

Twisted Pear Metronome ASRC Module

Version. 1.1

Overview:

The Metronome is a asynchronous re-clocking module with an on board low jitter crystal oscillator master clock. As supplied it is designed to input PCM at sample rates up to 212khz and output PCM at sample rates of 48khz, 96khz, or 192khz. This manual only covers the recommended configurations. Advanced users should refer to the [SRC4192 data sheet](#) from Texas Instruments. The PCB is geared toward output in master mode, but other input/output modes are possible as well. Please note however that using some of these modes may require that the reference clock be external. To provide for this option the on-board reference clock can be disabled via the “DISABLE” jumper. The Metronome is very flexible and useful, so advanced usage may require some research on the part of the user.

Power Supply:

The Metronome requires a single DC power supply voltage. We recommend 7.5VDC input. There is an 3.3V LDO voltage regulator on the board to service the SRC4192 and the clock.

Switch Settings:

For the recommended configuration of I2S PCM input and 24-bit I2S output in master mode set the tristate MODE switches as follows:

	128fs(192khz)	256fs(96khz)	512fs(48khz)
MODE2	0	0	0
MODE1	0	1	1
MODE0	1	1	0

To set the recommended I2S input/output configuration set these tristate switches as follows:

IFMT2	0
IFMT1	0
IFMT0	1
OFMT1	0
OFMT0	1
OWL1	0
OWL0	0
BYPASS	0
LGRP	0

PCM Input/output:

PCM (I2S as shown above) is input via the PCMIN and PCMOUT terminal blocks. BCK is the bit clock. SCK is the system, or reference clock. LRC is the LEFT/RIGHT clock. D is the PCM data input. GND is digital GND. **IMPORTANT NOTE: SCK is not normally used on PCMIN.**

Digital I/O:

The EXT pin header allows you to access the I/O pins of the SRC4192 externally. See the data sheet for details on these pins and how they might be used.

The “AUTOMUTE” jumper connects the RDY pin to the MUTE pin to mute the output when the SRC4192 is not in a ready state. It is recommended you leave all unused switches in the open (center) position.