



Micro Music Inc

MMI SOFTWARE APPLICATIONS NOTE 1

TITLE: CONVERTING MICRO COMPOSER TO STEREO

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It is possible to produce stereo sound by using two MICRO MUSIC DAC boards installed in SLOTS 2 and 4. Some minor software changes are needed to make this conversion. These changes are detailed below. Because the MICRO COMPOSER sound production is software, digital synthesis, stereo will not provide 8 voices of sound--four is the maximum limit for any configuration and still maintain reasonable frequency response. Even with the voice limitation, stereo provides increased sound quality. There is greater sound depth of field due to the spatial separation of voices and the signal-to-noise ratio is improved. With only two voices per DAC you can double the amplitude of any waveform. The conversion is set up to provide for 2 voices (voices 1 and 3) from the DAC in SLOT 2 and for 2 voices (voices 2 and 4) from the DAC in SLOT 4.

Conversion. To convert your MICRO COMPOSER system to stereo follow these steps:

1. Install 2 MICRO MUSIC DACs in SLOTS 2 and 4.
2. Make a copy of your MICRO COMPOSER disk to use for making your stereo changes--should anything go wrong, you don't want to harm your original!
3. Boot the copy disk (with cassette, do not run the program after loading).

4. When the computer stops to request SLOT number, type a (CONTROL) C and (RETURN) to halt program execution.
5. Push RESET or type CALL -151 to get the asterisk * to appear.
6. Type in the following exactly as shown (Ø = number zero):

```
*86Ø:2Ø ØØ 13 EA EA 18 (RETURN)
*13ØØ:AE 44 Ø3 86 77 AØ ØØ 6Ø (RETURN)
*866<869.Ø9DM (RETURN)
*89B:8D AØ CØ B1 (RETURN)
*8AF:B6 (RETURN)
*8B7:AE (RETURN)
*89A:68 (RETURN)
*89F:65 (RETURN)
*9DBFG (RETURN)
```

7. Now we've returned to the DOS and BASIC. The next step is to save the modified music machine file:

The cursor will show > for INTEGER

```
] UNLOCK DAC
] BSAVE DAC,A$800,L$17FF
] LOCK DAC
```

8. On cassette do not type 9DBFG as shown in step 6, instead, at this point save the music program on a new cassette as follows:

```
*300.4000W
```

Its important that you do not run the cassette version before making the changes or re-saving on a new cassette. Your newly save stereo cassette program will not have the MICRO MUSIC title page as your original did.

Timbres. With stereo you can increase the peak amplitude of each waveform stored in the timbre file. This will give you better quality sound production. To change your timbres use the Fourier command in MICRO COMPOSER. Simply refer to page 17 of the User's Guide. Enter each timbre shown in 4.7.2 using the amplitudes given. Assign the first timbre

(rich string) to waveform location #1, the wind/flute to #2, . . . up to the last (funky oboe) to #7. But, set the peak amplitude to 128 for each timbre. The maximum is now 256 for any 2 voices! After you've redone all 7 timbres, type Q to quit and you can then resave the DAC file as shown before. Now the new waveforms will be there anytime you run MICRO COMPOSER.

SLOT designation. Everytime you run MICRO COMPOSER it requests a SLOT number at the beginning of the program. With stereo, you must type in 4 to respond to this question. If you type in 2 the sound for all four voices will come from the DAC board in SLOT 2. You can use this feature, however, if you need to return to using one DAC board.

Voices. Voices 1 and 3 are channelled to SLOT 2 and voices 3 and 4 are channelled to SLOT 4. You can change this by changing the hex values in the locations shown below:

	898: _____	Set values to:
SLOT 2	89A: _____	\$62 for voice 1
		\$65 for voice 2
	89F: _____	\$68 for voice 3
SLOT 4	8A1: _____	\$6B for voice 4

***** THE STEREO CHANGE WILL ALSO AFFECT MUSIC PRODUCTION WITH THE
CHRISTMAS SHOW AND THE MHI AUTO DIGISONG PLAYER *****