

D O C U M E N T A T I O N U P D A T E

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*   INSTALLING VICTORLAN WITH ONLY   *  
*       DISKLESS WORKSTATIONS       *  
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Version of 4/2/84

Retain for Future Reference

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INTRODUCTION

The following instructions update the VictorLan Server Network manual, Chapter 7 - "Installation Guide," dated July 1983, and the Diskless Network Station OS Disk DISKID file regarding the installation of networks consisting of one or more file servers and having only diskless network stations. If floppy disk stations are present, disregard these instructions and follow the installation procedures outlined in the Server Network manual.

The procedure required for installing a VictorLan network having only Diskless Workstations requires approximately 2 hours and can be outlined as follows:

1. Attach a display and keyboard to the File Server and use the File Server as a stand-alone hard disk system to prepare working (system) copies of the required software.
2. Configure the hard disk system as a File Server as described in Chapter 7 of the Server Network manual.
3. Follow the procedure outlined in the DISKID file on the Diskless Workstation Distribution Disk to create the necessary directories on the File Server (INSTDKLS) and install the diskless operating system (DISKLESS). These instructions will be repeated and clarified below.
4. Boot the File Server from the Diskless Station System Disk, access the A drive on the server and the DISKLESS Directory on the A drive. Rename the login program, LOGIN.EXE, to LOGIN.XXX. Copy the INSTALL.EXE and INSTALL.DAT files from the Server Distribution Disk to the Diskless Directory on the A drive.
5. Reboot the File Server from the hard disk. Power-up a Diskless Workstation. At the A> prompt run the INSTALL program to set up one or more users.
6. Reboot the File Server from the Diskless Workstation System Disk, delete the INSTALL program from the Diskless Directory, and rename the LOGIN.XXX program to LOGIN.EXE.
7. Reboot the File Server from hard disk and reboot the Diskless station. Power-up all other diskless stations.

In the sections that follow, each of these steps will be described in greater detail. To complete the installation of the Diskless Station Network you will need the following items: - Victor Operator Reference and Server Network manuals
- Victor Hard Disk Operating System Software (MS-DOS

1.25a/2.7) - VictorLan File Server Software Distribution Disk
- VictorLAN Network Station Software Distribution Disk -
VictorLAN Diskless Workstation Software Distribution Disk -
several blank disks

NOTE: Both file server configuration and diskless station installation render inoperable the diskettes used in the installation process. Prepare multiple back-ups in case the configuration or installation must be repeated.

PREPARING THE FILE SERVER FOR USE AS A HARD DISK SYSTEM

Installations featuring only Diskless network stations must use the File Server as a stand-alone system to prepare diskettes for network start-up. This is accomplished by attaching a display and keyboard from a diskless station to the file server and using the AUTOSET routine to configure the hard disk. To ready the hard disk, insert the Hard Disk Operating System distribution disk into the floppy drive on the Hard Disk System and boot. At a B) prompt, enter AUTOSET 1AND3X3 and press <RETURN>. When the configuration is complete, reboot the system as instructed, use SYSCOPY to copy the Hard Disk Operating System to the A volume, and use COPY to copy FORMAT.COM and SYSCOPY.EXE to the A volume. Remove the Hard Disk Operating System disk from the floppy drive and reboot from the Hard Disk. The Hard Disk System should now be operational. See the Operator Reference manual, chapter 17, for more information on configuring a Hard Disk System.

PREPARING SYSTEM DISKS

The configuration (1AND3X3) suggested above divided the Hard Disk into four virtual volumes: A, C, D, and E. The steps that follow will use these virtual volumes as storage sites for building the Server System software and Diskless Station System software needed to complete network installation.

1. First, insert the Server Software Distribution Disk into the floppy drive and COPY all files to volume C (COPY B:.* C:). Remove the Server Distribution Disk from the floppy drive and secure it from further use at this time.
2. Next place a blank disk into the floppy drive and FORMAT it.
3. When the fresh disk is ready, use SYSCOPY to copy a Hard Disk Operating System onto it (SYSCOPY A: B:).
4. Then copy all Server files from the C volume onto the floppy (COPY C:.* B:).
5. Repeat steps 2, 3, and 4 to create as many Server System Disks (and spares) as necessary for network installation.
6. Next, insert the Diskless Station Software Distributuion Disk into the floppy drive and SYSCOPY the Diskless Operating System to the D volume (SYSCOPY B: D:).
7. Then COPY all other files from the Diskless Station disk to the D volume (COPY B:.* D:). The D volume now contains all Diskless Station software and can serve as a master for creating copies. Remove the Diskless Station Distribution Disk from the floppy drive and secure it from further use at this time.
8. To produce system copies of the Diskless Station software, first insert a blank disk in the floppy drive and FORMAT it.
9. Next SYSCOPY the Diskless Station Operating System to the disk in the floppy drive (SYSCOPY D: B:).
10. Then COPY the remainder of the Diskless Station software to the floppy (COPY D:.* B:).
11. Repeat steps 8, 9 and 10 to create as many Diskless Station System Disks and spares as necessary for the network being installed. NOTE: If several diskless stations are being installed and the customer wishes to have different default and auxilliary printers or other

output devices (e.g., a modem) for different stations, the generic installation cannot be used. Instead you must custom install each (every) Diskless Station separately. Each such station and installation will require a separate Diskless Station System Disk.

At this point, software needed to configure the Network and install the Diskless Stations and users should be at hand. Be sure all diskettes are clearly labeled. To complete the network installation you will need the following software:

- File Server System Disk (from step 4 above)
- Diskless Station System Disk (from step 10 above)
- Network Station Distribution Disk

CONFIGURING THE FILE SERVER

The first step in configuring the file server is to use the NETSETUP program on a Server System Disk to create a Server Initialization Disk (see Section 7.3 of the Server Network manual for detailed instructions). Briefly, using the hard disk system, proceed as follows:

1. Insert the Files Server System Disk in to the floppy drive and reboot. Enter the date and time as appropriate.
2. At the B) prompt type NETSETUP and press <RETURN>. Enter the server characteristics called for by the program prompts (these characteristics should be determined in advanced based on the customer's needs - see the Server Network manual, Section 7.3 for a discussion of the characteristics to be supplied).
3. When NETSETUP is finished, boot the Hard Disk System from the newly created Server Initialization Disk. When File Server initialization is complete, a voice message confirm the initialization and instruct you to "Boot from Hard Disk."
4. Remove the Server Initialization Disk from the floppy drive and boot the File Server. Check the display screen to verify that the hard disk system is functional as a file server.

INSTALLING DISKLESS STATION SOFTWARE ON THE FILE SERVER

Once the File Server has been initialized, the next task is to install the Diskless Station Software on the File Server.

1. Insert the Diskless Station System Disk in the floppy drive on the File Server and boot from the floppy drive.
2. Set the date and time as usual, then remove the Diskless Station System Disk.
3. Insert the Network Station Distribution disk into the floppy drive and, at a B) prompt, type INSTDKLS. This program installs the necessary directories for the Diskless Workstations. When this process is complete, remove the Network Station Distribution Disk from the floppy drive.
4. Once again insert the Diskless Station System Disk into the floppy drive. For a generic installation (all Diskless Station have the same characteristics), type DISKLESS at a B) prompt and press (RETURN). This process defines the type of installation, printer characteristics for the diskless station(s) being installed, and the name of the operating system file (you should specify BOOT01 for a generic installation - read the NOTE below before completing this step).

NOTE: If several diskless stations are being installed and the customer wishes to have different default and auxilliary printers or other output devices (e.g., a modem) for different stations, the generic installation cannot be used. Instead you must custom install each (every) Diskless Station separately. Each such station and installation will require a separate Diskless Station System Disk. The command to accomplish custom installation of a Diskless Workstation is DISKLESShh where hh is the hexadecimal address of the Diskless Station as set via the DIP switches on the network board inside the Diskless Workstation (refer to instructions accompanying the Diskless Workstation for the location of the station address switches). The chart on the following page shows the hexadecimal code for the various station numbers and DIP switch settings. Also, the operating system file for each custom installed Diskless Station must have a unique name in the form BOOT01hh where hh is the hexadecimal address of the Diskless Station.

5. Upon completion of the previous step, the Diskless Workstation Operating System will be created and placed on the File Server hard disk. This process renders the Diskless Workstation System disk inoperable for additional installations.

At this point the necessary directories and software are installed on the file server to permit Diskless Workstation use. However, no user has yet been installed. User installation in the Diskless-only environment will be described in the next section.

NETWORK STATION ADDRESS DIP SWITCH SETTINGS

Address		Switch								Address		Switch							
Decimal	Hex	1	2	3	4	5	6	7	8	Decimal	Hex	1	2	3	4	5	6	7	8
10	0A	0	X	0	X	0	0	0	0	37	25	X	0	X	0	0	X	0	0
11	0B	X	X	0	X	0	0	0	0	38	26	0	X	X	0	0	X	0	0
12	0C	0	0	X	X	0	0	0	0	39	27	X	X	X	0	0	X	0	0
13	0D	X	0	X	X	0	0	0	0	40	28	0	0	0	X	0	X	0	0
14	0E	0	X	X	X	0	0	0	0	41	29	X	0	0	X	0	X	0	0
15	0F	X	X	X	X	0	0	0	0	42	2A	0	X	0	X	0	X	0	0
16	10	0	0	0	0	X	0	0	0	43	2B	X	X	0	X	0	X	0	0
17	11	X	0	0	0	X	0	0	0	44	2C	0	0	X	X	0	X	0	0
18	12	0	X	0	0	X	0	0	0	45	2D	X	0	X	X	0	X	0	0
19	13	X	X	0	0	X	0	0	0	46	2E	0	X	X	X	0	X	0	0
20	14	0	0	X	0	X	0	0	0	47	2F	X	X	X	X	0	X	0	0
21	15	X	0	X	0	X	0	0	0	48	30	0	0	0	0	X	X	0	0
22	16	0	X	X	0	X	0	0	0	49	31	X	0	0	0	X	X	0	0
23	17	X	X	X	0	X	0	0	0	50	32	0	X	0	0	X	X	0	0
24	18	0	0	0	X	X	0	0	0	51	33	X	X	0	0	X	X	0	0
25	19	X	0	0	X	X	0	0	0	52	34	0	0	X	0	X	X	0	0
26	1A	0	X	0	X	X	0	0	0	53	35	X	0	X	0	X	X	0	0
27	1B	X	X	0	X	X	0	0	0	54	36	0	X	X	0	X	X	0	0
28	1C	0	0	X	X	X	0	0	0	55	37	X	X	X	0	X	X	0	0
29	1D	X	0	X	X	X	0	0	0	56	38	0	0	0	X	X	X	0	0
30	1E	0	X	X	X	X	0	0	0	57	39	X	0	0	X	X	X	0	0
31	1F	X	X	X	X	X	0	0	0	58	3A	0	X	0	X	X	X	0	0
32	20	0	0	0	0	0	X	0	0	59	3B	X	X	0	X	X	X	0	0
33	21	X	0	0	0	0	X	0	0	60	3C	0	0	X	X	X	X	0	0
34	22	0	X	0	0	0	X	0	0	61	3D	X	0	X	X	X	X	0	0
35	23	X	X	0	0	0	X	0	0	62	3E	0	X	X	X	X	X	0	0
36	24	0	0	X	0	0	X	0	0	63	3F	X	X	X	X	X	X	0	0

NOTE: Network Station cards may have either BLACK DIP switch blocks or BLUE DIP switch blocks. If your Network Station card has BLACK switch blocks, X = ON and 0 = OFF; if your Network Station has BLUE switch blocks, X = OFF and 0 = ON. Addresses 0-9 (not shown in the chart) are reserved for File Server.

INSTALLING THE FIRST USER

In order to install the first user on a Diskless-only network, you must temporarily defeat the LOGIN program and provide access to the INSTALL program in the /DISKLESS directory on the File server. Then you can work from a Diskless Station to install the first user.

1. With the Diskless Station System Disk in the floppy drive on the File Server, log over to the A volume.
2. At an A) prompt, type CD /DISKLESS and press <RETURN>. A DIR listing at this point will show the contents of the /DISKLESS directory to be COMMAND.COM and LOGIN.EXE.
3. Rename the LOGIN.EXE program to LOGIN.XXX by typing REN LOGIN.EXE LOGIN.XXX and pressing <RETURN>.
4. Remove the Diskless Station disk and insert the Server Installation Disk into the floppy drive.
5. At an A) prompt type COPY B:INSTALL.* and press <RETURN>. This will copy the INSTALL program files (INSTALL.DAT and INSTALL.EXE) to the A volume.
6. Remove the Server Installation Disk from the floppy drive and boot the File Server from the hard disk. The File Server should boot normally.
7. Power-up a Diskless Station. The Victor Logo and network banner will be displayed, then an A) prompt. A DIR listing executed at the Diskless Station will show the directory to contain COMMAND.COM, LOGIN.XXX, INSTALL.EXE, and INSTALL.DAT.
8. To install the first user, type INSTALL at an A) and press <RETURN>. Proceed as described in Chapter 9 of the Server Network manual. NOTE: You should set one of the drives assigned to the Diskless Station as the floppy drive on the File Server. This will permit Diskless Station users to copy-from and backup-to floppy disks as necessary.

After the first user has been installed successfully, you could proceed to install other users. However, it would be best to pause at this point to do some housekeeping, then proceed with additional user installations after the system has been returned to its normal operating form.

NORMALIZING THE NETWORK

Before proceeding further, you should return the LOGIN program to its executable form and delete the INSTALL program from the A volume on the file Server.

1. Insert the Diskless Station System Disk into the floppy drive on the File Server and boot from the floppy. Enter the date and time as appropriate and log over to the A volume.
2. At an A> prompt type CD /DISKLESS and press <RETURN>.
3. Rename the LOGIN.XXX program to LOGIN.EXE (REN LOGIN.XXX LOGIN.EXE), and delete the INSTALL program (DEL INSTALL.*).
4. Remove the Diskless Station System Disk and boot the File Server from the hard disk. The File Server should boot normally; confirm this by checking the display on the screen attached to the File Server.

At this point you may remove the Display and keyboard from the File Server and reconnect them to the Diskless Station from which they were borrowed. All further network activity can be performed from a Diskless Station.

INSTALLING ADDITIONAL USERS

Once the first network user has been installed, additional users can be installed at any time from a Diskless Station. The only prerequisite is that the INSTALL program must reside on one of the File Server volumes to which the Diskless Station has access. Follow the procedure below to copy INSTALL to a Diskless Stations File Server volume.

1. Power-up a diskless station and login to the network (the File Server must have been powered up previously).
2. Insert a File Server Software Distribution Disk into the floppy drive on the File Server and close the gate.

NOTE: For purposes of this example, assume that the File Server C volume is the default volume for the Diskless Station, you wish to transfer the INSTALL program to the Diskless Station's C volume, and the floppy drive on the File Server has been assigned as the Diskless Station's H volume.

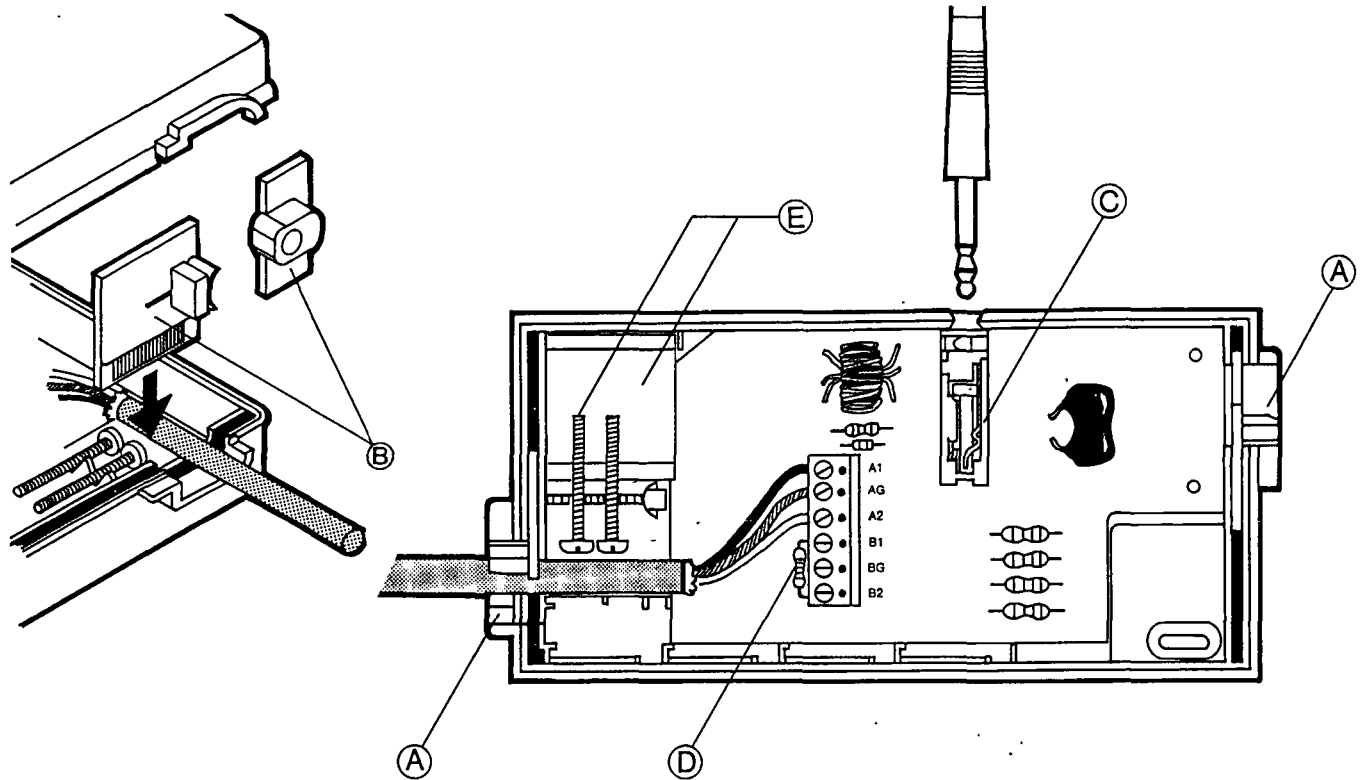
3. At a C) prompt, type COPY H:INSTALL.* C: and press (RETURN). As the INSTALL.EXE and INSTALL.DAT files are copied from the floppy drive, their filenames will be listed on the screen.
4. When the copy is complete, remove the File Server Software Disk from the floppy drive and secure it from further use.

With the INSTALL program now resident on a volume accessible to the Diskless Station, additional users may be installed at any time.

This same process should be used to load other network utilities which the users wishes to routinely access. Caution should be used, however, to conceal certain utilities from casual network users. Network administration should be given careful consideration at the time the network is being configured so that one or more users can be installed as "Network Administrators" with a private volume to house certain utility routines. In the case of INSTALL, the customer may not wish for all users to have the capability to install additional users. Refer to Chapters 9 and 10 of the Server Network manual for a discussion of network administration considerations.



Installation Instructions Network Connector Module



INSTALLATION INSTRUCTIONS

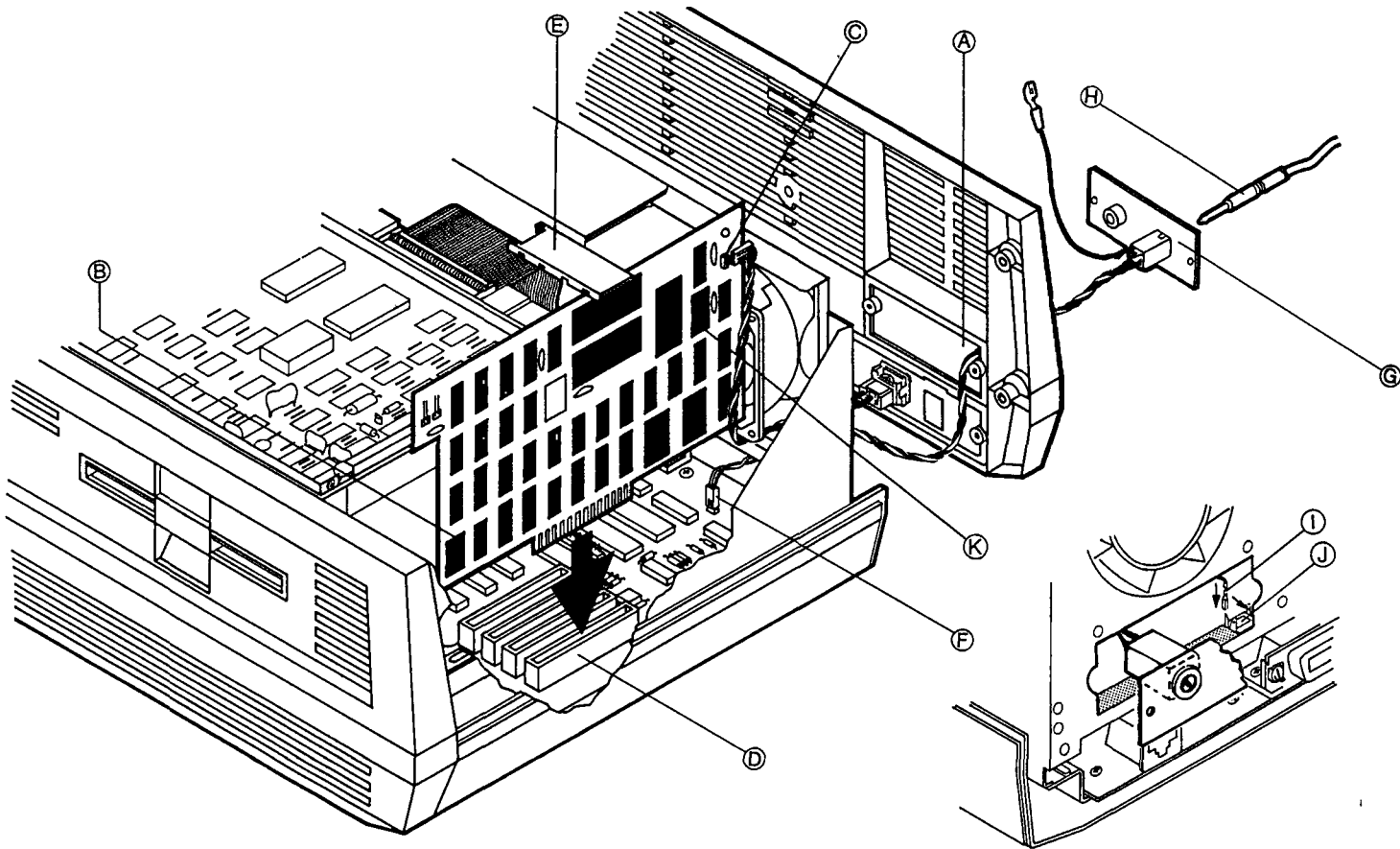
This sheet explains how to install the cables and junction boxes that connect the Network computers (servers and stations) to the Network trunk cable. Each computer requires one junction box. Each end of the trunk line must be terminated by a junction box whether or not there is a computer at each end of the trunk line. The maximum trunk line LENGTH is 1500 feet (450 meters). Junction Box (Model No. 6610) The recommended trunk line wire type is a braid shielded twisted pair, Victor Part No. 104386-01.

1. Lay the trunk line so that it passes within five feet of each computer.
2. Install a termination junction box at each end of the trunk line.
 - a. Strip $\frac{1}{4}$ inch of insulation from the end of the trunk line wires.
 - b. Pry the lid off a junction box by inserting a screwdriver near one of the box's grommets (A).
 - c. Loosen the screws for the terminals, A1, AG, and A2 on the terminal block in the junction box.
 - d. Twist, then insert the black wire in A1, the ground wire in AG, and the white wire in A2.
 - e. Tighten the terminal screws.
 - f. Remove the small piece from one of the two-part grommets (B), place the trunk line in the wire hole, and move the larger grommet piece so that the hole is narrowed.
 - g. Replace the lid on the junction box.
 - h. If the junction box is to be connected to a computer, plug the junction box cable from the computer into the jack on the side of the junction box (C).
3. Install the central junction boxes.
 - a. Cut the trunk wire near the computer to be connected.
 - b. Connect one end of the trunk cable as described in 2a through 2f, above.
 - c. Remove the resistor (D) from the B1 and B2 terminals and insert the wires from the other end of the trunk line cable into B1, BG, and B2 as described above.
 - d. Replace the lid on the junction box.
 - e. Plug the computer's junction box cable into the cable connector on the side of the junction box.
4. Use the provided double-sided mounting tape or screws (E) to mount the junction boxes.



Installation Instructions

Model 6600 VictorLAN Omninet Conversion Kit



INSTALLATION INSTRUCTIONS

Letters in () are drawing references.

This sheet explains MODEL 6600 VictorLAN Omninet Conversion Kit. This kit contains one each:

- VictorLAN Omninet Card (P/N 102990-01)
- Auxiliary Accessory Plate (P/N 104168-01)
- VictorLAN Drop-Cable (P/N 104076-01)

- Ground clip (P/N 105470-01)
- Expansion Board Retainer (P/N 100891-01)

1. Disconnect all cables, including the power cable, from the rear of the computer.
2. Remove the blank accessory plate (A) from the rear of the computer (middle left, viewed from rear, two Phillips screws) and replace it with the Auxiliary Accessory Plate (G), passing the attached wires through to the rear.
3. Remove the rear plastic overlay-panel from the computer (four Phillips screws). Lay the panel close by to avoid disconnecting the reset switch cable (some models).
4. Remove the plastic top-cover by lifting it at the rear and then pulling it rearward.
5. Install the ground clip (inset, J) by pressing it, tines upward, onto the horizontal forward-facing edge of the metal rear under-panel below the lower right (rear view) of the Accessory Panel cutout.
6. Pass both the twisted-pair and the single wire from the Auxiliary Accessory Plate through the Accessory Panel cutout in the metal rear under-panel.

7. On dip-switch (B), located at 1A on the VictorLAN Omninet Card, set positions 1 thru 6 ON, 7 OFF, and 8 ON. To select "ON" depress the side marked "ON". To select "OFF" depress the side marked "OFF".
8. On dip-switch (K), located at 3M on the VictorLAN Omninet Card, positions 1 thru 6 must be set so that the sum of the values shown in Table 1 equals the desired "network station number". For example, if the station number is 12, set positions 3 and 4 (values 4 and 8 add to 12) to OFF, and all others ON. Switches 7 and 8 are not used.

TABLE 1	----- POSITION -----					
	1	2	3	4	5	6
ON VALUE	0	0	0	0	0	0
OFF VALUE	1	2	4	8	16	32

9. Lay the VictorLAN Omninet Card inside the computer, orienting it approximately as shown in the drawing. Plug the twisted-pair cable from the Auxiliary Accessory Plate onto the header (C) at location N4 on the VictorLAN Omninet Card.

10. Press the VictorLAN Omninet Card into the outermost expansion slot connector (D). Dress the twisted-pair cable away from the fan blades.
11. Clip the Expansion Board Retainer to its place on the disk drive chassis (E) so that it supports the new card and any others that may have been installed.
12. Reinstall the top cover and rear overlay panel. If the cable to the reset switch has pulled out (some models), reconnect it to the header on the CPU board (F).
13. Press the "fast-on" connector on the end of the single wire from the Auxiliary Accessory Plate onto the ground clip installed in step 5 (I).
14. Reconnect all external cables, including power, to the computer.
15. Plug the VictorLAN Drop-Cable (H) into the jack on the new Auxiliary Accessory Plate on the rear of the computer (G). Plug the other end into the Victor Connector Module, which should be installed in the VictorLAN Trunk Cable, in accordance with its own instructions.
16. For software information and errata, please refer to the DISKID files on each diskette. This can be read or printed using the "type" command in MS-DOS.