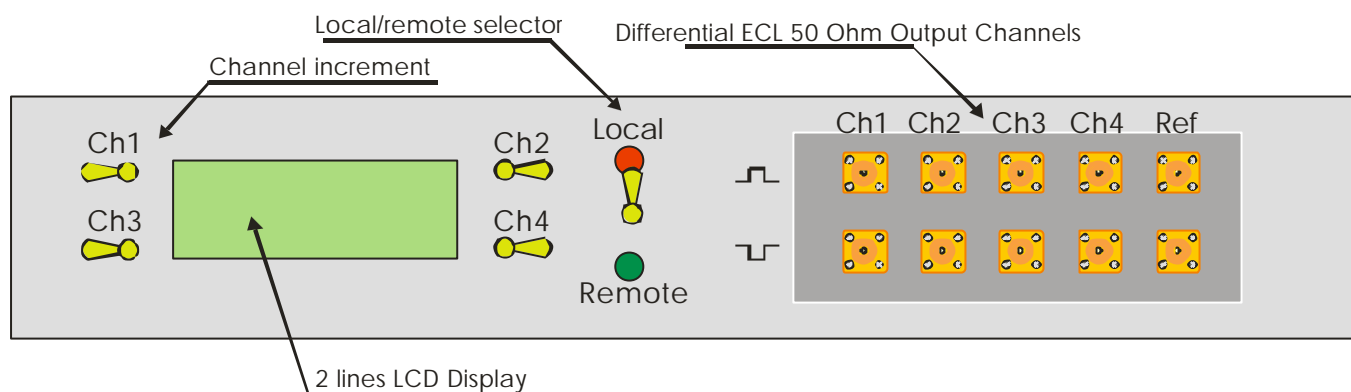


Clock Phase Shifter User Manual

1) Description

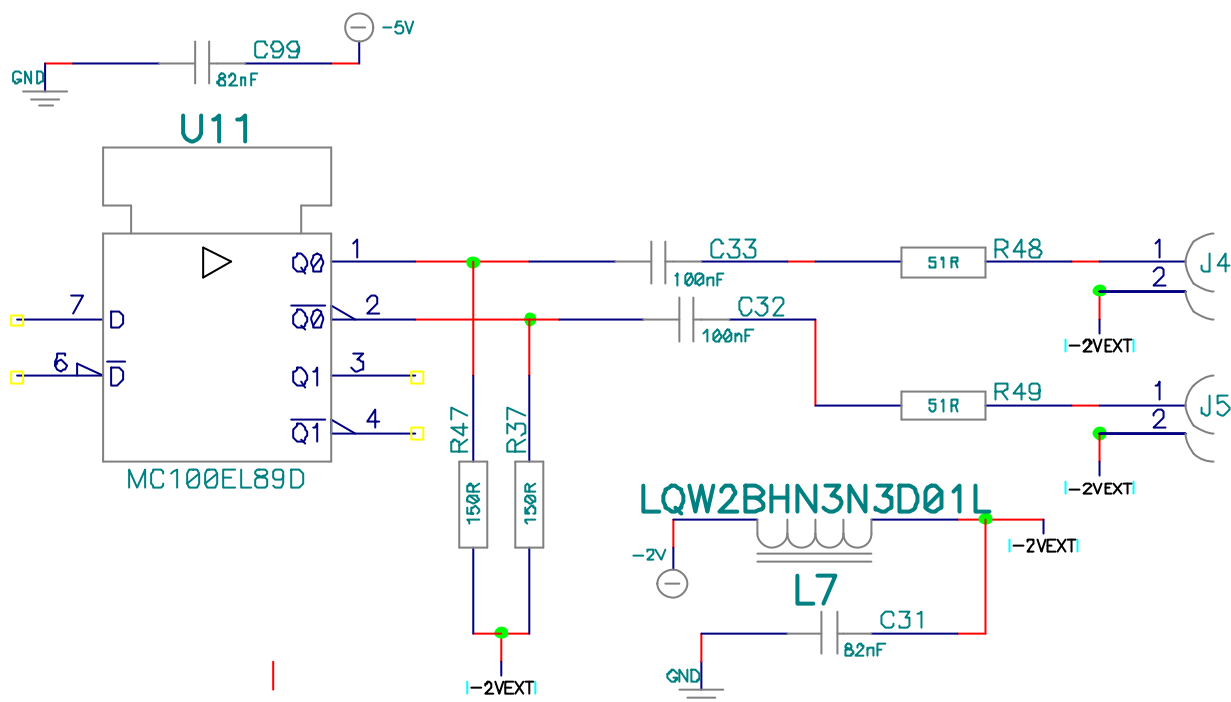
2) Frontpanel Service Instructions



- a) Channel Increment Switches:** Holding the switches more than one second in either directions, increments/decrements the channels to one programmed step.
- b) Local/Remote Control Switch:** The channels may be controlled locally by the frontpanel switches or remotely by the digital input port connector on the back of the CPhSV10 unit.
- c) Local/Remote Control Led Display :** Shows the operation mode status of the CPhSV10 unit. Additionnaly, while one of the leds is burning indicates that the unit is ready for use.
- d) LCD Display :** Shows the actual channel settings.

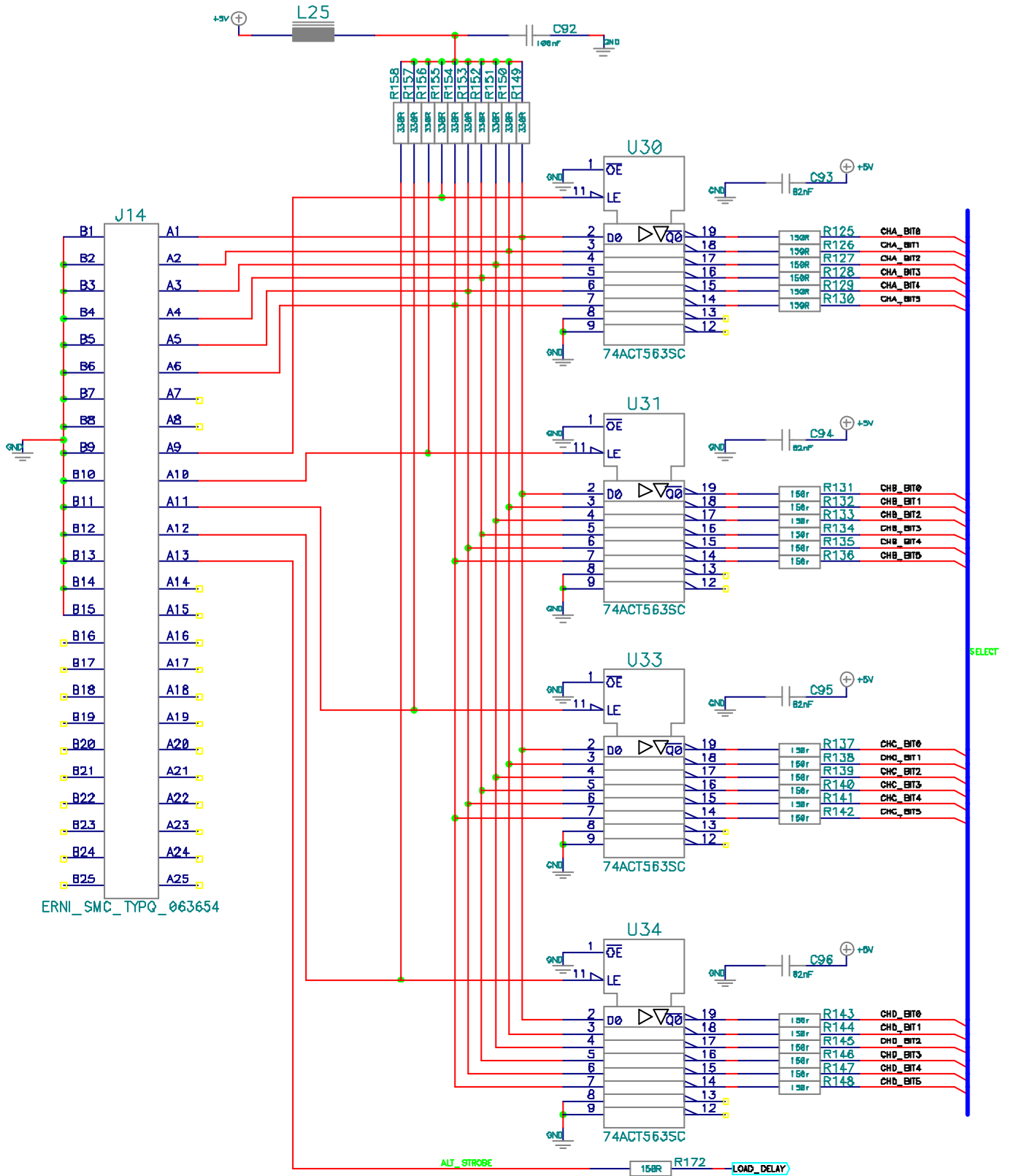
e) **Channels output** : They are 4 differentials 50 ohms channel outputs, each output should be terminated to ground to work. The last output is the reference output and can not be shifted.

f) **Channel output configuration:**



3) Remote Control Instructions :

a) Rear Connector Pinout :



b) Remote control description :

b1) Code Table (pins a6:a1)

Code	Delay[ps]	Code	Delay[ps]	Code	Delay[ps]	Code	Delay[ps]
000000	0000	010000	0710	100000	1245	110000	1950
000001	0090	010001	0790	100001	1325	110001	1955
000010	0175	010010	0795	100010	1330	110010	2040
000011	0180	010011	0800	100011	1415	110011	2125
000100	0260	010100	0880	100100	1420	110100	2130
000101	0265	010101	0885	100101	1500	110101	2215
000110	0350	010110	0890	100110	1505	110110	2220
000111	0355	010111	0970	100111	1510	110111	2305
001000	0435	011000	0975	101000	1590	111000	2310
001001	0445	011001	1060	101001	1595	111001	2395
001010	0520	011010	1065	101010	1600	111010	2480
001011	0530	011011	1145	101011	1685	111011	2485
001100	0535	011100	1150	101100	1770	111100	2570
001101	0615	011101	1155	101101	1775	111101	2660
001110	0620	011110	1235	101110	1860	111110	0000
001111	0705	011111	1240	101111	1865	111111	0000

b2) Channel Selector : (pin a12:a9)

1 1 1 1 : (data hold mode) all channels unselect, a data change has no effect on the channels.

0 0 0 0 : (data hold mode) all channels select, a data change has an immediately effect to all channels

X X X 0 : Change channel 1

X X 0 X : Change channel 2

X 0 X X : Change channel 3.

0 X X X : Change channel 4

b3) Literal description :

The following statements assume that the CPhSV10 unit is in remote control mode.

Each channel can be programmed remotely by a 6-bits code (pin a6:a1). Each channel has its own selector bit within a 4 bit selector code (pin a12:a9). If the channel selector bit is set to logic "0", the data are "pass through" i.e: every change in the channel data is directly passed to the channel. Setting the selector bit to logic "1", close the latch and the data are kept into the channel register, until a reset, a power down, a change in the local/remote switch or a new channel data select. One may change one channel at a time or all or part of the channel at a time by setting the appropriate channel selector.

Dataflow Example:

- 1) Set Channel Data.
- 2) Assign Channel Selector to (set to "0").
- 3) Release Channel Selector (set to "1").
- 4) Goto 1)