

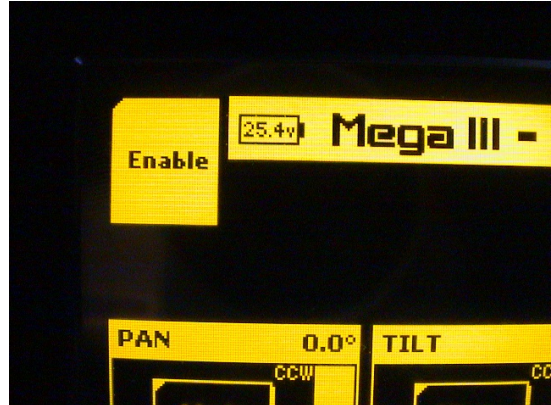
MEGA III

3-AXIS DIGITAL REMOTE HEAD

CIRCULAR CONTROLLER MANUAL

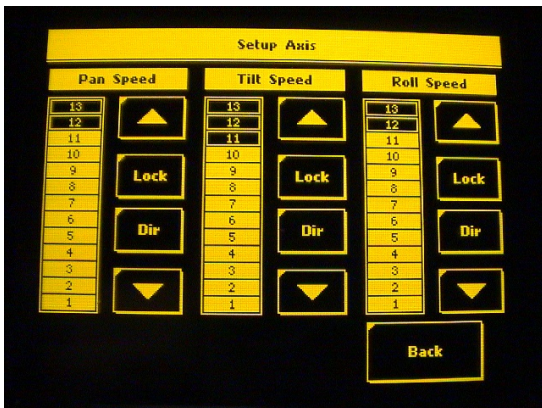


Main screen – note that as PAN is the left hand panel, then this is also what the left hand wheel operates. Degrees are displayed, along with an approximate position indicator/wheel direction for each axis. Also included in each axis box is the function of each axis (live, playback, record), and the speed of each axis. Global features include Enable on/off, and the voltage at the head.

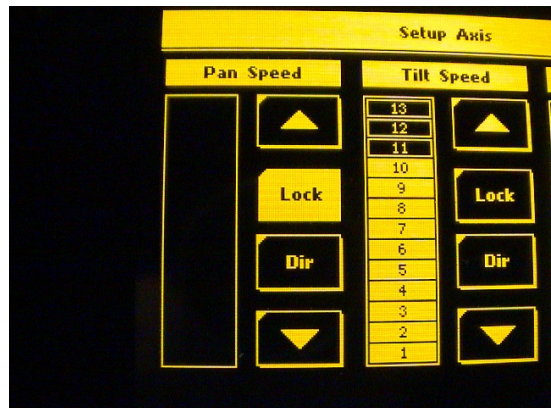


If enable is switched on (by a light press over the box), the box will then become yellow - the head is now ENABLED (ie the motors in the head are now holding the present position of the head, unless a handwheel is moved).

If the ENABLE is off, then the head is mechanically free. It is possible to move the head by hand, and if it is out of balance, the camera will fall under gravity.



If, on the **main screen**, any of the **SETUP** buttons are pressed, then you will see a screen as above. This screen controls the **HANDWHEEL** operation. An axis can be slowed by either pushing the down arrow, OR by directly pressing a numbered box. LOCK will stop the handwheel having any effect on the head position in the corresponding axis. DIR will reverse the direction that the head moves in relation to the wheel.

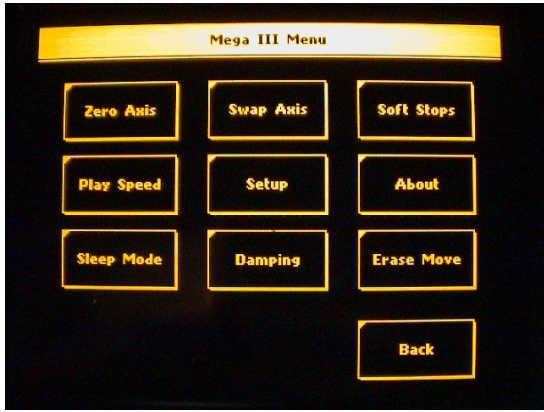


Note that if the **LOCK** button is on, then the column of **SPEED** buttons will disappear. This is because the head will be LOCKED in position, irrespective of the wheel position/speed.

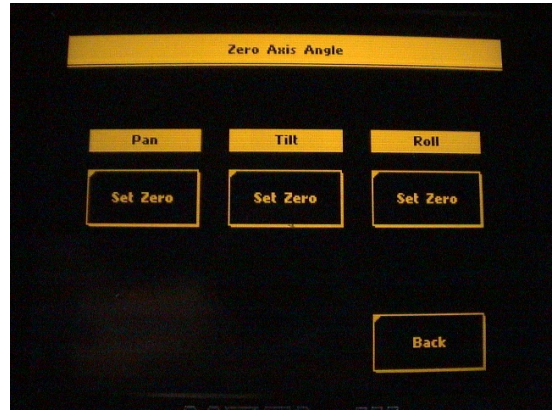
The main screen will also show the icon of a padlock on any axes which are locked.

To turn on the wheel again, simply press the **LOCK** button a second time.

NOTE: Having the axis in **PLAYBACK** mode will have the same effect. **An erratic movement is generally caused by a loose handwheel screw.**



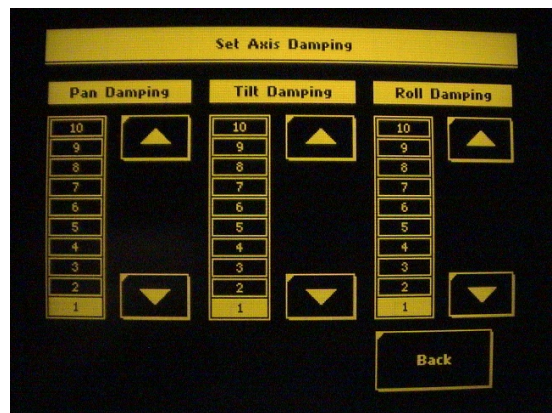
If the **MENU** button (MAIN SCREEN) is pushed, you will see the screen as above – this menu is for setting anything other than the relationship between head and handwheels.



ZERO AXIS will present you with the option of zeroing the individual POSITION indicators. **DO NOT DO THIS WITH A MEMORY MOVE**, as the ends of the move will change accordingly.

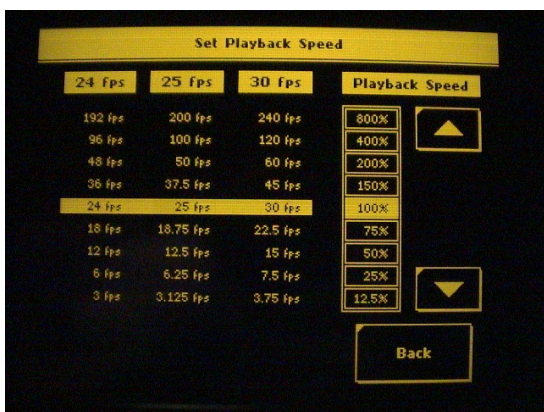


The **SWAP AXIS** screen allows you to configure any handwheel to any axis. The order of the main screen will change to reflect this.



AXIS DAMPING sets the responsiveness of the head to the wheels. 1 is absolute, whilst 10 is very damped (averaged). Always check the setting is 1 for all axes before each new job.

On a long lens, it may be necessary to increase the damping (especially at high gear/slow wheel).



SET PLAYBACK SPEED allows the recorded move speed to be adjusted. See detailed section on RECORDED MOVES.

NOTE: Do not go higher than 200% - this will be erased in the next software release, and an **USER LENGTH** button inserted.



SLEEP MODE sets the time taken for the display to turn off after there has been no wheel / touchscreen activity. This is to protect the display from burn-in. The display can be set to wake up with a touch of the wheels / display, or by touching the display only.

SOFT STOPS:



The **SOFT STOPS** screen allows limits to be put on any axis. Once a stop is set, the button will change from **SET** to **CLEAR**. Also, the **RAMPING** button allows the ramping speed into the stops to be configured for each axis.

Example: If you wish to fly the head over the top of someone, and roll 180 degrees anticlockwise, such that as you tilt right over the subject, the camera pulls out of the move level & the correct way up, you can do the following:

Set the camera to level, as you would for going into the shot. Set Stop 1 at this point. Try rolling the head anticlockwise – if the head will not move, but will go clockwise, roll the head back into the set limit, then **SET LIMIT 2** and **CLEAR LIMIT 1**. Now roll the head anticlockwise, and when the camera is level, but upside down, set the other limit.

The reason that the limits are direction dependant is so that you can set one limit with the camera level, roll it 3 times, and then have the other limit set at level. This will allow you to roll 3 times clockwise, & always come out level, then anticlockwise, and come out level again.

The **SOFT STOPS** take a little explaining, but once mastered, are very straightforward.

RECORD / PLAYBACK OF MOVES:



If a mode key is pressed (in any axis), then the transport bar will appear (as above) whilst any axis is in either **RECORD** or **PLAYBACK** modes. If there is a value other than 0 at **TOTAL FR** then there is already a move in memory. It is sensible to erase this move, if it is no longer required (see **ERASING MOVE** below).

The present memory of the head is 1080 frames (45 seconds). To **RECORD** a move, press the **MODE** button for the axes you wish to record, such that they display **RECORD**. Then push the **FORWARD PLAY (>)** button. The frame counters will start counting, and the recording is active. When you have done the move, press the **STOP key (£)** and wait 5 seconds for the move to be stored to memory. The axes which you recorded should automatically switch to **PLAYBACK** mode.

RESETTING MOVE:

To reset the move, simply push the **REVERSE PLAY (<)** key. The head will now do exactly what you did, but in reverse (depending on the playback speed setting – see **PLAYBACK SPEED**).

PLAYING THE MOVE: Make sure that the axes you wish to replay are set to **PLAYBACK** mode, and press the **FORWARD PLAY (>)** button. The rig will run through the move at the preset playback speed.

PRIORITIES: The head will give **PAN** highest priority, then tilt, then roll. As such, if a roll move lasts 5 seconds, and you record a tilt move on top, the recording will carry on **PAST** the end of the roll move. However, if you record a 10 second **PAN** move, then record a tilt or roll move, the recording will stop at 10 seconds.

You can **FORWARD PLAY** axes whilst recording other axes.



PLAYBACK TRANSPORT BUTTONS:

<< This button has 2 functions: Its normal function is to REVERSE PLAY axes in PLAYBACK MODE at the speed at which they were recorded (100%), for as long as you keep your finger on it.

Also, if you have put an axis in LIVE whilst a move is stored, and moved the head, then IF THE FRAME COUNTER IS AT ZERO, this button can be used to reset the head to the START POSITION of a move (assuming the necessary AXIS MODES are now in PLAYBACK).

< This button will REVERSE PLAY axes which are in playback mode, at the preset PLAYBACK SPEED.

|< This button will inch the axes in PLAYBACK MODE backwards 3 frames.

| This will stop any playback or recording of any axes in PLAYBACK MODE, and bring the head to rest.

>| This button will inch any axes in the PLAYBACK MODE forward by 3 frames

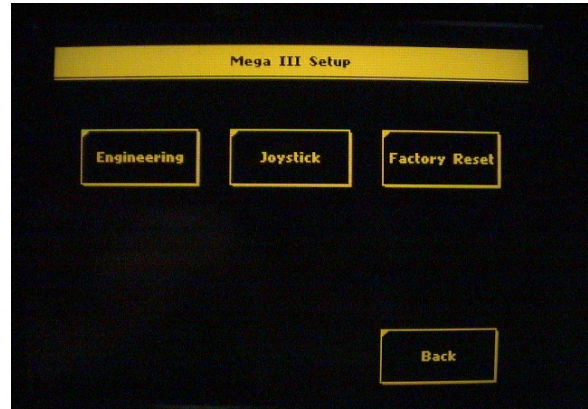
> This button is used to RECORD any axes in RECORD MODE, and PLAYBACK any axes in PLAYBACK mode. Note that recording is only possible when the preset PLABACK SPEED is set at 100%. 1 or 2 axes can be recorded whilst playing the other axes.

>> This button has 2 functions: Its normal function is to FORWARD PLAY axes in PLAYBACK MODE at the speed at which they were recorded (100%), for as long as you keep your finger on it.

Also, if you have put an axis in LIVE whilst a move is stored, and moved the head, then IF THE FRAME COUNTER IS AT THE RIGHT HAND END, this button can be used to reset the head to the END POSITION of the recorded move (assuming the necessary AXIS MODES are now in PLAYBACK).

CURRENT FR: This marks the head's current position within a recorded move.

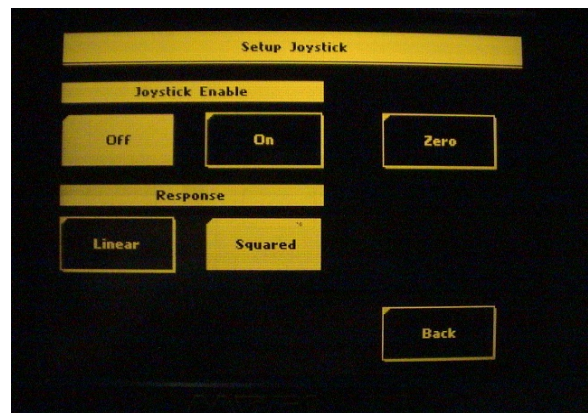
TOTAL FR: The total no of frames for the recorded move (at 24FPS). Maximum move length is 1080 frames (45 seconds).



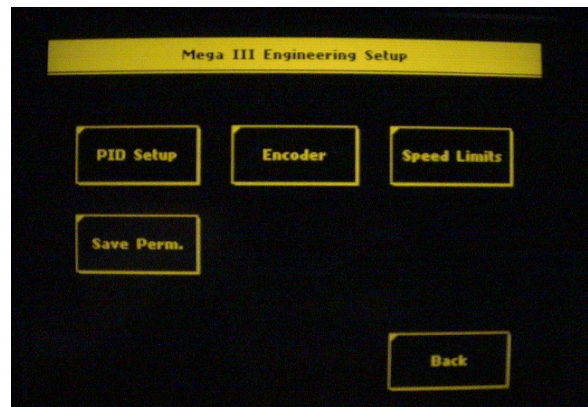
ENGINEERING SET-UP:

This screen should only be entered when using a joystick, re-setting the software, or setting up the rig's software parameters.

FACTORY RESET will re-instate the factory default values for motor gains, encoder counts, etc.



If you choose the **JOYSTICK** option, then you must plug the JOYSTICK in to the 10 pin KPT at the rear of the controller before re-enabling the head (switching the JOYSTICK ON/OFF will disable the head). Always use the joystick in **SQUARED** mode, as it is more precise. When in JOYSTICK mode, each time **ENABLE** is pressed, the joystick will ZERO any drift. As such, do not push the joystick when enabling the



head.

If you decide to enter the ENGINEERING screen, then you will need to know the password, in order to gain access. Once in, the only user button is the **SPEED LIMITS**, such that the max speed/acceleration for each axis can be set, to stop the controller seeing an out of position error (see HEAD SETTINGS). These numbers are not presently updated when **FACTORY RESET** is pressed – they have to be entered manually

