LCS-300 Rev001 Specifications   11/2011

Outputs:

Grp Trig: Provides trigger pulse at beginning of master pulse when loran C chain is transmitted.

Master: Outputs only the master pulse. Amplitude is fixed at 2V p-p at pulse maximum.

Slave1:   Outputs only Slave 1, fixed amplitude of 2v p-p.

Slave2:   Outputs only slave 2, fixed amplitude of 2V p-p.

Option: Output for upgrades. Not used at this time.

Composite Loran output: Connects to Loran receiver. Master, slave1, and slave2 are present at this connector, and the levels can be individually set over an 86 dB range or 50uV to 1V p-p.

Trig Out: Software selectable trigger for master, slave1, or slave2 group.

All outputs except for the Group Trig and Trig Out are 600 ohms and can tolerate DC voltages of +/- 20V. The Group Trig and Trig Out output is 0-5V with 1K impedance. Voltage must not be applied to these outputs or damage may occur.

Controllable parameters:

The GRI, Slave time difference (TD), and master , slave1, and slave2 amplitudes can be set. ECD can be set, but applies to master and slaves equally.
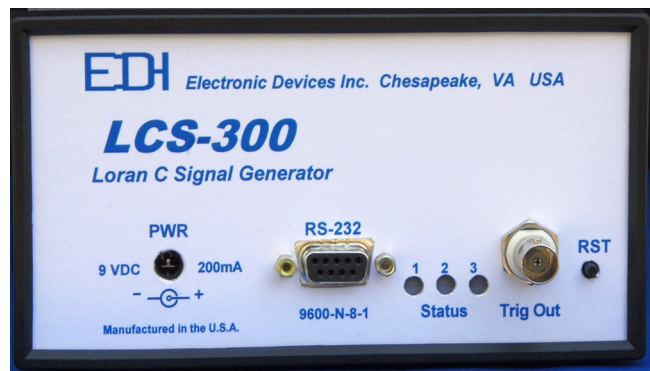
GRI range: 33mS to 500mS.

GRI resolution: 100uS.

Slave1 range Limits: 11000uS minimum to GRI - 11000uS maximum .

Slave2 range limits: Slave1 TD + 11000 uS minimum to GRI - 11000uS maximum.
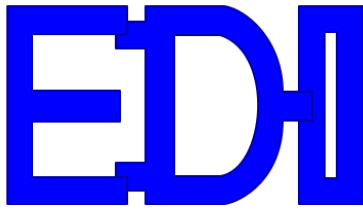
Slave resolution: 100nS.

Master and slave amplitudes: Amplitude for master, slave1, and slave2 can be individually set from 50uV to 1V p-p in 0.3dB steps.

ECD range: +10 to -10 uS in 1 uS steps.

Serial port: Standard 9-pin serial cable. An RS232 opto-isolator option is available.

Baud rate: 9600, 8 bits, no handshake, 1 stop bit.

Internal EEPROM stores operating parameters and restores these settings when power is applied.

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Software commands: note: For complete listing see operator's manual

'e'   Sets negative ECD in uS. 0 to -10 uS.

'e4'   Transmits pulses with a -4uS Envelope to Cycle Delay.

'E'   Sets positive ECD in uS. 0 to +10 uS

'i'   Prints out all output data, GRI, slave1 TD, slave2 TD, and ECD.

'm'   Sets the GRI, 7980, 9960. etc. 'm9960' sets the GRI to 99.60 milliseconds.

'M'   Sets the master amplitude, 0-255. 'M0' is minimum amplitude, 'M255' is
           maximum. Resolution is 0.3dB/step.

'x'   Sets the slave1 TD in tenths of a uS, 245678 = 24567.8 uS.
'X'   Sets slave1 amplitude, 0-255.

'y'   Sets slave2 TD in tenths of a uS.
'Y'   Sets slave2 amplitude, 0-255.

'sx'   Sets the slew rate for slave 1. 'sx9' will change slave1 by 0.1uS every 9 GRI
           periods.

'Sx'   Sets the slew direction for slave 1. 'Sx0' will decrement slave1, and 'Sx1' will
           increment   slave1.
'sy'   Sets the slew rate for slave 2. 'sy33' will change slave 2 by 0.1 uSec every 33
           GRI   periods.
'Sy'   Selects increment or decrement for slave 2.

't'   Sets back panel trigger for master. Master = 0, slave1 = 1, slave2 = 2.
           't1' will set the trigger pulse to the start of slave1 transmission.

'?' or '/' Prints this help file.

Software Updates: Updates are done through the RS-232 interface utilizing internal bootloader.
Internal time base: TCXO, 1ppm over temperature of -10 to +60 degrees centigrade.
Size of LCS-300:   15.9cm wide x 8.3cm high x 17cm deep, including connectors.
Shipping weight: 2Kg.

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Power supply: 9 VDC wall-plug transformer.