The MIDI Switch Controller

User's Guide

Music Quest, Inc.

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Introduction

Feature Summary

Congratulations on your purchase of Music Quest's *MIDI Switch Controller*. The MIDI Switch Controller (MSC-4) is a 4 X 4 switching system designed to meet the MIDI switching needs of today's computer-musician and computer-music hobbyist. The MSC-4 is a complete package consisting of:

- The MIDI Switch Card
- The MIDI Outlet Box
- Switch Controller Cable
- Switch Manager Software

The basic design of the MSC-4 allows any one of four MIDI inputs to be assigned to a MIDI output. A single input can be routed to one, two, three, or all outputs. Thus, the MSC-4 functions as both a switch and a MIDI "thru box". All switching functions are controlled from your PC using the Switch Manager software. The Switch Manager gives you complete control of your MIDI gear moving away from your PC. You can cable your equipment once, and then forget about it!

While the MSC-4 will work with any MIDI device, it is designed to accommodate the typical computer-music studio composed of a:

- IBM PC or compatible computer
- PC MIDI interface
- MIDI keyboard, synthesizer, guitar, or other MIDI controller
- Multi-timbral tone generator
- Rhythm or drum machine

System Requirements

IBM PC, PC/XT, PC/AT, PS/2 Model 25 or Model 30, or true compatible with a minimum of 256K RAM. DOS 2.10 or later.

Compatibility

The MSC-4 is compatible with all known MIDI interfaces for the IBM PC family. This includes:

- Music Quest MIDI Co-processor Card
- Roland MPU-401 with IPC card
- Roland MPU-IPC card
- Voyetra OP-4000 and OP-4001
- CMS-401
- IBM PC Music Feature

About this Guide

The MIDI Switch Controller User's Guide is designed to help you get the most out your MSC-4. It is divided into the following chapters.

Introduction — That's this chapter. It provides you with a summary of the MSC-4's functions.

Installation — Read this chapter to learn how to install the MIDI Switch Card in your PC and connect it to the MIDI Outlet Box. This chapter also includes instructions for installing the Switch Manager Software.

MIDI Switch Controller Functional Overview — Read this chapter to learn about the design and operation of the MSC-4. It introduces you to MIDI switching.

Using the MIDI Switch Controller — Read this chapter to learn about the various ways you can connect (configure) your MIDI equipment.

Using the Switch Manager Software — Read this chapter to learn how to use the three different Switch Manager programs.

Installation

The MIDI Switch Card

The MIDI Switch Card provides the switching and control functions for your Switch Controller. There is a single 25 pin connector on the Switch Card that you need to know about. Pick up the board so that the silver metal bracket faces you, with the bent part of the bracket being at the top (Figure 2-1). During the installation procedure, you will connect the Switch Controller Cable to this connector.

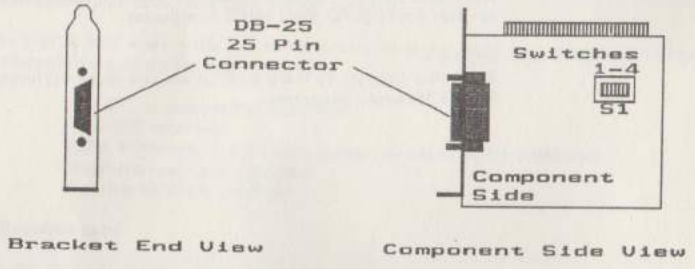

Figure 2-1. The MIDI Switch Card

Installing the MIDI Switch Card

Before installing the MIDI Switch Card, you must be sure that its default I/O settings do not conflict with another card in your PC. The Switch Card comes configured for I/O address 302. It is not necessary for you to worry about what an I/O address is; however, it is important to know if another card uses the same address.

The default setting is suitable for most PCs, PC/XTs, PC/ATs, and compatibles. If you have a MIDI interface other than the MIDI Co-processor Card, the default setting is adequate. If you have a MIDI Co-processor Card, you need to make sure that the Switch Card is installed consistently with the Co-processor Card.

To install the Switch Card, follow these steps.

1. Pick up the Switch Card with the components facing you. Locate the switch bank labelled S1, with switches numbered 1 through 4. These switches are used to assign the I/O address. If you need to change the default assignment, choose an alternate assignment from the table below and set the switches accordingly.

   Note: If you have a MIDI Co-processor Card, the first two digits of the I/O address used by the Switch Card and the Co-processor Card must be different. For example, if you have the Co-processor Card installed at I/O address 330 (the factory default), you can not install the MIDI Switch Controller at address 332. If you do, the results will be highly unpredictable. This is why the factory default I/O address for the Switch Controller Card is 302.

   Note: In the following table, the designations On and Off are used to identify the possible switch positions. You may find that your switches are labeled Closed and Open, instead of On and Off. In this case, Closed is the same as On and Open is the same as Off.

Switches				I/O
1	2	3	4	Address
On	On	On	On	202
On	On	On	Off	212
On	On	Off	On	222
On	On	Off	Off	232
On	Off	On	On	242
On	Off	On	Off	252
On	Off	Off	On	262
On	Off	Off	Off	272
Off	On	On	On	302 (default)
Off	On	On	Off	312 (1)
Off	On	Off	On	322
Off	On	Off	Off	332
Off	Off	On	On	342
Off	Off	On	Off	352
Off	Off	Off	On	362
Off	Off	Off	Off	372

(1) Recommended choice for alternate address assignment.

2. Before installing the Switch Card, write down the switch settings. During software installation, you will need to tell the software how you set the switches, so that the software knows how to communicate with the Switch Card.

3. Turn off all power to your computer.

4. Position the unit with the rear panel facing you. Find and remove the cover mounting screws (there are usually five of them).

5. Slide the cover, forward, away from the rear panel.

6. Locate an empty expansion slot (Figure 2-2). If you have an IBM PC/XT (not a PC/XT clone), do not select slot 8. Remove the screw that holds the expansion slot cover in place. Remove the expansion slot cover.

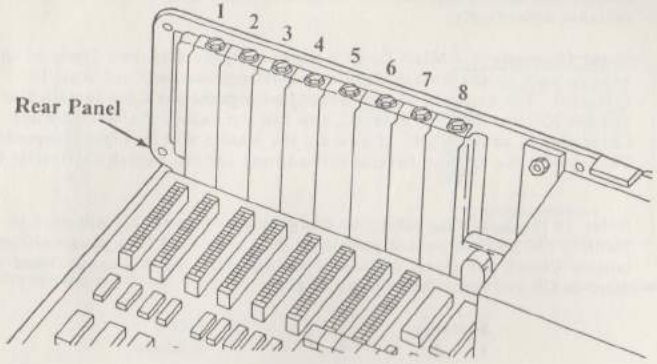

Figure 2-2. Locating Expansion Slots

7. Grasp the Switch Card by its top edge and insert it into the expansion slot. The metal bracket on the card should replace the expansion slot cover that you removed in step 6. Be sure that the board is firmly seated in the expansion edge connector.

8. Attach the Switch Card's metal bracket to the chassis with the screw that you removed in step 6.

9. Replace the system unit cover. Fasten the cover with the screws you removed during step 4.

This completes the installation of the MIDI Switch Card. Now, you are ready to connect the MIDI Outlet Box to the Switch Card in your PC.

Connecting the MIDI Outlet Box

Figure 2-3 illustrates how the Switch Controller Cable connects the Switch Card to the Outlet Box via the Switch Controller Cable.

1. Locate the end of the Cable with the 25 pin (DB-25 style) connector. This is the connector with the thumb screws. Attach this end of the cable to the 25 pin connector on the Switch Card. Tighten the thumb screws until the connectors fit snugly together.

2. Insert the other end of the Cable into the 36 pin (Centronics style) connector on the MIDI Outlet Box. Snap the "bails" into place, thus securing the connector.

Note: The Cable is a standard IBM-style printer cable. You connect the MIDI Outlet Box to the Switch Card just like you would connect a printer to your PC.

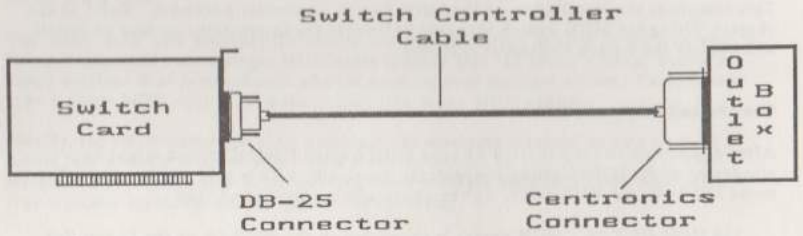

Figure 2-3. Connecting the Switch Card to the Outlet Box

Connecting MIDI Devices to the MIDI Outlet Box

The last step in the installation of the Switch Controller hardware is the connection of your MIDI devices to the MIDI Outlet Box. We recommend that you take the time to draw a diagram of how you want to connect your MIDI devices to the MIDI Outlet Box. At a minimum, this diagram should identify the name of the device that is plugged into the numbered connectors of Outlet Box. The following is an example of how to record your connections.

MIDI Device	MIDI Outlet Box		MIDI Device
OUT	IN	OUT	IN
PC	1	1	PC
Keyboard	2	2	Keyboard
Tone generator	3	3	Tone generator
Drum machine	4	4	Drum machine

This table tells you that the OUTput of your PC is plugged into INput 1 of the MIDI Outlet Box, and that OUTput 1 of the Outlet Box is connected to the INput of your PC. Creating such a table, as you make your connections, is highly recommended as it facilitates using the Switch Manager software.

This completes the installation of the MIDI Switch Controller hardware. Refer to the chapter "Using the MIDI Switch Manager Software" for instructions on how to install and operate the Switch Controller software.

The INs and OUTs of MIDI

After completing the installation of your MIDI Switch Controller, you might be wondering about MIDI naming conventions, especially with regard to the use of the terms MIDI IN and MIDI OUT. In the above section you found that:

> the MIDI OUT of a MIDI device is connected to the MIDI IN of the Outlet Box, which is switched to a MIDI OUT of the Outlet Box, which is connected to IN of a MIDI device!

All this IN and OUT nomenclature can bit confusing...but that's MIDI. Perhaps a little explanation will help make the nomenclature issue clear.

MIDI is a unidirectional medium. Data always flows from the OUTput of one device to the INput of another device, even if that device is little more than a box. Another way to express this fact is to say that a device always receives data on a MIDI IN and it always transmits data on a MIDI OUT. This is true, regardless of whether the device is active (like a synthesizer) or passive (like the Outlet Box).

In summary, IN and OUT notation is part of MIDI. An OUT is always connected to an IN, and vice versa. You never connect an OUT to an OUT, or an IN to an IN.

MIDI Switch Controller Functional Overview

MIDI Switching Concepts

Before presenting the functional design of the MIDI Switch Controller, we need to introduce some switching concepts. There are three kinds of products that manipulate MIDI messages:

1. The MIDI switch.
2. The MIDI "thru" box or "fan out" box.
3. The MIDI merger.

A MIDI path (read cable) is a unidirectional transmission medium. With the MIDI message protocol, it is possible for many devices to "listen" to what is being transmitted; however, there can only be ONE transmitter. The picture is further complicated by the fact that the electrical specifications of MIDI allow only one MIDI device to be attached to the receiving end of a MIDI cable. These "facts of MIDI life" give rise to the three types of MIDI products listed above.

The MIDI switch connects one of several potential transmitting MIDI devices to a MIDI cable (Figure 3-1). At any point in time, only one transmitter is physically connected to the MIDI cable.

The MIDI "thru" box provides the ability for multiple MIDI devices to receive what is being transmitted over a single MIDI cable (Figure 3-2). In short, a "thru" box is a single receiver that re-broadcasts what it receives over multiple cables. Thus, it can take a single MIDI cable and make it look like many MIDI cables.

Finally, the MIDI merger actually combines the messages received on two or more cables into a single MIDI stream. This gives the device on the output side of the merger the perception that it is receiving from multiple devices (Figure 3-3). This is true logically speaking, but not physically speaking.

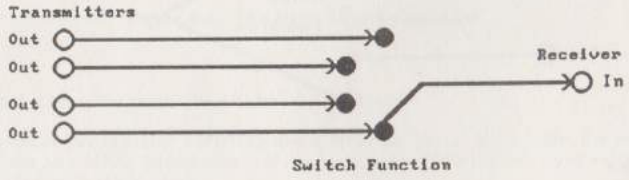

Figure 3-1. The MIDI Switch

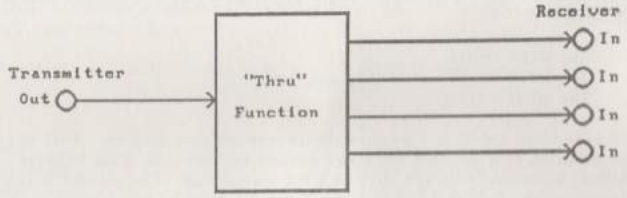

Figure 3-2. The MIDI "Thru" Box

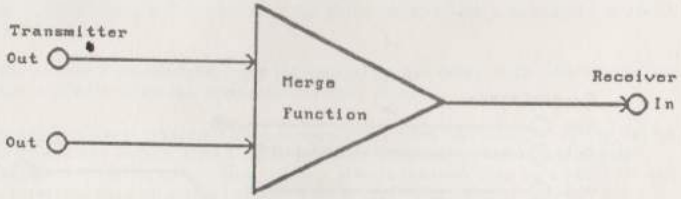

Figure 3-3. The MIDI Merger

MIDI Switch Controller Description

The MIDI Switch Controller is a combination MIDI switch and "thru" box. It provides complete 4 X 4 MIDI switching, under PC control, allowing any output to be connected to any input (switching function). This includes connecting multiple outputs to the same input ("thru" function). Facilities are included to perform "safe" switching, without corrupting MIDI message flow, which can happen with typical MIDI switches. Figure 3-4 illustrates the complete capabilities of the MSC-4.

The MIDI Switch Card, itself, is a one-third size PC option card that fits in any PC slot, except the short slot on the original IBM PC/XT. Up to four cards can be installed in a single system. The MSC-4 is compatible with all existing IBM PC MIDI interfaces, including the Music Quest MIDI Co-processor Card, Roland MPU-401 and MPU-IPC, Voyetra OP-4000 and OP-4001, CMS-401, and IBM Music Feature.

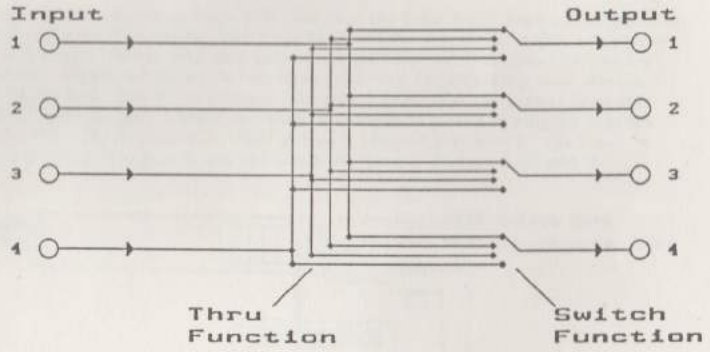

Figure 3-4. The MIDI Switch Controller

MIDI Switch Controller Outlet Box External Interfaces

The MIDI outlet box contains 4 MIDI-in and 4 MIDI-out jacks. Essentially, the outlet box functions as a MIDI "power strip". It connects to the MIDI Switch Card via a cable included with the product.

Power-on (Initial) Switch Configuration

Since the MIDI Switch Controller can't know which configuration you want as a default, it comes up in an uninitialized state. This means that when you turn your computer on, you will not know exactly how the Switch Controller is configured (this is not a problem for most computer-musicians, as their PC is an integral part of their system, meaning it is always powered on). To establish a default configuration, use the MSCAUTO program. This program is described in the "Using the Switch Manager Software" chapter.

Using the MIDI Switch Controller

To obtain the maximum benefit from your MSC-4, you need to know its configuration possibilities and how to use the Switch Manager software to implement a given configuration. When we refer to an MSC-4 "configuration", we mean a given set-up of the switch specifying:

1. The device plugged into each MIDI outlet box connector.
2. The input that is connected to each output.

In this chapter, we will examine the configuration possibilities by presenting different switch configurations. In the next chapter, we will present the Switch Manager software.

The Basic MIDI Studio Configuration

The majority of computer-musicians will find that the basic MIDI Studio configuration suits the majority of their needs. The basic MIDI Studio consists of a PC, a keyboard (or other MIDI input device such as a guitar), a multi-timbral tone generator, and a drum machine. Figure 4-1 shows the recommended way for attaching these devices to the MIDI Outlet Box. The PC is plugged into port 1 (note that the output from the PC is plugged into the port 1 input and that the output of port 1 is plugged into the input of the PC). The keyboard or MIDI guitar is plugged into port 2, the tone generator is plugged into port 3, and the drum machine is plugged into port 4.

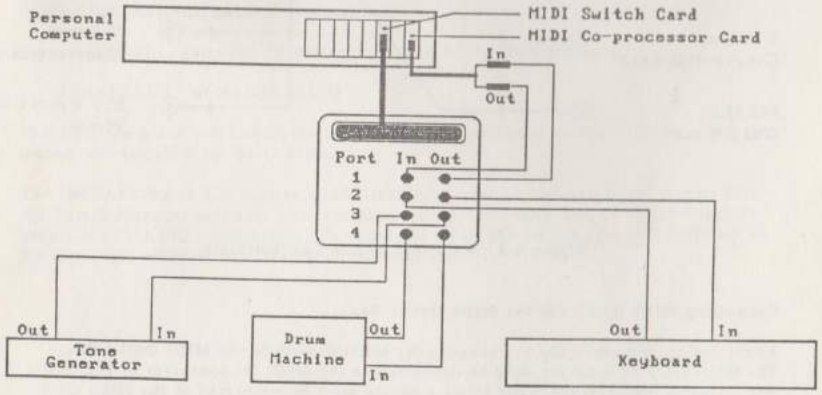

Figure 4-1. The Basic MIDI Studio Configuration

Custom Configurations

The experienced computer musician may wish to develop his own switch configurations. There are numerous ways that MIDI devices can be connected to the MIDI Outlet Box. For example, it is not necessary to connect a MIDI device so that its output and input are connected to the same Outlet Box port. In fact some MIDI devices only have a MIDI input or a MIDI output (eg. some effects devices have a MIDI input and no MIDI output and some MIDI guitar controllers only have a MIDI output). If you have devices like these, you can design your own configuration to accommodate your needs. Figure 4-3 illustrates the configuration just described.

There are 256 possible switch settings. That is, each of the 4 outputs can be connected to any one of the 4 inputs (4 X 4 X 4 X 4 = 256). The 256 possible configurations are sufficient to meet the needs of most MIDIists.

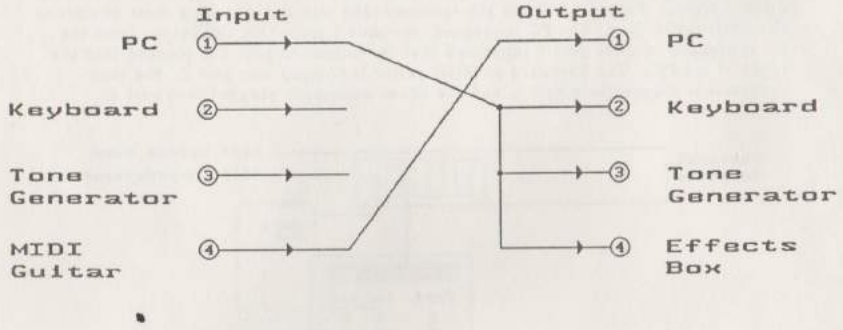

Figure 4-3. A Custom Switch Configuration

Connecting MIDI Devices to the MIDI Outlet Box

At this point, you are ready to connect your MIDI devices to the MIDI Outlet Box. The MIDI OUT of a device must be connected to the MIDI IN connector of the Outlet Box. Correspondingly, the MIDI IN of a device must be connected to the MIDI OUT connector of the Outlet Box. The Basic MIDI Studio Configuration, Figure 4-1, illustrates this point. As you connect the devices to the Outlet Box, be sure to write down the name of each device and the Outlet Box port number where it is connected. You will need this information when you use the Switch Controller software.

Using the Switch Manager Software

Making a Working Copy of the Program Diskettes

Before installing the Switch Manager software, you should make a working copy of the program diskette. Use the DOS DISKCOPY command to do this. If you have a single diskette system, use the following command:

DISKCOPY A: A:

You will be prompted to swap diskettes as necessary. The number of diskette swaps needed will depend upon how much memory is installed in your system.

If you have a two diskette system, insert the Switch Manager software program diskette in drive A and a blank diskette in drive B. Use the following command:

DISKCOPY A: B:

When you are finished, put the Switch Manager software program diskette in a safe place. Always use the working copy when you want to run the program. That way, if something happens to the working copy, you can always make a new working copy.

Installation on a Hard Disk System

The easiest way to install the Switch Manager software on a hard disk is to use the INSTALL batch file. INSTALL is capable of installing the Switch Manager software on either hard disk C or D. If your hard disk is at a different drive letter, you will have to alter the INSTALL batch file accordingly.

To run INSTALL, enter the following command at the DOS prompt:

A:INSTALL C or A:INSTALL D

The first command will install the Switch Manager software on the C drive, while the second will install it on the D drive.

The INSTALL batch file creates a subdirectory (from the root directory) named MQ. All Switch Manager software files are placed in this subdirectory, or in subdirectory branches of the MQ subdirectory. In order for all of the Switch Manager software to function, this subdirectory structure should be used.

Which Switch Manager Program Should You Use?

The Switch Controller comes with three programs that you use to manage the switch:

- MSCPOPUP
- MQMSCACC
- MSCAUTO

The MSCPOPUP and the MQMSCACC programs provide the same function, but they are used differently. Both programs give you complete, interactive control of the Switch Controller. They allow you to change switch settings and configurations.

The MSCPOPUP program is installed as an extension to DOS (sometimes called an in-memory extension or a Terminate-and-Stay-Resident program). Like most resident programs, you call up MSCPOPUP by pressing the ALT key and a letter simultaneously (eg. ALT-S). The advantage of using MSCPOPUP is that you can call it up quickly. If you need to make switch changes frequently, you may find that MSCPOPUP is the right choice. The drawback of MSCPOPUP is that it uses up your PC's memory (about 45K bytes). If you already use several resident programs, you may find that you can not tolerate giving up any more memory. In this case, you might opt to use the MQMSCACC program. MSCPOPUP is also limited in that it can not pop-up over an EGA or VGA graphics monitor in graphics mode. If you use programs such as Temporal Acuity Products' Music Printer+ or Personal Composer 2 with these monitors, you will find that MSCPOPUP does not work.

The MQMSCACC program is a normal DOS program that can be run from the DOS prompt. More importantly, it can be run as an accessory from the Easy-8 Accessory Box (Easy-8 is the sequencer that comes with the MIDI Starter System). Many other programs provide an "external command" function that allows you to run MQMSCACC. If you have a hard disk, you may find that using MQMSCACC gives satisfactory results. However, if you operate from a diskette based system, you may find that MSCPOPUP is the most desirable way to go.

The MSCAUTO program is designed to run from batch files and from the DOS prompt. You can use it in your AUTOEXEC.BAT file to establish a default switch configuration. Thus, if you want to set up a default configuration, you can use MSCAUTO to establish the configuration that you need.

The MSC-4 Profile

The MSC-4 profile (its name is MSC.PRO) is a DOS file where the Switch Manager software keeps information about the MSC-4. This information includes:

- The MSC-4 PC card DIP switch settings (which indicate the I/O address of the MSC-4)
- The names of MIDI devices that are connected to the MIDI Outlet Box and the ports where they are connected
- 16 different, named switch configurations

You create and maintain the MSC-4 profile using either the MSCPOPUP or MQMSCACC program. The MSC-4 profile can be used with the MSCAUTO program to establish a switch configuration from the DOS prompt or a batch file.

Using MQMSCACC and MSCPOPUP

With the exception of getting them started, both Switch Manager programs operate identically. After discussing how you load and start each program, we will proceed with a common discussion of how to use both programs.

How to Run MQMSCACC

There are two ways to run MQMSCACC. First, you can run it from the DOS command line, just like any other program. In this case, simply enter the command:

MQMSCACC

DOS will load and execute the accessory version of the Switch Manager software.

If you use the Easy-8 sequencer or MelodEase Piano Roll Composer programs, you can run MQMSCACC as an accessory. With these programs, you use the Program Accessory function to add MQMSCACC to your list of accessories. Then, when you want to run the Switch Manager, you simply pull down the Accessories menu and select the Switch Manager.

If you use other software packages, you may find that they have some sort of "external" command capability or a DOS "shell' function. Examples of such programs are Easy-16, Texture, Personal Composer, and Music Printer+.

How to Install MSCPOPUP

The MSCPOPUP program installs itself as a DOS resident extension (TSR program). To install MSCPOPUP, enter the command:

MSCPOPUP

After MSCPOPUP installs itself, it will display a message telling you "Use Alt-S to call up". Anytime you need to make a switch configuration change, simply press the Alt key and S key, together. MSCPOPUP will "pop up" over the current program.

You may find that you would like to use some other trigger key to call up this program. If you do, you can use the Program Trigger function to establish a different activation key sequence.

The First Time

The first time you run MQMSCACC or MSCPOPUP, you will be asked to enter some installation information. Figure 5-1 shows the installation window.

```
                    MIDI Switch Manager Accessory
                Copyright (c) 1988 by Music Quest, Inc.
Current=1  MYDEFAULT
Configurations                                                       Program

                        System Installation

MSC-4 PC Card Switch Settings                   MIDI Outlet Box
                                            IN                   OUT
1   2   3   4 Address                  Device Name     Port   Device Name

Off On  On  On  302                    MY PC             1    MY PC

                                       Keyboard          2    Keyboard

Path to Help Files                     Tone generator    3    Tone generator

a:\msc4\                               Drum machine      4    Drum machine


                 Enter a character string.                  Tab=NextField
                                                 Alt-H=Help  Esc=Back
```

Figure 5-1. Switch Manager Installation

The first thing you have to do is make sure that the MSC-4 PC Card Switch Settings field are correct. This information tells the Switch Manager where the Switch Controller Card was installed (these are the switch settings you recorded when you installed the Switch Card in your PC). Use the + and - keys to identify your switch settings.

The second thing you need to enter is the DOS path to the Switch Manager help files. If you used the INSTALL batch file, then the path to the help files will be "c:\mq\msc4\" or "d:\mq\msc4\" for hard disk based PCs and a:\msc4\" or "b:\msc4\" for diskette based systems.

The third thing you should do is name the devices connected to the MIDI Outlet Box. If you followed all of the Switch Controller installation instructions, you created a diagram or table, describing how you connected your MIDI devices to the Outlet Box. Figure 5-1 shows how to enter names that correspond to the example table discussed in the section "Connecting MIDI Devices to the MIDI Outlet Box". You should be aware that these names will be used as "handles" for your MIDI devices. The Switch Manager main screen always refers to MIDI devices by name.

Of course, you can change the names at any time by using the Switch Manager's Program Installation function.

Managing Switch Configurations

Figure 5-2 shows the Switch Manager main screen. The screen is broken into three areas.

The menu appears on the fourth line of the screen, just below the copyright statement. You access the menu line by pressing the Escape key. You can directly access a specific menu by pressing the Alt key and the first letter of the menu (see Appendix for reference information on using the keyboard). Notice that the currently active configuration always appears just above the Configurations menu item.

The Switch Configuration box shows you the current Switch Controller configuration. You can change the current configuration by positioning the block cursor to the desired switch port and using the + and - keys to make a choice. After making changes, press the ENTER key to put the new configuration into effect.

The Activity Monitor box shows you which Outlet Box inputs are active. When MIDI traffic is present at the input, the port number will blink accordingly. You can use the Activity Monitor to determine which device is attached to which input.

```
                    MIDI Switch Manager Accessory
                Copyright (c) 1988 by Music Quest, Inc.
Current=1
Configurations                                                       Program

Switch Configuration                               Activity Monitor
 IN Device               OUT Device                IN Device       Port/Status

 Keyboard        connected to MY PC                MY PC                1

 MY PC           connected to Keyboard             Keyboard             2

 MY PC           connected to Tone generator       Tone generator       3

 MY PC           connected to Drm mach             Drm Mach             4


              Use + and - keys to make a choice.
                              Alt-H=Help  Enter=Activate Esc=Menu
```

Figure 5-2. The Switch Manager Screen

A Switching Tutorial

To illustrate how to use the Switch Manager, we will set up and save a configuration. We will assume we are working with the Basic MIDI Studio shown in Figure 4-1. To summarize this configuration:

MIDI Device OUT	MIDI Outlet Box IN	MIDI Outlet Box OUT	MIDI Device IN
MY PC	1	1	MY PC
Keyboard	2	2	Keyboard
Tone generator	3	3	Tone generator
Drum machine	4	4	Drum machine

Furthermore, we will assume that you have installed and named your MIDI devices as shown in Figure 5-1, which matches the Basic MIDI Studio, above.

The task at hand is to create a configuration so that the tone generator is fully accessible to your PC. Typically, this action must be taken to enable a device editor/librarian to communicate with the tone generator.

1. Select input devices. Position the block cursor to the first line of the Switch Configuration box, opposite OUTput device MY PC. Press the + or - key until the "Tone generator" device appears. Then move the block cursor to the next line. Use the + or - key to select MY PC. Repeat this operation for the remaining two devices. When you have completed this step, the Switch configuration box should look like this:

```
┌Switch Configuration──────────────────────────┐
│IN Device                    OUT Device       │
│Tone generator  connected to MY PC            │
│MY PC           connected to Keyboard         │
│MY PC           connected to Tone generator   │
│MY PC           connected to Drm mach         │
└──────────────────────────────────────────────┘
```

   To put this configuration into effect, simply press ENTER. Now, the tone generator is fully connected to the PC (so it can be accessed by an editor/librarian).

2. Save the configuration. We want to save this configuration for future use. To do this, first press Alt-C, to pull down the Configurations menu. Then select the Save as .... menu item. The Switch Manager allows you to maintain 16 named configurations. Position the block cursor to configuration 2 and type the name "TG Edit". The Save as .... window should look like this:

```
┌──────Save configuration as?──────┐
│1                  9              │
│2 TG Edit          10             │
│3                  11             │
│4                  12             │
│5                  13             │
│6                  14             │
│7                  15             │
│8                  16             │
└──────────────────────────────────┘
```

   Now press ENTER and the configuration will be saved in the MSC.PRO file.

3. Retrieve the stored configuration. You can retrieve and activate this configuration at any time by using the Configurations Open function. From the main screen, press Alt-C to pull down the Configurations menu. Select the Open menu item. Position the block cursor to configuration 2, "TG Edit", and press ENTER. The "TG Edit" configuration is recalled and activated.

MQMSCACC Program Menu

Quit
Exit the program and return to DOS or to the invoking program (e.g. Easy-8).

Installation
This function brings up the Program Installation window. Typically, you use this function to change the names of your MIDI devices.

Display colors
This function brings up the Color Display screen. If you have a color monitor, you can use this function to adjust the color scheme to your preferences.

MSCPOPUP Program Menu

Quit -> Text
Exit the Switch Manager, placing the display adapter in text mode.

Quit -> Graphics
Exit the Switch Manager, placing the display adapter in graphics mode. If you use a Hercules or compatible monochrome adapter, and, you pop the Switch Manager over a program such as Personal Composer, you **MUST** exit the Switch Manager in graphics mode. Note: This special action is required to accommodate the Hercules monographics adapter, because it is not recognized by PC BIOS. This means that the Switch Manager has no way to know that the display was in graphics mode at the time it was called up.

Display colors
This function brings up the Color Display screen. If you have a color monitor, you can use this function to adjust the color scheme to your preferences.

Pop Up Trigger

If you can't use Alt-S as the pop up trigger for MSCPOPUP, use this function to select a new trigger. Any alphabetic character, in combination with the Alt key can be designated as the pop up trigger.

MSCAUTO

The MSCAUTO program allows you to make Switch Controller changes from the DOS command line or from a DOS batch file. This program takes a named configuration from an MSC-4 profile and puts it into effect.

The command syntax is:

MSCAUTO config-name profile-name

Here, profile-name is the full file name (including path) of the MSC-4 profile containing the configuration named config-name. You use either the MQMSCACC or MSCPOPUP program to create the configuration and profile. If you omit the profile-name, the name MSC.PRO is assumed. If you omit the config-name and profile-name, the first configuration (configuration 1) in MSC.PRO is loaded.

An example will serve to illustrate the use of MSCAUTO. Suppose that you have used the MQMSCACC program to define your desired default configuration. You named it MYDEFAULT and saved it in the profile managed by MQMSCACC (the MSC.PRO file). Assuming that you operate with a hard disk and followed the normal installation procedures, the full name of the profile is "C:\MQ\MSC.PRO". Now, you want to have the MYDEFAULT configuration established as the current configuration when your PC starts up.

To accomplish this task, simply add the following statement to your AUTOEXEC.BAT file.

MSCAUTO MYDEFAULT C:\MQ\MSC.PRO

When you turn on your PC (or re-start it), DOS will load itself and begin to execute the AUTOEXEC.BAT file. When the above statement executes, MSCAUTO will read the MYDEFAULT configuration from the C:\MQ\MSC.PRO file, and set up the Switch

Controller accordingly. As MSCAUTO puts the MYDEFAULT configuration into effect, you will see the following displayed results:

```
MIDI Switch Controller - Auto Configuration
Copyright (c) 1988 by Music Quest, Inc.

Configuration: [1] MYDEFAULT

Input ------------> Output

[2] Keyboard          [1] MY PC
[1] MY PC             [2] Keyboard
[1] MY PC             [3] Tone generator
[1] MY PC             [4] Drm mach
```

Appendix

PC Keyboard Reference

These tables describe keys and their uses within the MIDI Starter System.

Within a Screen

Press:	To:
ESC	Move the block cursor into the menu bar.
ENTER	Make changes to data and parameters.
Right arrow or Tab right	Move the block cursor to the next field to the right.
Left arrow or Tab left (SHIFT-TAB)	Move the block cursor to the next field to the left.
Up arrow	Move the block cursor to the next field above.
Down arrow	Move the block cursor to the next field below.
F1-F10	Execute a function assigned to a function key. Function key assignments are shown on the bottom of the screen.
Alt-H	Obtain help information for the current screen.
Alt-x	Move the block cursor into the menu bar, selecting the menu whose first letter is x. For example, to obtain the Configurations menu, press Alt-C.

Within a Data Field

When the block cursor is positioned to a data field, the prompt line tells you to enter a character string or a number. The control keys function as follows.

Press:	To:
Right arrow	Move the character cursor one character to the right.
Left arrow	Move the character cursor one character to the left.
Del	Delete the character under the character cursor.
Ctrl-End	Erase all characters to the right of the character cursor.
End	Move the character cursor to the end of field.

Ins	Toggle the insert/type-over mode. In insert mode, characters are inserted in front of the character under the character cursor. In type-over mode, characters overlay existing characters.
Any other character	Type data into the field.

Within a Choice Field

When the block cursor is positioned to a choice field, the prompt line tells you to use the + and - keys to find your choice.

Press:	To:
+	Move to the next value in the choice list.
-	Move to the previous value in the choice list.

Within a Pull Down Menu

Press:	To:
First letter	Directly execute a function. When you are in a pull down menu, you can execute a function by pressing the first letter of the menu item. See the discussion (below) on quick action keystrokes for more on short cuts. For example, in the Configurations menu, if you press S you will execute the Save as ... function.
ESC	Cancel the function and return to the previous screen.
ENTER	Execute the function. Usually opens a window so that you can enter parameters.
Right arrow or Tab right	Move the block cursor to the next menu to the right.
Left arrow or Tab left (SHIFT-TAB)	Move the block cursor to the next menu to the left.
Up arrow	Move the block cursor to the next menu item above.
Down arrow	Move the block cursor to the next menu item below.