Appendix C
Cable and Back Panel Information

This chapter describes cable connections for each of the input/output jacks found on the back panel of the ZETA-THREE, see Figure C.1. Each section gives a brief summary of the purpose of a particular jack and provides information for the type of cables needed for proper connections to the jack.

C.1 POWER MAINS [34]

Mains power is fed to the ZETA THREE through a standard 3-wire EIA power cord, which is supplied with the unit.

C.2 SLAVE TRANSPORT [32]

The SLAVE TRANSPORT connector [32] is responsible for monitoring the state of a transport, i.e. if the machine is in Play Fast forward, or Rewind and also sends commands to control the transport-s actions so that the slave will chase and synchronize to the master. Tach or Control Track pulses are observed through this connector.

1	CAPSTAN Common	14	GND Sense
2	CAPSTAN Normally Closed	15	DC
3	STOP	16	FM
4	FF	17	+5V DC
5	REW	18	CAPSTAN Normally Open
6	PLAY	19	Command Common
7	GP1/PAUSE/LIFTER DEFEAT	20	GP1 Common
8	GP2/LOCK/MUTE	21	GP2 Common
9	GP3/REHEARSE	22	GP3 Common
10	REC	23	SPARE Tally
11	REC Tally	24	..
12	DIRECTION	25	GND
13	CTL/TACH		

C.3 SLAVE CODE IN [31]

The SLAVE CODE IN jack [31] accepts longitudinal time code signals. Connections are:

    Pin 1: signal ground
    Pin 2 and Pin 3: differential input
    Shell   chassis ground

See Figure C.1 for further detail.

C.4 MASTER TRANSPORT [30]

The Master transport connector [30] is responsible for monitoring the state of a transport, i.e. if the machine is in Play, Fast forward, or Rewind. Tach or Control Track pulses are observed through this connector.

The pin assignments are listed below

1)			
)Pins 1 and 2 tied.		14	GND Sense
2)			
		15	--
3	STOP		
		16	
4	FF		
		17	+5V DC
5	REW		
		18	--
6	PLAY		
		19	Command Common
7	GP1/PAUSE/LIFTER DEFEAT	20	GP1 Common
8	GP2/MUTE	21	GP2 Common
9	GP3/REHEARSE	22	GP3 Common
10	REC	23	SPARE Tally
11	REC Tally	24	-
12	DIRECTION	25	GND
13	CTL/TACH		

C.5 MASTER CODE IN [29]

The MASTER CODE IN jack [29] accepts longitudinal time code signals. Connections are:

Pin 1: signal ground
Pin 2 and Pin 3: differential input
Shell: chassis ground

See Figure C.1 for further detail.

C.6 GEN CODE OUT [28]

Generator time code connections from the ZETA-THREE should be made with shielded, twisted-pair audio cable using type XLR-3 connectors.

Signals are:

Pin 1: signal ground
Pin 2 and Pin 3: balanced output
Shell: Chassis ground

See Figure C.1 for further detail.

C.7 REMOTE [27]

Reserved for Adams-Smith use.

C.8 CONTROL [26]

The CONTROL connector [26] is an RS-422 serial control port. It provides control for transports which require serial commands. Connections are as follows:

1	FRAME GROUND	6	RECEIVE Common
2	RECEIVE "A"	7	RECEIVE "B"
3	TRANSMIT "B"	8	TRANSMIT "A"
4	TRANSMIT Common	9	FRAME GROUND
5	$\overline{\text{AUXP}}$		

C.9 COMPUTER [25]

This connector provides serial communications for external computers.

When using RS-422, all connections are as follows:

1 FRAME GROUND

2 RECEIVE "A"

3 TRANSMIT "B"

4 TRANSMIT Common

5 $\overline{AUXP}$

6 RECEIVE Common

7 RECEIVE "B"

8 TRANSMIT "A"

9 FRAME GROUND

When using RS-232, connections are as follows:

1 -

2 RECEIVED DATA (RXD)

3 TRANSMIT DATA (TXD)

4 DATA TERMINAL READY (DTR)

5 SIGNAL GROUND

6 DATA SET READY (DSR)

7 REQUEST TO SEND (RTS)

8 CLEAR TO SEND (CTS)

9 -

NOTES

1) DATA TERMINAL READY (Pin 4) is always asserted, as long as the ZETA-THREE is powered-up.

2) DATA SET READY (DSR), when asserted, enables the ZETA-THREE receive channel. If DSR is not connected, then it will be asserted internally.

3) CLEAR TO SEND (CTS), when asserted enables the ZETA-THREE to transmit data. If not connected, then it will be asserted internally and the ZETA-THREE will transmit without restriction.

4) REQUEST TO SEND (RTS) should be connected to the external computer CLEAR TO SEND (CTS) input. When asserted, the RTS output indicates that the ZETA-THREE is ready to receive data (i.e. ther is plenty of room in the data buffer of the ZETA-THREE).

If RTS is not asserted, then the external computer should refrain from further transmissions, as the ZETA-THREE buffer is about to overflow.

C.11   AUX IN [18]

The AUX IN is a 1/4 inch stereo jack and requires a 1/4 inch tip sleeve phone plug (tip-signal, sleeve-ground).

The AUX IN jack will accept a square wave or pulse waveform (1 8 volts) as a frame rate when resolving.

C.12   AUX OUT [19]

The AUX OUT jack [19] is a stereo jack and requires a 1/4 inch tip ring sleeve phone plug.

The tip of the plug will normally be responsible for sending a 5V pulse to trigger EVENT 1, OR it can be assigned a drum frequency (MIDI timebase signal).

The ring of the plug will normally be responsible output a 5V pulse to trigger EVENT 2, OR will output a STP/CNT, or FRAME.