Chyron PCI Driver Handbook

1. Introduction

This document and related utilities accompany Chyron systems and 'board-level' products containing **digital pcCODI boards**, Lantern 32 boards, Lantern 64 boards and PCI Squeezeback boards.

Throughout this document, the **digital pcCODI**, **Lantern 32** and **Lantern 64** boards may be referred to as **VPB**s (for Video Processor Board).

The accompanying disc provides drivers for the Chyron components named above, as well as other important utilities needed to properly configure your system for use with those components.

NOTES

- For SOLO users: Driver installation on SOLO requires installation procedures different from those described here. Please refer to the instructions in the SOLO Handbook, Chyron Pub. No. 2a02191. In particular, with the newer Lantern 64 boards, it is necessary to run the **Set Magma Registry 128 MB** utility found under the CD's **Drivers and Utilities** menu.
- If you have purchased a Chyron application for use with the hardware mentioned above, the application's CD may contain more up-to-date drivers than those on this disc.
- Different operating systems will display different screens and dialogs during the installation and configuration processes described herein. The screens and dialogs shown here are taken from Windows 2000 and should be regarded as *examples* of what you may see during these procedures.

2. Overview

When installing a new Video Processor Board, four distinct software driver installations need to occur:

- **Configuration Panel**: The Configuration Panel procedure described in Section 3.1 installs the Configuration Panel application under the Program Files \ Chyron folder. In addition, the application **Configuration Panel** is added to the Windows Start menu under the Chyron Folder. This application enables setting of a variety of board-level registers, including vertical and horizontal timing, NTSC vs. PAL, gen-lock source, etc.
- PCI Video Drivers: The PCI Video Drivers installation installs several shared system .*dll files* (authhost.dll, tmcrt.dll, tmman32.dll) into Windows' System folder (in most situations, WINNT\System32).
- Tmman2K (Section 3.2): A Windows 2000-compatible video driver for VPBs.
- ChyronLMem (Section 3.3): Chyron Memory Manager.

NOTES

The Tmman2k driver needs to be installed from Windows' "Found New Hardware Wizard".

HOWEVER...

Depending on the hardware changes you have made prior to loading the disc, you MAY first see a "Found New Hardware Wizard" <u>or</u> the disc's interface presented by your system's auto-run. Note that these installations may be performed in any order.

3. Procedures

3.1 VPB/Squeeze Configuration Panel

The **VPB/Squeeze Configuration Panel** enables you to set a variety of system registers that control the behavior of your VPB or Squeezeback board.

- 1. From the installation interface's **Drivers and Utilities** page, select **Configuration Panel Installation**. Follow the installation instructions.
- 2. Running **Config Panel** from **Start > Programs > Chyron** displays the menu seen in **Figure 3-1**.

VPB / Squeeze Configuration Pa	anel	_ 🗆 🗙
Boot Board	Board (s) Board Type / Select Board to Boot	
Close Board	Ancillary Reset Line	
Load Graphic [BG]	C 8 C 9 C 10 C 11 C 12 C 13 C 14	
Load Message [FG]		
H Video Timing(-511,+1	Serial Number	
VVideo Timing(0-7)	Keyer Ancillary Data	
Background Line (0-63)		
SE SE	ON OFF ON OFF	
Genlock Digital Analog		
Video Standard NTSC PAL		t

Figure 3-1. The VPB/Squeeze Configuration Panel

Selecting the various configuration buttons issues the appropriate CODI commands to the video board to perform the desired action. The board's state is saved in internal registers and applied upon boot up.

- **Boot Board:** Boots the video board. This must be done first for any other functions to be enabled.
- Close Board: Disconnects application from video board.
- Load Graphic [BG]: (VPBs only) Loads a test graphic into the Background video plane.
- Load Message [FG]: Loads a test page into the Foreground video plane.
- **Board Type / Select Board to Boot**: Enables selection of individual board in multi-board systems.
- Ancillary Reset Line: Sets the line number to disable ancillary data pass through. Normal default is 10 for NTSC/525-line.
- H Video Timing: Sets Horizontal video timing.
- V Video Timing: Sets Vertical video timing.

- Background Line: Sets Background line.
- **Genlock**: Sets genlock source. If Digital, use BNC labeled Bkgnd. If Analog, use external panel.
- Video Standard: Set to NTSC or PAL.
- Serial Number: Displays serial number of video board.
- Send: Sends CODI command strings entered in the adjacent edit field to video board.
- Keyer: Enables/disables internal keyer.
- Key In: Enables/disables key in signal.
- Shape Video In: (VPB only) Enables/disables shaping of incoming video.
- Ancillary Data: Enables/disables passing of ancillary data on line 21.
- Background: Enables/disables background video plane.
- Exit: Exits Configuration Panel application.

For more detailed explanation of these controls, consult the documentation of the software that accompanied your board purchase.

3.2 Installing the "Lantern Board" driver (tmman2k.inf)

1. Following installation of your VPB or Squeezeback board, restart the system. When restart is complete, the **Welcome** dialog of the **Found New Hardware Wizard** should appear. If it does not, make sure that the new device is firmly seated in its PCI slot.



Figure 3-2. Found New Hardware Wizard; Welcome.

2. Install Hardware Device Drivers appears. Select "Search for a suitable driver for my device".

Found New Hardware Wizard			
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.			
This wizard will complete the installation for this device:			
Multimedia Controller			
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.			
What do you want the wizard to do?			
 Search for a suitable driver for my device (recommended) 			
 Display a list of the known drivers for this device so that I can choose a specific driver 			
< Back Next > Cancel			

- Figure 3-3. Decide whether to search for a driver or ask for a list of drivers known to Windows.
 - 3. Load the driver disc into your CD drive and click **Next**. Select the **Specify a location** checkbox and then click **Next**.

Found New Hardware Wizard			
Locate Driver Files Where do you want Windows to search for driver files?			
Search for driver files for the following hardware device:			
Chyron Digital pcCODI (Win2000)			
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.			
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.			
Optional search locations:			
🗖 Floppy <u>d</u> isk drives			
Specify a location			
Microsoft Windows Update			
< <u>B</u> ack <u>N</u> ext> Cancel			

Figure 3-4. Instructing the system where to look for the drivers.

The following dialog appears:

Found New	/ Hardware Wizard	×
	Insert the manufacturer's installation disk into the drive selected, and then click OK.	OK Cancel
	Copy manufacturer's files from:	Browse

Figure 3-5. Prompt to load the driver disc CD-ROM and navigate to the appropriate filepath.

- 4. Click **Browse** and navigate to the **appropriate folder on the CD for your operating system**. Most users will access the **Win2k** or **WinXP** folders. (Shown here is the appropriate filepath in the CD's **Win2k****drivers** directory.) Also, when considering the next couple of illustrations, remember that the drive letter of your CD-ROM device may be different than what's shown here.
- 5. In the Locate Files dialog, select tmman2k.inf and click Open.

Locate File					<u>?</u> ×
Look <u>i</u> n:	🔁 drivers		•	← 🗈 💣 🎟▼	
History	🗒 tmman2K.inf				
Desktop					
My Documents					
My Computer					
My Network Pla	, File <u>n</u> ame:	tmman2K.inf		•	<u>O</u> pen
	Files of type:	Setup Information (*.inf)		Ţ	Cancel

Figure 3-6. Selecting the required file tmman2k.inf.

6. In the next dialog, click **OK**:

Found New	/ Hardware Wizard	×
	Insert the manufacturer's installation disk into the drive selected, and then click OK.	OK Cancel
	Copy manufacturer's files from:	Browse

Figure 3-7. Specifying the filepath from which to load *tmman2k.inf*.

7. A Dialog confirming that the appropriate has been found appears. Click Next.

Found New Hardware Wizard		
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.		
Multimedia Controller		
Windows found a driver for this device. To install the driver Windows found, click Next.		
e:\win2k\drivers\tmman2k.inf		
< Back Next > Cancel		

Figure 3-8. Confirming installation of the driver.

8. The **Digital Signature Not Found** dialog appears. The software search suggested in the text is not necessary. Click **Yes** to continue the installation.



Figure 3-9. "Digital Signature Not Found" warning; disregard it and press "Yes".

9. The hardware installation is complete. Press the **Finish** button.



Figure 3-10. Installation complete.

3.3 Installing Chyron Memory Manager (ChyronLMem)

Do not be concerned by the similarity of this procedure to installation of a hardware driver; you are installing a "virtual device".

- 1. Select Start > Settings > Control Panel.
- 2. Double click Add/Remove Hardware then click Next. The *Add/Remove Hardware Wizard-Choose a Hardware Task* menu is displayed.
- 3. Select Add/Troubleshoot a device and then click Next.

After a short wait, the *Add/Remove Hardware Wizard-Choose Hardware Device* menu (Figure 3-11) is displayed.

Add/Remove Hardware Wizard
Choose a Hardware Device Which hardware device do you want to troubleshoot?
The following hardware is already installed on your computer. If you are having problems with one of these devices, select the device, and then click Next. If you are attempting to add a device and it is not shown below, select Add a new device, and then click Next.
Devices
Add a new device
PCI Device
🔜 ACPI Fixed Feature Button
🛄 Intel(r) 82802 Firmware Hub Device
🔜 System timer
Representation of the second s
< Back Next > Cancel

Figure 3-11. Add/Remove Hardware Wizard Menu - Choose a Hardware Device

4. Select Add a new device and press Next. When the *Add/Remove Hardware Wizard-Find New Hardware* menu is displayed, select No, I want to select the hardware from a list; click Next.

Add/Remove Hardware Wizard		
Find New Hardware Windows can also detect hardware that is not Plug and Play compatible.		
When Windows detects new hardware, it checks the current settings for the device and installs the correct driver.		
Do you want Windows to search for your new hardware?		
© Yes, search for new hardware		
No. I want to select the hardware from a list		
< <u>Back</u> <u>N</u> ext> Cancel		

Figure 3-12. Decide whether to have the system search for new hardware or look for it in a list of devices known to Windows.

5. When the *Add/Remove Hardware Wizard-Hardware Type* menu (Figure 3-13) is displayed, select Other devices and then click Next

Add/Remove Hardware Wizard	
Hardware Type What type of hardware do you want to install?	
Select the type of hardware you want to install.	
 Memory technology driver Moderns Multi-port serial adapters Network adapters NT Apm/Legacy Support Other devices PCMCIA adapters Ports (COM & LPT) Printers 	×
< Back Next >	Cancel

Figure 3-13. Add/Remove Hardware Wizard Menu - Hardware Type

- 6. When the *Add/Remove Hardware Wizard-Select a Device Driver* menu appears, click **Have Disk**.
- 7. Click **Browse** then select *E:\ChyronLMem* (again, remember to substitute the correct drive letter for your CD-ROM drive for "E").
- 8. Select ChyronLMem.inf then click Open.

9. The *Add/Remove Hardware Wizard-Select a Device Driver* menu (Figure 3-14) is displayed. Select Chyron Lyric Memory Manager then click Next.

Add/Rer	nove Hardware Wizard			
Sele V	c t a Device Driver Vhich driver do you want to install for this d	evice?		
\diamond	Select the manufacturer and model of you have a disk that contains the driver you w	ur hardware dev vant to install, cl	ice and then o ick Have Disk	slick Next. If you
Models:	Lyric Memory Manager			
				Have Disk
		< Back	Next >	Cancel

Figure 3-14. Add/Remove Hardware Wizard Menu - Select a Device Driver

10. When the Start Hardware Installation menu appears, click Next to install the memory manager.

Add/Remove Hardware Wizard
Start Hardware Installation Windows is ready to install drivers for your new hardware.
Chyron Lyric Memory Manager Windows will use default settings to install the software for this hardware device. To install the software for your new hardware, click Next.
<back next=""> Cancel</back>

Figure 3-15. Starting ChyronLMem installation

11. When the installation process is complete, click **Finish** to end the procedure.