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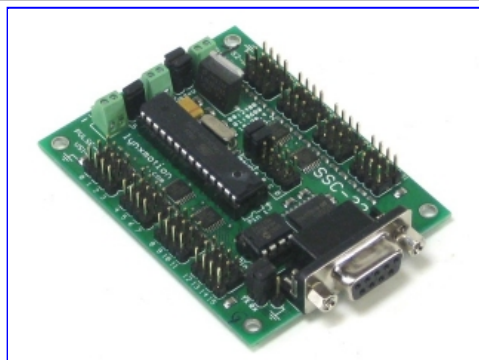
SSC-32 Servo Controller

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This is the best servo controller value available. 32 channels of 1uS resolution servo control. Bidirectional communication with Query commands. Synchronized, or "Group" moves. 12 Servo Hexapod Gait Sequencer built in. MiniSSC-II emulation, like having 4 of them. Plus much more!

Price: $39.95
Model Number: SSC-32
Weight: 0.13

Quantity: [1]   [Add to Cart]   [Add to Wish List]

User Guides

- Users Manual for SSC-32
- SSC-32 (v2) GP Sequencer Usage Manual

Specifications

These specifications pertain to firmware version 2.01XE:

- Microcontroller = Atmel ATMEGA168-20PU
- EEPROM = 24LC32P (Required for 2.01GP)
- Speed = 14.75 MHz
- Internal Sequencer = 12 Servo Hexapod (Alternating Tripod)
- Serial input = True RS-232 or TTL, 2400, 9600, 38.4k, 115.2k, N81
- Outputs = 32 (Servo or TTL)
- Inputs = 4 (Static or Latching, Analog or Digital)
- Current requirements = 31mA
- PC interface = DB9F
- Microcontroller interface = Header posts
- Servo control = Up to 32 servos plug in directly
- Servo type supported = Futaba or Hitec
- Servo travel range = 180°
- Servo resolution = 1uS, .09°
- Servo speed resolution = 1uS / Second
- Servo motion control = Immediate, Timed, Speed or Synchronized.
- PC board size = 3.0" x 2.3"
- VS current capacity = 15 amps per side, 30 amps max

Information

The SSC-32 (serial servo controller) is a small preassembled servo controller with some big features. It has high resolution (1uS) for accurate positioning, and extremely smooth moves. The range is 0.50mS to 2.50mS for a range of about 180°. The motion control can be immediate response, speed controlled, timed motion, or a combination. A unique "Group Move" allows any combination of servos to begin and end motion at the same time, even if the servos have to move different distances. This is a very powerful feature for creating complex walking gaits for multi servo walking robots. The servo's position or movement can be Queried to provide feedback to the host computer. There is even a 12 servo Hexapod sequencer built in. This allows complete control of all aspects of the alternating tripod gait simply by transferring a few values from the host controller. Any output can be used as a TTL level output. There are 4 digital inputs that are static or latched, so you don't have to worry about missing a short event. They can also be used as analog inputs. There are three terminal blocks for powering options. The DB9 input has

true RS-232 levels for use with a PC.

Downloads

Lynx SSC-32 Terminal
LynxTerm downloads available here.

SSC-32 Firmware for Atmega168 (v2) Chip	Version	Size	Details / Changes
2-05EGP_A4.abl => *Extended Binary General Purpose Sequencer.*	2.05EGP ALPHA4	43K	Extended Binary General Purpose Sequencer firmware, alpha release. Includes Register support.
2-04GP_BETA2.abl => *General Purpose Sequencer.*	2.04GP BETA	41K	Same as version 2.03GP except: Supports T parameter when starting a player. "PL0 SQ6 T1000" will take 1 sec to move to the starting position, and move at 100% speed after that. If no T command is specified, it moves as fast as possible to the starting position. The T command can be included with any other combination allowed when starting a player, i.e. "PL0 SQ6 IX15 SM50 T1000" etc. Includes Register support.
2-03XE.abl => *Hexapod Sequencer.* **=> *Currently shipping.***	2.03XE	36K	Same as version 2.01XE. Fixes Query Pulse (QP) bug when used with position offsets. Includes Register support.
2-03GP.abl => *General Purpose Sequencer.*	2.03GP	41K	Same as version 2.02GP. Fixes Query Pulse (QP) bug when used with position offsets. Includes Register support.
2-02GP.abl => *General Purpose Sequencer.*	2.02GP	41K	Same as v2.01 Beta except ONCE command now starts at the first step and ends at the last step. General Purpose Sequencer. Includes Register support.
2-01GP_beta1.abl => *General Purpose Sequencer.*	2.01GP BETA	41K	General Purpose Sequencer beta. Includes Register support.
2-01XE.abl => *Hexapod Sequencer.*	2.01XE	36K	Same as version 2.00XE. Register support added.
2-01XE.abl => *Hexapod Sequencer.*	2.01XE	36K	Same as version 1.06XE. Pulse offset bug fixed.

SSC-32 Firmware for Atmega8 (v1) Chip	Version	Size	Details / Changes
1-06XE.abl => *Hexapod Sequencer.*	1.06XE	34K	Same as version 1.03XE. Added a 600uS transmit delay and a 70uS pacing for the query commands. This will allow communication with slower processors, such as the BS2.
1-03XEA.abl => *Hexapod Sequencer.*	1.03XEA	34K	Same as version 1.03XE, but both ASCII and MiniSSC-II modes have extended range from 0.50 to 2.50mS pulses. MiniSSC-32 emulation addressing set to 32-63.
1-03XE.abl => *Hexapod Sequencer.*	1.03XE	34K	Same as version 1.03X, but both ASCII and MiniSSC-II modes have extended range from 0.50 to 2.50mS pulses.
1-03XA.abl => *Hexapod Sequencer.*	1.03XA	34K	Same as version 1.03X, but MiniSSC-II emulation addressing set to 32-63. Range = 0.75 to 2.25mS pulses for ASCII and MiniSSC-II emulation.
1-03XER.abl => *Hexapod Sequencer.*	1.03XER	34K	Same as version 1.03X, but ASCII mode has extended range from 0.50 to 2.50mS pulses. 0.75 to 2.25mS for MiniSSC-II mode.
1-03X.abl => *Hexapod Sequencer.*	1.03X	34K	Added Pulse-width Offset (PO) command. Fixed 120 second jog move bug when XS = 0. Range = 0.75 to 2.25mS pulses for ASCII and MiniSSC-II emulation.
1-1gbeta.abl => *General Purpose Sequencer.*	1.1G BETA	34K	Same as version 1.0G Beta. Fixes the slowdown because of sending too many Speed Multiplier commands, but the occasional "play a step quickly in reverse" bug is sometimes still present. **Updated:** May 14, 2007.
1-0gbeta.zip => *General Purpose Sequencer.*	1.0G BETA	42K	This version of the firmware retains all of the basic servo control functionality of the 1.06XE version, but replaces the MiniSSC-II emulation and the 12 servo hexapod sequencer with two powerful user configurable general purpose sequencer engines. **Updated:** Feb 26, 2007.

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