connection (Rx-) terminal. Repeat this with the positive Receive connection (Tx+) and the negative Receive connection (Tx-) using the other twisted pair.

4) If necessary, connect power to each modem.

Some modems or line drivers are powered by the RS-232 line. Others may require an external AC power connection.

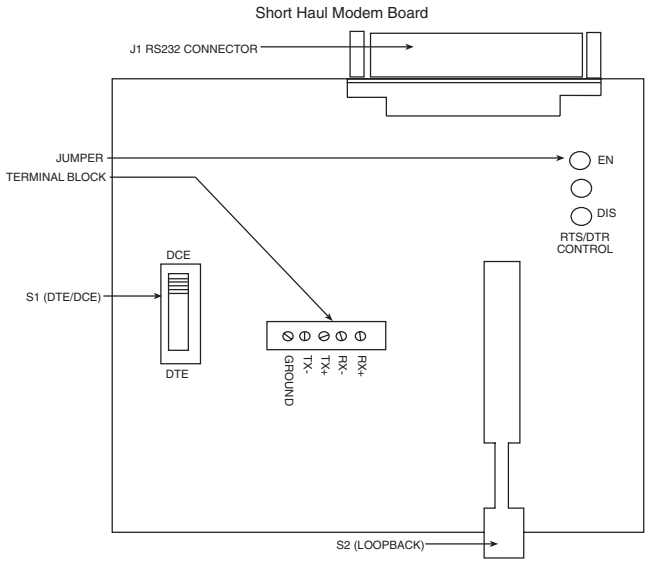


Figure 2-10. Simple Schematic of Short Haul Modem Board.

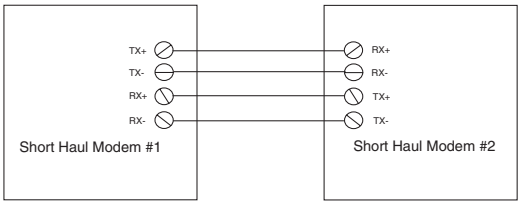
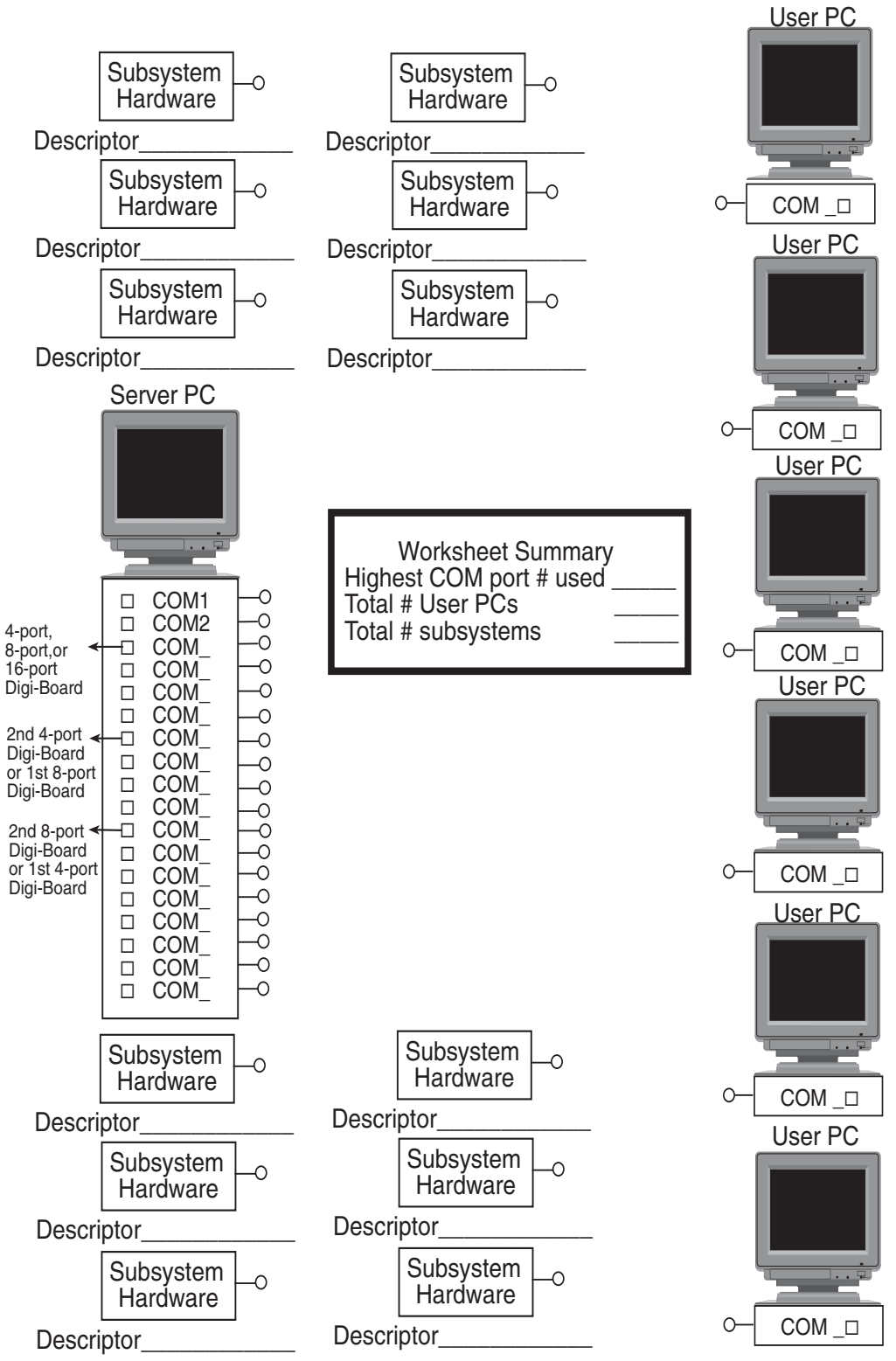


Figure 2-11. Wiring diagram for two short haul modems.

4.3 UNITY Hardware Worksheet



4.4 Server PC Connection Procedures

Since the Server PC is the center of all UNITY communication, it is appropriate to think in terms of starting all serial data connections there. These procedures describe the steps necessary to connect the Server PC to all of the other UNITY system elements. This exercise assumes that your PC has only one COM port (COM 1) and the DigiBoard will be numbered consecutively beginning with COM port 2. These UNITY software COM port numbers must match the numbers already assigned to these ports.

4.4.1 Complete the UNITY Cabling Worksheet

1) Draw a line from the Server to the next User PC .

Beginning at the connection dot for the next available Server PC COM port, draw a line to the next User PC to be connected.

2) Mark the COM port as used.

Put an "X" in the check box next to this Server COM port.

3) Repeat step #1 and #2, as necessary.

After using the COM 1 on the Server, connect the next User PC (if any) to the next COM port.

4) Fill in the Subsystem Descriptors.

For each hardware Subsystem (i.e., Delta 1000, CSI, EST), write in a descriptive name for that Subsystem. These names can be as creative or simple as you want (Building #1, Delta 2000 #1, Main EST, etc.).

5) Draw a line from the Server to the next Subsystem.

Beginning at the connection dot for the next available Server PC COM port, draw a line to the next User PC to be connected.

6) Mark the COM port as used.

Put an "X" in the check box next to this Server COM port.

7) Repeat steps #5 and #6, as necessary.

After using the COM port immediately following the last User PC, connect the next Subsystem (if any) to the next COM port.

8) Determine the serial expansion boards necessary for the Server PC.

Find the last COM port used. Look to the immediate left of the COM port list, find the first expansion board listed *above* this COM port, and circle the board type. (For example, if the last COM port used was COM6, the appropriate expansion board is the eight port DigiBoard.)

Note: If you use more than nine COM ports, you will need ***two*** *- eight port DigiBoard expansion boards or a 16 port DigiBoard.*

9) Fill in the COM port numbers.

Number the comports, beginning with those on the PC. PCs can have one or two COM ports. So, the first PC COM port is COM1. If your PC has a second COM port, it is labeled COM2. Then label the DigiBoards beginning with the next available COM #. No COM port should share a number, and COM port labels in the UNITY software must match the COM port numbers on the PC.

10) Fill in the Summary totals.

At the bottom of the Worksheet, fill in the highest COM port number used (on the Server), the total number of User PCS, and the total number of Subsystems.

4.4.2 Connect the Server to a User

1) Find this User PC on the Worksheet.

The UNITY Hardware Worksheet should show this User PC connected to the Server.

2) Route the cable between the Server PC and the User PC.

Make sure that the cable is not in danger of being pulled or severed due to its location.

3) Connect the Server PC end of the cable.

Some COM ports are DB-9 and some are DB-25. Using the appropriate connectors, plug the cable into the Server Communications Port (COM port) shown on the Hardware Worksheet. Secure this connection by tightening the screws.

Note: If short-haul or telephone modems will be used for this connection, two cables will be used. The other end of this cable should be connected to the Server PC's modem.

4) Connect the User PC end of the cable.

Some COM ports are DB-9 and some are DB-25. Using the appropriate connectors, plug the cable into the User PCs Communications Port (COM port) as shown on the Hardware Worksheet. Secure this connection by tightening the screws.

Note: If short-haul or telephone modems will be used for this connection, two cables will be used. The other end of this cable should be connected to the User PC's modem.

4.4.3 Connect the Server to a Subsystem

1) Find this Subsystem on the Worksheet.

The UNITY Hardware Worksheet should show this Subsystem connected to the Server.

2) Route the cable between the Server PC and the Subsystem hardware.

Make sure that the cable is not in danger of being pulled or severed due to its location.

3) Connect the Server PC end of the cable.

Some COM ports are DB-9 and some are DB-25. Using the appropriate connectors, plug the cable into the Server Communications Port (COM port) shown on the Hardware Worksheet. Secure this connection by tightening the screws.

Note: If short-haul or telephone modems will be used for this connection, two cables will be used. The other end of this cable should be connected to the Server PC's modem.

4) Connect the Subsystem end of the cable.

Plug the DB-25 into the Subsystem's Communications Port (COM port) as shown on the Hardware Worksheet. Secure this connection by tightening the screws.

Note: If short-haul or telephone modems will be used for this connection, two cables will be used. The other end of this cable should be connected to the User PC's modem.

Chapter 3: Software Setup & Configuration

Chapter Overview

This chapter of Installing UNITY will tell you:

- How to set up the PC Configuration Files
- How to use the Install program
- How to disable the OS/2 Printer Spooler

1 UNITY PC System Configuration

1.1 CONFIG.SYS

The following lines must appear in your CONFIG.SYS file for UNITY to run correctly:

- SET BTRPARMS=/M:48/P:4096/B:20

  This line is automatically added by the UNITY Install program.

- RUN=C:\BTI\OS2\BIN\OS2MKDE.EXE

  This line is automatically added by the UNITY Install program.

- DEVICE=C:\OS2\COM02.SYS (this appears if the PC is a PS/2

  or

- DEVICE:=C:\OS2\COM.SYS (this appears if the PC is a non-IBM PC)

  The Device line is automatically added by the OS/2 installation software.

*Note: These lines must appear in the CONFIG.SYS of **ALL** UNITY PCS (the Server and each User).*

At the end of the libpath line of the CONFIG.SYS file, UNITY will add ;C:\BTI\OS2\BIN.

If you installed one or more DigiBoards expansion boards, you need to include the specific line of code for that. Check the DigiBoard manufacture's instructions or contact Electronic Systems, USA support personnel.

Note: This line only needs to appear in the CONFIG.SYS of the Server PC or User PCS that have a DigiBoard installed. The instructions for adding this line are found in "Chapter 2: Hardware Installation."

It is recommended that you remove programs from the autostart line of this file. To do so, locate the line which looks similar to the following:

SET AUTOSTART=PROGRAMS,TASKLIST,FOLDERS,WARPCENTER

Remove **PROGRAMS** from the list. If **PROGRAMS** remains in the list, all programs which were running when the PC was shutdown will automatically start on a reboot. Save the **CONFIG.SYS** and close the file.

1.2 AUTOEXEC.BAT

Check that the **AUTOEXEC.BAT** contains the following line. If not, add it at the end of the file.

SET CLASMOOTH=OFF

This will prevent a problem with mouse movement in the Information Management System/System Data Reports. Save the **AUTOEXEC.BAT** and close the file.

2 UNITY Software Installation

Prior to the installation of UNITY, OS/2 WARP must be installed on your PC. Follow the manufacturer's directions for installing OS/2. Then install UNITY with the following procedure.

Note: Systems with the NexSys subsystem require OS/2 version 4.0 (Merlin).

2.1 Begin UNITY Install

The following instructions assume that OS/2 and UNITY are to be installed on the C: drive.

Note: If UNITY is to be installed on a drive other than C:, you must run the install program from a command window by typing **INSTALL X: ZY:**. **X** *is the name of the drive where UNITY will be installed,* **Z** *is the required starting character, and* **Y** *is the drive where OS/2 is installed. See Engineering Bulletin 135.*

1) Insert UNITY Installation Diskette 1 into the floppy drive

2) Open the drive into which the floppy has been inserted.

Click on the Drive A: or Drive B: icon on the OS/2 Desktop (Figure 3-1).

Figure 3-1. Drive Icon.

The Drive window opens (Figure 3-2).

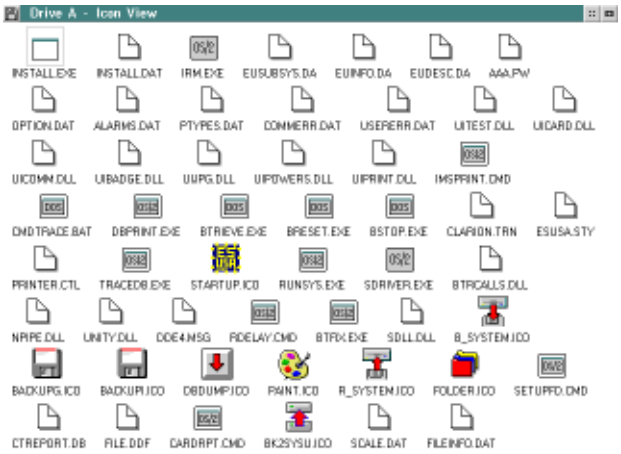


Figure 3-2. Drive Window.

3) Select the icon named INSTALL.EXE.

Double click on the INSTALL.EXE file (Figure 3-3).

Figure 3-3. Install.EXE Icon.

The file opens. If UNITY has been installed on the system before, the Upgrade Installation message box will appear (Figure 3-4). If this is a new installation, the Install dialog box appears (Figure 3-5). If this is a new installation, skip to Step 5.

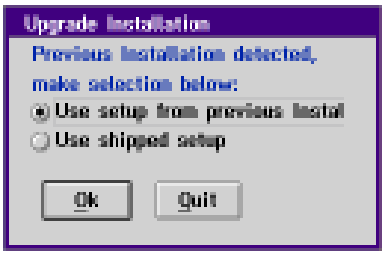


Figure 3-4. Upgrade Installation.

2.1 Begin UNITY Install- *continued*

4) Click the appropriate radio button and click Ok. Click Quit if you wish to cancel the install.

If you are installing a new version of UNITY, you must choose the Used Shipped Setup radio button. If you are adding users, components, or subsystems, choose the Used Shipped Setup. If you are reinstalling the existing version and setup of UNITY, you may choose the Use Setup from Previous Install radio button. The Install dialog box will appear (Figure 3-5).

If you choose the Previous Install radio button instead of the Shipped Setup, you will replace the **INSTALL.DAT** file on disk 1 of the install with the **INSTALL.DAT** from **C:\UNITY**. The changes for subsystems, users, COM ports, etc. will be lost. If this occurs by mistake, you may insert Disk 1 of the Install into Drive A. Type **DIR INSTALL.*.** You should find **INSTALL.DAT** and **INSTALL.ORG**. XCOPY the **INSTALL.ORG** to **INSTALL.DAT** by typing **XCOPY INSTALL.ORG INSTALL.DAT**. Type **INSTALL** again to resume the installation. when the Upgrade Installation message appears, click the Used Shipped Setup radio button.

Notice the TCP/IP checkbox. If your system is a TCP/IP setup, check this box. If it uses Novell or a LAN instead of a TCP/IP, do not check this box. The TCP/IP selection will install the socket version of the **ESUCOMM.DLL**. The non-selection of TCP/IP will install the namepipe version of **ESUCOMM.DLL**. Even if you have slected TCP/IP install, all serial users will install the namepipe **ESUCOMM.DLL**.

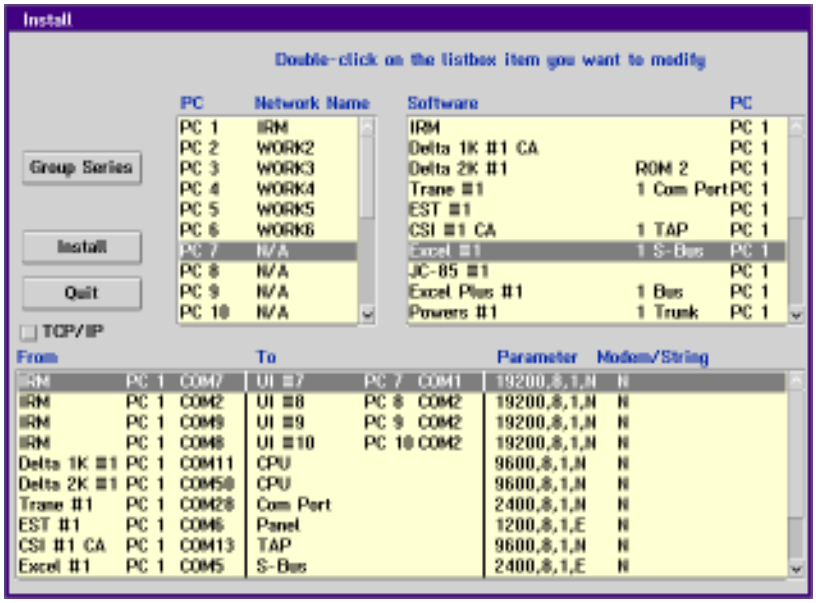


Figure 3-5. Install Dialog Box.

2.2 Software Assignment Setup

1) **Double click on an item in the Software /PC list box in the Install dialog box. (See Figure 3-5.)**

The Setup Software dialog box appears (Figure 3-6).

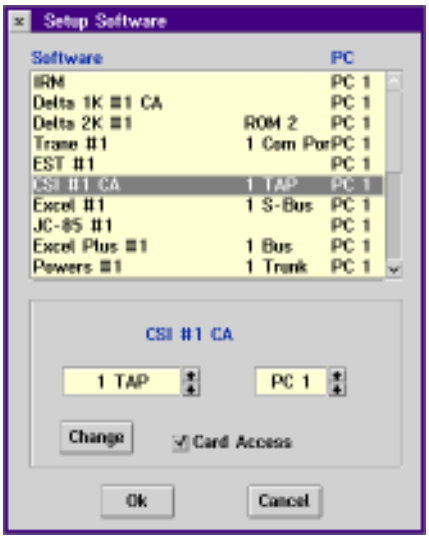


Figure 3-6. Setup Software dialog box.

2) **Select an item from the list box.**

The name of the item appears in the box beneath the list box.

3) **Select the port, if necessary.**

Some subsystems, like Excel and Powers, use multiple ports.

4) **Select the PC in which the software will be installed.**

Using the field to the right of the software's name, scroll to the PC in which the software will be installed.

5) **Select a subsystem configuration for the software.**

The information in the field below the software's name determines the configuration for the subsystem. This information is dependent upon the subsystem being installed. Subsystem configurations:
Delta 2000 - ROM type (ROM 1, ROM 2, Metric ROM)
Trane - Number of panels (1 - 4)
CSI - Number of TAPs (1 - 4)
Excel - Number of S-busses (1 - 4)
Excel Plus - Number of busses (1 - 4)
Powers - Number of trunks (1 - 16)

6) **If the subsystem is a Delta 1000 or CSI with card access, select the Card Access check box.**

A "✓" will appear in the check box when it has been selected.

7) **Click** Change.

You **MUST** click Change for each item in the list box to save the changes.

8) **Click** Ok.

The Install dialog box reappears.

2.3 Group Series Setup

1) From the Install dialog box, Click Group Series.

Refer to Figure 3-5. The Group Series Mapping dialog box appears (Figure 3-7).

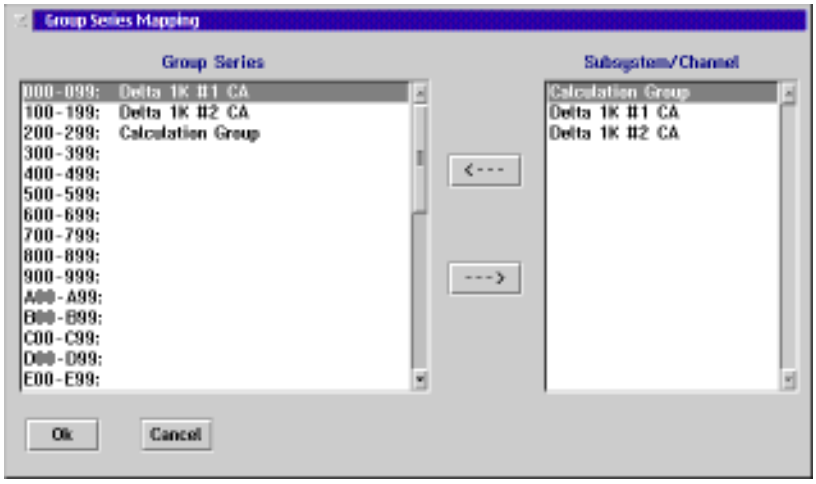


Figure 3-7. Group Series Mapping Dialog Box.

The Group Series Mapping dialog box contains two list boxes. The list box on the left displays the Group Series. The list box on the right shows the available subsystems and channels for your UNITY system.

Note: A Group Series is a range of groups assigned to a particular subsystem. A subsystem can have more than one Group Series assigned to it, however, a Group Series can be assigned to only one subsystem.

To assign a subsystem or channel to a group series, select a group series and a subsystem or channel. Then, click on the left arrow button in the dialog box. The subsystem or channel disappears from the Subsystems/ Channels list box and reappears next to the selected group series in the Group Series Mapping list box. To remove a mapped group, click on the right arrow.

Note: Each subsystem group series requires a minimum of one group per subsystem or subsytem channel. Additionally, the calculation group series require a mimimum of one group per calculation group.

2) Repeat step 1, as necessary, to meet the requirements of your system, and click Ok.

The Install dialog box reappears.

2.4 Network Name Setup

Setup of Network Names applies only to systems with a network. If your system is not on a network, skip to 2.5 Communication Assignment Setup.

1) **Double click on the first item in the PC/Network Name list box of the Install dialog box. Refer to Figure 3-5.**

   The Setup PC dialog box appears (Figure 3-8). If this is a new install, the dialog box appears blank, as shown. If this is an upgrade, the PC names will appear in the Network Names list.

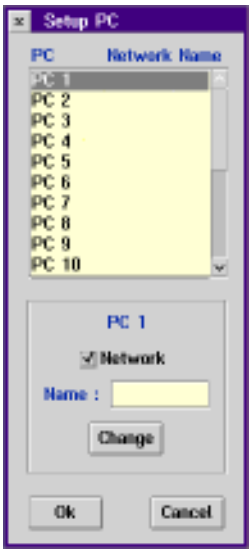


Figure 3-8. Setup PC Dialog Box.

2) **Highlight a PC from the list box and enter the network name.**

   The name of the PC appears in the box below the list box. If the PC will be part of a network, click on the Network checkbox and enter a name for the PC in the Name: field. These names must be the same computer name/workstation name that the network uses for each PC. PC1 is usually the IRM.

3) **Click** Cancel **to save the changes.**

4) **Repeat steps 2 and 3 for each network PC and click** Ok **.**

   The Install dialog box reappears.

2.5 Communication Setup

1) Double click on an item from the From/To/Parameter/Modem/ String list box of the Install Dialog Box. Refer to Figure 3-5.

The Setup Communications dialog box appears (Figure 3-9). If you are going from the IRM to a UI (User Interface), skip Steps 4-8. Steps 4-8 deal with connecting subsystems. If you will be installing Powers and Trane subsystems, you may need to check the Modem check box and select a Max Baud rate.

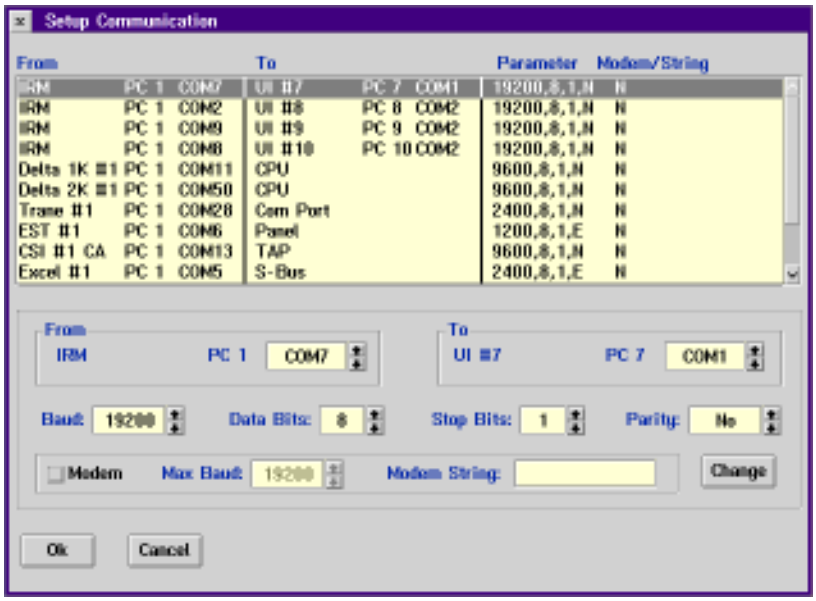


Figure 3-9. Setup Communications dialog box.

2) Select a COM port for the From box.

Default will be the lowest COM port available from the IRM PC.

Note: The Nexsys Subsystem does not require a COM port. Set this to a value higher than the last COM port available.

3) Select a COM port for the To box.

Default will be the lowest COM port available from the User PC.

4) Select a baud rate. Refer to Table 4-1 for completing steps 4-7.

Default will be 19200.

5) Select the number of data bits.

Default will be 8.

6) Select the number of stop bits.

Default will be 1.

7) Select the parity.

Default wil be None.

2.5 Communication Setup - *continued*

Subsystem	Baud Rate	Data Bits	Stop Bits	Parity
5600	2400	8	1	odd
CSI	9600	8	1	none
Delta 1000	9600	8	1	none
Delta 2000	9600	8	1	none
Excel Classic	2400	8	1	even
Excel Plus	9600	8	1	none
EST	1200	8	1	even
JohnsonControls	9600	8	1	none
Metasys	19200	8	1	none
Nexsys	9600	8	1	none
Powers	4800	8	1	none
Tracer 100	1200/2400	8	1	none

Table 4-1. Subsystems Communication Information.

8) If the item has a remote serial user equipped with a modem, click on the Modem check box.

The modem phone number can be entered here. But, usually it is entered when UNITY is running and you try to connect to a remote site. The phone number can be entered in be accessing the Logoff menu and selecting dial. The modem allows the remote user to dial in to the primary user.

Note: With the exception of the COM port selection and modem check box selection, default settings are strongly recommended.

9) Click Change to save any changes to the communication setup.

10) Repeat steps 1-9 for each PC your UNITY system contains.

10) Click Ok.

The Installation Setup dialog box reappears.

2.6 Save Setup Information

You may save you setup prior to completing the UNITY install, if you like. To do so:

1) Click Quit on the Install dialog box.

A warning dialog box will appear.

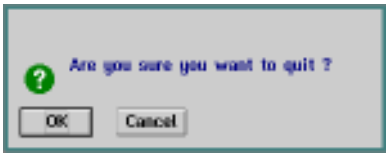


Figure 3-10. Warning Dialog Box.

2) Click Ok to save the install information you've just entered. Click Cancel to abort the installation.

The diskette in Drive A will be written to. The screen will return to the OS/2 command window. To complete the install, type **INSTALL** at the command prompt and press <enter>.

2.7 Complete UNITY Install

1) Click Install on the Install dialog box. Refer to Figure 3-5.

If this is a new installation, the Install dialog box appears (Figure 3-11). However, if UNITY is already installed on the system, the Overwrite Files dialog box will appear. (Figure 3-12). All the check boxes will be selected. If you do not wish to overwrite these files, click on the appropriate check boxes. Click Ok to continue.

Figure 3-11. Overwrite Files Dialog Box.

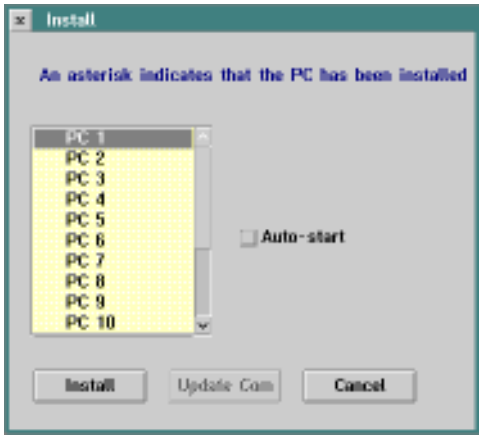


Figure 3-12. Install Dialog Box.

2) If this is an existing installation and the communications setup is the only thing that has been changed, click Update Com. If this is a new installation, skip this step.

The Communications Updated Successfully message box appears.

3) Make sure the correct PC is highlighted in the Install dialog box and click Install.

The UNITY installation begins, or (for an existing system) the communications information is updated. Once installation has started the system will request the disks necessary to complete the installation. When the next disk is needed the system will display a disk request dialog box (Figure 3-13).

2.7 Complete UNITY Install - *continued*

Figure 3-13. Disk Request Dialog Box.

4) Insert the requested disk and click Ok.

A message box will appear. (Figure 3-14). If you wish to create a new desktop icon, click Ok.

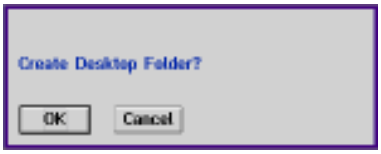


Figure 3-14. Create Desktop Folder? Message Box.

5) Once installation is complete the Install Completed dialog box appears (Figure 3-15).

Figure 3-15. Install Completed Dialog Box.

5) Click Enter to close the dialog box.

The Install screen reappears.

6) Click Quit.

The "Are you sure you want to quit?" dialog box appears (Figure 3-16).

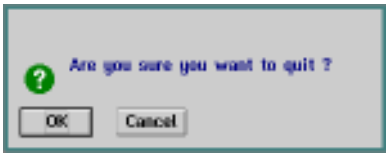


Figure 3-16. The "Are you sure you want to quit?" Dialog Box.

7) You MUST click Ok to save the install information you've just entered. Click Cancel to abort the installation.

This will save the setup information on Disk 1. The Install dialog box closes.

8) Repeat steps 1-7 on the remaining PCs.

3 Installion Checks

You may check for the following files to verify the UNITY setup if you like.

3.1 CONFIG.SYS

The UNITY 5.5 Install program will add the following line to the **CONFIG.SYS** file libpath line. **C:\BTI\OS2\BIN**

The line should look similar to the following:

LIBPATH=C:\IBMLAN\NETLIB;C:\MUGLIB\DLL;.;C:\OS2\DLL;C:\MPTN\DLL;
C:\IBMCOM\DLL;C:\IBMI18N\DLL;C:\OS2\MDOS;C:\;C:\OS2\APPS\DLL;
C:\JAVAOS2\DLL;C:\IBMINST;C:\NSC\DLL;C:\TCPIP\DLL;
C:\TCPIP\PCOMOS2;C:\TCPIP\UMAIL;C:\NETWARE;
C:\NETWARE\NLS\ENGLISH;C:\BTI\OS2\BIN;C:\BTI\OS2\BIN

3.2 Check for Files

The following files are automatically added to these directories by the UNITY Install program.

1) **Check the C:\OS2 directory for the following files:**
   PRINT_01.SYS
   PRINT_02.SYS

2) **Check the C:\BTI\OS2\BIN directory for the following files:**
   BREBUILD.EXE
   BTI.INI
   BTICOMM.INI
   BTRCALLS.DLL
   DBU_UI.DLL
   MKDE .TRN
   MKDELINK .EXE
   MKDESVCS.EXE
   NWLOCALE.DLL
   OS2FEXEC.EXE
   OS2FEXEC.HLP
   OS2FMAN.HLP
   PBTRVRES.DLL
   OS2FMAN .EXE
   OS2MKDE .DLL
   OS2MKDE .EXE
   OS2MKDE.HLP
   OS2NWBRQ.DLL
   PBROLL.EXE

3) **Check in the C:\OS2\MSDOS\WINOS2\SYSTEM directory for the following file:**
   WBTRCALL.DLL

3.3 REPORT.TXT

Check in the **C:\UNITY** directory for the **REPORT.TXT** file. A copy of this file should be printed and maintained on file in your permanant records. This file contains information pertaining to the installed setup of your UNITY system.

3.4 SYSTEM.CMD

Check in the **C:\UNITY** directory for the **SYSTEM.CMD** file. This file contains the startup commands for your UNITY system.

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