Opcode Tech Primer

Music Software is a very powerful and sophisticated tool and Opcode is the industry leader in reliability and ease of use. But as with any software, technical difficulties can arise in the course of operating our programs. Most of these problems can be traced to one or more of several basic causes, and the following information and procedures have been found to resolve a large majority of people's questions and technical difficulties. We ask that you go through these things thoroughly before contacting Technical Support, as in many cases you'll be able to solve your own problem and get back to making music right away—without even having to call us or log onto our Web site.

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CH 1: WHERE THE SOFTWARE IS INSTALLED

The most basic information you need to be aware of when using any program is which files are installed and where they reside on your hard disk.

OPEN MUSIC SYSTEM (OMS)

Important OMS files and folders installed to your hard disk include:

- The *OMS Setup* application is installed into the "OMS Applications" folder, which resides in the "Opcode" folder on the top level of your hard disk.

  NOTE: If installing from an OMS disk set, the OMS Applications folder is placed on the top level of your hard disk (not in the Opcode folder).

- The "OMS Folder" is installed into the System Folder. The OMS Folder contains MIDI interface drivers, Factory Names documents, the OMS Time Manager, and OMS preferences.

- The *Open Music System* extension is installed into the Extensions folder within the System Folder. OMS applications will not run without this extension installed.

GALAXY/GALAXY PLUS EDITORS

Installed files for Galaxy and Galaxy Plus Editors include:

- A Galaxy folder containing the application, along with Librarian and Editor modules, is installed into the Opcode folder, on the top level of your hard disk.

- *Galaxy Setup* and *Galaxy Librarian Modules* files are written into your System Folder.

- The *Galaxy Keywords* file is written into the Preferences folder inside your System Folder.

VISION, STUDIO VISION, AND OVERTURE

Installed files for these applications include:

- A folder containing these applications and their related files is installed into the Opcode folder, on the top level of your hard disk.
- Preference files are written into the Preferences folder within the System Folder.
- In order to display and print music notation, the *Alois* and *Aloisen* fonts are installed into the Fonts folder of the System Folder.

☆ *NOTE: There is a complete graphic depiction of installed files (and where they reside) in the "Quick Start" card included with most Opcode applications.*

CH 2: WHAT TO DO WITH OLDER SOFTWARE VERSIONS

If you have older versions of Opcode applications installed there are several things to keep in mind.

You can only have one version of OMS installed at a time. Because it uses a System extension, multiple versions of OMS can conflict with one another and cause serious MIDI communication problems. If for some reason you have multiple copies of OMS on your computer, you should trash the older OMS files (OMS Folder, OMS Setup application, and the Open Music System extension) to eliminate any possible conflicts with the current version.

☆ *NOTE: The OMS extension used to be named "Opcode MIDI System." If this version is present you should remove it.*

With the exception of OMS, you can leave old versions of the software on your system if you want. Opcode applications generally have no interaction with earlier versions—it's as if you have two entirely different programs on your computer. However, most people find it less confusing to have just one version of an application on their computer. To remove an older software version, simply go to the folder (outlined in Where the Software is Installed (pg. 1)) and drag the application and its related files to the trash.

Authorizations are separate from installations. The authorization to run a particular version of a program is installed on your computer separately and applies only to that version. This means that as long as you don't deauthorize a particular version of a program you can trash all the files and reinstall them as many times as you want without affecting your authorization. If you want to move your software to a different computer (or hard disk), make sure to first deauthorize your hard disk with the *Deauthorization* program located on disk 1(key disk).

CH 3: THE FUNCTIONAL RELATIONSHIP BETWEEN OMS, GALAXY/GPE, AND VISION/SVP/OVERTURE

The Open Music System (OMS) keeps track of which MIDI devices you have, how they are connected, and which patches (sounds) they are using. OMS also makes it easy for music applications to communicate with MIDI hardware connected to your computer.

OMS stores information about your MIDI devices in Studio Setup documents, which are edited in the OMS Setup application. An OMS Studio Setup that accurately reflects your physical studio configuration, and which responds correctly in "Test Studio" mode (see MIDI Communication Problems (pg. 8)), is the first and most essential component of your MIDI system.

Galaxy is patch librarian software that can retrieve, store and organize your synthesizer patches. Galaxy stores patches in Bundles, which in turn provide patch names to applications like Vision, Studio Vision and Overture. Although Galaxy works with hundreds of devices, not all instruments are supported.

If your device is not specifically supported by Galaxy and you would like to view patch names in Vision (or Studio Vision, Overture) you have the following options:

- OMS provides a number of factory names documents. These documents, which are stored in your OMS Folder, are typed-in lists of stock factory patches; this means however that you can't alter the patches in the device or change their ordering.
- Another option is to create a custom names document. To do this open the Names Window (accessed from either the Windows menu in Vision/Studio Vision or the Options menu in Overture) and type the appropriate patch names into the provided template.

Galaxy Plus Editors does everything Galaxy does and adds on-screen graphic editing of synth sounds. Not all devices supported with a Librarian module in Galaxy have a corresponding Editor module in Galaxy Plus Editors.

You will spend most of your time using Vision, Studio Vision, and Overture for writing and arranging music. They utilize the information from your OMS Studio Setup and Galaxy Bundles. Once you have successfully configured your OMS Studio Setup and loaded Galaxy Bundles from your various MIDI devices, it is not necessary to actually run those applications. You can open your OMS Studio Setup from within Vision∕Studio Vision in the **Setups** menu and from Overture in the **Options** menu. In addition, choose **Windows**>**Names** in Vision∕Studio Vision (or **Options**>**OMS Names** in Overture) to subscribe to a Bundle or Names document in order to get patch names.

Keeping in mind the functions of the various programs, and their relationship to one another can often help you focus in on where a particular problem may be occurring. For instance, if you are in Vision and you are not getting a MIDI signal in or out of a device, the first place to check is OMS, since it is mainly responsible for MIDI management. Or, if you are having trouble with a particular Bundle in Overture, the first thing to try would be to launch Galaxy and see if the same problem happens there, since Galaxy is responsible for handling patch information.

CH 4: BASIC TROUBLESHOOTING STEPS

EXTENSION CONFLICTS

A very large percentage of the problems people have with their Macintosh software result from a conflict between their various System extensions. Extensions are programs or parts of programs that are automatically loaded into RAM when you turn on your computer— they appear as little puzzle-piece icons at the bottom of your screen when you boot up. In general, it is best to run with as few extensions as possible to avoid conflicts.

Macs running system 7.5 or later come with the *Extensions Manager* control panel; if you uncheck an extension listed there and then restart the computer, it will not be loaded into RAM and therefore cannot conflict with another extension.

☆ *NOTE: Macs with earlier versions of the System software can accomplish the same effect by dragging an extension from the Extensions folder (located in the System folder) to any other location on your hard disk. There are also several commercial startup managers that will perform this same task.*

For using Opcode software, you only need two or three active System extensions. The first of these is always necessary, and that is the *Open Music System* (OMS) extension. If you are working with MIDI only (no digital audio), OMS is the only extension you need to run most Opcode applications. If however you intend to use digital audio, you will need either Apple's *Sound Manager* extension or, if you are using Digidesign audio hardware, the *DigiSystem INIT*. In addition, if you are using a MIDI card or interface with an Opcode application that requires an extension, such as Digidesign's Sample-Cell, you will need to retain those extensions as well. You will also need your printer driver installed if you intend to do any printing.

Of course, it is ultimately up to you as to which extensions you want active. However, if you are experiencing problems while using our software and are going to contact Technical Support, we ask that you first disable all other extensions besides the Open Music System, and your audio extension if you are using one, and restart your computer to see if the problem is resolved. If it is, then there is an extension conflict and you will need to either run with a reduced set when using our software, or systematically go through your extensions, loading them in groups, to try and locate the conflict.

CORRUPTED PREFERENCE FILES

Occasionally, an application's preference file(s) can become corrupted, usually resulting in small glitches or strange performance in a previously functioning program. If these files are trashed or moved when the program is not running, they will be recreated clean when you relaunch the application.

For Vision, Studio Vision and Overture, these files reside in the Preferences folder inside the System Folder and are called *Vision Preferences* (or Studio Vision Preferences or Overture Preferences). If you develop an odd or anomalous problem with an application, simply quit the program and drag the file from the Preferences folder to the desktop; then reopen the program to see if the problem is resolved. If it is, then there was some file corruption in the preferences and you can drag it to the trash. You will however have to reset a few of your application's parameters (Metronome's MIDI note assignment, for example). If the problem was not solved then simply drag the old preferences file (from the desktop) back into the Preferences folder and continue troubleshooting.

☆ *NOTE: Once you've configured your application to your liking, it is a good idea to make a copy of your preferences file and save it to a floppy disk. That way if you later need to trash the file due to corruption, you can simply replace it with the backup—thereby saving you from resetting your preferences in the application.*

In Galaxy or Galaxy Plus Editors the files in question are *Galaxy Setup* and *Galaxy Librarian Modules* in the System Folder, and *Galaxy Keywords* in the Preferences folder. If there is a particular Bundle that has developed a strange problem or won't load patches correctly, you can try quitting the application and removing these files. When reopening Galaxy you will see a "Scanning" dialog, which means that your OMS Studio Setup is being scanned so the relevant modules are automatically reinstalled.

☆ *NOTE: If you have a K2000, you may not want to immediately trash the Galaxy Setup file since it stores important ROM information. Instead place Galaxy Setup on your desktop to see if the new file alleviates the problem —if not, drag the old Setup file back into the System Folder.*

☆ *NOTE: If you have been assigning keywords to patches, it would be better not to actually trash Galaxy Keywords. Just move it out of the folder to see if it fixes the problem. If not, simply drag the old Keywords file back into the Preferences folder.*

REINSTALLING APPLICATION SOFTWARE

If disabling extensions or trashing preference files does not solve your problem, it is sometimes a good idea to trash all application files and do a fresh install from the floppy disks (or CD-ROM). This will eliminate any corrupted application files and restore you to an original "clean" state. Remember to store any files you have made with the application (sequences, Studio Setups, Overture files or Galaxy bundles) separately from the application so you don't accidently throw out something you want to keep.

☆ *NOTE: You do not need to deauthorize the application because its authorization key remains on your hard disk until you run the Deauthorize application.*

MIDI COMMUNICATION PROBLEMS

Many problems with MIDI software revolve around not getting input from a controller to the software, or not getting output from the software to a MIDI device. These are MIDI communication errors and are probably due to one of several causes.

YOUR OMS STUDIO SETUP IS IMPROPERLY CONFIGURED OR NOT CURRENT:

- Thoroughly examine your Studio Setup to make sure all of your devices are properly defined and depicted. Pay special attention to whether the INs and OUTs for all devices (virtual "patch cords" with arrowheads) reflect the physical patch cords of your actual studio. Also, double-click on the device icon to open the MIDI Device Info Window and check that each device is set up to receive on the appropriate MIDI channels, and that you have established whether it is a controller and if it is multitimbral. It is especially good to check these things if you haven't been using the program for a while, or if you have opened an old Studio Setup with a later version of the program, as it is easy to forget about changes in your studio that may not be reflected in your OMS Setup.

- Make sure there is a small diamond next to the name of the Studio Setup name in the window's title-bar, thus indicating that it is the *current* Setup document. If there isn't a diamond, choose **File**>**Make Current**.

- Choose **Studio**>**Test Studio** to verify MIDI input and output. Once enabled, move the cursor over one of your device icons and notice the cursor turn into a small note (if it doesn't, verify that **Studio**>**Test Studio** is checked); then single-click on the device and you should hear random bursts of MIDI notes from that instrument (this can be quite loud so make sure your volume is down). Next play some notes on any controller keyboard—you should hear your Macintosh say "MIDI received."

YOUR PHYSICAL STUDIO IS NOT SET UP CORRECTLY:

- Check and double-check that all devices have the desired MIDI inputs and outputs correctly connected to your interface (IN to OUT, OUT to IN).

- If you have a multiport interface (Studio 64X, Studio 4 or Studio 5), it is important that just one device is used for each port number—even if the device is connected with just one MIDI cable. In other words, always treat the paired IN/OUT ports of the interface as though they were dedicated to a single device.

- If the communication problems are with a specific device, try substituting different MIDI cables to rule out defective cables.

- If the problem was only on playback, check that the device's volume was turned up, and that any mode or other front panel settings, which may be necessary to allow the device to send or receive MIDI, are correctly configured.

- Try using a different serial cable.

  IMPORTANT: Most interfaces have LEDs that flash on input/output, which can help narrow your problem.

- If you're not getting MIDI playback and the interface's output LEDs are flashing, then the problem must reside in the MIDI cable connecting the device to the interface, or in the device itself. If you are not getting playback and the interface's output LEDs are not flashing, then the problem probably resides within the computer (OMS problem or extensions conflict) or with the interface itself (try using your setup with another interface to test).

- The reverse is obviously true for problems on recording from a sequencer. If you have a record problem and the interface's input LEDs are flashing when you play the controller, then the problem is likely with your OMS Setup (or an extensions conflict); if the LEDs are not flashing then its probably your device, cables or interface.

YOU MAY HAVE AN EXTENSION CONFLICT:

- Some MIDI communication problems are related to System conflicts. See *Extension Conflicts (pg. 6)* for more details.

CH 5: MACINTOSH SYSTEM ERRORS AND WHAT TO DO ABOUT THEM

The Macintosh has a series of numbered error messages that it displays when encountering a problem. There are several important things to know about these messages. First, you should always restart your computer when one of these System errors occurs. There are a great many of these messages, and often the actual message displayed is very cryptic and does not indicate the real problem.

There are however several basic causes and possible remedies:

- You have an extension conflict. Extension conflicts are the most common cause of Mac System errors, particularly positive numbers 1-100. See Extension Conflicts (pg. 6).
- The application is running out of allocated memory. Programs claim a chunk of your total RAM when launched; if it uses up this RAM, it can cause a crash. To allocate more memory, quit the program and single-click its icon from the desktop and choose **File**>**Get Info**; then increase the number in the "Preferred size" field (usually an increase of 40-60% will do the trick). This assumes of course that you have the available RAM to spare; if not, you may wish to invest in more memory for your computer.
- The System software has become corrupted. Apple does recommend reinstalling your OS periodically to keep this in check (something like getting the oil changed on your car). If your problems are not remedied by any of the procedures previously mentioned, reinstalling the OS is often the ultimate solution.
- There is a bug in the application. We test all our applications rigorously, and have a strong Beta-test program, but occasionally problems do get through. If you have tried all the above steps and a problem persists, we are eager to see if there is a bug with the application, and fix it as soon as possible. If you do call with what you think is a software bug, it helps us enormously if you can provide a "recipe" to reproduce the problem (bugs are almost always reproducible on a wide range of computer models).

CH 6: INFORMATION YOU NEED BEFORE CONTACTING TECHNICAL SUPPORT

If you have been through the above steps and are still experiencing problems, please have the following information ready before contacting Tech Support:

CUSTOMER CODE OR APPLICATION SERIAL NUMBER

Your customer code is "ZZ," the first five letters of your last name or of the institution that purchased the software, and some number. It is created when we receive your registration card and is then printed on anything we later send you. If you have not yet registered your software, you must provide us with the serial number printed on disk 1 of the original version of the program you purchased.

APPLICATION VERSION NUMBERS

This is essential because certain application versions, or combination of versions, can have problems we already know about, which means we can often give you a solution immediately. To find the version numbers, either look at the disks used to install the software you are currently using, or single-click on the unopened application icon and choose **File**>**Get Info** (or type command-I). It is especially important to know your version of OMS as many of what seem to be Vision, or Galaxy or Overture problems are really OMS problems.

MACINTOSH MODEL, OPERATING SYSTEM VERSION, AND RAM SIZE

Many problems are related to specific computers or operating systems. To find out your version of the Apple System software and how much RAM your computer has, choose **About this Macintosh** from Apple menu (with the Finder current).

CH 7: FREQUENTLY ASKED QUESTIONS

Q: WHY AM I HAVING TROUBLE PRINTING WHILE I RUN OMS APPLICATIONS?

A: Choose the OMS MIDI Setup menu item and temporarily uncheck BOTH serial ports. When the printing job is completed, recheck the port(s) for MIDI use.

Q: WHAT DO I DO IF MY MIDI INSTRUMENT IS NOT LISTED IN THE MIDI DEVICE INFO WINDOW'S LIST?

A: If your device is not listed in the *Manufacture* and *Model* pop-ups of the MIDI Device Info Window, you can still add it to your OMS Studio Setup and use it with OMS applications.

① Choose **Studio>New Device** to open the MIDI Device Info Window.

② In the Manufacturer pop-up choose **Other** (if the Manufacturer is not listed); then in the Model pop-up select **Other**.
The choice "Other" should be at the top of both of these pop-up menus.

③ In the Name field, below Model, type in the desired instrument name.
Your OMS applications will reference this device by the name you enter.

④ Lastly, specify receive channels, sync options, and whether the device is a controller and if it is multitimbral.

Q: WHY IS MY INTERFACE'S RED INPUT LED CONSTANTLY FLICKERING OR PULSING FAINTLY.

A: Many newer MIDI devices send out a message called *Active Sensing,* which tells devices (to which they are connected) that they are online and ready to go. This creates a faint red LED pulse on your interface, even when you are not playing.

Q: CAN I GET PATCH NAMES IN VISION FOR MY DEVICE EVEN THOUGH IT ISN'T SUPPORTED BY GALAXY?

A: Yes. To create a custom name list, follow these steps:

① Define the device in your OMS Studio Setup and activate **Test Studio** to make sure the device is sending and receiving MIDI signals.

② In Vision, or Studio Vision, choose **Windows>Names** to open the Names Window.

③ Highlight the desired device and choose **Names>New Patch Document**.

If your device is not listed, make sure your *current* Studio Setup contains the device.

④ Single-click on the Patch Name column for the first patch number (defaults to number 0) and type in a patch name.

Repeat this procedure for all the patches you wish to have listed in the Names document.

⑤ Once you have entered all the patch names, click **OK** and then **Save**.

The new Names document is then saved and automatically subscribed. The device's patch names then appear in Vision's Current Patch field (next to the trumpet icon).

Q: WHAT ARE THE REQUIREMENTS TO SUPPORT A NEW MIDI DEVICE IN GALAXY?

A: To support any new MIDI device takes many, many engineering hours to work with the device in house and develop a new Galaxy module. In order to justify those engineering hours, Opcode has four major requirements:

• The device must be selling well, to many users, for us to have a large enough customer base to support it.

• We need the cooperation of the manufacturer to provide us with at least one loaner unit along with its system exclusive specs.

• The unit should be highly programmable. We don't get many requests to support units that use mostly presets with just a few editable parameters.

• We also factor in how many requests we get from users to support the device.

Q: WHY DON'T MY SYNTHESIZER PATCH NAMES FROM GALAXY APPEAR IN VISION?

A: A Bundle must be retrieved from your instrument. Then from within Galaxy, choose **File**>**Save and Make Current** so the patch names appear in Vision.

☆ *NOTE: When creating bundles in Galaxy it is sometimes necessary to load all banks in the bundle. For instance, if you have not retrieved the Proteus Program Map bank, names will not appear in Vision.*

If the patch names still don't appear after Making Current in Galaxy, or subscribing to the Bundle in Vision, your instrument's Device Info may be set incorrectly in the *current* Studio Setup. If the device's Model is set to "Other" you will be unable to subscribe. Make sure the name specified for Model matches the Bundle type to which you are subscribing.

Q: WHERE CAN I FIND ONLINE HELP FOR VISION/STUDIO VISION, GALAXY AND OMS?

A: Online help is available within most Opcode programs:

• **Vision**, **Studio Vision**: Use Command-Shift-Option to click on any field, button, icon or menu item for pop-up help on that topic.

• **Galaxy**, **Galaxy Plus Editors**: Open a new Bank, Bundle or Library and the Help option in the Apple Help menu ("?") will tell you everything you need to know about using that device.

• **OMS Setup**: Incorporates Apple's Balloon Help; once enabled, simply point to any icon in your Studio Setup, or any menu item, for balloon help.

CH 8:   BACKING UP YOUR WORK

Please back up your files! The most important rule of working with any computer is "back up your data," whether it's word processing, graphics or music. Back up everything in three locations if possible. Floppies, external drives and removable cartridge are excellent ways to archive your data. Backing up your work doesn't take nearly as much time as losing a file and "learning the hard way."

Do a "Save As" every 15 minutes or so and switch to a different disk or location. Add the date or version number (2, 3, 4, etc.) to successive versions when saving and keep some of your previous versions as extra "insurance." By doing this regularly, you will never lose more than a few minutes of work. Floppies and cartridges can be stored in different locations so if you have a fire or your computer is stolen, you still have years of valuable work saved.

Although digital audio takes a lot of hard disk space, removable cartridges and more affordable hard disk prices allow most users to regularly back up audio. Digidesign owners can even back up digital audio to an audio DAT recorder.

Other files worth backing up include:

- OMS Studio Setup documents;
- Galaxy Bundles, Banks, and Libraries;
- Preference files for Vision, Studio Vision, and Overture;
- Galaxy preference files (including Galaxy Setup, Galaxy Librarian Modules, and Galaxy Keywords).