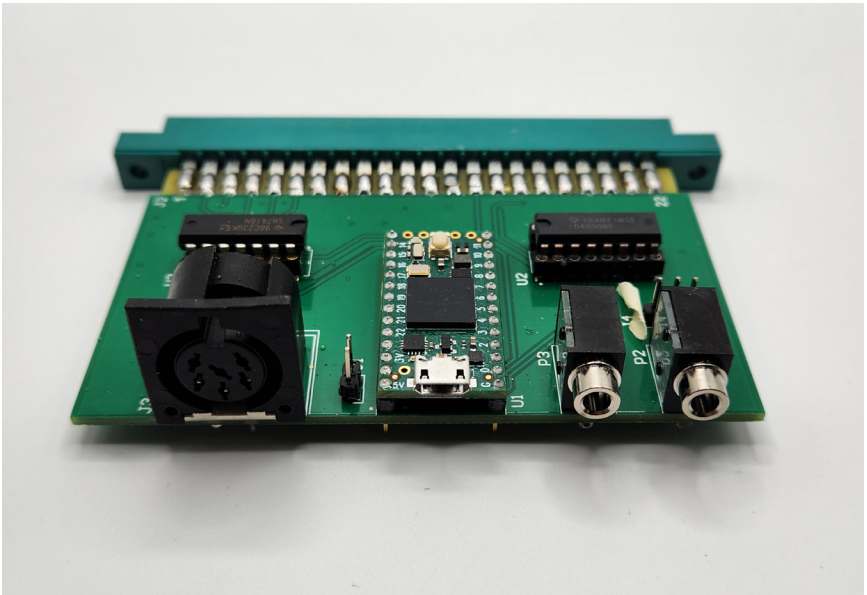




**RetroSpy**  
Technologies

# **SYM-1 SymDOS I/O Board**





# The SYM-1 SymDOS I/O Board

The SYM-1 SymDOS I/O board is custom I/O board for the SYM-1 single board computer that provides SymDOS functionality which allows for floppy disk access using Commodore IEC disk drives.

## **Features**

- Commodore IEC floppy disk drive, or SD2IEC, access via SymDOS
- TTY over RS-232 communication via a micro-USB connector
- Cassette audio out (jumper configurable HI or LOW) via a mono 3.5mm jack
- Cassette audio in via a mono 3.5mm jack

SymDOS functionality requires SYM-1 Monitor version 1.1 and either RAM at \$9000 or a burned EPROM addressable at \$9000. I recommend Corsham Tech's SYM-1/AIM-65 RAM Board.

# Connecting the I/O Board

The SYM-1 SymDOS I/O board connects to the Application connector at the top of the SYM-1 plus a jumper wire from P1, on the I/O board, to either E-7 or AA-13. Never plug or unplug the I/O board while the AIM 65 is powered on.

## SymDOS I/O Board Operation

### 1. TTY to RS-232 over micro-USB

Connect the micro-USB connector to your PC with the appropriate cable. Power on your SYM-1 and connect to the board at 115200 bps, 8 data bits, no parity, 1 stop bit and no flow control. You will also likely need to add a transmit delay of at least 25 ms/char and 50 ms/line depending on how you are loading data from your terminal. Once connected push <CR> on your SYM-1 then <Shift><Jump><1><CR> a dot should appear in your terminal. Right now, you are connected to the SYM-1 at 110 bps, which is SLOW. To change the connection speed in your terminal type MA651 and then enter XX where XX is the number in the below table representing the speed you want to use. Then use Control-Z to cycle through the speeds until you have reached the matching speed.

<b>Speed</b>	<b>XX</b>
110	D5
300	4C
600	24
1200	10
2400	D6
4800	01

## **2. Cassette Audio In**

Connect a 3.5mm mono cable between the audio out (EAR) of your cassette player to the jack labeled P3 on the I/O board. A stereo cable can be used but cassette audio will only be used from one channel.

## **3. Cassette Audio Out**

First, we need to set the HI/LO jumper labelled J4 on the I/O board. Most of the time LOW is sufficient for proper operation. To put the audio out into LO mode jumper pins 1-2 on J4. Pins 1 is closest to the J4 label. If needed, you can put the audio out in HI mode by jumpering pins 2-3 of J4. Once properly jumpered connect a 3.5mm mono cable between the audio in (MIC) of your cassette player to the jack labeled P2 on the I/O board. Again, a stereo cable can be used but the audio will only be outputted on one channel.

## **4. SymDOS Usage**

SymDOS requires RAM at \$9000 or an EPROM addressable at \$9000. First hook up the drive or SD2IEC to the IEC connector and power on the drive/SD2IEC and the SYM-1.

Connect to your SYM-1's terminal either following the steps above or using a T-connector solution. Included on the USB stick is the SymDOS software in KIM-1 papertape format, a wav file in SYM-1 tape format and an Intel Hex file for burning to an 4k EPROM. Load the software however is convenient and start it using G 9000 at the monitor once the software is loaded into memory. Included on the USB stick is the SymDOS manual, so consult it for how to use it.



# Contact Us

If you have any problems do not hesitate to contact us for help.

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