

**C**ongratulations on purchasing your Virtual CD Server™ from Academy Computer Services, Inc. This system takes up a small amount of space, but replaces millions of pages of text. Gigabytes of information are less than a second away. Your new server system features:

- ◆ High Speed CD-ROM drive drives fully compatible with ISO 9660
- ◆ CDServ CPU with 10Base-T Ethernet and RG-58 connections for network access.
- ◆ External SCSI port for future expansion.
- ◆ Up to 250 users.
- ◆ Tower enclosure with ample power for all drives and cooling fans for long drive life.



**WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This manual explains how to install your new CD Serv 7. You will need to:

1. Unpack and check the shipment.
2. Connect the unit to the network.
3. Make CDs available to workstations.

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# Getting Started

## System Prerequisites

You will need the following network components:

- ◆ Windows 3x/95/98/NT, DOS, Apple Macintosh™, UNIX™, OS/2 Warp™, or Internet/Intranet network using 10Base-TX or RG-58 10Base2.
- ◆ TCP/IP and NetBEUI enabled on the workstation that will administrate the CD Serv 7
- ◆ An Internet web browser loaded on the administration workstation.
- ◆ Ethernet patch cable or BNC coaxial cable to attach the CD Serv 7 to the network.

## Unpacking the Box

Carefully unpack your shipping box:



**WARNING: Server units can weigh as much as 30 pounds and should be lifted by two individuals. Observe the practice of bending the knees, not the back. Be certain both people have a firm grasp on the unit itself, not just the plastic wrap or other packing materials. Such materials will slide over the component and could cause the unit to drop. Dropping the tower will result in equipment damage and possible personal injury.**

Check to see that the shipment is complete.

<b>CD Serv 7</b>
<b>Large Box:</b>
CD Serv 7
This Installation Guide
<b>Accessory Bag:</b>
Black Power Cord
Category 5 Ethernet Patch Cable w/ RJ45 connector
Floppy disks: "CD-Serv Manager"

Figure 1, Package Contents

Place your server on a sturdy, flat surface. Academy recommends placement off the floor away from possible dust contamination. If your package is incomplete or irregular in any way, please contact Academy without delay at **800-385-6442**.

Call 800-38-Logic for help  
[www.LegalHardware.com](http://www.LegalHardware.com)  
[www.SchoolHardware.com](http://www.SchoolHardware.com)



## Physical Connection

1. Insert the Category 5 Ethernet patch cable into the RJ-45 connector at the rear of the CD Serv 7. Insert the other end into a network hub.
2. Connect the power cable to the unit and plug it into the power strip or outlet. Use of a surge protector is strongly recommended for long system life.
3. Turn on the CD Serv 7. The switch is located at the lower front of the unit.

## LED Indicators

The CD Serv 7 has 4 LED indicator lights on the front. The CPU has Link, Fault, and Power LEDs. There is a Power LED for the entire CD Serv 7. These lights give information about the operation status of the unit.

There are three steps to the system POST (Power On Self Test).

1. Just after the unit is turned on all three CPU LED indicators will light for about 1 second. This indicates that all LEDs are correctly functioning.
2. The Power LED will remain lit through the network initialization process.
3. The Link and Fault lights will flash as the system examines the Flash-ROM.

For further information about the CPU LEDs please refer to: Error! Reference source not found..

## Connecting to the Network

### System Defaults

When a CD Serv 7 is connected to the network the system will configure itself to use the following defaults.

- ◆ The CD Serv 7 name is **CD<default Ethernet address>**. The default Ethernet address is unique to each unit and cannot be changed.
- ◆ The CD Serv 7 will poll the network to locate DHCP/BOOP/RARP servers and acquire an IP address through one of these servers. If no such server exists on the network the default IP address will be **192.168.1.1**.
- ◆ The CD Serv 7 Domain/workgroup name is **WORKGROUP**
- ◆ The CD Serv 7 administration username/password is **Admin/cdserv**
- ◆ The CD Serv 7 CD-ROM drives are shared on the network using the name **Share0, Share1, Share2**, etc. There is no password security for these shares.

## Initial Setup

A valid TCP/IP address must be established for administrative access of the CD Serv 7. There are two methods for doing this:

- ◆ CD Serv Manager software.
- ◆ Change the IP Address of the Workstation

## CD Serv 7 Manager

This utility requires Windows 3x/95/98.

### Install the program

1. Place the CD Serv 7 Manager disk into the floppy drive.
2. Click on Start and Run.
3. Type A:\setup.
4. Click on OK.
5. Follow the screen prompts to install the management software on the PC.

### Configure the CD Serv 7 IP Address

1. Select the CD Serv Manager Utility from the Program menu.
2. The program will automatically browse the network to locate the CD Serv 7. An icon or minimized window will list every CD Serv 7 located.
  - 2.1. If no CD Serv 7 is discovered, use the Discover CD Servs option of the Actions menu. Or click on the Discover CD Servs icon (first button on the left).
3. Enlarge the CD Serv 7 window.
4. System modifications are only possible in Superuser Mode. This is a password protected security level for Administrators. Enter Superuser Mode by clicking on the Superuser icon (a shield/badge). Or by selecting the Superuser option from the View menu.
5. Enter the administration password. The default password is **cdserv**.
6. Select the Server Parameters from the Configure menu.
  - 6.1. This window can be used to change the unit name, Workgroup name, IP Address and Subnet Mask.
  - 6.2. Click on OK when done.
7. The CD Serv 7 must be rebooted for these changes to take effect. When prompted click on OK to reboot the unit.

## Change the IP Address of the Workstation

The CD Serv 7 uses the default IP address of **192.168.1.1**, with a Subnet Mask of **255.255.255.0**. By changing the IP Address of the administrator workstation to be in the same Subnet, and IP range the CD Serv 7 may be accessed via a web browser.

### Load the TCP/IP protocol

The TCP/IP protocol must be installed on the administrator's workstation.

1. Open the Windows Control Panel. Double-click on the Network icon.  
OR:
2. Right-click on the Network Neighborhood desktop icon, and select the Properties option.
3. If the TCP/IP protocol is listed no further action is needed. If it is not listed click on the Add button.
4. Highlight the Protocol option, and click on the Add button.
5. Select Microsoft from the Manufacturers list. Select TCP/IP from the Network protocol list. Click on the OK button.
6. Follow the screen prompts if Windows requests the Windows 95/98/NT CD-ROM. Reboot the computer when prompted.

## Modify the IP Address of the workstation

The TCP/IP address must be in the same range as the CD Serv 7

1. After the PC has rebooted open the Windows Control Panel. Double-click on the Network icon.  
OR:
2. Right-click on the Network Neighborhood desktop icon, and select the Properties option.
3. Select TCP/IP and click on the Properties button.
4. Select the IP Address tab.
5. If the radio button next to Specify an IP address is selected, the IP address field lists an address of 192.168.1.x (where x is a number from 2 to 254), and the Subnet Mask is 255.255.255.0 no further action is needed.
  - 5.1. If the radio button next to "Obtain an IP address automatically" is selected. Click on the radio button next to Specify an IP address. Enter the IP address 192.168.1.x (where x is a number from 2 to 254), and the Subnet Mask of 255.255.255.0
6. Click on OK to return to the Network properties window.
7. Click on OK. Restart the computer when prompted. As the workstation restarts the new parameters will be in effect.

### Modify the server parameters

The default IP address of the CD Serv 7 is 192.168.1.1. By following the previous steps the workstation and the CD Serv 7 are now in the same "Intranet". To access the Administrator's web utility of the CD Serv 7, and make any desired IP address modifications to the CD Serv 7:

1. Open a web browser on the workstation.
2. The URL of the CD Serv 7 Administration main web page is **http://192.168.1.1/admin**. By default, the username/password for Administrator access is **admin/cdserv**.
3. To modify the server parameters (server name, domain, IP address, etc) click on the **Server Parameters** link. Click on the **Modify Parameters** button. After any/all modifications are made click on the **Save** button at the bottom of the screen.
4. To change the Administration password click on the **Server Password** link. After any modifications are made click on the **Save** button at the bottom of the page.
5. The CD Serv 7 must be rebooted for any of these new server parameters take effect.
  - 5.1. Click on the **Shutdown** link.
  - 5.2. Click on "Yes, continue with shutdown".
  - 5.3. Power off the CD Serv 7 when prompted.

After all TCP/IP modifications are made to the CD Serv 7, the original IP settings of the workstation may be restored.

## System Management

Administration of the CD Serv 7 is done through a web browser. The default URL of CD Serv 7 Administration page is **http://192.168.1.1/admin**. The Administration page uses frames, and links to the following administration features: CD-ROM List, Server Parameters, Drive Parameters, Virtual Volume, Security, User Level Configuration, HTTP Customization, Server Password, Statistics, Reset, Shutdown, Firmware Upgrade, Help.

### CD-ROM List

The CD-ROM List displays a table of all currently available CDs and any Virtual Volumes.

### Server Parameters

The current server system parameters (server name, domain name, IP address, etc.) are displayed on this page. To modify any of these parameters click on the **Modify Parameters** button. After any/all modifications are made click on the **Save** button at the bottom of the screen.

### Drive Parameters

The current drive parameters (share name, volume name, etc.) are displayed on this page. To modify any of these parameters select a drive from the drop down list and click on the **Modify Parameters** button. The Share Name may be changed, a password may be entered to provide share level security to the drive, or a limit may be placed on the total number of users who can access the drive. After any/all modifications are made click on the **Save** button at the bottom of the screen.

### Virtual Volume

The Virtual Share provides a method for all CDs to be accessed via a single network share. The default name of the Virtual Share is ROOT. To change this default name, or to disable the Virtual Share select this link. After any/all modifications are made click on the **Save** button at the bottom of the screen.

## Security

### Share Level

The system default. Share Level Security limits access to a volume by requiring a password for a specific share. There are no default passwords for shares.

### User Level

A user must be stored in the CD Serv 7 database of users to be allowed access to a volume.

### Drive Level

Access to specific CD-ROM drives is restricted based on users listed on the CD Serv 7 database.

## User Level Configuration

The database of users used by User Level and Drive Level security.

## HTTP Customization

The CD Serv 7 can be customized to act as a Web Server by assigning any HTML file stored on the unit as the home page of the CD Serv 7.



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Up to three HTML files from a single CD-ROM drive can be selected as HTML files. When the Serv 7 is accessed as a Web Server the files are searched, in order, and the first viable HTML page is displaced in the user's web browser.

## Server Password

The Administration security password may be modified on this page. After any/all modifications are made click on the **Save** button at the bottom of the screen.

## Statistics

Statistics on system usage by Windows, HTTP, NFS, and AppleTalk users is available on this page.

## Reset

The links on this page will cause the CD Serv 7 to reboot.

## Shutdown

The links on this page will cause the CD Serv 7 to shutdown.

## Firmware Upgrade

Select this page when a firmware upgrade is required.

## Help

Explanations of each page and its functions are available on this page.

## User Access

All CDs can be accessed via a single drive mapping. The CD Serv 7 default volume of ROOT (a Virtual Share) may be used for this mapping. All CDs are available as subdirectories of this volume.

### Windows95/98/NT Peer Networks

Workstations must have the NetBEUI or TCP/IP protocol loaded.

1. Double click on Network Neighborhood.
2. Double click on the CD Serv 7.
3. Highlight the ROOT volume.
4. Select Map Network Drive from the File menu. Select a drive letter to use for the mapping. Place a check in the box labeled "Reconnect at logon".
5. Click on OK. A new window will open, showing the data accessible through the mapped drive. The mapping process is now complete. Close all windows.

### Windows 3x/Windows for Workgroups

Workstations must have the NetBEUI or TCP/IP protocol loaded.

1. Start the File Manager.
2. Open the Disk menu and select the Connect Network Drive option.
3. A pop-up window will open. In the Show Shared Directories frame double click on the workgroup that contains the CD Serv 7. If the workgroup does not appear, click on the browse button.
4. Double click on the CD Serv 7. Each shared volume will appear in the Share Directories frame.
6. Highlight the ROOT volume and click on the OK button. The mapping process is now complete. Close all windows.

### Windows NT Client/Server

Workstations must have the TCP/IP protocol loaded.

1. Double click on Network Neighborhood.
2. Double click on the CD Serv 7.
3. Highlight the ROOT volume.
4. Select Map Network Drive from the File menu. Select a drive letter to use for the mapping. Place a check in the box labeled "Reconnect at logon".
5. Click on OK. A new window will open, showing the data accessible through the mapped drive. The mapping process is now complete. Close all windows.

## Apple Macintosh

The Chooser is used to mount/access CDs.

1. Click on the **Apple** menu.
2. Select **Chooser**.
3. If AppleTalk is not currently active, click on the radio button to make it active.
4. Connect to the server.
  - 4.1. Select **AppleShare**. All Mac servers will appear in the right window.
    - 4.1.1. Highlight the CD Serv 7. Click on **OK**
  - 4.2. Select the Volume to mount. Click on **OK**
    - 4.2.1. By selecting the ROOT volume, all CDs will be accessible.
    - 4.2.2. All true Mac (HFS format) CD/Imaged CDs will also appear as separate volumes. If an HFS CD is selected it will be mounted directly on the desktop.
  - 4.3. A connection log in window will open.
  - 4.4. Click on **Connect**
  - 4.5. Select the CD(s) you want to mount and click on **OK**

## Technical Specifications

<b>Protocols</b>	<i>Protocols</i>	TCP/IP, SMB, NFS, HTTP, AFP
	<i>File Formats</i>	ISO 9660, HSF, Multisession, ISO 9660 with Rock Ridge, Apple HFS
	<i>TCP/IP Suite</i>	RARP, BOOTP, DHCP, WINS
<b>Network Interface</b>		10Base-2 (BNC), 10Base-T (RJ-45)
<b>Operating Condition</b>	<i>Temperature</i>	32°-104° F (0°-40°C)
	<i>Humidity</i>	10-90% RHS

## LED Codes

<b>Stage</b>	<b>Power LED</b>	<b>Fault LED</b>	<b>LAN LED</b>
<i>Power ON</i>	On	Off	Off
<i>POST</i>	Flash	Off	Off
<i>Memory Error</i>	On	On	Off
<i>RTC Error</i>	Off	On	Off
<i>Network Error</i>	Flash	On	Off
<i>CMD IDE Error</i>	Off	On	On
<i>MFG Test</i>	Flash	Flash	Off
<i>Set Default</i>	Flash	On	Flash
<i>Firmware Upgrade</i>	Flash	Off	Flash
<i>Ready</i>	On	Off	Flash
<i>System Halt/Diag Error/MFG Error</i>	On	On	On

## Support Numbers

### Contacting Academy Computer Services

Academy Computer Services: 800-385-6442, Fax: 781-279-4262

Academy e-mail: [tech@academycomputerservice.com](mailto:tech@academycomputerservice.com)

### Warranty and Disclaimer Information

Specifications subject to change without notice. All trademarks the property of their respective companies.

Warranty: One-year parts and labor from date of purchase. This warranty is in lieu of all other express warranties which now or hereafter might otherwise arise with respect to this product, implied warranties, including those of merchantability, fitness for a particular purpose and non-infringement shall (A) have no greater duration than 1 year from the date of purchase (B) terminate automatically at the expiration of such period and (C) to the extent permitted by law be excluded. In the event this product becomes defective during the warranty period, the purchaser's exclusive remedy shall be repair. Incidental or consequential damages, including without limitation loss of data or inaccurate retrieval of data, arising from breach of any express or implied warranty are not the responsibility of Academy Computer Services, Inc. and, to the extent permitted by law, are hereby excluded both for property damage, and to the extent not unconscionable, for personal injury damage.

### Options

Many installations require modifications or additions for optimal functionality. To this purpose we offer CD changers/jukeboxes, Macintosh interfaces, OS/2 drivers, Ornetix Software for CD management in Novell or Windows NT environments, dual channel SCSI cards for multiple towers, multiplexers, Virtual CD Towers using hard disks and other options too numerous to list. We have extensive experience with large and custom installations. Please call 800-385-6442 for a tailored quotation.

### Recommendation for Further Study

Elshami, Ahmed M. Networking CD-ROMs. American Library Association. Chicago. IL. 1996. 800-545-2433 press 7 to order.

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