

MasterConsole II

User's Manual

MCC4, MCC8, MCC16
MCC4R, MCC8R, MCC16R
MCC8RD, MCC16RD

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MCC8RD, MCC16RD



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FCC Information

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 in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential environment may cause harmful interference.

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Welcome

Overview

Raritan's keyboard/video/mouse (KVM) switches are engineered to provide reliable, cost-effective, central control of multiple computers. This eliminates the cost and clutter of unnecessary equipment, reclaims space, and improves productivity for a host of applications.

MasterConsole II enables control of any mix of 2 to 256 computers from a single keyboard, monitor, and mouse. MasterConsole II user interface provides simple on-screen control and system management. Raritan's unique emulation technology dedicates a keyboard/mouse emulator for each computer to ensure that each computer always 'sees' its own keyboard and mouse. This means smooth, flawless switching and operation, even when computers are running the most demanding operating systems.

Features

- Models for 4, 8, or 16 computers
- Mix any brand PCs, Macs, Suns, Alphas, RS/6000s, HP9000s, SGIs
- "Keep-alive" emulation ensures non-stop computer operation in the event of power loss to the switch
- High resolution video-1600x1280
- Tangle-proof, double-shielded coaxial cable from 6.5, to 30 feet
- On-screen user interface for simple control and system management
- Assign meaningful names to computers for quick identification and selection
- Operate with front panel buttons or hot-keys with on-screen menus
- AutoSkip function to bypass inactive channels
- AutoScan computers at variable rates
- Password Security to ensure authorized access to computers
- Optional Dual Remote access capability with Cat5 Reach
- Compatible with MasterView ready MasterConsole P Models (MCPn)
- Cascade from a multi-user MasterConsole MX⁴
- One year warranty for parts and labor

One-Tier and Two-Tier Configurations

MasterConsole II can be configured in one or two tiers, depending on the number of computers you want to control. In a one-tier configuration, only computers are connected to a single MasterConsole II unit. **See Figure 1.** In a two-tier configuration, either a computer or another MasterConsole unit is connected to each channel of the base MasterConsole II unit. **See Figure 2.**

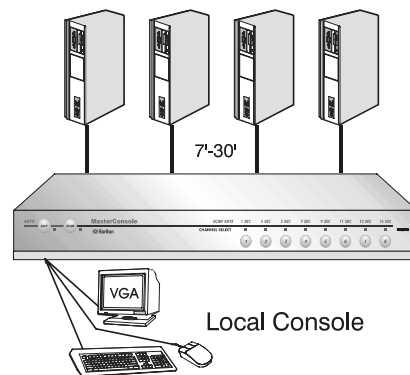


Figure 1. One-Tier Configuration

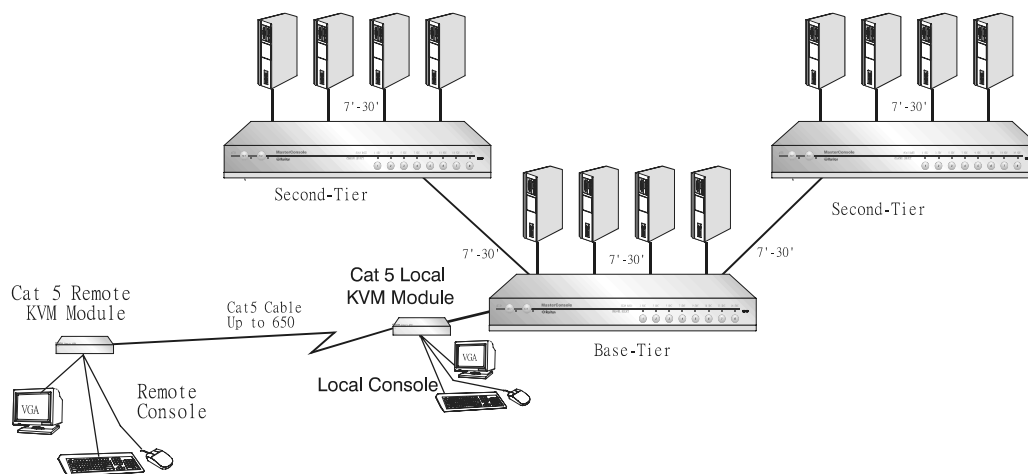


Figure 2. Two-Tier Configuration (With optional Remote Access)

Getting Started

MasterConsole II is designed for quick, easy installation and operation. Follow the steps for either one-tier or two-tier configuration to be up and running within minutes:

1. **Install MasterConsole II** (connect computers).
2. **Configure MasterConsole II.**
3. **Assign computer names and set channel-specific Scan Rates** for attached computers.
4. **Turn ON security and change passwords** if you want to restrict access to computers connected to MasterConsole II.
5. **Operate** using On-Screen User Interface or front panel buttons.
6. **Install optional Cat5 Reach** for remote console or satellite unit.

Quick-Start Operation

After you connect computers to your MasterConsole II you may wish to explore MasterConsole II operation with the default names and parameters.

You may operate using the front panel buttons and/or the On-Screen User Interface. To activate On-Screen User Interface, press the <ScrollLock> key twice rapidly. The Selection Menu will appear. To select a computer, use the <↑>/<↓> keys to highlight the desired channel (computer) and press <Enter> or press the desired computer's Key number (located in the left-hand column). To select another computer, use front panel buttons or re-activate the On-Screen User Interface.

One-Tier Configuration

Installing MasterConsole II (One-Tier)

1. Shut down and power off all computers to be connected to MasterConsole II.
2. Plug a keyboard, monitor, and mouse into the keyboard, monitor, and mouse ports on the MasterConsole II back panel. **See Figure 3 and Figure 4.**
3. Power ON the MasterConsole II unit.
4. Using a universal cable kit (CCPnnU), plug the 25-pin connector into one of the numbered channels on the MasterConsole II back panel.
5. Plug the cable's other connectors into the computer's keyboard, monitor, and mouse ports. Use supplied adapters for AT style PCs. **See Figure 5.**
6. Power ON the connected computer.
7. Select the connected computer by pressing the corresponding front panel button. Verify that the monitor attached to MasterConsole II displays the video for the connected computer. Use the keyboard and mouse attached to MasterConsole II to verify that they operate the connected computer.

Note: *An amber channel light above a numbered channel button on the MasterConsole II front panel indicates that the channel is active; that is, a computer is connected and powered on. A green light above a numbered channel button indicates the currently displayed channel. See Figure 6 and Figure 7.*

8. Repeat Steps 4 through 7 to connect the remaining computers to MasterConsole II.

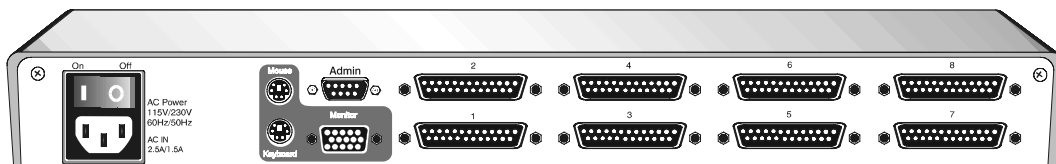


Figure 3. *MasterConsole II Back Panel*

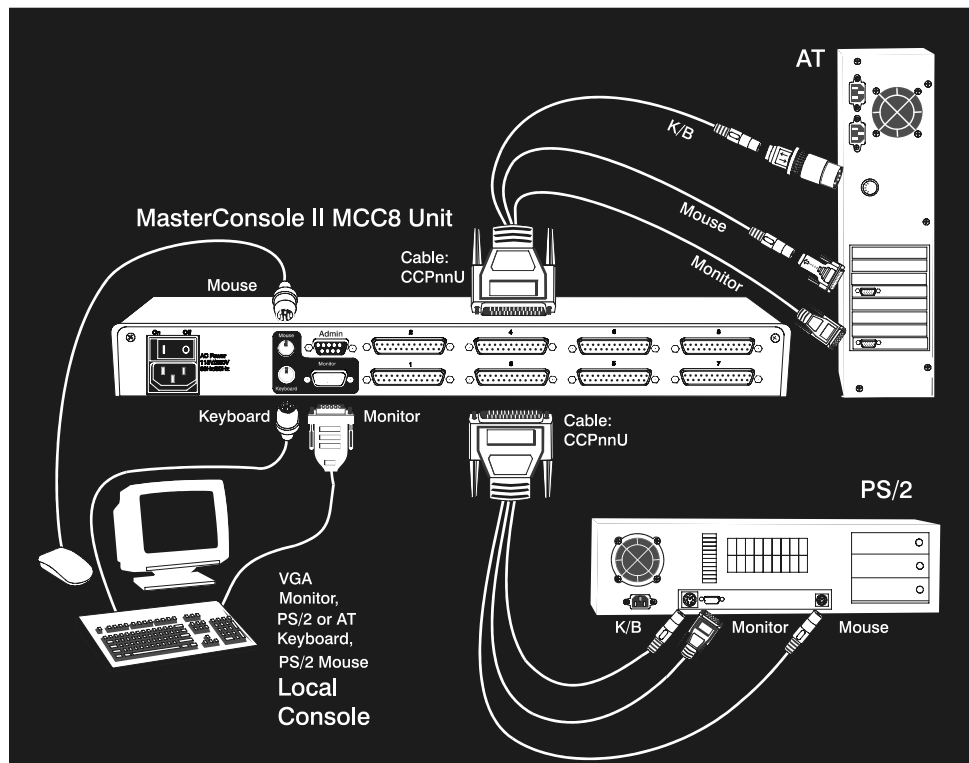


Figure 4. One-Tier Configuration Cabling Details

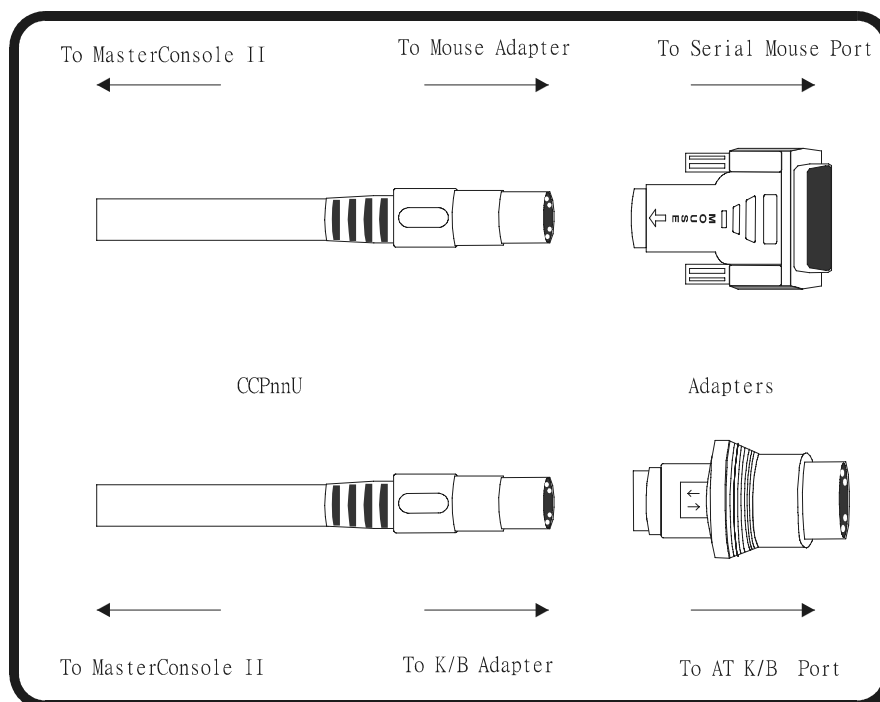


Figure 5. Cable Adapters to convert PS/2 to AT

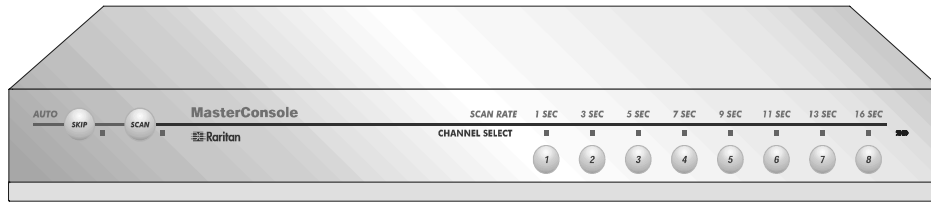


Figure 6. MasterConsole II Front Panel

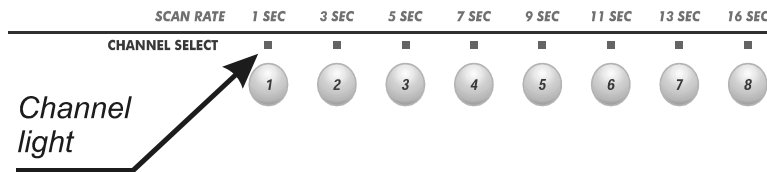


Figure 7. MasterConsole II Front Panel (Channel lights)

Configuring MasterConsole II (One-Tier)

The Configuration Menu is used to specify your MasterConsole II configuration and to set/change operation parameters.

1. Activate **On-Screen User Interface** by pressing the hot-key (<ScrollLock> by default) twice rapidly.

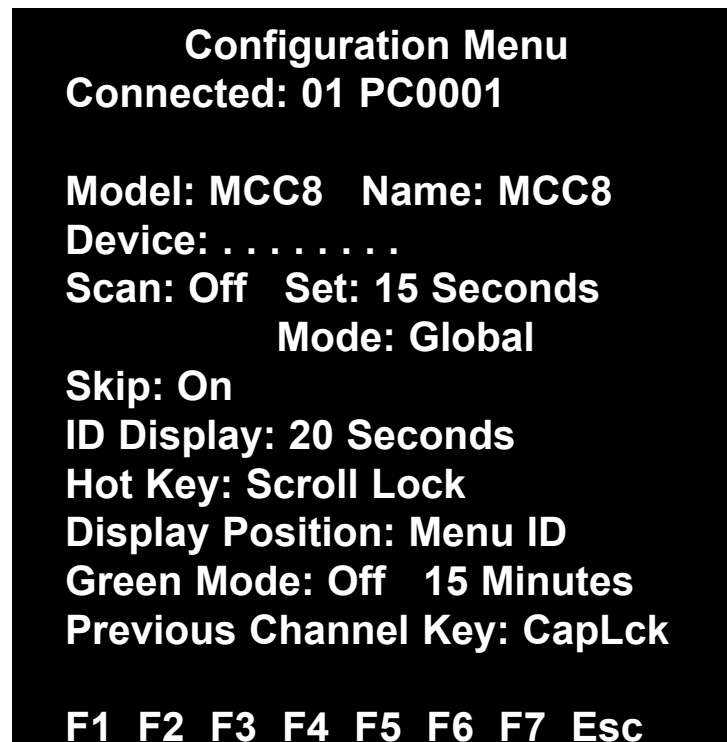


Figure 8. Configuration Menu

2. Press **<F4>** to access the Configuration Menu. *See Figure 8.*
 - The **Connected** field displays the Channel ID and Name of the currently selected computer.
 - The **Model** field displays the model number of this MasterConsole unit.
3. Use the **<Tab>** (forward)/**<Shift-Tab>** (backward) keys to highlight the desired field and make your changes as follows:
 - To change **Name** (default is the unit's model number): Move to **Name** and type a name up to five characters. This field is used for your identification purposes only.
 - The **Device** field specifies the type of device connected to each channel. The default character is ".", which indicates that the device is a computer. In a one-tier configuration, only a computer may be connected to each channel. The Device field settings may be changed when expanding to a two-tier configuration. *See Figure 15, page 19 for two-tier device type settings.*
 - To turn AutoScan ON/OFF (default is OFF): Move to Scan and press the **<↑>/<↓>** keys to toggle. If you exit On-Screen User Interface with AutoScan ON, MasterConsole II will scan according to the currently set mode (Individual/Global) and scan rate.
 - a. To change the **Global Scan Rate** (default is 3 seconds): Move to **Set** and type a number from 01 to 99, or press the **<↑>/<↓>** keys to specify the Scan Rate (in seconds) for Global AutoScan.
 - b. To change AutoScan mode (default setting is Global): Move to Mode and press the **<↑>/<↓>** keys to toggle between **Global** and **Individual**. See page 34 for description.
 - To turn **AutoSkip ON/OFF** (default is OFF): Move to **Skip** and press the **<↑>/<↓>** keys to toggle. With AutoSkip ON, only active channels can be selected.
 - To change the **ID Display time interval** (default is 3 seconds): Move to **ID Display** and type a number from 01 to 99, or press the **<↑>/<↓>** keys to specify the interval (in seconds) you want the Channel ID and Name to display when each computer is selected. Type **99** if you want the Channel ID and Name to display continuously.
 - To change the **On-Screen User Interface** activator (default is **<Scroll Lock>**): Move to **Hot Key** and press the **<↑>/<↓>** keys to select the desired key. The hot-key can only be **<ScrollLock>**, **<NumLock>**, **<CapsLock>**, **left <Shift>** or **left**

<Alt>.

- To change the **Menu Display position**: Move to **Menu** and press <Enter>. Then press the <↑>, <↓>, <←>, and <→> keys to move the menu vertically and horizontally to the desired position. Then press <Esc> or <Enter>.
- To change the **Channel ID display position**: Move to **ID** and press <Enter>. Then press the <↑>, <↓>, <←>, and <→> keys to move the menu vertically and horizontally to the desired position. Then press <Esc> or <Enter>.
- To turn **PowerSave ON/OFF** (default is OFF): Move to **Green Mode** and press the <↑>/<↓> keys to toggle. To change the **PowerSave delay time** (default is 15 minutes): Move to the next field and type a number from 01 to 99, or press the <↑>/<↓> keys to change the interval (in minutes) of inactivity (no keyboard or mouse operation) after which the video signal will be cut off from the monitor. This will allow a properly equipped monitor to enter low-energy mode.
- To select **Previous Channel Toggle** (default is **CapsLock**). This feature enables the user to toggle between the previous and current selected channel. Press F4 to display the Configuration menu (Figure 1) and move the cursor to the Previous Channel Key. Use the <-> or <_> keys to select the key, <caps lock>, <scroll lock>, <num lock>, left <shift>, or left <alt> to be used. This feature enables the user to switch back to a previous channel by pressing the selected key twice rapidly. There is no need to activate the OSUI.

NOTE: Select a previous channel key that is not being used as the current hot key activator.

4. To **exit** the Configuration Menu: Press an appropriate **Menu F** key to go to another menu, or press <Esc> to **exit** On-Screen User Interface and return to normal computer operation. Any changes made to the Configuration Menu are automatically saved.

Assigning Names and Scan Rates (One-Tier)

You may assign meaningful names to quickly and easily identify and select connected computers. By default, the channel name is **PC00aa** (where **aa** is the channel ID number) and the Channel-Specific Scan Rate is 3 seconds.

1. Activate **On-Screen User Interface**.

2. Press **<F3>** to access the **Edit Names and Scan Rate Menu**. See *Figure 9*.
3. Use the **<Tab>**, **<Shift-Tab>** or **<↑>/<↓>** keys to move the cursor to the line you want to edit. Use **<←>/<→>** to move within a line.
 - To change the **Name**: Type up to 8 characters (no spaces).
 - To change the Channel-Specific **Scan Rate** (default is 3 seconds): Type a number from 00 to 99 (seconds). When the AutoScan Mode in the Configuration Menu is set to Individual, these Channel-Specific Scan Rates are enabled. If the AutoScan mode is set to Global, the global value will be used.
4. When you move to a different page or exit this Menu, you are prompted to save your changes. Press **<Y>** to save.
5. To **exit** the **Edit Names and Scan Rate Menu**: Press any **Menu F** key to go to another menu, or press **<Esc>** to go to the Selection Menu.

Note: If your MasterConsole II is a 16-channel model, MCC16, use the **<Page Up>/<Page Down>** keys to view the next or previous group of eight channels.

Edit Names and Scan Rate								
MC: MCC8					Page: 1 / 1			
Ch. ID		Name			Scan Rate			
.....				
01		PC0001			05			
02		Sara			03			
03		Sales-2			10			
04		Bob			04			
05		PC0005			06			
06		PC0006			08			
07		Market-4			03			
08		JoePC			02			
.....				
F1	F2	F3	F4	F5	F6	F7	Esc	

Figure 9. Edit Names and Scan Rate Menu (One-Tier)

USING MASTERCONSOLE II SECURITY FEATURE (ONE-TIER)

You can restrict access to MasterConsole II. The **Administration Menu** is used to turn security on/OFF and to change the Administrator's Password and the five authorized user passwords. Up to six passwords can be defined - one Administration Password and five User Passwords.

Note: *If security is ON, and the system remains idle (no keyboard, mouse, or front panel operation for a time interval set by the user-default is 15 minutes), the next user must enter a user password to establish access. By default, MasterConsole II operates with security OFF.*

Passwords

Only the Administrator's password provides access to the Administration Menu, which is accessed to turn security on/off and to change passwords. If you use the security feature, be sure to record and store passwords where they will be handy to you and other authorized users.

MasterConsole II is delivered with system default passwords. They are

	<i>Password</i>
<i>Admin</i>	<i>Raritan</i>
<i>User 1</i>	<i>111</i>
<i>User 2</i>	<i>222</i>
<i>User 3</i>	<i>333</i>
<i>User 4</i>	<i>444</i>
<i>User 5</i>	<i>555</i>

as follows:

Turning Security ON/OFF and Changing Passwords:

1. Activate On-Screen User Interface.
2. Press **<F5>** to access the Administration Password prompt.
3. Type in the Administration Password, then press **<Enter>**.
 - The Administration Menu will be displayed. **See Figure 10.**
4. Use the **<Tab>** (forward)/**<Shift-Tab>** (backward) keys to move

the cursor to the desired field and make your changes as follows:

- To turn **Security ON/OFF** (default is OFF): Press the <↑>/<↓> keys to toggle.
- To change **Security** activation delay time (default is 15 minutes). Move to the **Time Out** field, then type a number from 01 to 99, or use the <↑>/<↓> keys to specify a time interval. If the system will remain inactive (no keyboard or mouse operation) for this time interval, the next user is required to enter a password to access the MasterConsole II.
- To change the **Administration Password**: Move to **Change Passwords**, where **Admin** will be highlighted. Press the <Enter> key and type a new password (up to eight alphanumeric characters, no spaces). Press <Enter>. Confirm the password by typing it again. Press <Enter>.
- To change a **User Password**, press the <Tab> key to highlight one of the desired Users. Press <Enter>. Type a new password (up to eight alphanumeric characters, no spaces). Press <Enter>. Confirm the password by typing it again. Press <Enter>. Repeat this process for the remaining four Users, pressing the <Tab> key to move from one User field to the next. You can specify up to five User Passwords.
- To change the type of keyboard, press the <Tab> key to highlight Language Mode field. Press <↑>/<↓> to select English, German, or French.

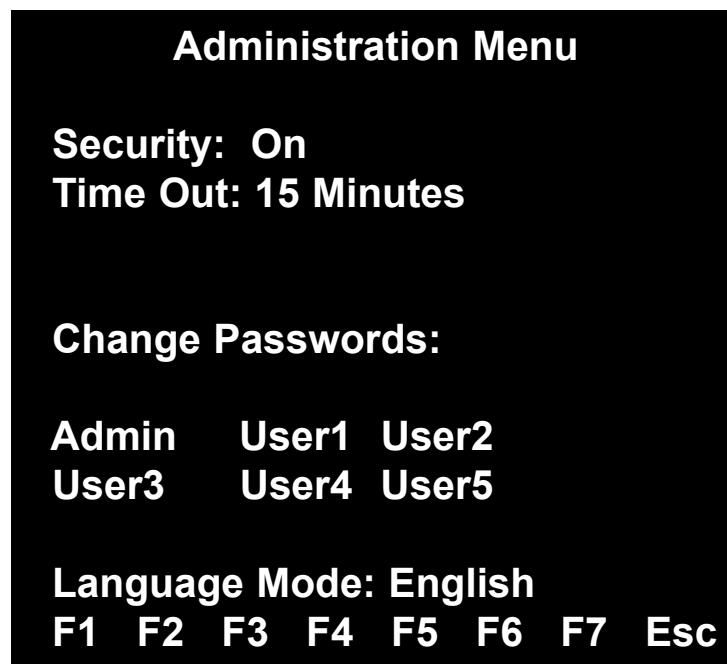


Figure 10. Administration Menu

5. To **exit** the **Administration Menu**: Press any **Menu F**(function #) key to go to another menu or press **<Esc>** to exit on-screen user interface and return to normal computer operation.

Operating MasterConsole II Using On-Screen User Interface (One-Tier)

Selecting a Computer

1. Activate **On-Screen User Interface** by pressing the hot-key twice rapidly.
 - AutoScan is suspended, if set.
 - MasterConsole II front panel buttons are disabled.
 - The **Selection Menu** is displayed. **See Figure 11.**
2. The Selection Menu lists channels sorted either by Channel ID or alphabetically by Name. Default sorting is by Channel ID. Press **<F12>** to toggle between Channel ID and alphabetical.
 - The Selection Menu displays a maximum of eight channels at a time.
 - The Status column shows each channel's activity and Channel-Specific Scan Rate. A "+" in the first column indicates a device is connected and powered ON, while a "-" indicates the device is powered OFF or there is no device connected. "**Snn**" indicates the Channel-Specific Scan Rate of nn seconds. (default is 3 seconds).

Selection Menu				
MC: MCC8		Page: 1 / 1		
Key	Ch ID	Name	Status	
.....	
1	01	PC0001	+S05	
2	02	Sara	+S03	
3	03	Sales-2	+S10	
4	04	Bob	+S04	
5	05		-S06	
6	06		-S08	
7	07	Market-4	+S03	
8	08	JoePC	+S02	
.....	
F1	F2	F3	F4	F5 F6 F7 Esc

Figure 11. *Selection Menu (One-Tier, sorted by Channel ID)*

As the computer status changes (active/inactive), the MCC updates the Status column periodically. To enable a user to see the new status immediately, activate the OSUI and press F8-Upgrade Computer Status. The MCC will scan the channels and update the computer status and then return to the previous menu.

- For any inactive channel, the ID bar will display only the channel ID and not the name field, when sorted by channel and will not display anything when sorted by name-F12 toggle.

The non-displayed names are still available in the MCC internal database and can be edited with the F3 function.

3. To select a computer:

- Use the **<Page Up>/<Page Down>** or **<↑>/<↓>** keys to highlight the desired computer and press **<Enter>**;

OR

- When the Selection Menu is sorted by **Channel ID**, press the desired computer's **Key** number (shown in the left-hand column);

OR

- When the Selection Menu is sorted by Name (arranged alphabetically), use the **<Page Up>/<Page Down>** or **<↑>/<↓>** keys, or type the first character(s) of the desired Name to quickly jump to the Name that most closely matches what you type. To back up a character, press the **<Backspace>** key. Highlight the desired computer, and press **<Enter>**.

- When you select a computer, you automatically return to normal computer operation at the selected computer.
- The light above the selected Channel button turns from amber to green, and the monitor displays video from the selected computer.
- The Channel ID and Name will be displayed on the monitor for the time interval specified in the Configuration Menu.
- Press **<Home>** at any time to return to the first page of the Configuration Menu (for 16-channel or two-tier systems).

<p>Note: See Appendix page 27 for a list of other Function Keys and how to use them.</p>

Setting AutoScan

- **AutoScan activation shortcut:** Activate the On-Screen User Interface and press the F6 Function Key. The green light next to the <Scan> button on the front panel will be ON and the unit will scan according to the parameters set in the Configuration Menu.

Operating MasterConsole II Using Front Panel Buttons (One-Tier)

When the on-screen user interface is not activated, you can operate MasterConsole II from the front panel.

The front panel has a <Scan> button, a <Skip> button, and a series of **numbered** buttons used to select channels and to set the Global Scan Rate. **See Figure 6 and Figure 7.**

1. To select a computer:
 - Be sure the green light next to the <Scan> button is OFF (toggle ON/OFF).
 - Press the **numbered** button corresponding to desired channel.
 - The light above the selected Channel button turns green, video from the selected computer displays on screen and you may now operate the selected computer.
 - The Channel ID and Name will be displayed on the screen for the time interval specified in the Configuration Menu.
2. To activate **AutoScan**:
 - Press the <Scan> button (toggle ON/OFF) The green light next to the <Scan> button will be ON and the unit will scan according to the parameters set in the Configuration Menu. If the AutoScan Mode is set to Individual, AutoScan will occur at the Channel-Specific Scan Rates as defined in the Edit Names and Scan Rate Menu.

-
3. To change the **Scan Rate**:
 - While AutoScan is ON, press the numbered button corresponding to the desired Scan Rate located above the front panel channel light to set the Global Scan Rate. If the Scan Mode in the Configuration Menu had been previously set to Individual, it will be reset to Global after the front panel button is pressed.
 4. To activate **AutoSkip**:
 - Press the **<Skip>** button (toggle ON/OFF). The green light next to the Skip button will be ON and only active channels will be selected.

Two-Tier Configuration

You may cascade MasterConsole II units to create a two-tier configuration. In a two-tier configuration, a mix of devices-computers and MasterConsoles-may be connected to the channels of the first tier-referred to as the base MasterConsole II. **See Figure 12.**

The second-tier MasterConsole may be any combination of MasterConsole IIs, or MasterConsole P Models, which may be banked. Only computers may be connected to the channels of the any second-tier MasterConsole.

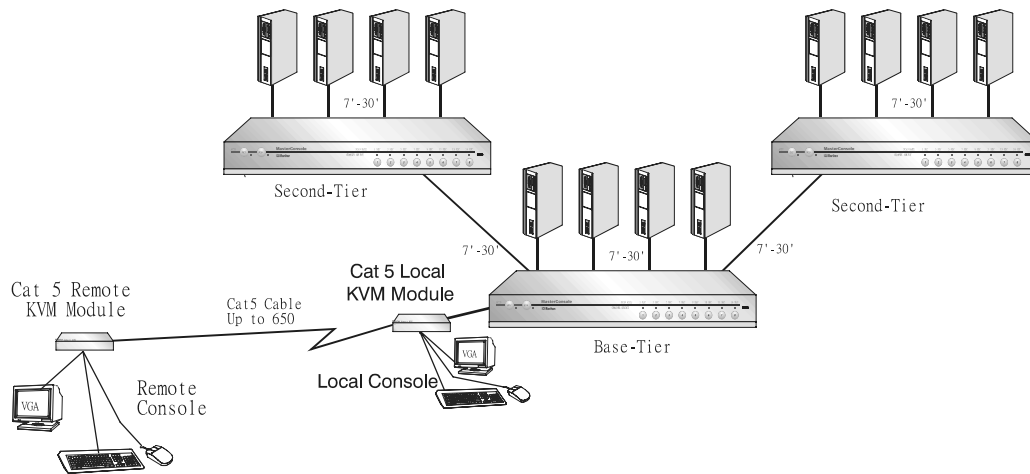


Figure 12. Two-Tier Configuration (With optional Remote Access Kit)

Installing MasterConsole II (Two-Tier)

Install Base Unit (First-Tier) MasterConsole II

1. Plug the keyboard, monitor, and mouse into the keyboard, monitor, and mouse ports on the MasterConsole II back panel.
See Figure 13.
2. Power ON the MasterConsole II base unit.
3. Connect computers to any Channels on the base MasterConsole II back panel.
 - a. Shut down and power off all computers to be connected to the base MasterConsole II.

- b. Using a Universal cable kit (CCPnnU), plug the 25-pin connector into one of the numbered Channels on the base MasterConsole II back panel.
- c. Plug the cable's other connectors into the computer's keyboard, monitor, and mouse ports. Use supplied adapters for AT style PCs. **See Figure 5.**
- d. Power ON the connected computer.
- e. Select the connected computer by pressing the corresponding front panel button. Verify that the monitor attached to MasterConsole II displays the video for the connected computer. Use the keyboard and mouse attached to the base MasterConsole II to verify that they operate the connected computer.
- f. Repeat Steps 3.a through 3.e to connect additional

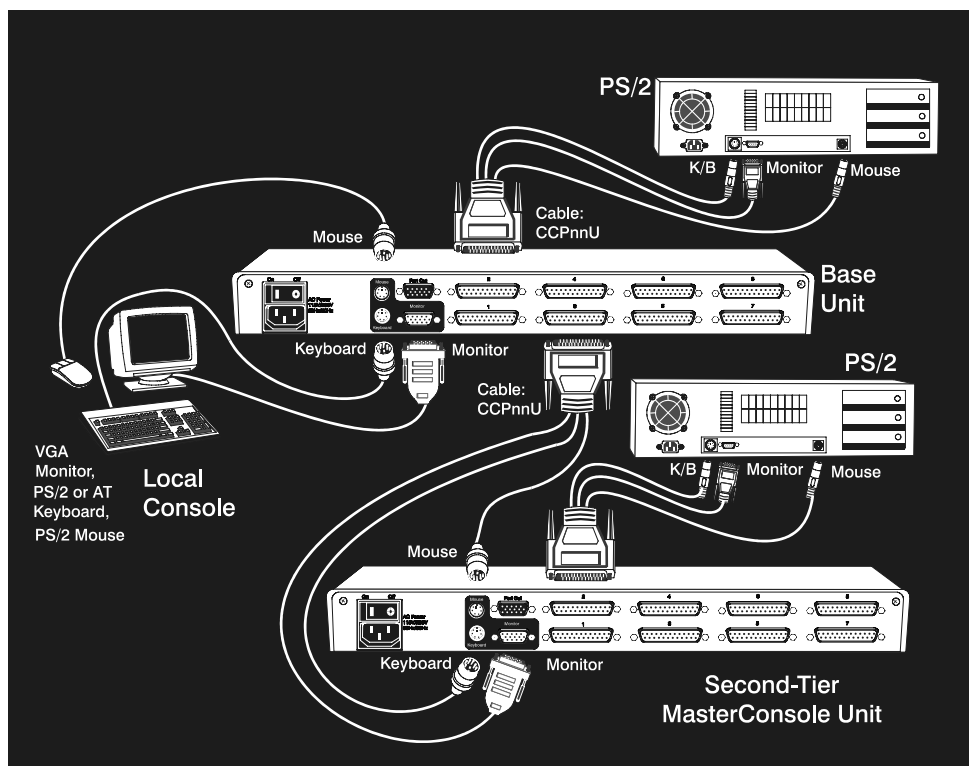


Figure 13. Two-Tier Configuration Cabling Details

computers to the base MasterConsole II.

Connect Second-Tier MasterConsole(s) to the Base Unit

4. Connect MasterConsole(s) to any Channel(s) of the base MasterConsole II.

- a. Using a Universal cable kit (CCPnnU), plug the 25-pin connector into one of the numbered Channels on the base MasterConsole II back panel.
- b. Plug the cable's other connectors into the Keyboard, Monitor, and Mouse ports of the second-tier MasterConsole II or MasterConsole P Model.
- c. Power on the MasterConsole unit according to the follow-

Note: All second-tier MasterConsole P Models must be MasterView ready. To determine if your P Model does have this feature, check the white label on the bottom of the unit *. This label shows the unit's level and style of firmware: **MDSP-nnn**. If it is MDSP-1AC or higher (MDSP-1AD, etc.), the unit is MasterView ready. If not, you need to upgrade. Call Raritan Technical Support for details.

ing instructions:

- **IMPORTANT:** For MasterConsole II, the unit must be programmed as a second-tier unit. (The default setting is first-tier) To program any MasterConsole II as a second-tier unit, power ON while pressing the Channel #2 button on the front panel and hold for 3 seconds. When the unit is programmed as a second-tier unit, the LED on the far right of the unit's front panel (2ND) will be lit continuously. Note: Any unit can be re-programmed to be a first-tier unit by pressing the Channel #1 button on the front panel during a subsequent power ON process.
 - For MasterConsole P Model: Turn the power switch on.
- d. Repeat steps **4a** through **4c** to connect additional second-tier MasterConsole units to the base MasterConsole II.
 - e. For second-tier units located more than 30 feet away from the base unit, see **Remote Access Using Cat5 Reach**, page 25.

Connect Computers to Second-Tier MasterConsole(s)

5. Connect computers to the channels of second-tier MasterConsole(s).
 - Follow Steps **3a** through **3f** to connect the computers to each second-tier MasterConsole II.
 - For MasterConsole P Models, follow installation instructions in the P Model manual.

Configuring the Base MasterConsole II (Two-Tier)

The Configuration Menu is used to specify your base MasterConsole II configuration and to set/change parameters for operation.

See Figure 14

1. Activate **On-Screen User Interface** by pressing the hot-key (<**Scroll-Lock**> by default) twice rapidly.
2. Press <**F4**> to access the **Configuration Menu**.
 - The **Connected** field displays the Channel ID and Name of the currently selected computer.
 - The **Model** field displays the model number of this MasterConsole unit (MCCn).
3. Use the <**Tab**> (forward)/<**Shift-Tab**> (backward) keys to select the desired field and make your change as follows:
 - To change **Name** (default is the unit's model number): Move to Name and type a name up to five characters. This field is used for your identification purposes only.
 - The **Device** field specifies the type of device computer or

```

Configuration Menu
Connected: 01 PC0001

Model: MCC8  Name: MCC8
Device: . . . . .
Scan: Off  Set: 15 Seconds
Mode: Global

Skip: On
ID Display: 20 Seconds
Hot Key: Scroll Lock
Display Position: Menu ID
Green Mode: Off  15 Minutes
Previous Channel Key: CapsLck

F1 F2 F3 F4 F5 F6 F7 Esc
  
```

Figure 14. Configuration Menu (Two-Tier)

MasterConsole connected to each channel of the base MasterConsole II unit. **<Tab>** to the **Device** field. You must specify the device for each channel .**See Figure 15.**

The **Device** field consists of a sequence of characters equal to the channel capacity of the base unit. The leftmost character corresponds to the unit's channel 1, while the rightmost character corresponds to the highest channel number.

.(dot)	=	computer (default)
For non-computers, define the Device as follows:		
a	=	MCP2
b	=	MCP4
c	=	MCP8
d	=	MCP16
x	=	MCC4, MCS4, MCX4
y	=	MCC8, MCS8, MCX8
z	=	MCC16, MCX16

Figure 15. Device Types

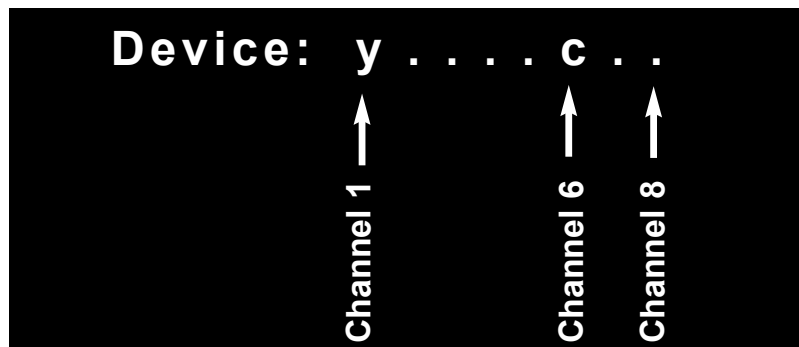


Figure 16. Device Field

For example, in **Figure 16**, the **y c . .** Device field indicates the following: an 8-channel MasterConsole II MCC8 model is connected to the first channel on the base MasterConsole II, an 8-channel MasterConsole P Model is connected to the sixth channel, and computers are connected (or to be connected) to all other channels.

Note: If you specify a MasterConsole P Model, a pop-up box will prompt for banking information.

See **One-Tier Configuration** for instructions on setting/changing other operational parameters (AutoScan, AutoSkip, ID Display, hot-key, Menu Display, PowerSave).

Assigning Names and Scan Rates (Two-Tier)

When you specify non-computer devices (MasterConsole units) connected to base MasterConsole II channels, these devices are automatically assigned default names in the base MasterConsole II Selection Menu. In addition, since computers can be connected to each channel of a second-tier MasterConsole, a page is automatically created for each second-tier MasterConsole in the Selection Menu, listing Channel IDs with default names for each channel. These names may be changed using the Edit Names and Scan Rate Menu. **See Figure 12b and Figure 12c.**

The following are the MasterConsole II default Channel ID and Names for connected devices in a two-tier configuration.

To change Names and/or Channel-Specific Scan Rates:

1. Activate **On-Screen User Interface**.
2. Press <F3> to access the **Edit Names and Scan Rate Menu**.
See Figure 18 and Figure 19.

Base MasterConsole II		
Connected Devices	Channel ID	Default Name
computer	aa	PC00aa*
MasterConsole II	aa	/MCCaa*
MasterConsole MCPn	aa	/MCPaa*
* where aa= Channel # of the base MCCn.		
Second Tier		
Computers Connected To	Channel ID	Default Name
MasterConsole II	aa.bb	PCaabb
where aa= Channel # of the base MCCn; and bb= Channel # of the second-tier MasterConsole II		
MasterConsole P Model	aa.Bb-cc	PCaaBbcc
where aa= Channel # of the base MCCn, and b= Bank # and cc= Channel # of the second-tier MCPn		

Figure 17. Default MasterConsole II Channel IDs and Names

3. Use the <Tab>, <Shift-Tab> or <↑>/<↓> keys to move the cursor to the line you want to edit. Use <←>/<→> to move within a line.

Note: Since you have specified a two-tier configuration, use the <Page Up>/<Page Down> keys to view the next or previous group of up to eight channels.

- To change the **Name** of a second tier MasterConsole Device in the base unit channel list: Type up to seven alphanumeric characters (no spaces). The "/" (backslash) first character cannot be changed.
- To change the **Name** of any computer connected to either the base unit or second-tier MasterConsole, type up to eight alphanumeric characters (no spaces).
- To change the Channel-Specific **Scan Rate** for any highlighted channel (default is 3 seconds): Type a number from 00 to 99 (in seconds). When the AutoScan **Mode** in the Configuration Menu is set to **Individual**, these Channel-Specific Scan Rates are enabled. If the AutoScan mode is set to Global, the global scan rate will be used.

Edit Names and Scan Rate							
MC: MCX8				Page: 1 / 3			
Ch. ID		Name			Scan Rate		
.....			
01		/MCS01			08		
02		PC0002			03		
03		Market-3			10		
04		Jen			04		
05		Vicki			06		
06		/MCP06			05		
07		PC0007			03		
08		PC0008			02		
.....			
F1	F2	F3	F4	F5	F6	F7	Esc

Figure 18. Edit Names and Scan Rate Menu (Base MasterConsole II)

Edit Names and Scan Rate		
MC: MCS01		Page: 2 / 3
Ch. ID	Name	Scan Rate
.....
01.01	PC0101	05
01.02	Sara	03
01.03	Sales-2	10
01.04	Bob	04
01.05	PC0105	06
01.06	PC0106	08
01.07	Market-4	03
01.08	JoePC	02
.....
F1	F2	F3 F4 F5 F6 F7 Esc

Figure 19. *Edit Names and Scan Rate Menu (Second-Tier MCC8)*

- When you move to a different page or exit this Menu, you are prompted to save your changes. Press <Y> to save.
- To **exit** the **Edit Names and Scan Rate Menu**: Press any **Menu F** key to go to another menu, or press <Esc> to go to the Selection Menu.

Using MasterConsole II's Security Feature (Two-Tier)

Follow instructions for Security in

Using MasterConsole II's Security Feature (One-Tier), page 9.

Important: You must use the On-Screen User Interface to operate a two-tier configuration.
There is no front panel option available.

Operating MasterConsole II (Two-Tier)

Selecting a Computer

1. Activate On-Screen User Interface.

- AutoScan is suspended, if set.
 - MasterConsole II front panel buttons are disabled.
 - The **Selection Menu** is displayed. *See Figure 20 and Figure 21*
2. The Selection Menu lists channels sorted either by Channel ID or alphabetically by Name. Default sorting is by Channel ID. Press **<F12>** to toggle.
- The Selection Menu displays a maximum of eight channels at a time.
 - The Status column shows each channel's activity and Channel-Specific Scan Rate. A “+” in the base unit's Selection Menu indicates the device is connected and powered ON, while a “-” indicates the device is powered OFF, or there is no device connected. A “.” in the Status column of the second-tier Selection Menu indicates that the status of the computer is undetermined. **Snn** indicates the individual Scan Rate of nn seconds.
- As the computer status changes (active/inactive), the MCC updates the Status column periodically. To enable a user to see the new status immediately, activate the OSUI and press F8-Upgrade Computer Status. The MCC will scan the channels and update the computer status and then return to the previous menu.
- For any inactive channel, the ID bar will display only the channel ID and not the name field, when sorted by channel and will not display anything when sorted by name-F12 toggle

The non-displayed names are still available in the MCC internal database and can be edited with the F3 function.

3. **To select a computer:**

- Use the **<Page Up>/<Page Down>** or **<↑>/<↓>** keys to scroll to the desired computer and press **<Enter>**;

OR

- When the Selection Menu is sorted by **Channel ID**, press the desired computer's **Key** number (in the left-hand column);

OR

- When the Selection Menu is sorted by **Name**, use the **<Page Up>/<Page Down>** or **<↑>/<↓>** keys, or type the first character(s) of the desired Name to quickly jump to a Name that most closely matches what you type. To back up a character, press the **<Backspace>** key. Highlight the desired computer, and press **<Enter>**.
 - When you select a computer, you automatically return to normal computer operation at the selected computer.
 - The light above the selected Channel button turns green, and the monitor displays video from the selected computer.
 - The Channel ID and Name will display on the monitor for the time interval specified in the Configuration Menu.
- Press **<Home>** at any time to return to the first channel on the first page of the Selection Menu. Press **<End>** at any time to advance to the last channel on the last page of the Selection Menu.

Selection Menu							
MC: MCC8				Page: 1 / 3			
Key	Ch ID			Name		Status	
.....	
1	01			/MCC01		+S08	
2	02			PC0002		+S03	
3	03			Market-3		+S10	
4	04			Jen		+S04	
5	05			Vicki		+S06	
6	06			/MCP06		+S08	
7	07			PC0007		+S03	
8	08					-S02	
.....	
F1	F2	F3	F4	F5	F6	F7	Esc

Figure 20. Selection Menu (Two-Tier, Base MasterConsole II)

Selection Menu							
MC: MCC01				Page: 2 / 3			
Key	Ch ID			Name		Status	
.....	
1	01. 01			PC0101		.S05	
2	01. 02			Sara		.S03	
3	01. 03			Sales-2		.S10	
4	01. 04			Bob		.S04	
5	01. 05			PC0005		.S06	
6	01. 06			PC0006		.S08	
7	01. 07			Market-4		.S03	
8	01. 08			JoePC		.S02	
.....	
F1	F2	F3	F4	F5	F6	F7	Esc

Figure 21. Selection Menu (Two-Tier, Second Tier)

Remote Access Using Cat5 Reach

Raritan's Cat5 Reach can be used to extend the user console up to 650 feet away. Please see the Cat5 Reach manual for installation procedure. The MasterConsole II with Cat5 Reach provides:

- **Dual Remote User Console::** Remote access point to a base MasterConsole II, plus a local user console. **See Figure 22.**
- **Satellite Unit::** Second-tier MasterConsole located more than 30 feet from the base unit. **See Figure 23.**

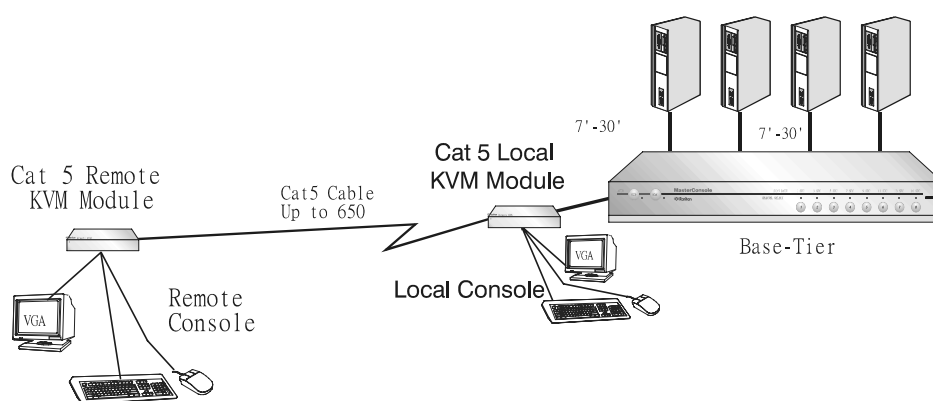


Figure 22. Remote Access with Cat5 Reach

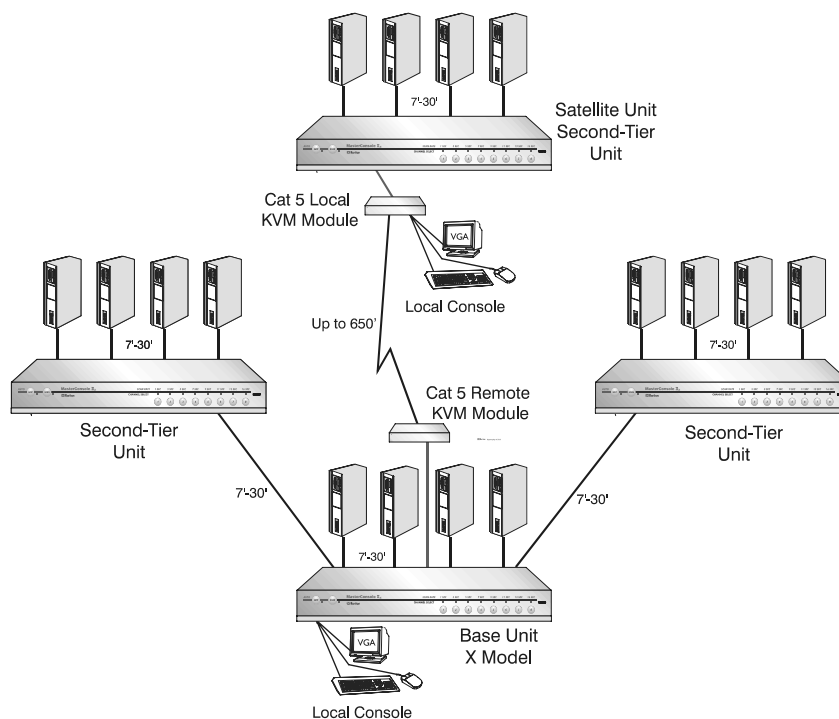


Figure 23. Two-Tier Configuration with Satellite Unit

Appendices

System Default Settings

Administration Password		raritan(case sensitive)
AutoScan		OFF
AutoScan mode		Global
AutoSkip		OFF
Channel-Specific Scan Rate		3 seconds
Device		“.” (computer devices)
Global Scan Rate		3 seconds
Hot Key		<ScrollLock> <ScrollLock>
ID Display Interval		3 seconds
MasterConsole II unit configuration		First tier
PowerSave		OFF
PowerSave delay time (Green Mode)		15 minutes
Remote Time Out interval		3 seconds
Security		OFF
Security activation delay time		15 minutes
Selection Menu sorting		Channel ID
User password	User 1	111
	User 2	222
	User 3	333
	User 4	444

On-Screen User Interface Function Keys

Use the following Function Keys while using On-Screen User Interface:

<u>Press...</u>	<u>when you want to...</u>
<F1>	go to the Help Menu; get a list of all the Function keys.
<F2>	go to the Selection Menu; view the list of channels or select a channel.
<F3>	go to the Edit Names and Scan Rate Menu; change channel Names or Individual Scan Rates.
<F4>	go to the Configuration Menu; change operating parameters (On-Screen User Interface, Menu position, ID position, Global / Individual Scanning, AutoScan OFF/ON, Scan Rate, AutoSkip OFF/ON, Hot Key, duration of ID display).
<F5>	go to the Administration Menu; turn Security ON/OFF, change User Passwords.
<F6>	exit On-Screen User Interface and turn ON AutoScan.
<Alt>+<F6>	exit On-Screen User Interface and turn OFF AutoScan.
<F7>	exit On-Screen User Interface and turn ON AutoSkip.
<Alt>+<F7>	exit On-Screen User Interface and turn OFF AutoSkip.
<F12>	toggle Selection Menu sorting (by Name or Channel ID).
<Esc>	exit On-Screen User Interface and return to normal computer operation at the last channel selected. If SCAN is set ON, the system will AutoScan according to parameters set in the Configuration Menu.

MasterConsole Configurations and Programming MasterConsole II at Power Up

MasterConsole II Product Design Background and Considerations

- **User connection** and operation of MasterConsole II is through the unit's local KVM port (marked Keyboard, Monitor, Mouse - Din 6F,HD15F, Din 6F) on the back panel of each MasterConsole II.
- **For operation**, a console-keyboard, monitor and mouse-plugs into the local KVM port. MasterConsole II includes front panel buttons as well as an integrated On-Screen User Interface for switching and other operations.
- **The On-Screen User Interface** is activated through a console keyboard and facilitates operation of MasterConsole II with on-screen menus and commands.
- **In a one-tier configuration**, the console operates the all connected computers. The KVM port is called **first-tier ports**, which means that they have an active On-Screen User Interface for console operation.
- **In a two-tier configuration**, one or more MasterConsole II second-tier units are cascaded from the base unit. This is accomplished by connecting MasterConsole II computer cable from the base unit to the KVM port of the second-tier unit. The base unit's local KVM port and remote access port are first-tier ports with an active On-Screen User Interface; and the base unit's on-screen menus include the names of all the computers accessible from the base unit's console. This way, the base unit's console can access and operate all MasterConsole II units and all connected computers. For proper operation, the user must see only the base units On-Screen User Interface menus from the base unit console. To accomplish this, the On-Screen User Interface at the port by which the second-tier unit is connected must be deactivated, so that the base unit console can access and operate all connected computers. A port with a deactivated On-Screen User Interface and is called a **second-tier port**.

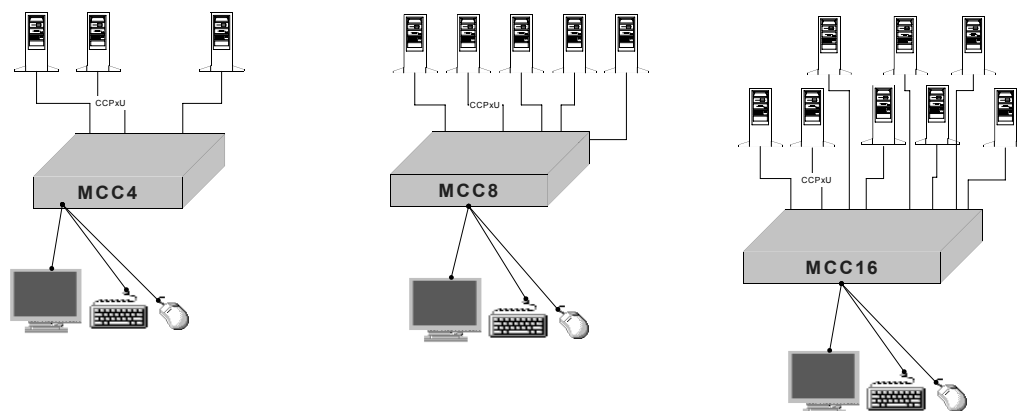
Programming MasterConsole II

Each MasterConsole II is programmed at the factory as a base tier unit. To modify the factory setting, a MasterConsole II unit can be programmed as a second-tier unit by holding down the #2 button on the front panel at power up for a minimum of 3 seconds.

MasterConsole II Configuration Diagrams

For more information on cabling details see *Figure 4, 5, and 13.*

Basic MasterConsole II One-Tier Configurations



MasterConsole II Basic Configurations of
2 to 16 Computers

Figure 24. *Basic One-Tier Configurations*

MasterConsole II Two-Tier Configuration with Remote Access Kit

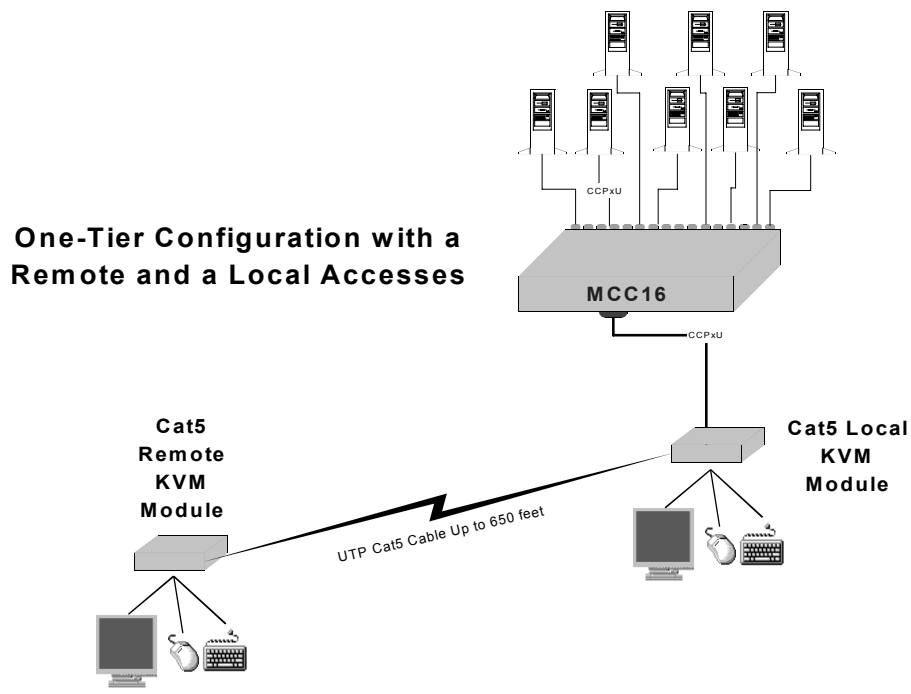


Figure 25. *One-Tier with Remote Access Kit*

MasterConsole II Two-Tier Configuration

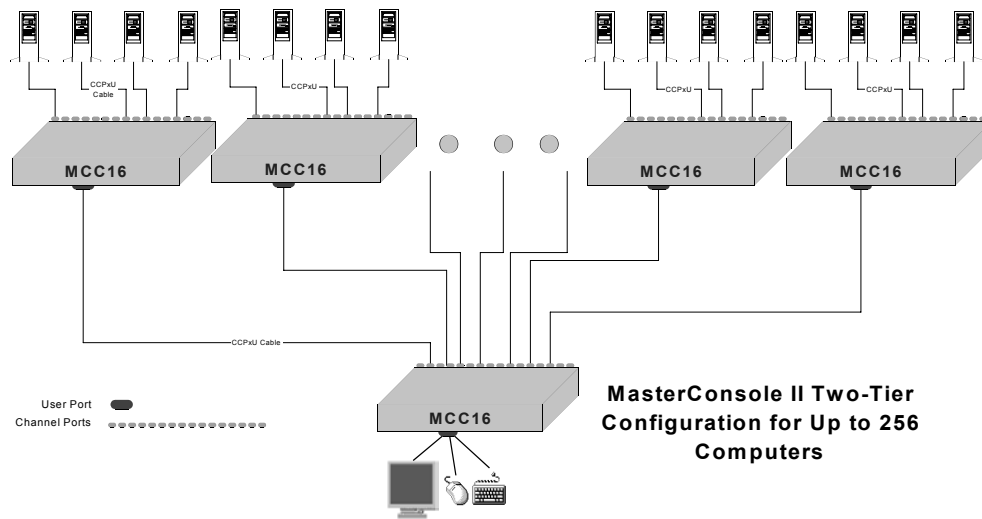


Figure 26. *Two-Tier Configuration of up to 256 Computers*

MasterConsole II Two-Tier Configuration with MasterConsole P Model

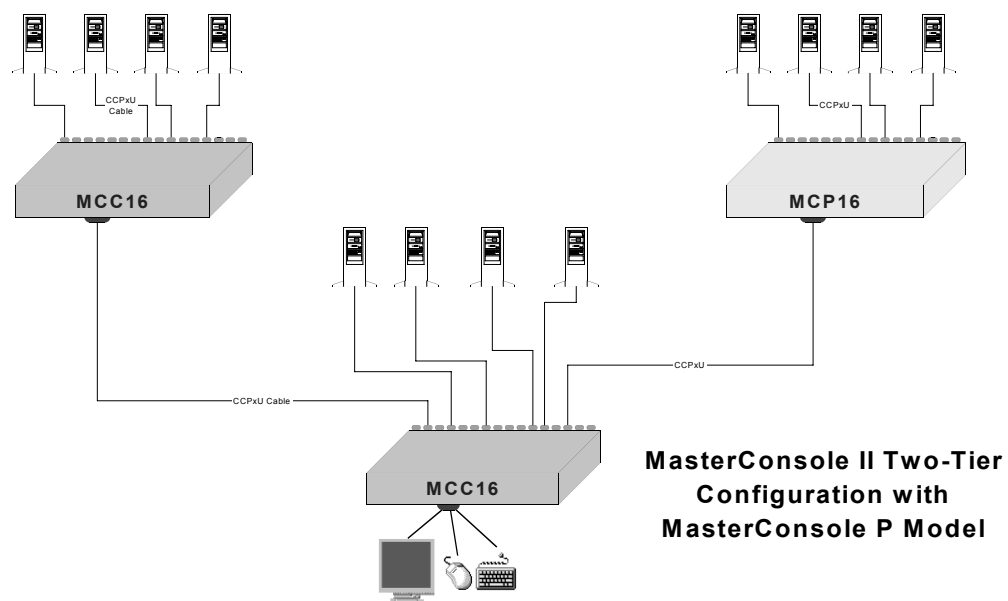


Figure 27. *Two-Tier Configuration with MasterConsole P Model*

MasterConsole II Two-Tier Configuration with Satellite Unit

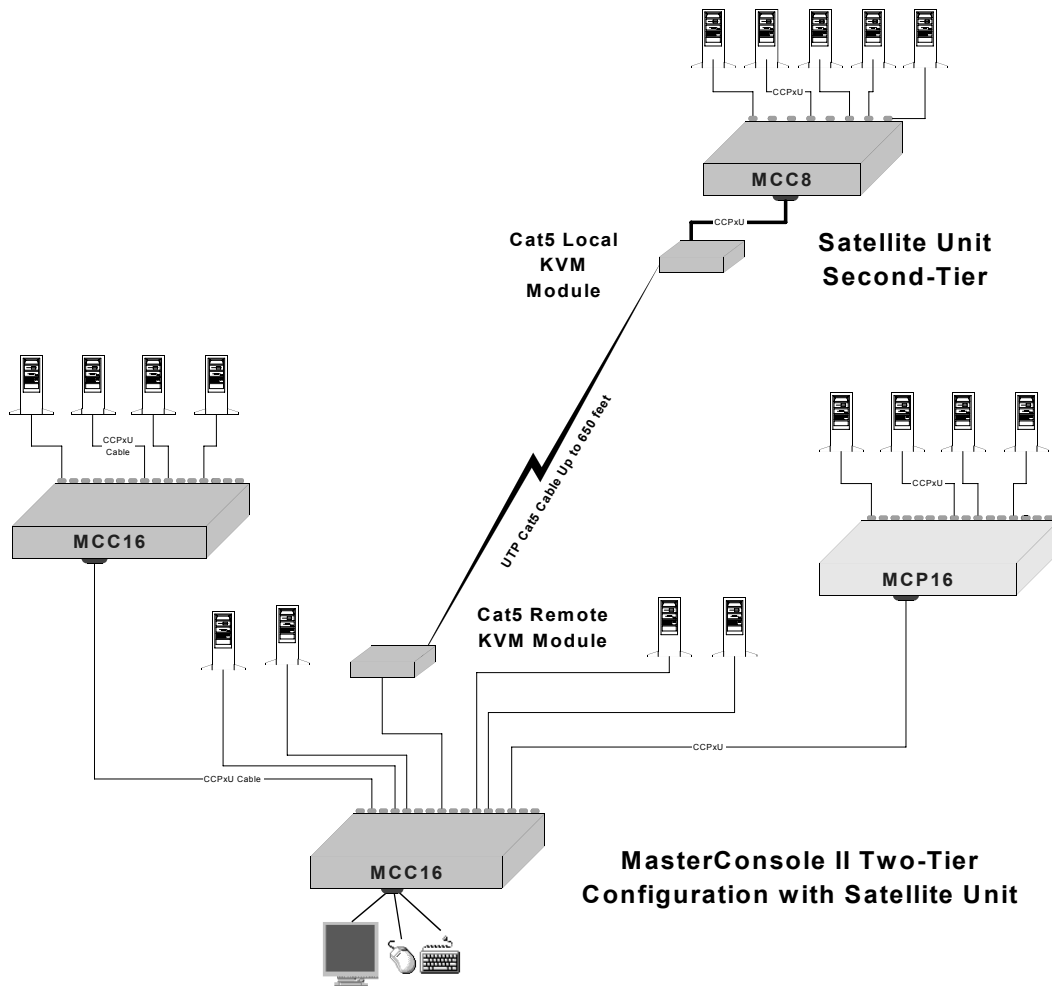


Figure 28. Two-Tier Configuration with Satellite Unit

Glossary

- **Administration Menu**

Used to restrict access to MasterConsole II; toggle Security ON/OFF and to change Administrator's Password and up to five User Passwords.

- **Administration Password**

The only Password with access to the Administration Menu, through the Administration password prompt.

- **AutoScan**

When activated, MasterConsole II automatically cycles through channels, displaying each computer's video for a specified period.

- **AutoSkip**

When activated, channel selection is restricted to active channels.

- **Base Unit**

MasterConsole II unit to which devices (computers and / or other MasterConsoles) are connected in a two-tier configuration.

- **Channel**

The 25-pin connector by which a device is connected to MasterConsole II.

- **Active:** A channel is active when a powered ON device is connected to it.
- **Inactive:** A channel is inactive when there is no device connected to it, or if the connected device is powered OFF.

- **Channel ID**

The specific Channel number to which a device is connected.

- **Configuration**

- **One-Tier:** Computers are connected to a single MasterConsole II unit.
- **Two-Tier:** A mix of devices (computers and MasterConsole units) are connected to a base MasterConsole unit.

- **Configuration Menu**

Used to specify MasterConsole II configuration and operation parameters.

- **Device**

A computer or a MasterConsole unit connected to a MasterConsole II channel.

- **Device Field**

In the Configuration Menu, specifies the type of device connected to each channel of a base MasterConsole II unit.

- **Edit Names and Scan Rate Menu**

Used to assign meaningful Names to each channel and set Channel-Specific Scan Rates.

- **Green Mode**

A field in the Configuration Menu used to toggle the PowerSave feature ON/OFF.

- **Hot Key**

Used to activate On-Screen User Interface. (To activate On-Screen User Interface, press the hot-key twice rapidly).

- **ID Display**

The display shown on the monitor to identify the currently selected channel.

- **Key**

Left-hand column in the Selection Menu; lists the key numbers (a sequence of numbers) for the channels listed on that page. To quickly select a channel, press its Key number when the Selection Menu is displayed.

- **KVM Port**

The Keyboard, Monitor, and Mouse connectors on the back of the MasterConsole II unit.

- **Menu**

An On-Screen User Interface display.

- **Menu F Keys**

Function keys used to access On-Screen User Interface menus while On-Screen User Interface is activated.

- **Mode**

Field in the Configuration Menu; can be set to either Global or Individual. See also *Scan Rate*.

- **Name**

A user-assigned label (up to eight characters) for a device connected to a MasterConsole II channel.

- **On-Screen User Interface (OSUI)**

Series of Menus displayed on the monitor that can be used, through keystrokes, to operate MasterConsole II. All keystrokes are captured and interpreted as MasterConsole II commands.

- **PowerSave**

Allows a properly equipped monitor to operate in low-energy mode.

- **Remote Console**

Keyboard, monitor, and mouse plugged into the Remote access kit.

- **Cat5 Remote KVM Module**

Optional Remote Unit that connects to the MasterConsole II to provide additional access to connected computers up to 650' away using Cat5 UTP Cable.

- **Cat5 Remote KVM Port**

The Keyboard, Monitor, and Mouse ports on the back of the Cat5 Remote KVM Module unit.

- **Satellite Unit**

Second-tier MasterConsole II located more than 30 feet from the base unit and connected through its Remote Access Kit.

- **Scan**

Front panel button and On-Screen User Interface function used to activate AutoScan.

- **Scan Rate**

The duration (in seconds) a channel's computer is to remain displayed on the monitor when AutoScan is activated.

- **Global Scan Rate:** Scan rate is the same for all computers, if the Mode field in the Configuration Menu is set to Global.
- **Channel-Specific (Individual) Scan Rate::** Scan rate specified for each computer during the Scan cycle, if the Mode field in the Configuration Menu is set to Individual. Channel-specific scan rates can be set in the Edit Names and Scan Rate Menu.

- **Security**

When activated, and the system remains idle for a period of time, the next user must enter an authorized User Password to establish access.

- **Selection Menu**

Used to select a computer.

- **Sorting**

Order of the channels listed in Selection Menu; either by Channel ID or by Name.

- **Time Out**

Is the length of time that the system can remain idle (that is, since the last keyboard/mouse or front panel operation) before the next user must enter an authorized User Password to establish access.

- **User Password**

Enables access to the system after Time Out.

Troubleshooting

1. No power.

- a. Check power cord.
- b. Make sure power switch is turned ON.
- c. Check cable connection from PC to MasterConsole II.

2. No video display for one or all computers.

- a. Check video cable's connection to the PC.
- b. Check the monitor and PC: Turn off power to MasterConsole and the PCs. Connect the monitor to the PC directly, boot the PC, and make sure the monitor has the proper display. If it does not, the problem is either with your PC, or the monitor is not compatible with your PC. If it does display, continue to Troubleshooting #3.

3. The monitor cannot correctly display the video output from some of the PCs.

- a. The monitor probably does not match the video outputs. If the monitor is a single mode type VGA, all PCs must have the same type of video output.
- b. (Note: this problem occurs most often with some IBM PS/2s and IBM 63xx, 85xx, and 95xx monitors.) The intelligent type display card outputs video signals based on the monitor ID-pin setting in the connector of the monitor cable. If the ID-pin setting is correct, the monitor at MasterConsole may have no display, become monochrome instead of color, or become unstable. If this is the case, you will need to provide a proper ID-pattern to the display card. Call Raritan Computer for help if necessary.

4. All PCs powered up without keyboard error, but the keyboard at MasterConsole II has no control (cannot input to any PC).

- a. Make sure the keyboard is connected firmly into MasterConsole II. Disconnect and reconnect keyboard.
- b. Replace keyboard. (MasterConsole II allows hot re-connection of keyboard at its Keyboard port.)
- c. In a two-tier configuration, check that the MasterConsole II with the keyboard connected is the base unit.

5. Repeated "KB ERROR" at power-up of PC.

- a. The keyboard cable from the PC to MasterConsole II is loose. Secure the connection and power up the PC again.
- b. If the problem occurs after MasterConsole II has been installed for a period of time, and occurs on PCs that have previously worked with MasterConsole II, then some components are out of order. Verify that the PC works with the keyboard when connected directly. Then contact your dealer or Raritan Computer for service.

6. After a period of trouble-free operation, the keyboard attached to MasterConsole II locks (unable to input keystrokes) when a particular PC is selected, but works normally when other PCs are selected.

- a. The most likely cause of the problem is either a voltage "spike" (increase) or a "brown out" (decrease) in the power supply, which would cause the microprocessors in MasterConsole II to malfunction. A short-term solution to the problem is to try to recover operation by turning the MasterConsole II power switch off and on. Then, if necessary, restart all PCs. The long-term method of avoiding this problem is to power MasterConsole from a UPS.
- b. Check keyboard connection.

7. Repeated "MOUSE INSTALLATION FAILURE" at power-up of PC.

- a. The mouse cable from the PC to MasterConsole II is loose. Secure the connection and power up again.
- b. If the problem only occurs to new PCs which are being added to the system, the firmware in the KVM (MasterConsole II internal mouse emulator) may need to be upgraded to a later version to be compatible with newer PCs. Contact your dealer or Raritan Computer for Service.

8. After a period of trouble-free operation, the mouse attached to MasterConsole II locks (unable to control mouse functions) when a particular PC is selected, but works normally when other PCs are selected.

- a. Try to identify if the problem is originating from the PC by reconnecting the PC to a different channel with a different cable. Then power up the PC. If the problem is not with the cable or with the specific channel, then connect the mouse directly to the PC. If the problem persists, then the PC's mouse port is out of order. Otherwise, contact your dealer or Raritan Computer.
- b. If the problem occurs after MasterConsole II has been installed for a period of time, and occurs to PCs that have previously worked with MasterConsole II, then some components are out of order. Contact your dealer or Raritan Computer for service.

9. Unit does not operate in On-Screen User Interface.

- a. Replace keyboard. On-Screen User Interface works only with PS/2 or extended AT style keyboards.

10. Unable to select channel.

- a. Scan function is active; press the Scan button once to toggle Scan OFF so the light next to the button is off.

Specifications

Main Unit

Desktop Model

MCC4 (4-channel model)	10.55"(W) x 9"(D) x 1.75"(H) 2.0 kg (4.5 lbs.)
MCC8 (8-channel model)	15.4"(W) x 9"(D) x 1.75"(H) 2.8 kg (6.1 lbs.)
MCC16 (16-channel model)	15.4"(W) x 9"(D) x 3.5"(H) 3.8 kg (8.4 lbs.)

Power	115V/230V (Auto Sensing) 60 Hz / 50 Hz 0.2A/0.1A
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Rackmount Model

MCC4R (4-channel model)	19"(W) x 9"(D) x 1.75"(H) 3.0 kg (6.66 lbs.)
MCC8R (8-channel model)	19"(W) x 9"(D) x 1.75"(H) 3.77 kg (8.37 lbs.)
MCC16R (16-channel model)	19"(W) x 9"(D) x 3.5"(H) 4.8 kg (10.66 lbs.)

Power	115V/230V (Auto Sensing) 60 Hz / 50 Hz 0.2A/0.1A
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Rackmount 48 Volt DC Model

MCC8RD (8-channel model)	19"(W) x 9"(D) x 1.75"(H) 2.97 kg (6.6 lbs.)
MCC16RD (16-channel model)	19"(W) x 9"(D) x 3.5"(H) 4.52 kg (10.05 lbs.)

Power	48Volt DC +/-0.3A 3W3 male connector Pin out A1 (G), A2 (-), A3 (+)
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Operating Temp.	0–50 °C (32–122 °F)
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Universal Cable Kits

For each PS/2 Computer (VGA Video, PS/2 K/B, PS/2 Mouse)
and AT Computer (VGA Video, AT K/B, Serial Mouse)

Part No.	Length	Connectors
CCP06U	2' (0.6 M)	DB25(M) to HD15(M), 2x mini-DIN6(M)
CCP20U	6.5' (2 M)	DB25(M) to HD15(M), 2x mini-DIN6(M)
CCP40U	13' (3 M)	DB25(M) to HD15(M), 2x mini-DIN6(M)
CCP60U	20' (6 M)	DB25(M) to HD15(M), 2x mini-DIN6(M)
CCP90U	30' (9 M)	DB25(M) to HD15(M), 2x mini-DIN6(M)

Each Universal Cable Kit comes with 2 Adapters for AT keyboard and serial mouse: (1) DIN 6F to DIN 5M, and (1) DIN 6F to DB9F

Accessories

RMCS4 (for 4-channel model)	19" Rack Mount Bracket – 1U
RMCS8 (for 8-channel model)	19" Rack Mount Bracket – 1U
RMCS16 (for 16-channel model)	19" Rack Mount Bracket – 2U
PCE60	20' (6 M) Extension Cable for Keyboard, Video, and Mouse
PCE110	35' (11 M) Extension Cable for Keyboard, Video, and Mouse

Remote Access Kit

See Cat5 Reach Specification Sheet for complete details.

UKVM (Dual Transmitter for Category 5 UTP cable)

Dimensions	4.3" (W) x 3.6"(D) x 1.0" (H) 108mm (W) x 91mm (D) x 23mm (H)
Weight	0.5 lbs (0.2 kg)
Power	No external power required
User Port (local access)	6 pin k/b & mouse, HD15
Connection to PC/switch	Cable kit CCP06U or CCP10E included

URKVM (Receiver for Category 5 UTP cable)

Dimensions	4.3" (W) x 3.6"(D) x 1.0" (H) 108mm (W) x 91mm (D) x 23mm (H)
Weight	0.5 lbs (0.2 kg)
Power	6V DC input (Adapter included)
User Port (remote access)	6 pin k/b & mouse, HD15

Note: *Category 5 UTP cable with RJ45 connectors must conform to EIA/TIA T568B Category 5 wiring standard.*

Note: *For highest quality video at distances greater than 200', Category 5 UTP Enhanced (350Mhz bandwidth) cable is recommended.*

