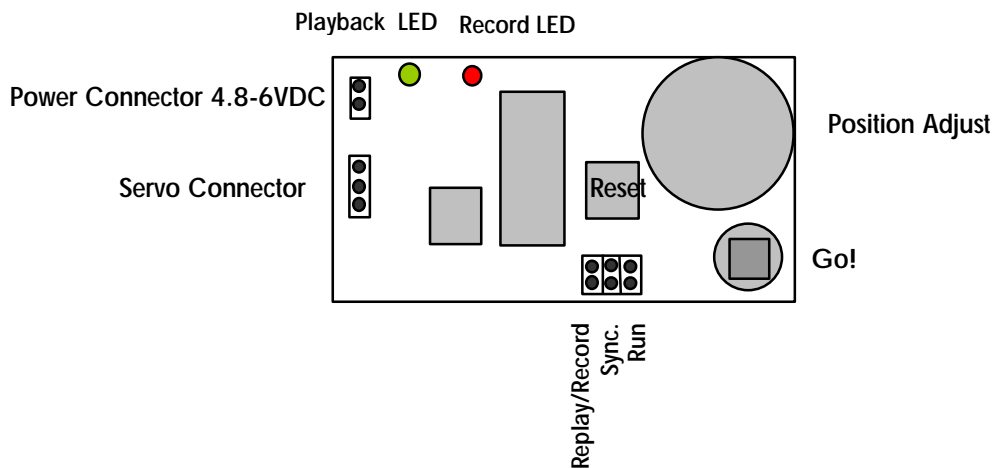


Puppeteer, Part Number 1-919

The Puppeteer module is a single channel servo controller capable of recording up to 4 minutes of servo movement. Features include loop playing with variable delay between loops, synchronised playback of several modules and the ability to build up a full recorded session in several parts.

Layout



Power Connector- The module requires between 4.8 and 6v DC to operate. Take careful note of the connector polarity or damage may be caused to the module and/or any connected servo.

Servo Connector- standard servo connector. Take note of the polarity of the connection. On some servos white is used in place of yellow as the signal control line.

Go!- Press to start either recording or playback depending on the currently selected mode.

Record LED- Red LED flashes whilst waiting to start recording and is on continuously during recording.

Playback LED- Green LED indicates playback in operation. Flashes during the delay period for loop operation.

Replay/Record Jumper- Jumper IN to select RECORD mode, jumper OUT to select PLAYBACK mode.

Sync- Synchronising pulse and ground connection for multiple module operation. Delivers

a short negative pulse at the start of playback and record which may be used to trigger other modules.

Run- Jumper position that may be used in place of the Go! button. Insert the jumper for automatic playback looping mode.

Reset- Reset the module. The only way to interrupt a playback session or enable recording from the beginning of data space with the power connected.

Position Adjust- When in idle or recording mode, adjusts the position of the servo. Note that the controller generates signals to allow extended range servo operation- not all servos will physically move this amount so take care not to damage your servo by driving it into the end-stops for extended periods.

In looping playback mode, the Position Adjust control adjusts the delay between successive plays... adjustable between 0 (anticlockwise) and 255 (fully clockwise) seconds.

Recording

Starting a new recording:

Connect a servo and suitable power supply.

Insert the RECORD jumper- the red led will start flashing.

Move the servo to the required start position.

Press and HOLD the Go! button to record all subsequent movements of the servo.

Releasing the Go! button will suspend recording and hold the servo in the last recorded position- press Go! to continue with the recording session.

The total recording time available is approximately 3 minutes 24 seconds- the red and green leds will flash when only 15 seconds of recording time remain.

Adding to an existing recording session:

If you have removed the power supply or pressed Reset since your original recording was made then you must playback the existing session first otherwise you will enable recording at the start of the memory space and overwrite your existing session.

Insert the RECORD jumper- the servo will automatically move to the last recorded position. Carefully rotate the servo position potentiometer until the green led lights- this indicates the servo position potentiometer and the current servo position are aligned so there will be no servo jitter between recording sessions.

Press Go! to continue recording – the recording will be appended to the original session.

If you wish to shorten a previous recording session- insert the RECORD jumper during playback at the point you wish to edit from. The module will cease playback, go into Record mode and wait with the red LED flashing until you press the Go! button.

Playback

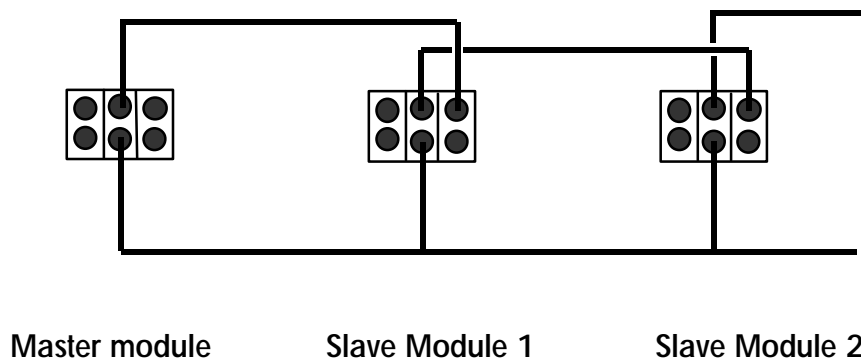
Ensure the Record/Playback jumper is OUT

Briefly press the Go! button to begin playback- the module will continue to play to the end of the recording. At the end of the recording, the module looks at the Go! button (or the RUN jumper)- if depressed (or IN) the module assumes looping play has been selected and will wait for a period determined by the Position Adjust control before beginning the next cycle. If the Go! button was not pressed then the module will wait for further instructions.

Synchronised Playback

It is possible to synchronise several Puppeteer modules. To do this, one module should be elected to be the master- the remainder as slave units.

The sync pins should be connected as follows:



At the start of playback and record, the master module drops the Sync pin to 0V to simulate the pressing of the Go! button on the first slave unit. The slave unit begins operation and triggers the next slave and so on.

For Loop operation place the Run jumper ONLY on the master unit.