Windows drivers for the Voyetra V-22 and V-24s (v1.39)

The enclosed driver, **VAPI22.DRV** or **VAPI24S.DRV**, allow you to use your Voyetra **V-22** or **V-24s** MIDI interface with any standard Windows 3.1 or Multimedia Windows application that supports MIDI.

This document will help you install and configure the appropriate driver. It also contains important information on using your V-series interface with different types of Windows MIDI applications.

Installation

Installation of the driver is fairly straightforward. Besides this document file, README.WRI, the disk (or, if you downloaded this from our BBS, the .ZIP file) should also contain these three files:

*OEMSETUP.INI
*VAPI22.DRV or VAPI24S.DRV
*MIDIMAP.CFG

To install a V-series Windows driver:

1) If you obtained the Voyetra V-series Windows driver on a disk, insert the disk into one of your floppy drives.

Or, if you obtained the driver via our BBS, copy the three necessary files to either a floppy disk or to a temporary directory on your hard drive (for example, C:\VDRIVERS).

2) From the Windows Control Panel, run the Driver applet.

3) From the Drivers applet, choose "Add...".

4) From the Add dialog box, highlight "Unlisted or Updated Driver" and choose "OK".

5) From the Install Driver dialog box, type in the drive letter of the floppy drive containing the driver disk and choose "OK".

Or, if you downloaded the drivers from our BBS and copied them to a directory on your hard drive, type in the drive and directory where those files are located (C:\VDRIVERS, etc.). Then choose OK.

6) From the Add Unlisted Or Updated Driver dialog box, choose OK.

7) In most cases, the installation will then present you with a Driver Exists message box, giving you the option of overwriting your current MIDI maps with a new one that will route MIDI data on channels 1-10 to output port 1 of the V-22 or V-24s. The purpose of this MIDI map is to make it as easy as possible to use your V-22 or V-24s to play MIDI files from "multimedia" applications like the Media Player, presentation programs, etc.

If you're not sure whether you want to install this MIDI map, see the later section "MIDI Mapper Considerations".

8) The "Voyetra V-22 (or V-24s) Setup" dialog box will appear. Select the correct I/O Port and Interrupt for your interface. The V-series interfaces, as shipped, default to I/O Port (Address) **330** and Interrupt (IRQ) **2**. Unless you've physically changed the jumper settings of your interface, you can select the default values. If you *have* changed the jumper settings, enter the correct values. Then choose OK.

For more information on the I/O Address and IRQ jumper settings, refer to your V-22 or V-24s Users Guide.

9) You will then be presented with a message box verifying that the Voyetra driver has been added and prompting you whether you want to re-start Windows so that the new driver can take effect. Choose "Restart Now".

10) After re-starting Windows, run the Driver applet, highlight the Voyetra driver in the list of installed drivers, and choose "Setup". From the Setup dialog box, choose "Test".

If you get a "Hardware Failed Test" error message, see "Hardware Conflicts" below.

MIDI MAPPER considerations

Windows uses an application called the MIDI Mapper to route different channels of a MIDI file to different output devices. The primary purpose of the MIDI Mapper is to provide Windows with a "virtual output device" so that you can play MIDI files conforming to Microsoft's Multimedia Authoring Guidelines with "multimedia" and "MCI layer" applications like the Media Player, MacroMedia Action!, Compton's Encyclopedia, Voyetra's Jukebox for Windows, etc.

Most MIDI sequencers don't even use the MIDI Mapper to route MIDI data. Rather, they allow you to route individual tracks to any of the available output devices right from the program itself. Therefore, if you primarily use Windows for sequencing, not multimedia, chances are you don't really care about the MIDI Mapper at all.

When you install the V-series Windows drivers for the first time, you will be presented with a messaage box that reads "**The required midimap.cfg driver is already on the system. Do you want to use the current driver or install a new driver?**". You can either choose "New" or "Current":

*Choose "New" if you intend to use your V-22/V-24s as part of your "multimedia" setup with a General MIDI-compatible synthesizer **and** you don't care about overwriting your existing MIDI maps.

If you choose "New", the installation will create a new MIDI map that will route MIDI data on channels 1-10 to output port 1 of the V-22 or V-24s. This will allow you to connect a General MIDI-compatible synthesizer (like a Roland Sound Canvas) to output port 1 and use it transparently with the types of multimedia applications mentioned above.

A word of caution: Unfortunately, Windows does not provide a way to *add* a new MIDI Map to the existing ones; it only allows you to overwrite the existing MIDI maps with new ones. **If you choose to install the new MIDI map for the V-22 or V-24s, this will overwrite any current MIDI Mapper configurations.**

*Choose "Current" if you don't want to overwrite your existing MIDI maps. You can manually create your own "multimedia" MIDI map for your V-22 or V-24s by running the MIDI Mapper and assigning Source Channels 1-10 to output port 1 of the V-22 or V-24s. If you're not sure how to create your own MIDI map, refer to the Micosoft Windows User's Guide.

Hardware Conflicts

"Hardware Failed Test" Error Message

The Setup window for this preliminary version of the driver is not capable of testing the IRQ. If, when you choose "Test", you receive a "Hardware Failed Test" error message, it probably indicates that either you've specified an incorrect I/O Address, or there is an I/O Address conflict.

Since I/O Address conflicts are relatively rare, first double-check the I/O Address setting of the Setup window and the interface itself to make sure they both agree. If, after doing this, you still receive the error

message, refer to the V-22 or V-24s Users Guide for information on resolving I/O Address conflicts.

Interrupt (IRQ) Conflicts

If you are not able to get MIDI input or output but you don't receive a "Hardware Failed Test" error message when you Test the driver, this may indicate an IRQ conflict or mismatch. Since the Setup window for this preliminary version of the driver is not capable of testing the IRQ, refer to the V-22 or V-24s Users Guide for information on detecting and resolving IRQ conflicts.

Using the V-24s' SMPTE features in Windows

Reading SMPTE

Unfortunately, Microsoft's Windows MIDI Driver Protocol does not provide a standard way to send SMPTE time code to an application. To overcome this, the V-24s Windows driver converts incoming SMPTE code to MIDI Time Code (MTC), which most Windows-based sequencers and many other advanced music applications *can* read.

Note: Windows MCI layer applications (Media Player, most current "multimedia" applications, etc.) cannot read SMPTE time code.

The V-24s driver presents three MIDI input ports to a sequencer: two of them are the V-24s' physical MIDI input ports; the third is a "virtual" MIDI port, the V-24s' SMPTE reader. When the V-24s is locked to SMPTE, this third input port will send MIDI Time Code to the application.

To use the V-24s SMTE reader with your Windows sequencer:

Note: As used below, the term "sequencer" is used to refer to any advanced Windows music application that supports MTC sync.

1) If your tape is not already striped with SMPTE time code, stripe it using the method outlined in the next section.

2) Connect the output of your tape deck's SMPTE track to the V-24s SMPTE In.

3) From your sequencer, enable the input device called "Voyetra V-24s SMPTE Reader". The method for doing this will vary from sequencer to sequencer. For example, in Cakewalk Pro for Windows, this is done by choosing "MIDI Devices" from the Settings menu.

Once your sequencer has enabled the V-24s SMPTE reader, the System Monitor LED on the V-24s will be turned off. If the LED continues to flash every two seconds, it means that the sequencer hasn't properly enabled the V-24s SMPTE reader.

4) Set-up your sequencer to sync to MIDI Time Code (MTC) by choosing the proper sync mode, frame rate, and offset as per the manufacturer's instructions. Some sequencers, such as Cakewalk for Windows, will call this sync mode "SMPTE/MTC". Others will simply call it "MTC".

5) Start syncing to SMPTE as per the sequencer manufacturer's instructions.

Once the V-24s detects SMPTE timecode, its System Monitor LED will remain lit. If the LED stays off, it either means that the V-24s probably isn't receiving good time code, or that the V-24s isn't properly connected to your tape deck. Refer to the V-24s Users Guide.

Generating SMPTE

Since Windows MIDI Driver Protocol does not provide a standard way for an application to tell a MIDI interface to generate SMPTE, it is not possible in most cases to generate SMPTE directly from an application. Instead, you can use the Driver applet's Setup window to generate SMPTE with the V-24s.

To generate SMPTE with the V-24s:

1) Connect the input of your tape deck's SMPTE track to the V-24s SMPTE Out.

2) If you are currently running a MIDI program, exit the program.

3) From the Windows Control Panel, run the Driver applet.

4) From the Drivers applet, highlight the V-24s driver in the list of installed drivers and choose "Setup".

5) From the Voyetra V-24s Setup window, choose "Generate...".

6) From the V-24s SMPTE Generation window, select the desired Frame Rate and, if necessary, enter a Generator Offset value in the format **HOURS:MINUTES:FRAMES**.

The Generator Offset is the SMPTE time with which the generated time code will start. For example, if you enter **1:0:0**, the V-24s will generate SMPTE time code starting at 1 hour.

7) Start recording with your tape deck and choose "GEN" to start generating SMPTE.

The "Amount Generated" will keep a running display of how much SMPTE time code has been generated.

8) Choose "STOP" to stop generating SMPTE.

Features not implemented in this version of the driver (v1.39)

The following features are not yet implemented, but will be in subsequent versions.

1) The Test routine in the Setup window does not test for correctly functioning IRQ hardware.

2) The Help button and Status box in the V-24s Setup window are currently non-functional.

3) The dialog box that is called up by clicking on the V-24s Setup's SMPTE button is currently non-functional. These are mainly advanced SMPTE options that will be implemented in the future.

4) The V-24s Audio Click Detector is not yet supported.