Overlay button images and alternate with +5v Logic

Download jpeg button images
http://www.lyntec.com/LynTec_Buttons_jpg.zip

TIMING and LOGIC LEVEL DIAGRAM
LynTec MS-12 series Modular Sequencer

Timing Diagram is shown for a one board system with only one jumper in the **First 2 sec.** position. Step rates default at 1 sec.
All boards within each panel are factory daisy-chain connected with 4 pin board-to-board cascade connectors.
Remove cascade connectors to separate into multiple systems.

Press ON button

ON switch LED Flashes during sequencing for operator feedback

ON LED flashes at 1 second interval regardless of step rate

Sequence finished. All ON

Press OFF button

Sequence finished. All OFF

ON

Sequencer Step number

1 Motorized Breakers 1a and 1b ON

2 Motorized Breakers 2a and 2b ON

2 sec. DELAY TIME Adjustable up to 8 min. May be set before or between any step.

3 Motorized Breakers 3a and 3b ON

same DELAY TIME on turn off. Only on Rev. 14 up boards >8/03.

4 Motorized Breakers 4a and 4b ON

5 Motorized Breakers 5a and 5b ON

6 Motorized Breakers 6a and 6b ON

139-0266-09 MS-12 Timing Diagram 5/18/10

Control line TIMING, FUNCTIONS and LEVELS

ON Switch. +35v — Common — 30 msec. minimum 500 msec. maximum. Source resistance is 3720 to 6900 Ohms depending on model.

For daisy-chain, connect to ***previous*** board's CARRY.
Use only the ***first*** ON switch in daisy-chained systems - turn ON ***first*** board - turn OFF ***last*** board.

OFF Switch. For daisy-chain, connect to ***next*** board's BORROW.
Use only the ***last*** OFF switch in daisy-chained systems - turn ON ***first*** board - turn OFF ***last*** board.

+35v — Common — 30 msec. minimum 1500 msec. maximum (2 sec. will invoke HurryOff — a Kill without automatic restart). Source resistance is 3720 to 4700 Ohms depending on model.

BUSY +12v — Common
(An output. Connected to ***next*** board's HOLD. Low holds next sequencer until this board's on sequence is complete).

PILOT Com — +16v 60 Hz pulses. 7.5v rms
(An output. Connect to all external ON switch LEDs).
For daisy-chained systems ***all*** ON LEDs + connect to the ***first*** board's PILOT.
Power Verification and sequencing completion uses each subsequent board's PILOT output.
The last sequencer uses a V+ to V— jumper or series connected Power Vouchers to light the **ON** LED at end of sequence.

Sequence finished. All OFF

+5v Logic — Common
(Clean CMOS 5v logic for touch panel interface. 3.3 kOhm source impedance).

CARRY
(An open collector, NPN darlington with a 1N4004 diode and a 200 Ohm transient current limiting resistor. Connect to ***next*** ON. Toggles next board on).

+35v supplied from ***next*** ON. Source resistance is 3720 to 6900 Ohms depending on model.
56 msec.
CARRY low state voltage is +2.5v due to series 200 ohm resistor, diode and VCEsat of darlington transistor. (one daisy-chain load)
— Common

BORROW
(An open collector NPN output with an 82 Ohm transient current limiting resistor.
Connect to ***previous*** OFF. Toggles previous board off).

+35v supplied from ***previous*** OFF. Source resistance is 3720 to 4700 ohms depending on model.
56 msec.
BORROW low state voltage: +0.75v due to series 82 Ohm. (one daisy-chain load) — Common

Press ON button

Sequence finished. All ON

Press OFF button