Assembly & Instruction Manual
Appendix – DMX Network Setup

1 <u>DMX Network Setup</u>

DMX Network is an optional setup which allows multiple units to be linked together to operate in unison. This is achieved via the DMX networking capability. Devices can be controlled using either your PC or a DMX compatible control desk (see the *DMX Channel Assignments* section).

Additional cables required (unsupplied):-

- 1 or more standard RJ-45 PC network cables.
- (Optional, control desk only) 1 x 3 or 5 pin XLR (depending on DMX control desk) > RJ-45 DMX cable.

2 <u>Wiring (Rear IO Panel)</u>

1) Mains power switch (illuminated when on)
2) Fuse holder
3) IEC (mains power) inlet
4) **DMX base address**
5) 'F' (Function) button
6) Indicator LEDS (top = controller status, bottom = power)
7) **DMX networking IO ports**
8) 'R' (Reset) button
9) USB compatible port
10) Audio input (TTi units only)
11) Audio output (TTi units only)

2.1. PC Controlled

1) Connect the first motion system in the chain to your PC using the supplied USB cable as described previously.

2) Connect one end of the RJ-45 cable to the *DMX Out* port *((7) DMX ports)* on the first motion system in the chain to the *DMX In* port on the second motion system.

3) For each subsequent system you wish to control simultaneously, connect another RJ-45 cable from the *DMX Out* port of the previous unit to the *DMX In* port of the next.

2.2. DMX Desk Controlled

1) Connect the *DMX In* port (*(7) DMX ports*) of the first motion system in the chain to your DMX control desk using the XLR > RJ-45 DMX cable.

2) Chain subsequent units together by following the second and third steps outlined in the '*PC Controlled*' section above.

2.2.1.   Dip Switch Settings

1) The DMX512 address of the unit is set using switches 1-9 on the ADDR/TERM switch panel (**(4) DMX address**). As with most DMX-compatible equipment, the addresses are set using a binary system, by summating the values of all enabled (on) switches (1-9) to give the address. e.g. switch 1 enabled (on) and 2-9 disabled (off) = Channel **1**, switches 2 and 4 enabled (and all others disabled) = Channel **10**, and so on. Units set with the same address in the chain will operate in unison.

2) IMPORTANT: Switch **10** should only be enabled (on) in the LAST unit in the DMX chain - this enables the **termination resistor**, and if left disabled (off) unexpected results may occur. If it is enabled on a unit prior to the last in the chain, the subsequent units may not function correctly.

3) If you are unsure about DMX channel setup or will only be using a single motion system via PC control, just set the unit to channel 1 by enabling switch 1 (on) and disabling all others (off).

2.2.2.   DMX Channel Assignments

Channel	Range	Title	Description
1	0 -255	Pitch (Coarse)	Coarse pitch position (0 = fully backward, 255 = fully forward)
2	0 -255	Pitch (Fine)	Fine pitch position. Used in conjunction with Pitch (Coarse) to form a 16-bit number, allowing 65536 possible positions. Pitch (Coarse) is the high-order byte
3	0 -255	Roll (Coarse)	Coarse roll position (0 = fully left, 255 = fully right)
4	0 -255	Roll (Fine)	Fine roll position. Used in conjunction with Roll (Coarse) to form a 16-bit number, allowing 65536 possible positions. Roll (Coarse) is the high-order byte
5	0 -255	Force	Movement force (0 = lowest, 255 = highest)
6	0-255	Max Speed	Movement maximum speed (0 = lowest, 255 = highest). If unsure, set this to be permanently 255
7	0-255	TT Gain (TTi Units only)	Sets the gain (volume) of the tactile transducers (0 = lowest, 255 = highest)
8	0-255	TT LFC (TTi Units only)	Sets the LFC (Low Frequency Cut-off) of the tactile transducers (0 = lowest (20hz), 255 = highest (100hz))
9	0-255	Command	Used to issue one-shot commands to the unit. Must be set to 0 at all other times. Commands are as follows:- • 255 – Reset system It is recommended the command channel is set to the desired value for a minimum of 0.5 seconds before being reverted back to zero, to ensure the command is transmitted correctly