Active VGA Managed Software
SC-000047-A.EXE

Installation Guide

P/N: 94-000712-A SE-000712-A

MuxLab

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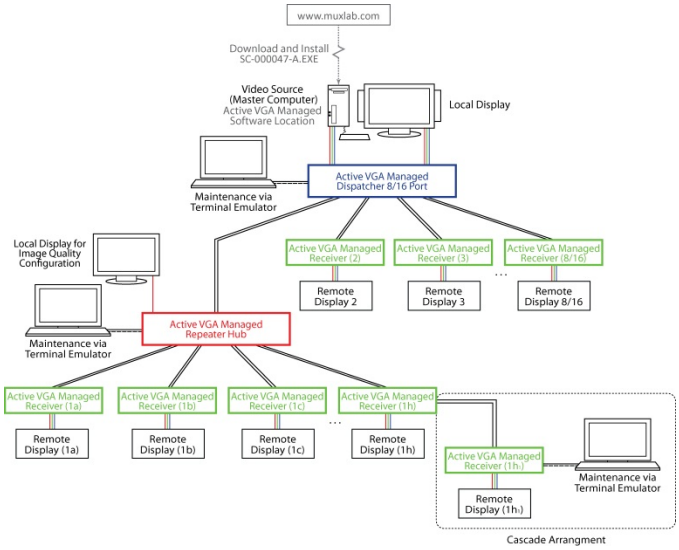
1. Overview

1.1. Description

MuxLab's Active VGA Managed Software allows the user to control MuxLab's family of Active VGA Managed products:

(1) Active VGA Managed Dispatcher
(2) Active VGA Managed Receiver
(3) Active VGA Managed Repeater Hub

Once downloaded and installed on the master computer of a typical system, MuxLab's Active VGA Managed Software enables the user to control the image quality associated with each Active Managed VGA product in the system.



2. Installation

2.1. Preliminary

Before installing MuxLab's Active VGA Managed Software, please ensure that the following steps have been taken:

1. The SC-000047-A.EXE file has been downloaded from MuxLab's website (www.muxlab.com) to your system's Master Computer.
2. Your Master Computer is running under Windows XP (SP3), Vista, or Windows 7. (MuxLab supports both 32-bit and 64-bit versions of each operating system.)
3. The user has Administrative privileges on the Master Computer.
4. Any firewall on the Master Computer allows communication between the GUI and server service.
5. A serial cable is connected between the Master Computer and the Dispatcher (Local Out RS232 port). Alternatively, a USB-RS232 cable may be used.

2.2. Installation Procedure

Locate the SC-000047-A.EXE file on your computer and double-click it. This will begin the installation procedure through a Setup Wizard.

If no version of MuxLab's Active VGA Managed Software already exists on your computer, continue to page 8 for instructions on using the Setup Wizard.

If a version of MuxLab's Active VGA Managed Software already exists on your computer, you will be asked to launch the Uninstall Wizard before installing the current version (Figure 1).

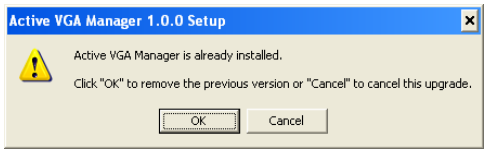


Figure 1: Active VGA Manager 1.0.0 Setup Widow

Click **OK**. The Uninstall Wizard will appear (Figure 2).

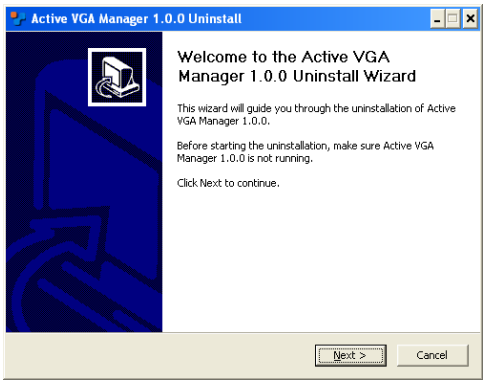


Figure 2: Uninstall Wizard

Click **Next >** to proceed.

The Uninstall Wizard will determine the folder location of the previously installed version of MuxLab's Active VGA Managed Software and request permission to begin uninstalling it (Figure 3).

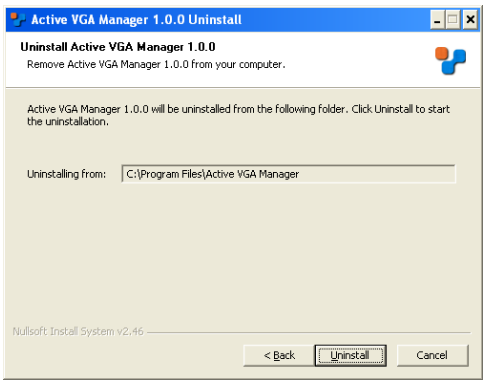


Figure 3: Uninstall Permission Request

Click **Uninstall** to proceed. Once completed, the Uninstall Wizard's final window will appear (Figure 4).

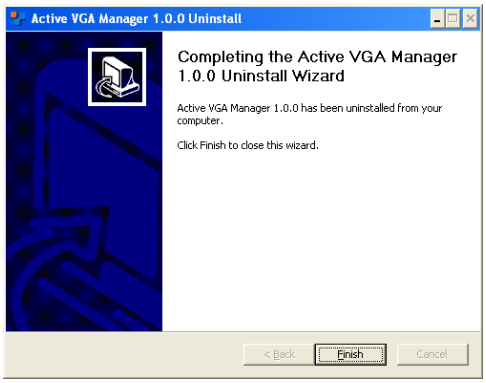


Figure 4: Uninstall Permission Request

Click **Finish** to close the Uninstall Wizard and proceed with installation of MuxLab's Active VGA Managed Software.

The Setup Wizard welcome window will now appear (Figure 5).

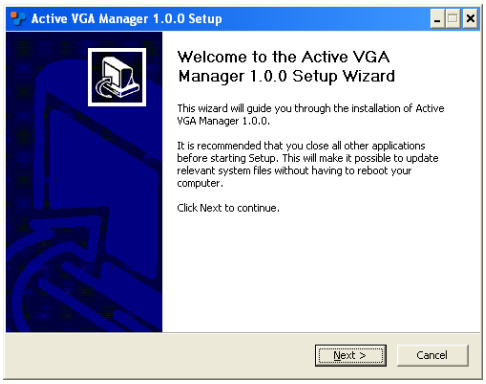


Figure 5: Active VGA Manager 1.0 Setup Wizard

Click **Next >** to continue.

The next window to appear allows you to choose which features to install (Figure 6). Make the appropriate selections and click **Next >**.

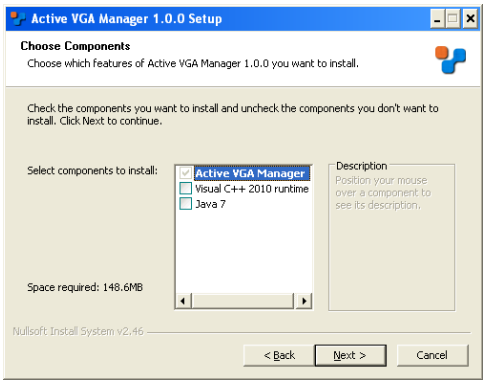


Figure 6: Choose Components to Install

The next window initiates the installation process (Figure 7). A destination folder is chosen by default. To change it, click **Browse** and select a different destination. Otherwise click **Install**.

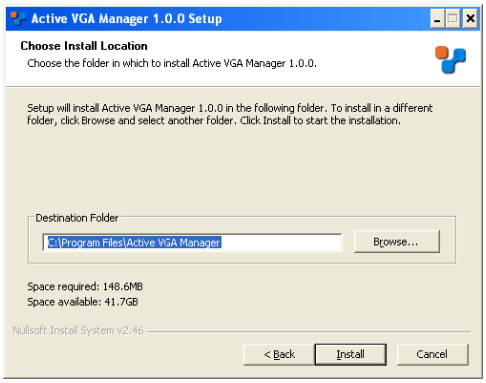


Figure 7: Destination Folder and Install Window

The next window shows the progress of the installation (Figure 8).

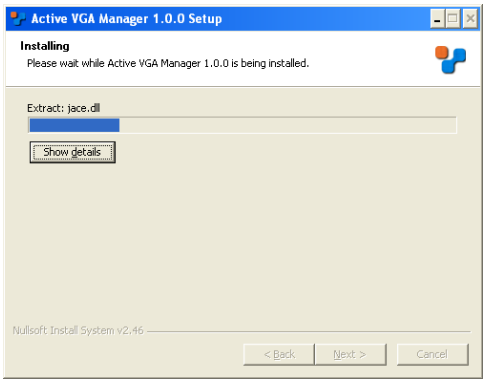


Figure 8: Installation Progress

For more information on which components are being installed, you may click on **Show details**.

If the Setup wizard determines that Java components need to be installed, Oracle's Java installation manager will start running. The first window to appear is shown below (Figure 9).

Figure 9: Java Installation Manager

Click **Install >** to continue.

Once Java has been successfully installed (Figure 10), click **Close**.

Figure 10: Java Installation Successful

Once the installation of MuxLab's Active VGA Manager is complete, the final window (Figure 11) will be shown.

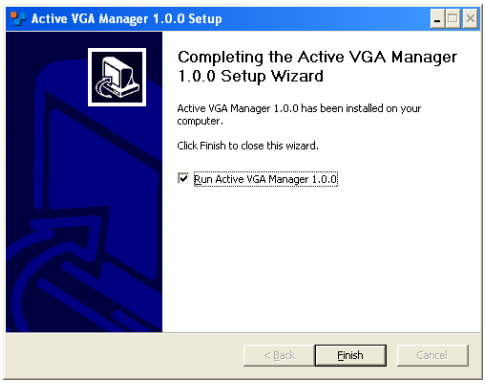


Figure 11: Active VGA Manager Installation Successful

Click **Finish** to close the Setup wizard and (if the Run Active VGA Manager 1.0 check box is checked) start the program.

3. Usage

3.1. Overview

When running MuxLab's Active VGA Managed Software for the first time, the main screen will appear (Figure 12).

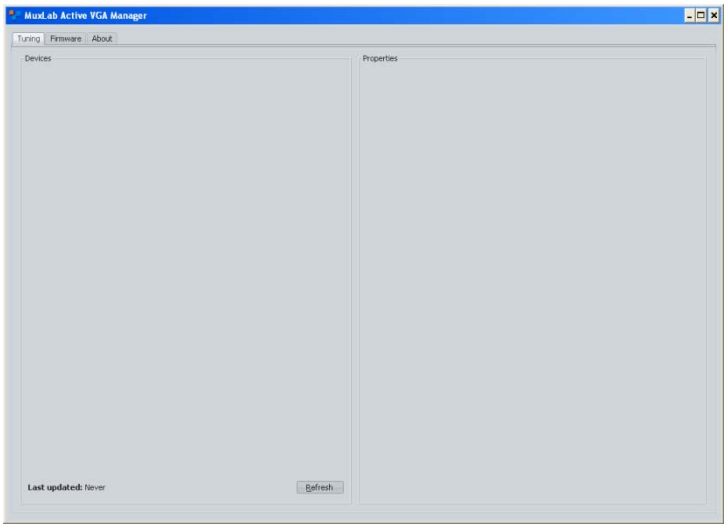


Figure 12: Active VGA Manager Main (Tuning) Screen

The user has a choice of three screens (Tuning, Firmware, and About), each of which is accessed by clicking the associated tab at the top left.

Selecting the Tuning or Firmware tab will bring up a screen that is roughly divided into left and right sections, with a device tree on the left and controls on the right. The About tab lists program build data and contact information for reaching MuxLab.

3.2. Tuning

Introduction

Tuning screen is the default window that opens when running the Active VGA Managed Software (Figure 13). The screen is divided into left and right sections, with a device tree (**Devices** pane) on the left, and controls (**Properties** pane) on the right. Controls are context-sensitive, meaning that they change depending on the device currently being highlighted in the device tree.

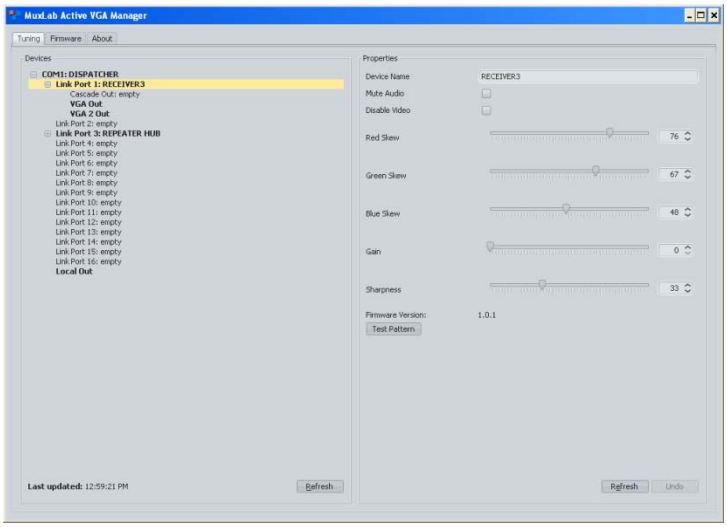


Figure 13: Active VGA Manager Main (Tuning) Screen

The purpose of the Tuning screen is to allow the user to adjust the quality of the image being transmitted from the Dispatcher to any Receiver at a remote display location.

If a Repeater Hub is being used, the tuning screen also allows the user to adjust the quality of the image being transmitted from the Dispatcher to the Repeater Hub, as well as to any Receiver connected to the Repeater Hub.

Adjustments

MuxLab's Active VGA Managed Software adjusts images at the Receiver and Repeater Hub, not at the Dispatcher or Master Computer. The need for image adjustment arises from the fact that various types of distortions can arise when signals are being transmitted over distances as great as 1,000 feet (305 meters).

The user can adjust an image in any one of five ways: (1) Gain; (2) Sharpness; (3) Red Skew; (4) Green Skew; and (5) Blue Skew.

Gain

The Gain of an image refers to its brightness, *i.e.*, its luminance apart from its hue or saturation.

Sharpness

The sharpness of an image refers to its clarity, meaning its ability to display detail (the greater the ability, the greater the sharpness).

Red Skew, Green Skew, and Blue Skew

The color skew (red, green, blue) refers to the misalignment of any of image's three colors with respect to one another. An image signal consists of three colors (RGB), which are *separately* transmitted from the Master Computer and recombined at the Receiver (or at the Repeater Hub, if used). Because each color is transmitted along a separate path, no two paths are exactly equal in length, resulting in a time lag between the reception of color signals at the Receiver (or at the Repeater Hub). The image distortion caused by this time lag is known as skew. The software allows the user to adjust for skew by delaying faster color signals, thereby ensuring that all signals reach their destination at the same time.

MuxLab's Active VGA Managed Software offers the user a sample image in order to calibrate devices. By clicking on **Test Pattern** in the **Properties** pane, a calibration window (Figure 14) appears that enables the user to adjust Gain, Sharpness, and Skew.

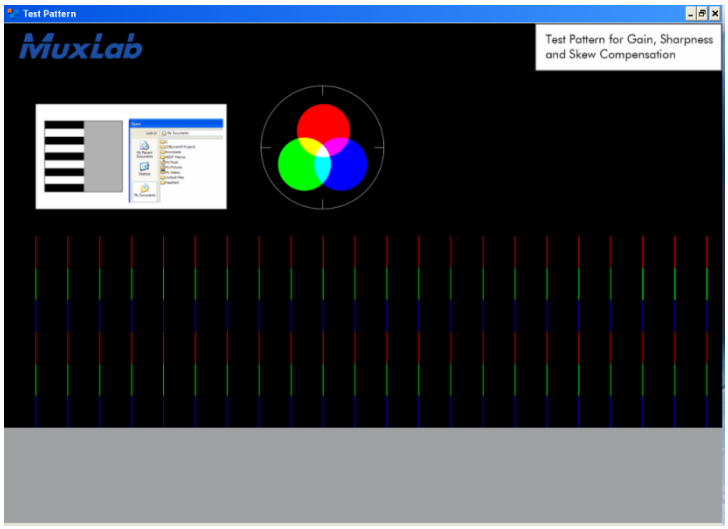


Figure 14: Test Pattern Window

With the Test Pattern window open, the user can adjust properties in the **Properties** pane, which will automatically be reflected in the Test Pattern image. Please note that Test Pattern window must be placed in the screen transmitted to the Receiver.

Startup

When starting the software, the device tree is empty. By clicking **Refresh** in the **Devices** pane, the software scans the entire system for Active VGA Managed products (Dispatcher, Repeater Hub, Receiver), displaying them and their associated ports in the **Devices** pane (Figure 15). The time when the system was last updated is

displayed at the lower left of the screen, next to **Last updated**.

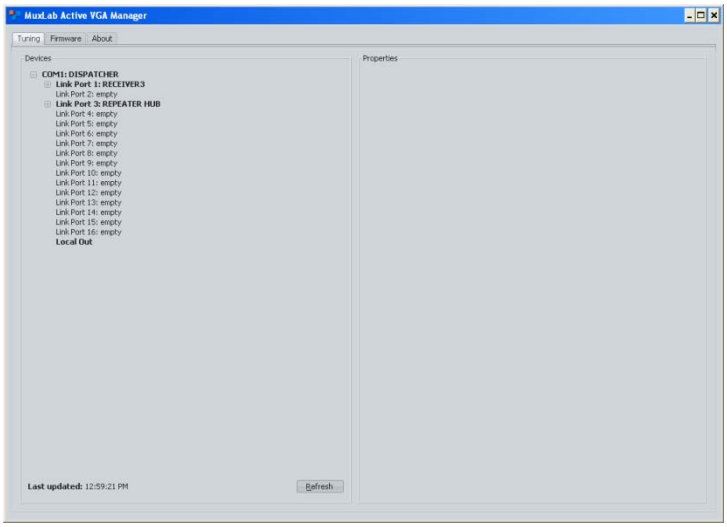


Figure 15: Tuning Screen (Updated)

The following table lists the different entry names that may be found in the device tree (default settings).

Primary Level	Secondary Level	All Lower Levels
DISPATCHER	RECEIVER REPEATER HUB	RECEIVER

The user may change any of these names by highlighting a given entry in the **Devices** pane, and then entering a new name for it in **Device Name** entry box, located at the top of the **Properties** pane. In the **Devices** pane, names displayed in bold signify ports that are currently active.

Because the **Properties** pane is context-sensitive, image adjustment options will not be visible when a Dispatcher is highlighted in the Device tree (Figure 16). This is due

to the fact that when making an image adjustment, the user is actually adjusting the image at a given Receiver or Repeater Hub, not at the Dispatcher.

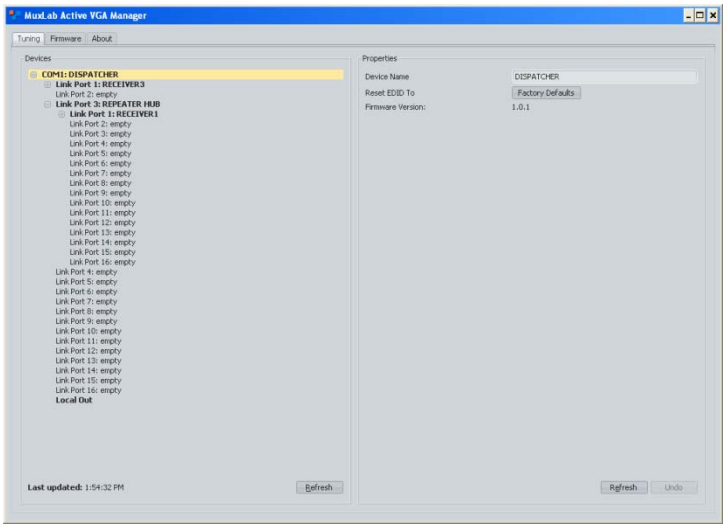


Figure 16: Context Sensitivity of Tuning Screen

EDID Settings

The EDID settings of the Dispatcher may be reset to factory defaults by highlighting the Dispatcher in the **Devices** pane and clicking **Factory Defaults** in the **Properties** pane.

The EDID settings of any display connected to a Receiver may be copied to the Dispatcher by highlighting the given display under the Receiver in the **Devices** pane and clicking on **Dispatcher** in the **Properties** pane. This may also be done by highlighting the Local Out port of the Dispatcher in the **Devices** pane and clicking on **Dispatcher** in the **Properties** pane (Figure 17).

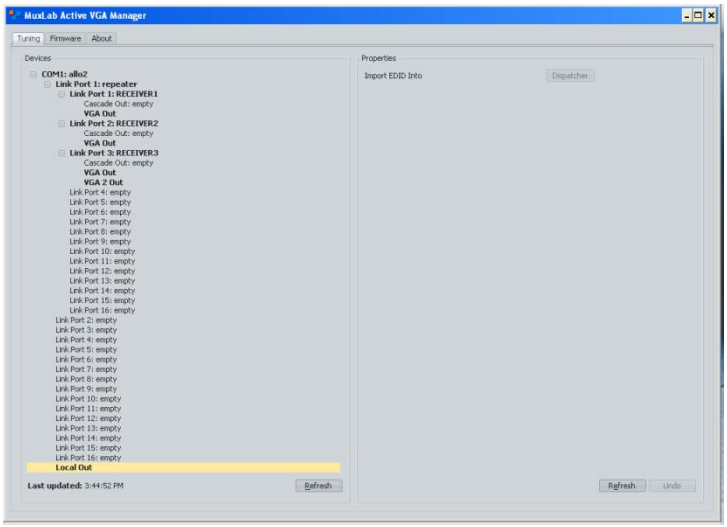


Figure 17: Importing EDID Settings

In cases where an image is being transmitted from the Dispatcher to a Receiver Hub and then to a Receiver, the user is advised to first adjust the image at the Repeater Hub, and then to adjust the image at the Receiver. This is because the range of possible image adjustments at the Receive alone may not be sufficient to compensate for any image problems occurring at the Repeater Hub.

To make an image adjustment, two steps must be taken:

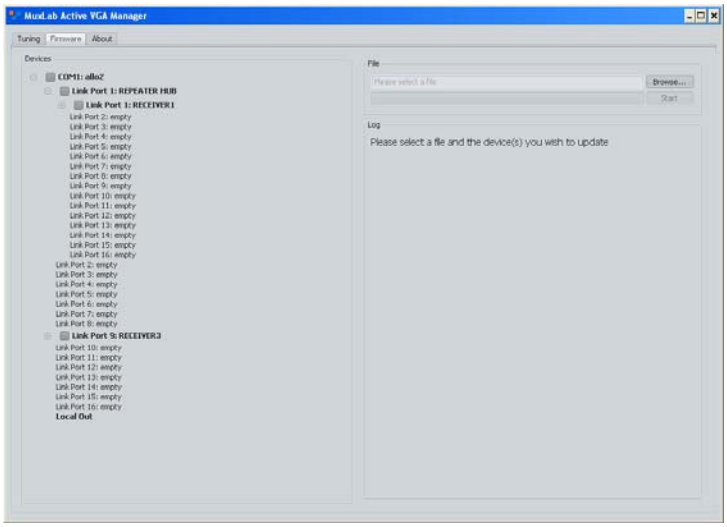
(1) Highlight a Receiver or Repeater Hub in the **Devices** pane. The name of the highlighted device will then appear in the **Properties** pane on the right.

(2) Move the appropriate adjustment slider in the **Properties** pane. Alternatively, the user may enter a number between 1 and 100 in the entry box to the right of an adjustment slider OR click on the up or down arrows to the right of the entry box.

Image adjustments occur immediately. Please note that if an image is being adjusted manually at a given Receiver or Repeater Hub, these changes will not be immediately reflected in the **Properties** pane. For these changes to be reflected, the user must click on **Refresh** in the **Properties** pane.

3.3. Firmware

If new firmware is required for MuxLab's Active Managed system, it can be downloaded from MuxLab's website (www.muxlab.com). The firmware must then be loaded on all components separately. To do this, go to the **Devices** pane of the **Firmware** tab, click the checkbox to the left any device to be upgraded, and then click **Browse…** and select the downloaded file (Figure 18).



Repeat this procedure for all devices in the **Devices** pane. (Please note that once the firmware file has been located for the first time by clicking on **Browse…**, it will subsequently appear by default in the **File** box.)

4. Troubleshooting

The following table describes some of the problem symptoms, the probable causes and possible solutions. If the information below does not solve the problem, the technical support contact information can be found at the end of this section or in the About screen of the software.

Problem	Possible Solutions
Failure to Install	• Check that you have Administrator privileges on the Master Computer. • Check if an older version of software is already installed. If so, uninstall it.
Failure to Run	• Check that Java is correctly installed.
Failure to Communicate with Dispatcher	• Check that the "Active VGA Managed Service" is loaded and running. • If using a USB to Serial Adapter, check that the driver is correctly installed. Check the Device Manager service in Windows that the COM port is present.
Failure of Script to Run at the Correct Time	• Check the Master Computer's clock, and adjust it if necessary.
Computer Fails to Recognize New EDID	• Depending on the Windows operating system, it may be necessary to reboot the system.

When contacting your nearest MuxLab dealer or MuxLab Technical Support at 877-689-5228 (toll free in North America) or (+1) 514-905-0588 (International), please have the following information ready:

- Unit model number.
- Cabling layout. Please include the model of the video card and display monitor(s), as well as cable types and lengths.
- Description of problem.
- List of tests performed.
- Master Computer characteristics (found in the About screen).

5. Product Warranty Policy

Items Under Warranty – Company Policy
MuxLab guarantees its products to be free of defects in manufacturing and workmanship for the warranty period from the date of purchase. If this product fails to give satisfactory performance during this warranty period, MuxLab will either repair or replace this product at no additional charge, except as set forth below. Repair and replacement parts will be furnished on an exchange basis and will be either reconditioned or new. All replaced parts and products become the property of MuxLab. This limited warranty does not include repair services for damage to the product resulting from accident, disaster, misuse, abuse, or unauthorized modifications or normal decay of battery driven devices. Batteries, if included with the product, are not covered under this warranty.

Limited warranty service can be obtained by delivering the product during the warranty period to the authorized MuxLab dealer from whom you purchased the product, or by sending it to MuxLab. MuxLab will not accept any such product for repair without a Return Material Authorization (RMA) number issued by its Customer Service Department and a proof of purchase date. If this product is delivered to MuxLab by mail, you agree to assume risk of loss or damage in transit, to prepay shipping charges to the warranty service location, and to use the original shipping container or equivalent.

THE ABOVE LIMITED WARRANTY IS THE ONLY WARRANTY COVERING YOUR MUXLAB PRODUCT. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER, YOUR SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED FOR ABOVE. IN NO EVENT SHALL MUXLAB BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOSS OF PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF MUXLAB OR AN AUTHORIZED MUXLAB DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; NOR WILL MUXLAB BE LIABLE FOR ANY CLAIM BY ANY OTHER PARTY. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

Warranty Periods

Any product found to be defective within three (3) months of invoice, including one (1) month shelf life, may be returned for replacement by a new unit or a satisfactory repair within one (1) month of having been received by MuxLab. The customer must provide MuxLab with the serial number and proof of purchase of the defective unit being returned. All RMAs issued are subject to inspection by MuxLab, and will be returned to the customer if not properly packaged – units must be returned in their original container or equivalent. MuxLab will not accept any such product for repair without an authorization for its Technical Support department and without an RMA number issued by MuxLab's Customer Service department. For credit and replacement RMAs, the customer will be liable to pay the replacement invoice if defective products are not returned.

Products More than Six Months Old, Including Shelf Life

The defective unit must be returned prepaid to MuxLab, and the unit will be repaired. If repairing the unit is not possible, it will be replaced by an equivalent unit and returned to the customer within one (1) month of having been received by MuxLab. There is no charge for repair (parts and labor) during the full warranty period.

Products Defective and Not Under Warranty

MuxLab's policy is to repair and return any defective MuxLab products that are no longer under warranty. An amount of 25% of the unit's published list price at the time of purchase will be charged. The customer must issue a purchase order in order to cover repair costs.

Each unit will be returned to the customer within one (1) month of having been received by MuxLab. The defective unit must be returned prepaid to MuxLab. The repaired unit will be returned to the customer FOB MuxLab. The repaired unit has a 90-day warranty.

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