8x8 Cat 5 A/V Matrix Switch

VM0808T

User Manual

FCC Information

This is an FCC Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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.

RoHS

This product is RoHS compliant.

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006规定的限量要求之下。

●: 表示符合欧盟的豁免条款，但该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。

╳: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://support.aten.com
North America	http://www.aten-usa.com/product_registration

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-10-5255-0110
Japan	81-3-5323-7178
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Package Contents

The VM0808T package consists of:

- 1 VM0808T 8x8 Cat 5 A/V Matrix Switch
- 1 Power Cord
- 1 Rack Mount Kit
- 1 Grounding Wire
- 3 Terminal Blocks
- 1 User Manual*
- 1 Quick Start Guide

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

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* Features may have been added to the VM0808T since this manual was printed. Please visit our website to download the most up-to-date version.

Contents

4. Remote Operation

Appendix

About this Manual

This User Manual is provided to help you get the most from your VM0808T system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

Introduction, introduces you to the VM0808T system. Its purpose, features and benefits are presented, and its front and back panel components are described.

Hardware Setup, describes how to set up your VM0808T installation. The necessary steps – including how to connect up to the VE500 A/V Over Cat 5 Extender system – are provided.

Local Operation, explains the fundamental concepts involved in operating the VM0808T at the local site via the front panel LCD display and pushbuttons.

Remote Operation, provides a complete description of the VM0808T's Browser Graphical User Interface (GUI), and how to use it to remotely configure and operate the VM0808T.

An Appendix, provides specifications and other technical information regarding the VM0808T.

Conventions

This manual uses the following conventions:

`Monospaced`	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, and then select *Run*.
⚠	Indicates critical information.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

Introduction

Overview

The ATEN VanCryst VM0808T 8x8 Cat5 A/V Matrix Switch is a versatile audio/video over Cat 5 + serial solution that offers an easy and affordable way to route any of 8 audio/video sources to any of 8 displays, in combination with the ATEN VE500 A/V Over Cat 5 Extender system.

With eight Cat 5 A/V input ports, the VM0808T allows you to connect eight source devices (via eight VE500T transmitters) to eight monitors, displays, or projectors (via eight VE500R / VE500RQ receivers) at the same time. In addition to the eight Cat 5 connections, the unit is also enabled with local audio/video inputs/outputs so that an extra source device and monitor located in the same rack as the VM0808T can function as a further transmitter and receiver.

As a Matrix Switch, each input can be independently connected to any or all outputs, and the audio and video inputs from each source device can also be switched independently, giving you the ultimate in flexibility and control in any multi-display audio/video installation.

The VM0808T operates over standard TCP/IP connections, and so it will seamlessly integrate with your existing network infrastructure. It allows convenient configuration and operation via an intuitive Graphical User Interface (GUI), accessed via web browser, as well as locally via front panel pushbuttons and LCD display. The VM0808T can also be accessed via a remote terminal session using Telnet.

Furthermore, for complete system and install integration, serial control is standard through the VM0808T's built-in RS-232 and RS-485/422 ports that allows the switch to be controlled through a high-end controller or PC. The unit's bi-directional RS-232 serial port also allows serial devices, such as touchscreens and barcode scanners, to be included in the installation.

In combination with the ATEN VE500 A/V Over Cat 5 Extender system, the VM0808T 8x8 Cat5 A/V Matrix Switch supports distances up to 300 meters between the transmitter and receiver units, making it the ideal solution for applications that require A/V + serial information from multiple sources to be conveniently delivered to any of multiple destinations.

Features

- Connects any of 8 Cat 5 A/V inputs to any of 8 Cat 5 A/V outputs in combination with ATEN VE500 A/V Over Cat 5 Extender system
- Long signal range – supports up to 300 meters between VE500T transmitters and VE500R / VE500RQ receivers
- Easily switch between multiple sources and multiple displays
- Local Operation:
  - Front panel LCD display and pushbuttons
  - Serial controller
- Remote Operation:
  - Browser Graphical User Interface (GUI)
  - Telnet
- Supports additional local input and local display – provides an extra input/ output source
- Supports high-resolution video – up to 1920 x 1200@60Hz; DDC2B
- Supports stereo and balanced audio
- Automatic and adjustable video and audio quality
- Independent switching of audio and video sources – any audio source can be connected to any video source for output flexibility
- Upgradeable firmware
- Rack Mountable

Requirements

The following equipment is required for a complete VM0808T installation:

Transmitters
- 8 x VE500T Transmitters

Receivers
- 8 x VE500R / VE500RQ Receivers

  Note: For further information about the ATEN VE500 A/V Over Cat 5 Extender system, please visit the ATEN website or contact your ATEN dealer.

Local Input / Output
- A VGA, SVGA, XGA, SXGA, UXGA, WUXGA, or multisync display device with an HDB-15 connector
- Computer or A/V source device with VGA and stereo/balanced audio output
- Stereo and/or balanced audio speakers

Cables
- Use VGA/Audio/RS-232 cables to connect the local computer (or other audio/video source device) to the VM0808T
- Use cat 5e cables to connect the VE500T Transmitters and VE500R/RQ Receivers to the VM0808T

  Note: Cables are not provided in the VM0808T package.

Source Device Operating Systems

Supported operating systems are shown in the table, below:

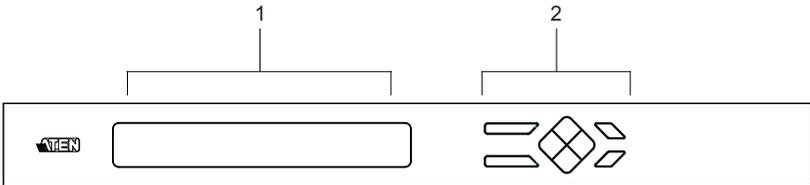| OS		Version
Windows		2000 and higher
Linux	RedHat	6.0 and higher
	SuSE	8.2 and higher
	Mandriva (Mandrake)	9.0 and higher
UNIX	AIX	4.3 and higher
	FreeBSD	3.51 and higher
	Sun	Solaris 8 and higher
Novell	Netware	5.0 and higher
Mac		OS 9 and higher
DOS		6.2 and higher

Note: The VM0808T's Serial GUI is compatible with Windows platforms only. See *Local Operation*, page 15.
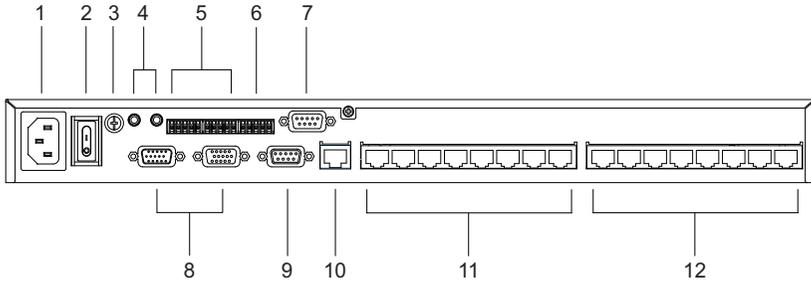
Components

Front View

No.	Component	Description
1	LCD Display	The LCD display shows the various options for configuring and operating the VM0808T. For full details, see *Front Panel Operation*, page 15.
2	Front Panel Pushbuttons	Use the pushbuttons to navigate the LCD display to configure and operate the VM0808T. ◆ MENU – Press to invoke the Main Menu ◆ AUDIO – Press to invoke the Audio page ◆ ESC – Press to cancel the current selection ◆ ENTER – Press to confirm the current selection ◆ Use the directional pushbuttons to navigate up, down, left, and right within the LCD display. For full details, see *Front Panel Operation*, page 15. **Note:** The MENU and AUDIO front panel pushbuttons have built-in LEDs that light to indicate they have been selected.

Rear View

| No.	Component	Description
1	Power Socket	This is a standard 3-pin AC power socket. The power cord from an AC source plugs in here.
2	Power Switch	This is a standard rocker switch that powers the unit on and off.
3	Grounding Terminal	The grounding wire attaches here. See *Grounding*, page 9, for further details.
4	Local Stereo Audio In / Out Ports	These ports are for the local stereo audio source and speakers.
5	Local Balanced Audio In / Out Ports	These ports are for the local balanced audio source and speakers.
6	RS-485 / RS-422 Serial Port	These serial ports, comprising of one 5-pole captive screw connector (RS-485 / RS-422) and one DB 9 (RS-232), are for serial control of the VM0808T.
7	RS-232 Serial Port (Female)	
8	Local Video In / Out Ports	These VGA ports are for connecting your local input source and your local display.
9	RS-232 Serial Port (Male)	RS-232 serial devices – such as touchscreens and barcode scanners – plug into this port.
10	Ethernet Port	In order to access the VM0808T's Browser Graphical User Interface (GUI), the VM0808T must be connected to your network. The cable that connects the VM0808T to your LAN/WAN plugs in here. See *Cable Connection*, page 11, for further details
11	Cat 5 In Ports	Use Cat 5e/6 cable to connect these ports to up to 8 VE500T transmitters. See *Cable Connection*, page 11, for further details.
12	Cat 5 Out Ports	Use Cat 5e/6 cable to connect these ports to up to 8 VE500R / VE500RQ receivers. See *Cable Connection*, page 11, for further details.

Chapter 2
Hardware Setup

⚠ 1. Important safety information regarding the placement of this device is provided on page 41. Please review it before proceeding.

2. Make sure that the power to all devices connected to the installation are turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

Rack Mounting

The VM0808T can be mounted in a 19" (1U) system rack. For the most convenient front panel pushbutton configuration and operation at the local site, mount the unit at the front of the rack, as follows:

1. Use the M3 x 8 Phillips head hex screws supplied with the Rack Mount Kit to screw the rack mounting brackets onto the front of the unit.

Phillips head hex
M3 x 8

(Continues on next page.)

7
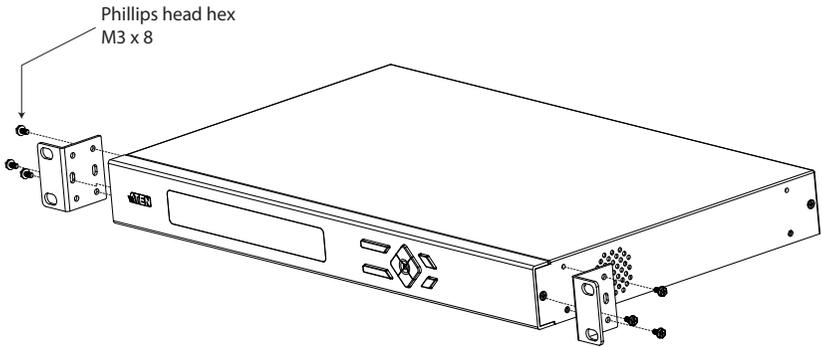
2. Position the unit in the front of the rack and align the holes in the mounting brackets with the holes in the rack.

3. Screw the mounting brackets to the rack.
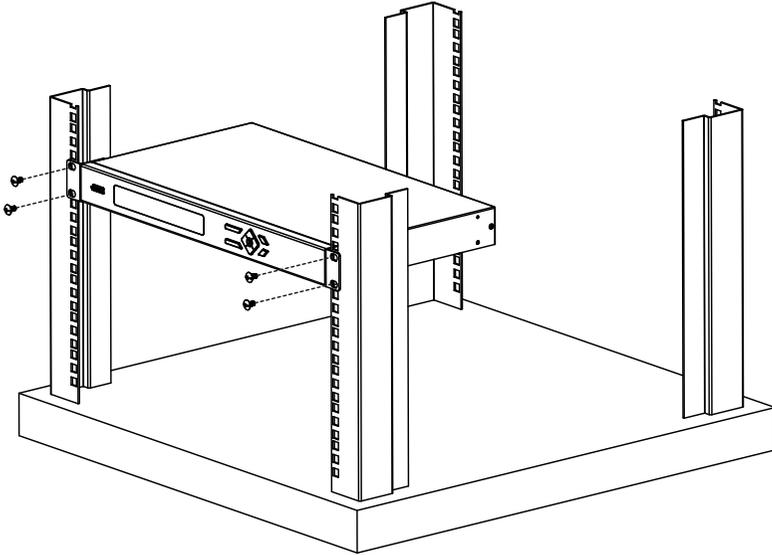
Grounding

To prevent damage to your installation, it is important that all devices are properly grounded.

1. Use the grounding wire supplied with this package to ground the VM0808T by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.
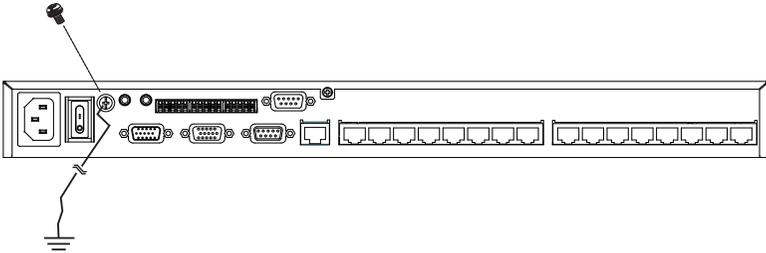
2. Make sure that all devices in your VM0808T installation, including transmitters and receivers, are properly grounded.
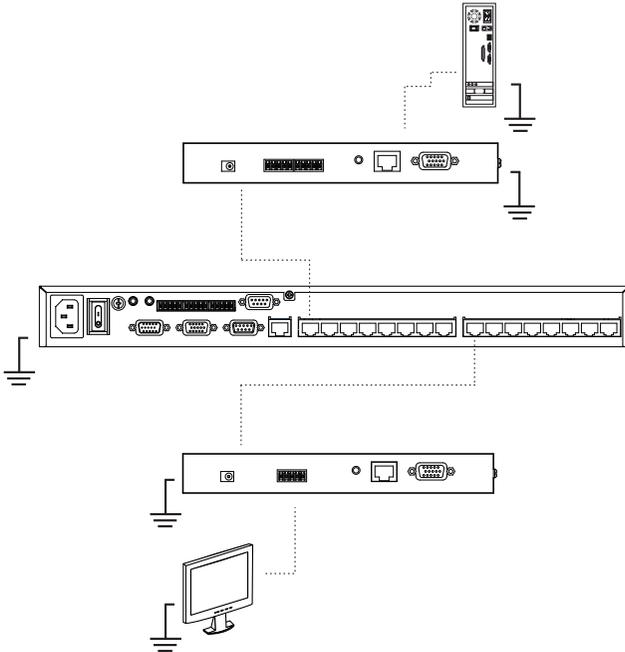
(Continues on next page.)

3. For increased grounding protection, use STP (shielded twisted pair) cable to connect the Local and Remote Units. There are two methods that can be used:

a) In addition to the eight paired wires, STP cable also contains a grounding wire. Solder this wire to the RJ-45 connector as shown in the diagram below:
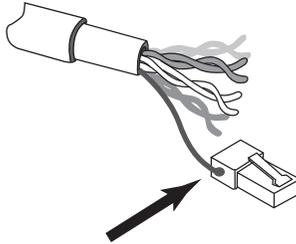
b) The second method is to use the STP cable shielding for grounding. In this case, make sure that the shielding makes tight contact with the top inside of the RJ-45 connector as shown in the diagram below:
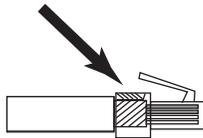
In either case, make sure that the sides of the RJ-45 connector make tight contact with the grounding contacts on the sides of the RJ-45 socket as shown in the diagram below:
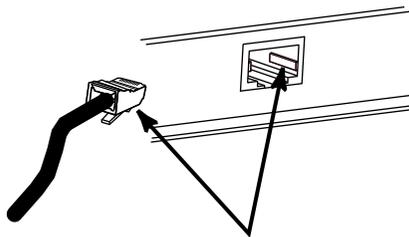
Cable Connection

Note: A complete VM0808T installation requires additional transmitter and
receiver units that are not included in the VM0808T package.
Compatible models are the VE500T Transmitter and the VE500R /
VE500RQ Receiver. See *Requirements*, page 3, for details.

Installation of the VM0808T is simply a matter of connecting the appropriate
cables. Refer to the installation diagrams on the following pages (the numbers
in the diagrams correspond to the steps, below), and do the following:

1. Use a VGA/Audio cable to connect the audio/video output ports of the
   local computer (or other audio/video source) to the VM0808T's Video In
   port and stereo / balanced Audio In ports.

2. Plug the local display's VGA cable into the VM0808T's Video Out port.

3. Plug the local stereo/balanced audio speakers into the appropriate Audio
   Out ports.

   Note: If both audio sources are connected, the stereo audio source has
   priority.

4. If you are using the serial control function, use an appropriate serial cable
   to connect the computer or serial controller to the VM0808T's female RS-
   232 port or the RS-485 / RS-422 captive screw connector.

5. If you are using a serial device at the local site, connect it to the
   VM0808T's male RS-232 port.

6. Plug a Cat 5e cable from the LAN into the VM0808T's Ethernet port.

7. Use the grounding wire supplied with the VM0808T package to ground
   the unit by connecting one end of the wire to the grounding terminal, and
   the other end of the wire to a suitable grounded object.

   Note: Do not omit this step. Proper grounding helps to prevent damage to
   the unit from surges or static electricity.

8. Connect up to 8 audio/video sources to up to 8 VE500T Transmitter units.

9. Using Cat 5e cable, connect the VE500T's Remote I/O ports to the RJ-45
   Cat 5 Input ports on the VM0808T.

10. Connect up to 8 display devices and speakers to up to 8 VE500R / VE500RQ Receiver units.

11. Using Cat 5e cable, connect the VE500R / VE500RQ's Remote I/O ports to the RJ-45 Cat 5 Output ports on the VM0808T.

**Note:** See the VE500 A/V Over Cat 5 Extender User Guide for further details of VE500 installation.

12. Plug the power cord supplied with the package into the VM0808T's 3-prong AC socket, and then into an AC power source.

13. Power on the VM0808T and all devices in the installation.

Installation Diagram A

Installation Diagram B

Audio/Video Source x 8

8

VE500T x 8

9

VM0808T

11

VE500R / VE500RQ x 8

10

Display x 8
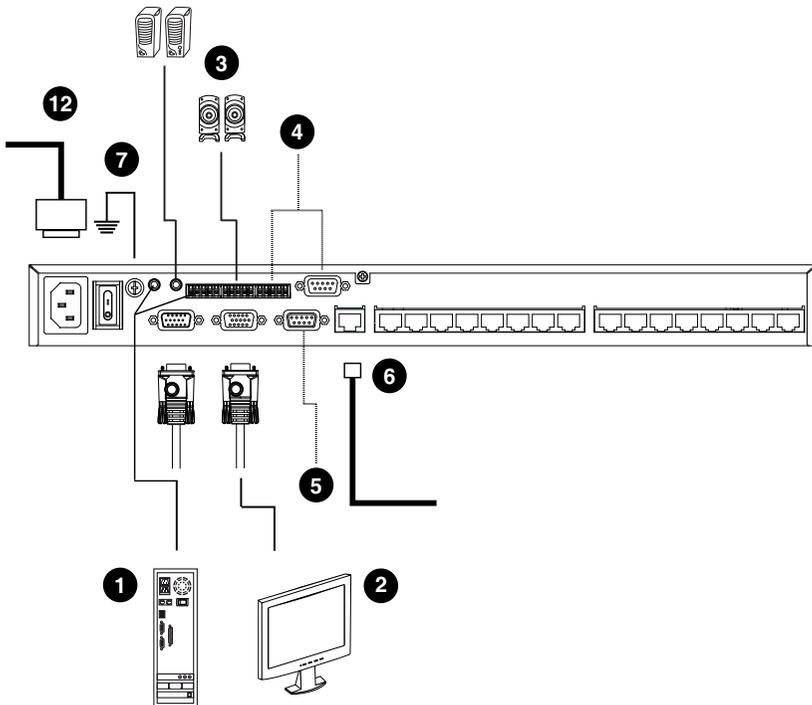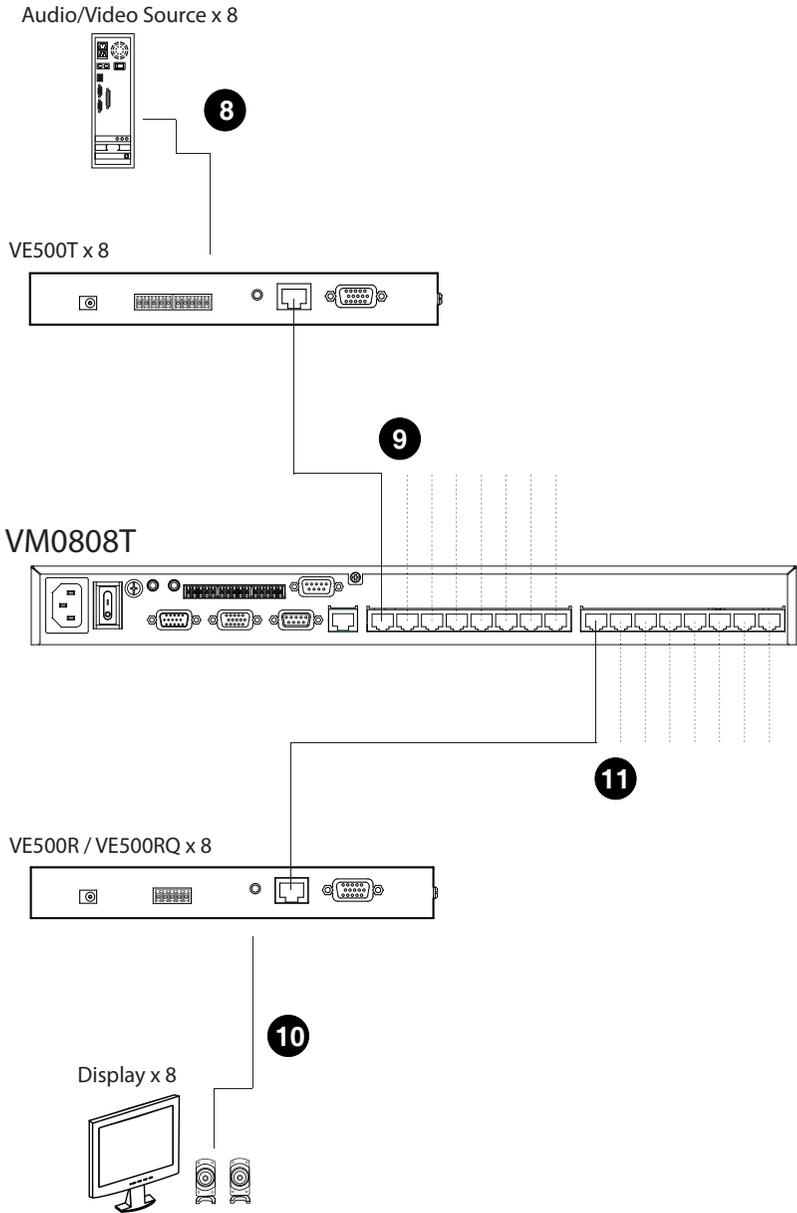
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Local Operation

Overview

The VM0808T can be configured and operated locally via the front panel pushbuttons, or remotely over a standard TCP/IP connection via a Browser graphical user interface (GUI). Local front panel operation is discussed in this chapter. Over-IP (and Telnet) operation is discussed in Chapter 4, *Remote Operation*.

Note: The VM0808T can also be controlled locally via a serial controller. Please download the appropriate software AP from our website (www.aten.com) and reference the Browser GUI for operation

Front Panel Operation

The VM0808T features front panel pushbuttons and an LCD display panel for convenient configuration and operation at the local site. This allows you to perform operations such as selecting which source displays on which display, configuring the IP port and serial port, adjusting audio and video levels, and setting security information.

Basic Navigation

The VM0808T's front panel display operation is intuitive and convenient. Please note the following operation conventions:

◆ Use the MENU pushbutton to cycle through the Main Menu options.

◆ Use the AUDIO pushbutton to go directly to the independent audio page.

◆ Use the ESC pushbutton to go back a level, return to the Main page, or exit.

◆ Use the ENTER pushbutton to select options and confirm operations.

◆ Use the Up / Down navigation pushbuttons to cycle forwards or backwards through numbered options.

◆ Use the Up / Down / Left / Right navigation pushbuttons to position the cursor on options for selection.

Menu Organization

Use the MENU pushbutton to cycle through the main menu options, starting from the Password page, in the order show in the table, below:

Menu Page	Sub-Menu Page(s)		
Password			
Main Page	Select Video IN		
	Independent Audio Page	Select Independent Audio IN	
Set IP Port	IP Address	Save and Reset / Exit	
	Subnet Mask		
	Gateway		
	Default IP Settings	Yes / No	
Set Serial Port	Serial Port Address	Save / Exit	
	Baud Rate		
	Serial Port Mode	RS-232 / RS-422, RS-485 / Bypass	
	Default Serial Setting	Yes / No	
Adjust Video Level	Optimize Video Output Port	All / Local / 1–8	Local / Gain
			Local / Compensation
Adjust Audio Level	Output Audio Port	All / Local / 1–8	
	Audio Level	Stored Values / 0–15	
Save / Load Profile	Save to a Profile	0–15	
	Call a Saved Profile		
Security Mode	Password Required	Yes / No	
	Change Password	Old / New	

Enter Password

If the VM0808T has been configured to require a password for local operation (see *Security Mode*, page 28], when the password screen is accessed, the cursor flashes on the first digit. Enter a 4-digit password to continue to the Main Screen.

Note: If you are accessing the VM0808T for the first time, the default password is 1234.

To enter a password, do the following:

1. Use the front panel Left/Right pushbuttons to move the cursor.

2. Use the front panel Up/Down pushbuttons to cycle through the numbers.

3. Press and Release Enter to confirm the password and continue to the Main Screen.

Note: 1. If you enter an incorrect password, re-enter the correct password over the incorrect string.

   2. If Password Required (see *Security Mode*, page 28) is enabled, the timeout is 5 minutes.

Main Page

The Main Page displays Output Ports 1–8 and Local in sequential order across the top. Whichever source is displaying on each output port is shown directly beneath. From the Main Page, you can set create input-output connections that route all signals from a selected input port to a selected output port. You can also: Press the Audio pushbutton to go straight to the independent audio setup page; press the Menu pushbutton to continue cycling through the menu options; or press the Esc pushbutton to exit the display.

Video In Selection

To select which input source displays on each output port, do the following:

1. Use the navigation pushbuttons to select an output port's corresponding input port.
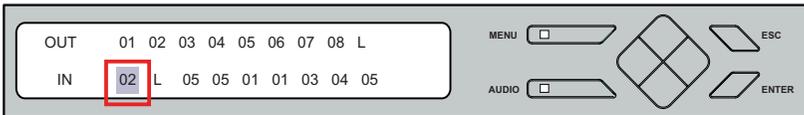
2. When the cursor flashes on your selected input port, use the navigation pushbuttons to cycle through the available input sources.

   Options are Ports 1–8, NA (none), and L (local).

3. Press Enter to confirm your selection. The selected audio, video, and RS-232 signal from the selected input is now tied to the selected output port.

4. Repeat steps 1–3 for all required ports.

   > **Note:** This operation ties all three signals (audio, video, serial) from a selected input to a selected output. For independent switching of the audio signal, see the following section, *Independent Audio In Selection*.

Independent Audio In Selection

The audio signal can be switched independently of the video signal from the same input port using the Audio Main Page. Press the Audio pushbutton to access this page. The Audio pushbutton LED lights, and the following screen appears:
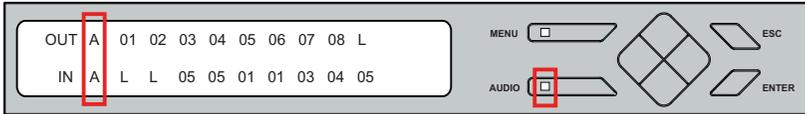
To create an independent audio connection, do the following:

1. Use the navigation pushbuttons to select the desired output port's corresponding input port.
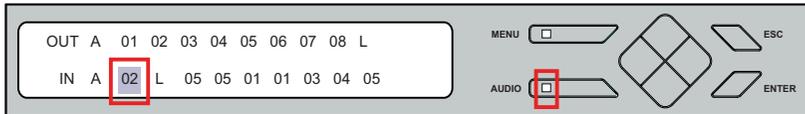
2. When the cursor flashes on your selected input port, use the navigation pushbuttons to cycle through the available audio input sources.

   Options are Ports 1–8, NA (none), and L (local).

3. Press ENTER to confirm your selection to switch audio only to the selected port.

4. Press AUDIO or ESC to return to the Main Page.

Set IP Port

To configure the VM0808T's IP port settings, select Set IP Port from the Menu.

```
  ▶   Set IP Port              MENU  □        ESC

      Set Serial Port       ▼  AUDIO □        ENTER
```
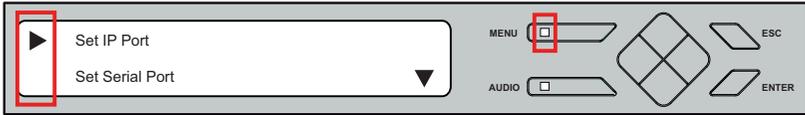
The sub-menu provides four options: IP Address; Subnet Mask; Gateway; and Default IP Settings; as follows:

IP Address

To set the VM0808T's IP address, do the following:

1. Select IP Address from the Set IP Port submenu. The cursor flashes on the first number:

```
  ▶   IP Address: 192.168.168.23    MENU  □       ESC

      Subnet Mask: 255.255.255.0  ▼  AUDIO □       ENTER
```

2. Use the Up / Down navigation pushbuttons to select each number.

3. Use the Left / Right navigation pushbuttons to move the cursor forwards / backwards.

4. Press ENTER to confirm the IP address.

Note: The default IP address is 192.168.168.23

Subnet Mask

To set the VM0808T's Subnet Mask, do the following:

1. Select Subnet Mask from the Set IP Port submenu. The cursor flashes on the first number:
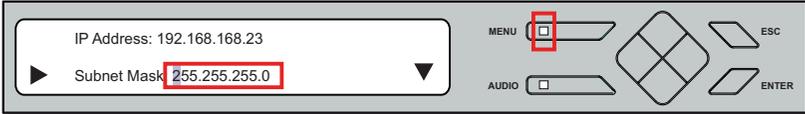
2. Use the Up / Down navigation pushbuttons to select each number.

3. Use the Left / Right navigation pushbuttons to move the cursor forwards / backwards.
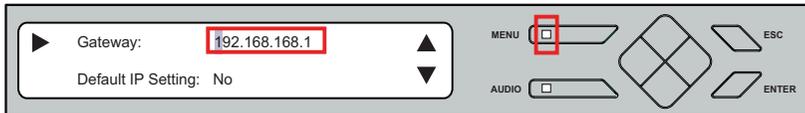
4. Press ENTER to confirm the Subnet Mask.

Note: The default Subnet Mask is 255.255.255.0

Gateway

To set the VM0808T's Gateway, do the following:

1. Select Gateway from the Set IP Port submenu. The cursor flashes on the first number:

2. Use the Up / Down navigation pushbuttons to select each number.

3. Use the Left / Right navigation pushbuttons to move the cursor forwards / backwards.

4. Press ENTER to confirm the Gateway.

Note: The default Gateway is 192.168.168.1

Default IP Settings

To use / not use the VM0808T's Default IP Settings, do the following:

1. Select Default IP Settings from the Set IP Port submenu. The cursor flashes on the entry:
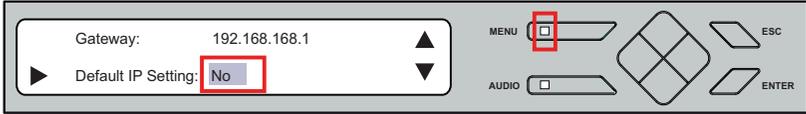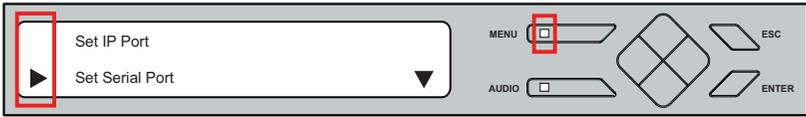

2. Select Yes or No.

Save and Reset / Exit

After each operation, you can either:

◆ *Save and Reset the Device* to save all changes and restart the VM0808T;

◆ *Exit without Save* to ignore changes and return to the Menu; or

◆ Press ESC to return to the previous step without change.

Set Serial Port

To configure the VM0808T's serial settings, select Set Serial Port from the Menu.

The sub-menu provides four options: Serial Port Address; Baud Rate; Serial Port Mode; and Default Serial Settings, as follows:

Serial Port Address

To set the VM0808T's serial port address, do the following:

1. Select Serial Port Address from the Set Serial Port submenu. The cursor flashes on the first number:
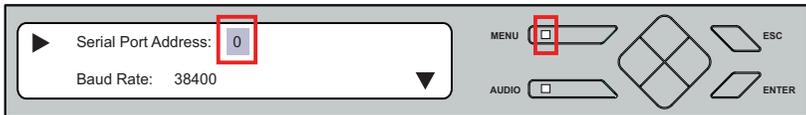
2. Use the Up / Down navigation pushbuttons to select each number.

3. Use the Left / Right navigation pushbuttons to move the cursor forwards / backwards.

4. Press ENTER to confirm the serial port address.

Note: The default serial port address is 0.

Baud Rate

To set the VM0808T's baud rate, do the following:

1. Select Baud Rate from the Set Serial Port submenu. The cursor flashes on the first number:
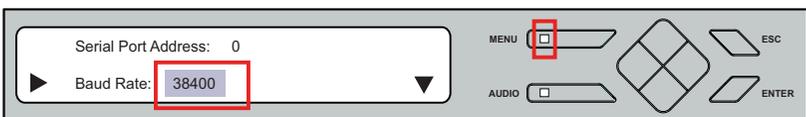
2. Use the Up / Down navigation pushbuttons to cycle through the options. Baud rate options are 9600, 19200, 38400, and 115200.

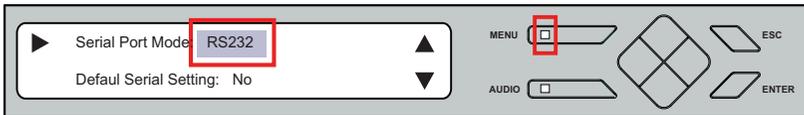3. Press ENTER to confirm the baud rate.

Note: The default baud rate is 38400.

Serial Port Mode

The VM0808T supports RS-232, RS-422, and RS-485. To set the VM0808T's serial port , do the following:

1. Select Serial Port Mode from the Set Serial Port submenu. The cursor flashes on the entry:

2. Use the Up / Down navigation pushbuttons to cycle through the options. Mode options are RS-232, RS-422, RS-485, and bypass.

3. Press ENTER to confirm the Serial Port Mode.

Note: 1. The default serial port mode is RS-232.

2. If *bypass* is selected, the female RS-232 port connected to the local controller (PC) bypasses signals to the VE500R/RQ receiver unit, and RS-232 signals from the VE500T transmitter unit pass to the male RS-232 port. Select *bypass* if you are using the male RS-232 port to connect a serial device, such as a touchscreen or barcode scanner.


Default Serial Settings

To use / not use the VM0808T's Default Serial Settings, do the following:

1. Select Default Serial Settings from the Set IP Port submenu. The cursor flashes on the entry.
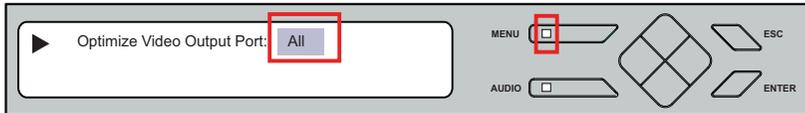
2. Select Yes or No.

Adjust Video

Video Gain and Video Compensation can be adjusted for all displays at once, or for each display individually. To adjust video, do the following:

1. Use the MENU button to access the Adjust Video page.
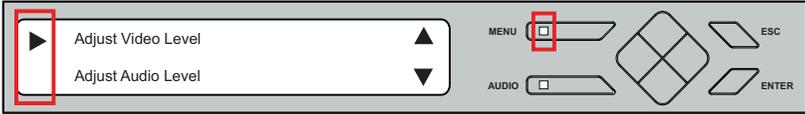
2. With the cursor flashing at Adjust Video Level, press Enter to go to the Optimize Video Output Port page to select ports.

3. Use the Up / Down pushbuttons to cycle through the ports and select for optimization.

   You are able to select all ports in the installation (ALL), just the local port (L), or any of the 8 ports individually (1–8).

   Press Enter to select.

4. Select Gain or Compensation, then cycle through the options to adjust values for the local port.

   Options are Stored, Auto, or 0–31. See page 27 for storing values,

   Note: If either Gain or Compensation is set to Auto, the other will also set to Auto automatically.
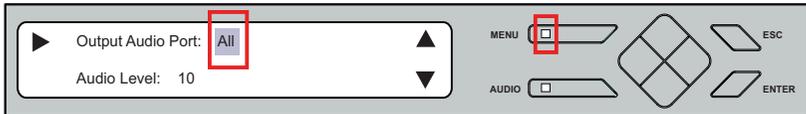
Adjust Audio

The audio level (volume) can be adjusted for all sources at once, or for each source individually. To adjust audio, do the following:

1. Use the MENU button to access the Adjust Video page.
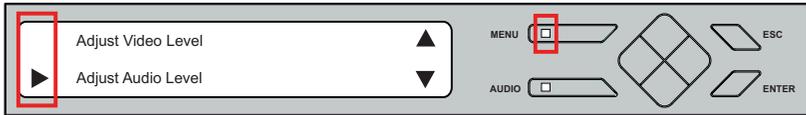
2. With the cursor flashing at Adjust Audio Level, press Enter to go to the Adjust Audio Level page to select ports.

3. Use the Up / Down pushbuttons to cycle through the ports and select for adjustment.

   You are able to select all ports in the installation (ALL), just the local port (L), or any of the 8 ports individually (1–8).

   Press Enter to select. The cursor will move down to Audio Level

4. Then, use the Up / Down pushbuttons to cycle through the Audio Levels (0–15) and press Enter to select.

Note: 1. The default audio level is 10 (0dB).

2. Audio level L/R: 00 (mute); 01 (-25dB); 15 (+6dB).

Save / Load Profile

The VM0808T allows you to store up to 16 (numbered 0–15) different connection profiles that can be saved and recalled later by either connection method. To use the unit's front panel pushbuttons to save/recall profiles, do the following:

1. Use the MENU button to access the Save / Load Profile page.
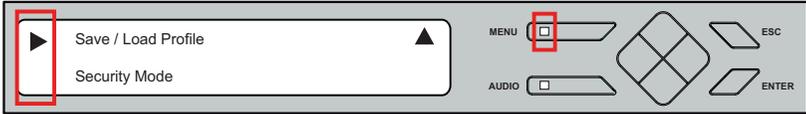
2. With the cursor flashing at Save / Load Profiles press Enter to go to the Profiles page to save or load connection configurations.

3. To save the current connection configuration, use the Up / Down pushbuttons to cycle through the numbers and press Enter to save.

4. To load a Saved Profile, press and release the Down button so the cursor moves to Call a Saved Profile. Then, use the Up / Down pushbuttons to cycle through the profiles (0–15) and press Enter to select.
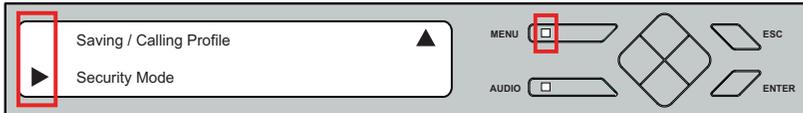
Security Mode

The Security Mode page allows you to configure the VM0808T's password-related settings.
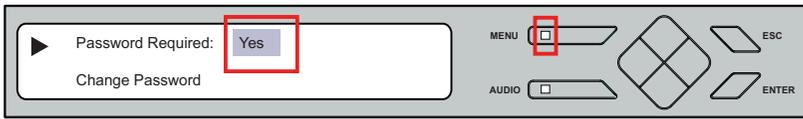
Password Settings

To configure the VM0808T's password settings, do the following:

1. Use the MENU button to access the Security Mode page.

2. To set the VM0808T to require a password for local operation, select Password required, and use the Up / Down pushbuttons to select Yes or No.

3. To change the password, use the Down pushbutton to move the cursor to Change Password.

4. Enter the old password (see *Enter Password*, page 17). Then, press enter to move the cursor down to New Password, and enter the new password in the same way.

5. Press and Release Enter to confirm the password and continue to the Main Screen.

> **Note:** 1. If you enter an incorrect password, re-enter the correct password over the incorrect string.
>
> 2. If Password Required (see *Security Mode*, page 28) is enabled, the timeout is 5 minutes.

Chapter 4
Remote Operation

Overview

The VM0808T 8x8 Cat 5 A/V Matrix Switch can be configured and controlled over a standard TCP/IP connection via its own Browser Graphical User Interface (GUI). Because the VM0808T can be accessed from anywhere on the LAN, WAN, or Internet, remote operators can log in via any Web browser, from any location. Security is ensured by password protection and user configurable timeout. The VM0808T supports four levels of remote user with various operational privileges, and up to 32 users can log into the GUI at one time. For full details, see the sections that follow.

Note: The VM0808T can also be accessed via a remote terminal session using Telnet. See *Telnet Operation*, page 38, for details.

Logging In

To access the Browser GUI, type the VM0808T's IP address into the address bar of any browser. The welcome screen appears:

- The VM0808T's default IP address is http://192.168.168.23. See *IP Setup*, page 34, for further information.
- The default username and password are aten0808. See *Password*, page 37, for further information.

Note: The VM0808T login supports lower case letters only.

Connections Page

The VM0808T's GUI main page is the Connections page. This displays all active connections for control and configuration:

Toolbar

Icon		Description
	Connections	This page displays the VM0808T's active connections and enables you to control them.
	Setup	This page enables you to configure the VM0808T's IP settings, and name ports.
	User Management	This page enables you to configure user permissions, including passwords.
	Firmware	The page enables you to upgrade the VM0808T's firmware.
	Logout	This icon ends the session and closes the Web interface.

Configuring Connections

To configure a connection, do the following:

1. Select the radio button at the corresponding input/output intersection of the port(s) you want to configure.

   Note: Multiple connections can be changed simultaneously; simply select all the connections you want to configure.

2. Make changes according to the sections that follow.

3. Click the Submit button. The display reloads with the new status changes. Or, click the Clear button to revert to the stored configurations.

Status Colors

Active connections display in one of three colors to indicate their status, as follows:

- Blue – Audio + Video
- Orange – Video only
- Gray – Audio only

Save / Store Connection Profiles

The VM0808T allows you to store up to 16 (numbered 0–15) differently configured connection profiles that can be saved and recalled later by either connection method (both locally via the unit's front panel pushbuttons and over IP via the GUI).
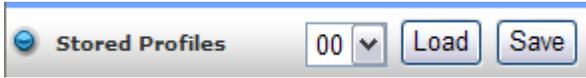
◆ Use the *Save* button to save the current connection profile.

◆ Use the drop-down list to select a saved connection profile and then click the *Load* button to switch to that profile.

Note: 1. Profile 00 is the default.

2. The latest saved profiles will automatically load when the VM0808T is reset.

Operation Type

Use these radio buttons to select your operation parameters. There are three options: You can switch audio + video at the same time (for all or any ports), or you can switch either separately (for all or any ports).

Viewing Port Information

The input ports can be sorted by port name or port number. Use the drop-down menu to select.

Move your cursor over the Output Port number to see the port name displayed. See *Port Name*, page 35, for further information.

Optimizing Video

For the display attached to the Local port, gain and compensation can be selected for optimization using these buttons. For all other ports, the VM0808T will adjust video levels to achieve the highest quality for all connected monitors.

Video	Port	L ▾	Gain	31 ▾	Compensation	31 ▾	Optimize
Audio	Port	L ▾			Volume	10 ▾	Adjust

1. Use the drop-down menu to select a port for optimization.

   Options are Local (L), All, or Ports 1–8)

2. Select Gain / Compensation (Local port only)

3. Click **Optimize**.

Adjust Audio

To adjust the audio, do the following:

1. Use the drop-down menu to select a port for audio adjustment.

   Options are Local (L), All, or Ports 1–8)

2. Use the drop-down menu to select the volume level.

3. Click **Adjust**.

Setup

Click the Setup icon to configure the VM0808T's IP and serial settings, and to name all the ports in your installation.

IP Setup

The Web Setup settings enable you to configure the VM0808T's Web interface connection. Changes take a few seconds and automatically redirect you to the IP address specified. Enter values and then click Save or Clear. Click Default Setting to use the following defaults:

- IP Address – 192.168.168.23
- Subnet Mask – 255.255.255.0
- Default Gateway – 192.168.168.1
- Website Timeout – 5 minutes

> **Note:** This option controls how long an inactive Web connection stays logged in to the VM0808T. Any changes will take effect immediately.

Telnet Configuration

Enable the checkbox if you want the VM0808T to receive commands on Port 23 for telnet use. See *Telnet Operation*, page 38, for further details.

> **Note:** The VM0808T must be power cycled for a change in the Telnet configuration block to take effect.

Serial Setup

The Serial Setup settings enable you to configure the VM0808T's serial connection. Use the drop-down menus to select values and then click **Save** or **Clear**. Click **Default Setting** to use the following defaults:

- Serial Port Address – 0
- Baud Rate – 38400
- Serial Port Mode – RS-232

> **Note:** Mode options are RS-232, RS-422/RS-485, and bypass. See *Serial Port Mode*, page 24, for further details about bypass mode.

Port Name

The Port Name page enables Administrators and Super Users to change the display name of the input and output ports.

Input Num.	Input Name			Output Num.	Output Name		
Local	Port_In_0	Save	Clear	Local	Port_Out_0	Save	Clear
1	Port_In_1	Save	Clear	1	Port_Out_1	Save	Clear
2	Port_In_2	Save	Clear	2	Port_Out_2	Save	Clear
3	Port_In_3	Save	Clear	3	Port_Out_3	Save	Clear
4	Port_In_4	Save	Clear	4	tt	Save	Clear
5	Port_In_5	Save	Clear	5	Port_Out_5	Save	Clear
6	Port_In_6	Save	Clear	6	Port_Out_6	Save	Clear
7	Port_In_7	Save	Clear	7	Port_Out_7	Save	Clear
8	Port_In_8	Save	Clear	8	Port_Out_8	Save	Clear

To change the display name, enter a value and click **Save**. Click **Clear** to revert to the previous stored named.

Firmware

Click the Firmware icon to view information about the VM0808T's firmware version and to upgrade. This is an Administrator function only

☑ Enable to check firmware version V1.1.102

Filename [   ] [Browse...]

To upgrade the VM0808T's firmware, do the following:

1. Use the *Browse* button to locate the firmware upgrade file.

2. Click **Upgrade Firmware** to start the upgrade.

> **Note:** Check the box to enable the utility to compare the VM0808T's current firmware version with that of the upgrade files. If it finds that the VM0808T's firmware version is the same or higher than the selected upgrade version, it brings up a dialog box informing you of the situation and gives you the option to *Continue* or *Cancel*.

User Management

Click the User Management icon to add, edit, or remove user information, and to change the password for accessing the VM0808T's GUI.

Note: This is an Administrator only function.

Operations are as follows:

- ◆ Add User – Click Add to add another user to the list. The VM0808T supports up to 32 users at one time.

- ◆ Edit User – Select user and click Edit to change information. This option allows an Administrator to set/reset the selected user's password, add a description of the user, and to set the user's privileges. See below for full details.

- ◆ Delete User – Select user and click Delete to remove all user information.

Password
Use the Edit User function to change the user's password for accessing the VM0808T's GUI. This password is also used for the Telnet interface (see *Telnet Configuration*, page 34). Passwords are case sensitive, and must be 5–16 alphanumeric characters.

Privileges
Use the Edit User function to set a user's privileges. The three available levels are as follows:

- ◆ Administrator – this level provides full access and control of the VM0808T functions in addition to full User Management privileges

- ◆ Super User – this level provides full access and control with no User Management privileges

- ◆ User – this level provides basic functions only (create connections, save and recall presets, adjust audio)

Telnet Operation

The VM0808T can be operated and configured via a remote terminal session using Telnet.

To log in to the VM0808T by means of a Telnet session, do the following:

1. On your computer, open a terminal (command line) session.

2. At the prompt, key in the VM0808T's IP address in the following way:

   ```
   telnet [IP address]:23
   ```

3. Press **Enter**. The login screen appears. At the login prompt, provide your Username and Password.

Configuration Menu

Once a Telnet connection to the VM0808T is established, the device's text-based Configuration Menu comes up, with the following items:

1. H – Call up the command list for help

Command list:

GT – Set gateway address

IM – Set IP subnet mask

IP – Set IP address

LO – Load connections from profile

PW – Change password

RI– Read what output is connected to *nn* input

RO – Read what output is connected to *nn* input

SB – Set the serial port baud rate

SS – Switch input to specified port

TI – Set timeout

VR – Software version information

Ctrl-Q – Quit

2. GT – Set gateway address

```
GT
```

Old gateway address: 192.168.1.1

New gateway address:

3. IM – Set IP subnet mask

```
IM
```

Old IP subnet mask: 192.168.1.1

New IP subnet mask:

4. IP – Set IP address

```
IP
```

Old IP address: 192.168.1.45

New IP address:

5. LO – Load connections from profile

```
LO 01
```

Load profile 01 OK.

6. PW – Change password

```
PW
```

Old password: ********

New password:

7. RI – Read what input is connected to *nn* output

```
RI 01
```

Output port 02 04 08 is connected input port 01

8. RO – Read what output is connected to *nn* input

```
RO 01
```

Input port 02 is connected to output port 01

9. SB – Set serial port baud rate

```
SB 96
```

Serial port baud rate is set to 9600

10. SS – Switch input to specified output

```
SS 01 03
```

Switch input 01 to output 03

11. TI – Set timeout

```
TI 30
```

Set 30 minute timeout

12. VR – Software version information

```
VR
```

Software version 1.0.

Note: For further information about these functions, please reference the equivalent Browser GUI functions earlier in this chapter.

Appendix

Safety Instructions

<u>General</u>

- Read all of these instructions. Save them for future reference.

- Follow all warnings and instructions marked on the device.

- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.

- Do not use the device near water.

- Do not place the device near, or over, radiators or heat registers.

- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.

- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.

- Never spill liquid of any kind on the device.

- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

- The device is designed for IT power distribution systems with 230V phase-to-phase voltage.

- To prevent damage to your installation it is important that all devices are properly grounded.

- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.

- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).

- Position system cables and power cables carefully; Be sure that nothing rests on any cables.

- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.

- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.

- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.

- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.

- Always load the rack from the bottom up, and load the heaviest item in the rack first.

- Make sure that the rack is level and stable before extending a device from the rack.

- Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.

- After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.

- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.

- Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.

- Ensure that proper airflow is provided to devices in the rack.

- Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.

- Do not step on or stand on any device when servicing other devices in a rack.

- **Caution:** Slide/rail (LCD KVM) mounted equipment is not to be used as a shelf or a work space.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: **http://support.aten.com**

- For telephone support, see *Telephone Support*, page iii:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase.

- Your computer configuration, including operating system, revision level, expansion cards, and software.

- Any error messages displayed at the time the error occurred.

- The sequence of operations that led up to the error.

- Any other information you feel may be of help.

Specifications

Function				VM0808T
Input Connections	Direct			1 (local)
	Max.			9 (1 x local input; 8 x VE500T Transmitter)
Display Connections	Direct			1
	Max.			9 (1 x local display; 8 x VE500R/RQ Receiver)
Connectors	Local	Audio In	Balanced	1 x Captive Screw Connector, 5 pole
			Stereo	1 x Mini Stereo Jack Female (Green)
		Video In		1 x HDB-15 Male (Blue)
		Audio Out	Balanced	1 x Captive Screw Connector, 5 pole
			Stereo	1 x Mini Stereo Jack Female (Green)
		Video Out		1 x HDB-15 Female (Blue)
	Unit to Unit	A/V In		8 x RJ-45 Female
		A/V Out		8 x RJ-45 Female
	Ethernet			1 x RJ-45 Female
	Serial	RS-232		1 x DB-9 Female (Black); 1 x DB-9 Male (Black)
		RS-485 / RS-422		1 x Captive Screw Connector, 5 pole
	Power			1 x 3-prong AC Socket
Switches	Up / Down / Left / Right			4 x Pushbutton
	Menu			1 x Pushbutton
	Audio			1 x Pushbutton
	Esc			1 x Pushbutton
	Enter			1 x Pushbutton
	Power			1 x Rocker
Display				1 x LCD Display (Green)
LEDs	Menu			1 (Blue
	Audio			1 (Blue)
	Up / Down / Left / Right			4 (Blue)
Power Consumption				110V / 16W; 220V / 17W
Environment	Operating Temp.			0–50ºC
	Storage Temp.			-20–60ºC
	Humidity			0–80% RH, Non-condensing
Physical Properties	Housing			Metal
	Weight			3.50 kg
	Dimensions (L x W x H)			43.20 x 25.30 x 4.40 cm

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquiries, please contact your direct vendor.