Twisted Pear WM8804 SPDIF Transceiver Module.
Version 2.0

Overview:
This module is designed around the well regarded Wolfson WM8804 chip. It is a SPDIF transceiver which can both transmit and receive SPDIF. This manual covers supported basic configurations. Advanced configurations may require that you consult the WM8804 data sheet. It can receive on SPDIF_IN and send dejittered audio through SPDIF_OUT. It can also take PCM input and output SPDIF. The module is geared toward hardware configuration mode with an on board 12Mhz crystal. Software mode is also supported by the PCB refer to the data sheet for information on how to use it.

Power Supply:
The module has one on-board LDO 3.3V voltage regulator. 7.5VDC input is recommended.

Switch Settings:
The module has tristate switches to configure operation. The module must be reset (or power cycled) in order for a configuration change to take effect. Only the recommended settings are covered here. Other configurations are possible. Refer to the WM8804 data sheet if you wish to experiment. In order to insure the widest possible compatibility with our other modules it is recommended that the DAC be configured to input/output PCM as 24-bit I2S as indicated below.

Recommended SPDIF IN/SPDIF+PCM OUT Configuration:

AIF/MS	1
TXSRC	0
AIFCONF1	0
AIFCONF0	1

Recommended PCM IN/SPDIF OUT Configuration:

AIF/MS	1
TXSRC	1
AIFCONF1	0
AIFCONF0	1

PCM Input/Output:
PCM is output and input on the AIF terminal block. BCK is the bit clock. SCK is the system or master clock. LRCK is the LEFT/RIGHT clock. DOUT is the PCM output signal. GND is digital GND. DIN is PCM input. PCM input/output as configured above will be 24-bit I2S, See the data sheet for detail.

LED Status Indicators:
There are four LEDs which indicate various status conditions. The most commonly used LED is GEN_FLAG which will be green when the receiver has a good SPIDF lock on an audio signal. See the data sheets for more information if required.

Digital I/O Header:
Advanced users will find an I/O header with access to all the I/O pins. This allows for external control over those pins as well as the use of a microcontroller. Refer to the data sheet for more information.