SongCanvas Power User Information

IMPORTANT NOTE: Reading this file is completely OPTIONAL! You do not have to read nor understand this information to run the *SongCanvas!*

Overview

This document contains detailed technical information to help "power users" get the most out of the *SongCanvas*. Note that the *Windows* version of the *SongCanvas* is now available, too, however; look on *CompuServe's* **MIDIFORUM** in library 11 for **LUDWIG.EXE**.

This document discusses:

- General DOS information

- Complete command-line options for *Play/D*, the MIDI engine

General / DOS

PLAYD.EXE is the MIDI "engine" for the ***SongCanvas***. **CANVAS.EXE** by itself does not send system exclusive MIDI data, nor does it play MIDI Format Files (AKA "standard MIDI files"). You load *Play/D* with the correct parameters for your MIDI interface; the two programs then work in tandem.

CANVAS.EXE's help information loads into virtual memory as the program starts up. This is extended or expanded memory on a 286 or better (if available); otherwise it is the hard disk. If you have the **XMS** and/or **EMS** RAM, help will run faster.

You will probably want to customize the **C.BAT** batch file for your normal operating environment (directories, replaceable paramteres, etc.).

Play/D Command-Line Options

−a   *Allocate*—indicates the amount of memory (in K bytes; 1K = 1024 bytes) to allocate for MIDI file storage. The default is **−a24** (24K bytes).

−d   *Device*—specifies the type of MIDI interface in use. **−d** also gives additional information about the device if you use a non-standard setup. This option is unnecessary for most users. The supported MIDI interfaces are listed below. Use **−d** followed by the device name and options as shown to select one.

> **Roland** *MPU-401* and compatibles **−dmpu:I:A**
> **Key Electronics** *MIDIator* **−dmid:C**
> **Roland** *SC-7* interface **−dser:C**
> **Creative Labs** *Sound Blaster* **−dsbm:I:A**

where **I** indicates **IRQ**, **A** indicates **Address**, and **C** indicates **COM port**.

For example, to define an *MPU*-compatible interface using IRQ 5 and I/O address 336 (hex), use **−dmpu:5:336**

To define a *MIDIator* attached to COM2, use **−dmid:2**

The default value for the **−d** option is **−dmpu:2:330**

Play/D Command-Line Options

−e   *Exclusive*—similar to **−d** (with same syntax) but safer under *Windows* in enhanced mode. −**e** prevents any other drivers from even being looked at.

−m   *Mode*—selects the operating mode: 1, 2, or 3. The default is **−m1**.

   Mode 1 uses background interrupt stepping. It relies on the underlying TSR mechanism, *TesSeRact*, to determine when it is absolutely safe to interrupt DOS to play.

   Mode 2 is the same as **Mode 1** plus conditional timer stepping. It adds use of the system timer (about 18 ticks per second) to advance play. This permits play to continue while running programs that otherwise would not allow *Play/D* to operate at all. Any DOS activity will temporarily suspend play, however. See warnings for **Mode 3** next.

   Mode 3 is the same as **Mode 1** plus <u>un</u>conditional timer stepping. It combines idle time processing with forced timer stepping to assure high accuracy and continuous play regardless of other system activity. While it is unlikely that timer interrupts will cause any problems, this is technically "unsafe."

−r   *Remove*—removes *Play/D* from memory.

−s   *Size*—determines the size of the MIDI receive buffer. Follow **−s** with a number up to 63, indicating the size of the buffer (in K bytes; 1K=1024 bytes). By default, no buffer is used, and *Play/D* operates in polled (versus interrupt-driven) input mode.

Using Environment Variables

Since it may be inconvenient to add these options every time you run *Play/D*, you can set-up options ahead of time using DOS environment variables. A pool of environment variables named "opt1" through "opt9" is available. Pick any of these nine variables for the options that you would like to preset. For example, if you would normally use **−dmpu:5:336** and **−m2**, you could use the DOS **SET** command as follows:

```
SET OPT1=-dmpu:5:336
SET OPT2=-m2
```