Sancode100 Timing Set Application Note

September 9, 2009

Description

The Sancode100 Tester timing generator can change timing set and format on the fly. Timing set minimum period is 10ns, resolution 2ns. Following is sample test pattern, that show timing set reality waveform.

Test Condition

- Pin Electronic using Venus Plus
- Have channel DCL Relay
- Measure at Sancode100 Load Board (QFP128_14x20)
- OSCILLOSCOPE : TDS 684B 1GHz Probe:P6243(1M)

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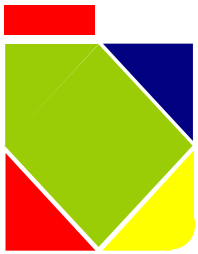
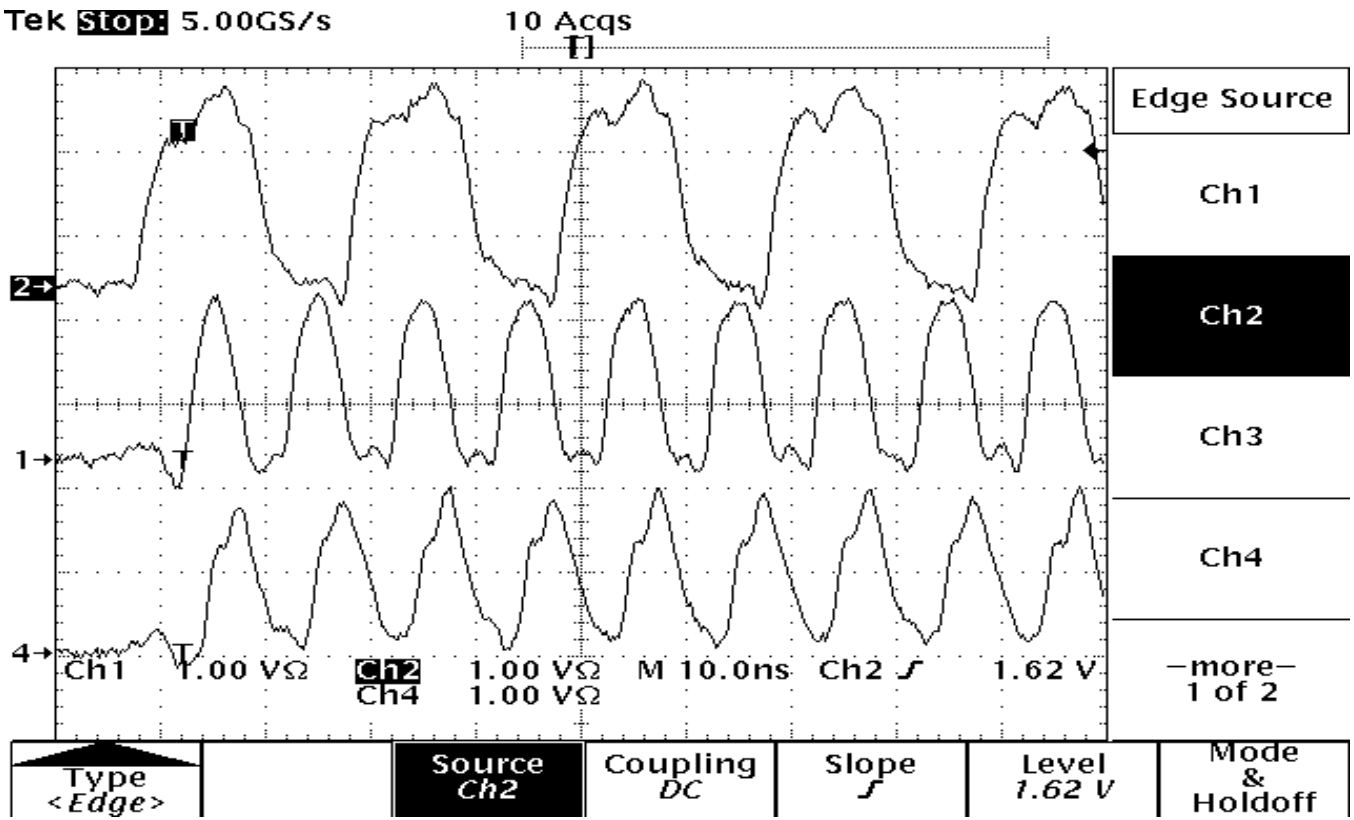


Signality System Engineering Co., LTD.

1. Sancode100 Min. Period is 10ns, and min. pulse width is 4ns.

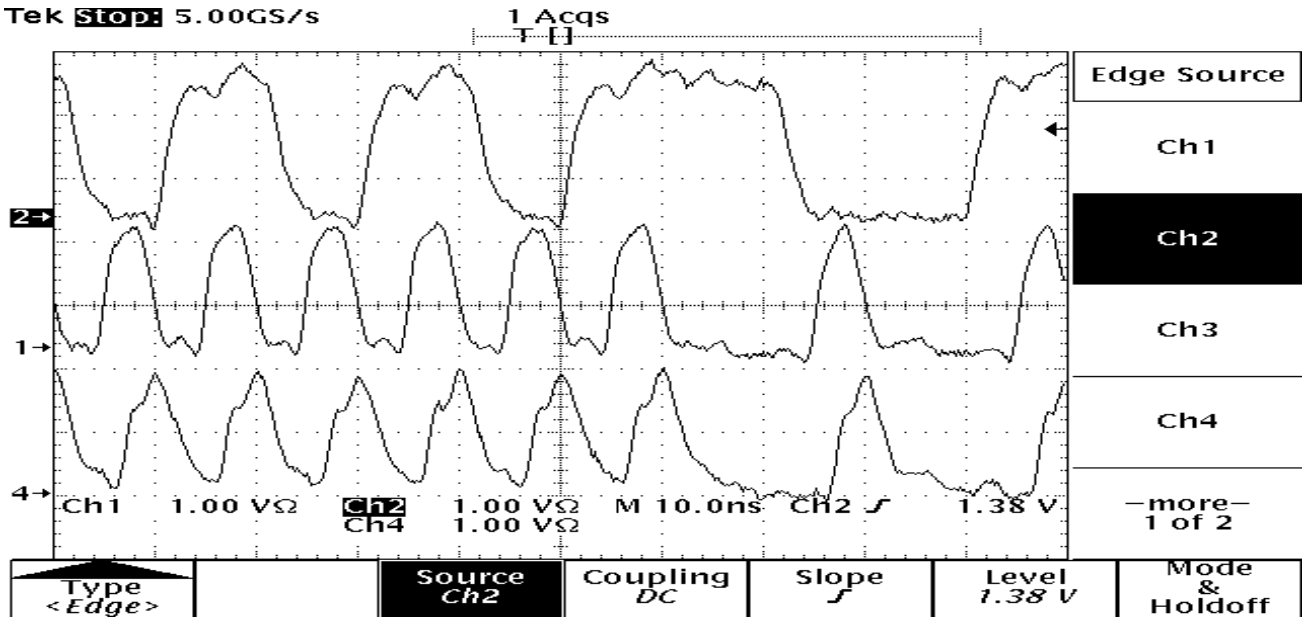
```
TS1(10ns)
{
                    Channel2{'0ns' D/U;}
          //NRZ
                    Channel3{'0ns' D/D; '4ns' D/U; '8ns' D/D;}          //RZ
                    Channel4{'0ns' D/D; '6ns' D/U; '10ns' D/D;}         //RZ
}
```



Signality System Engineering Co., LTD.

1. 2. Sancode100 can change timing set on the fly

```
TS1(10ns)
        {
                Channe12{'0ns' D/U;}
        //NRZ
                Channe13{'0ns' D/D; '4ns' D/U; '8ns' D/D;}          //RZ
                Channe14{'0ns' D/D; '6ns' D/U; '10ns' D/D;}         //RZ
        }
        TS2(20ns)
        {
                Channe12{'0ns' D/U;}
        //NRZ
                Channe13{'0ns' D/D; '4ns' D/U; '8ns' D/D;}          //RZ
                Channe14{'0ns' D/D; '6ns' D/U; '10ns' D/D;}         //RZ
        }
```



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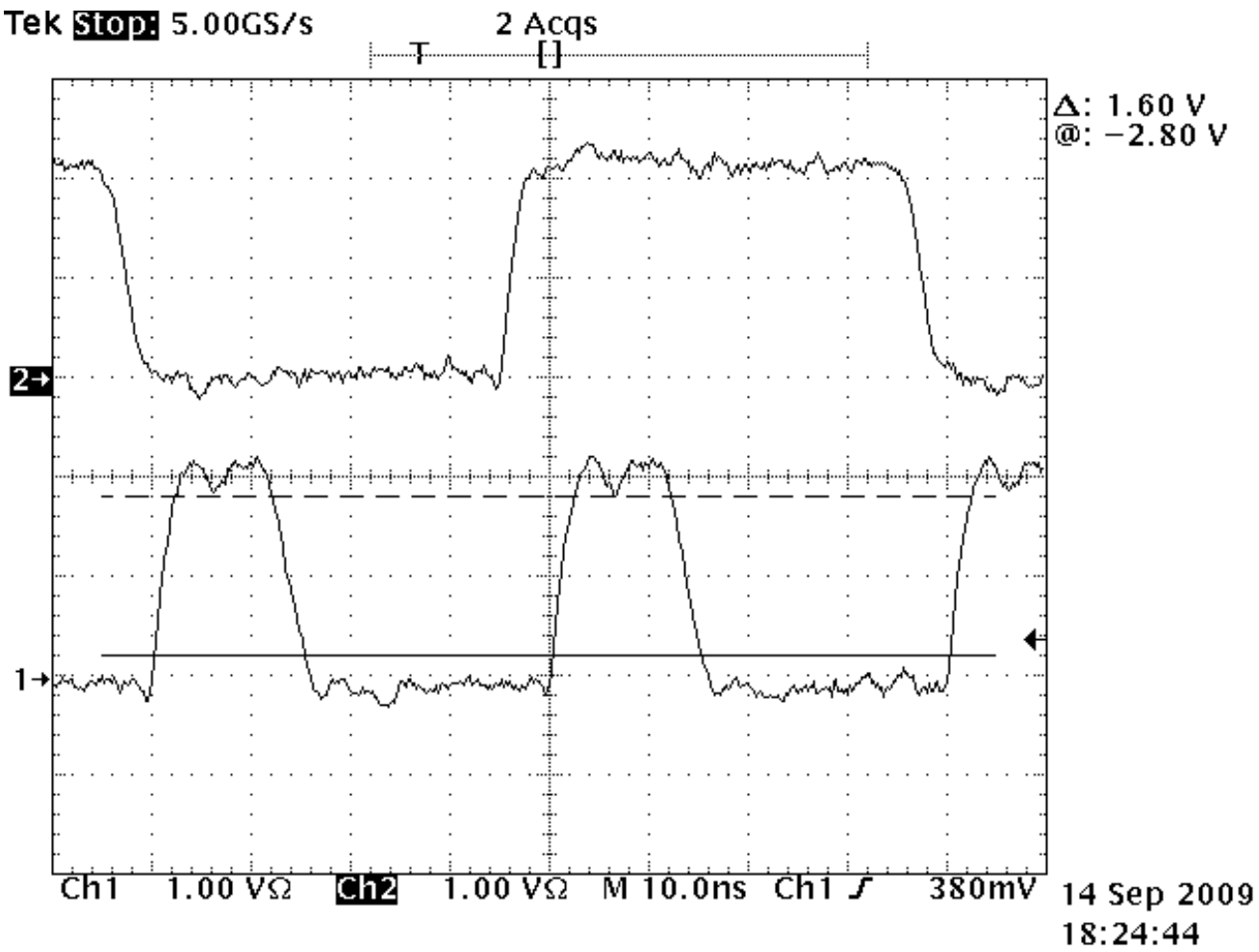

* See Test Pattern 25th line.

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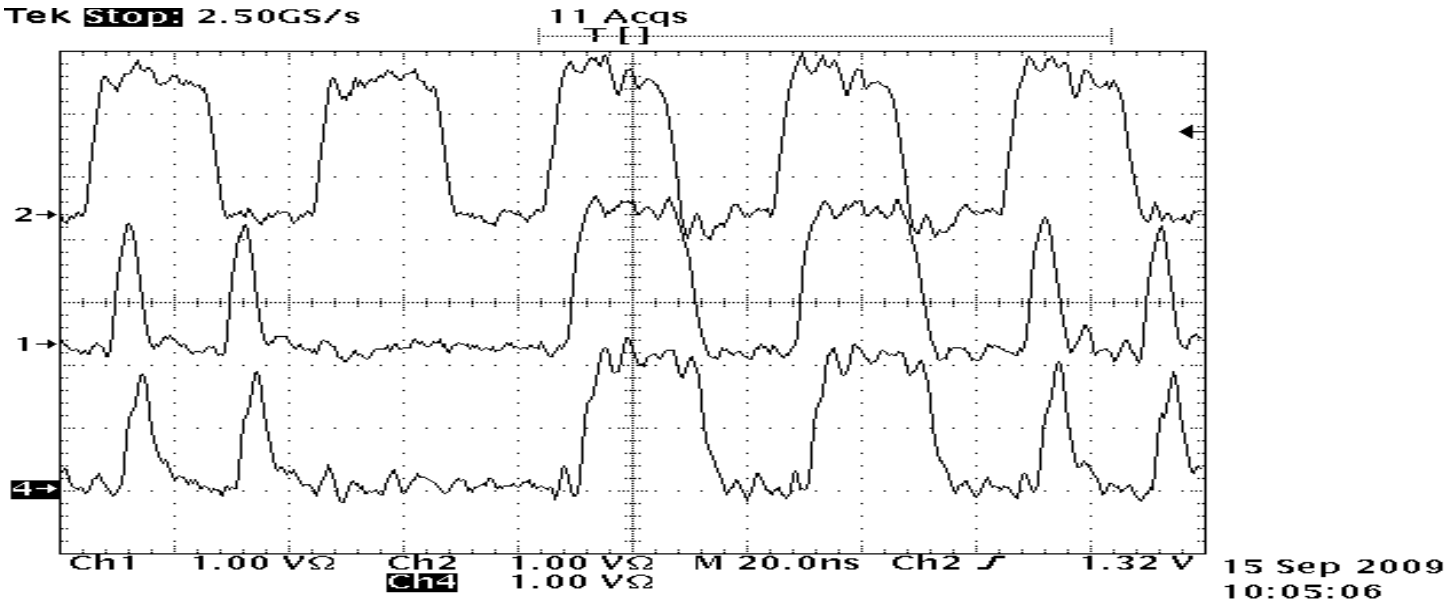
```
Sancode100 can change format on the fly
        TS2(20ns)
        {
                Channel2{'0ns' D/U;}
        //NRZ
                Channel3{'0ns' D/D; '4ns' D/U; '8ns' D/D;}          //RZ
                Channel4{'0ns' D/D; '6ns' D/U; '10ns' D/D;}         //RZ
        }
        TS3(20ns)
        {
                Channel2{'0ns' D/U;}
        //NRZ
                Channel3{'4ns' D/U;}
        //NRZ
                Channel4{'6ns' D/U;}
        //NRZ
        }
```

* See Test Pattern 31st line.



* See Test Pattern 5th line.

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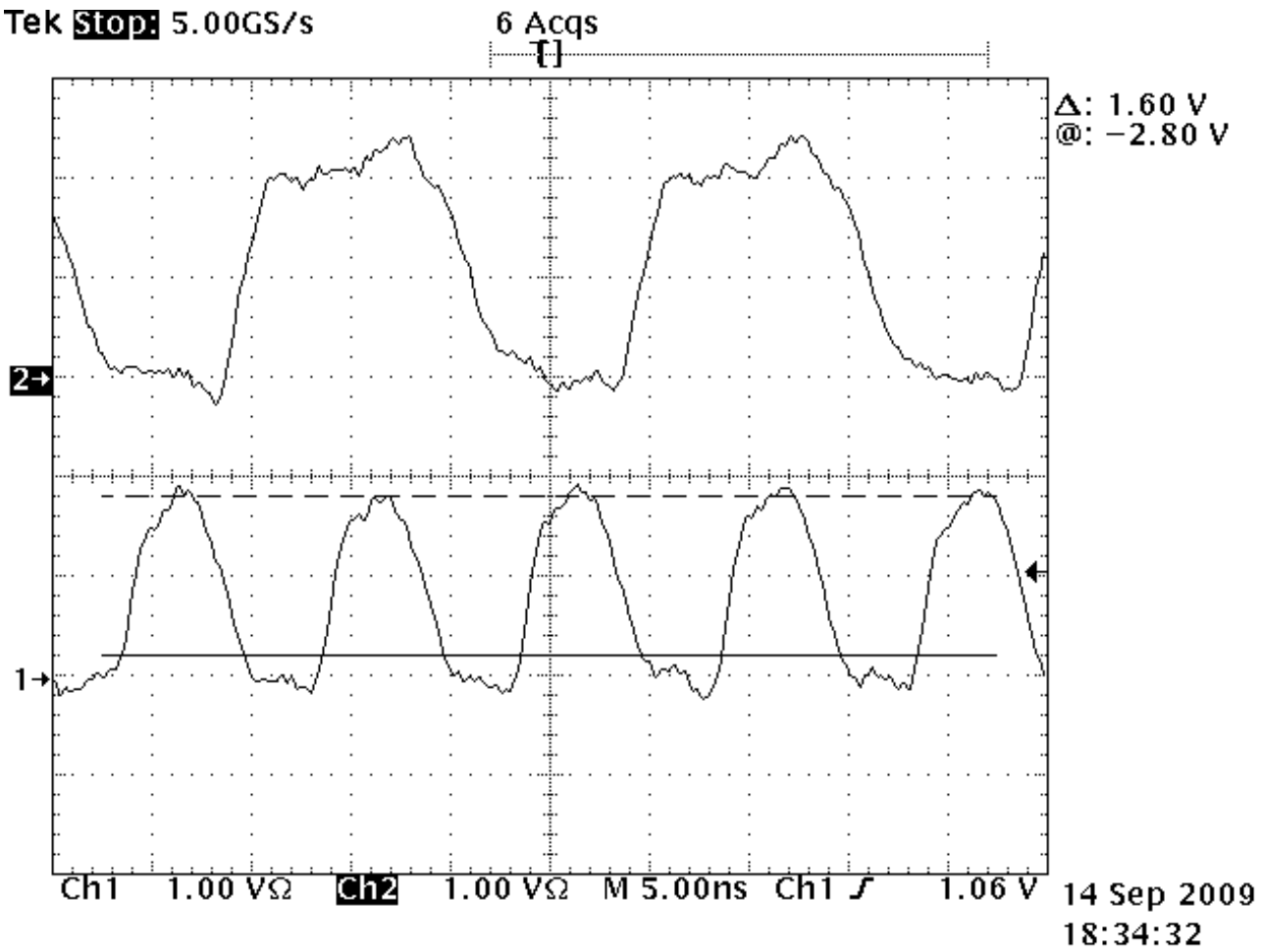

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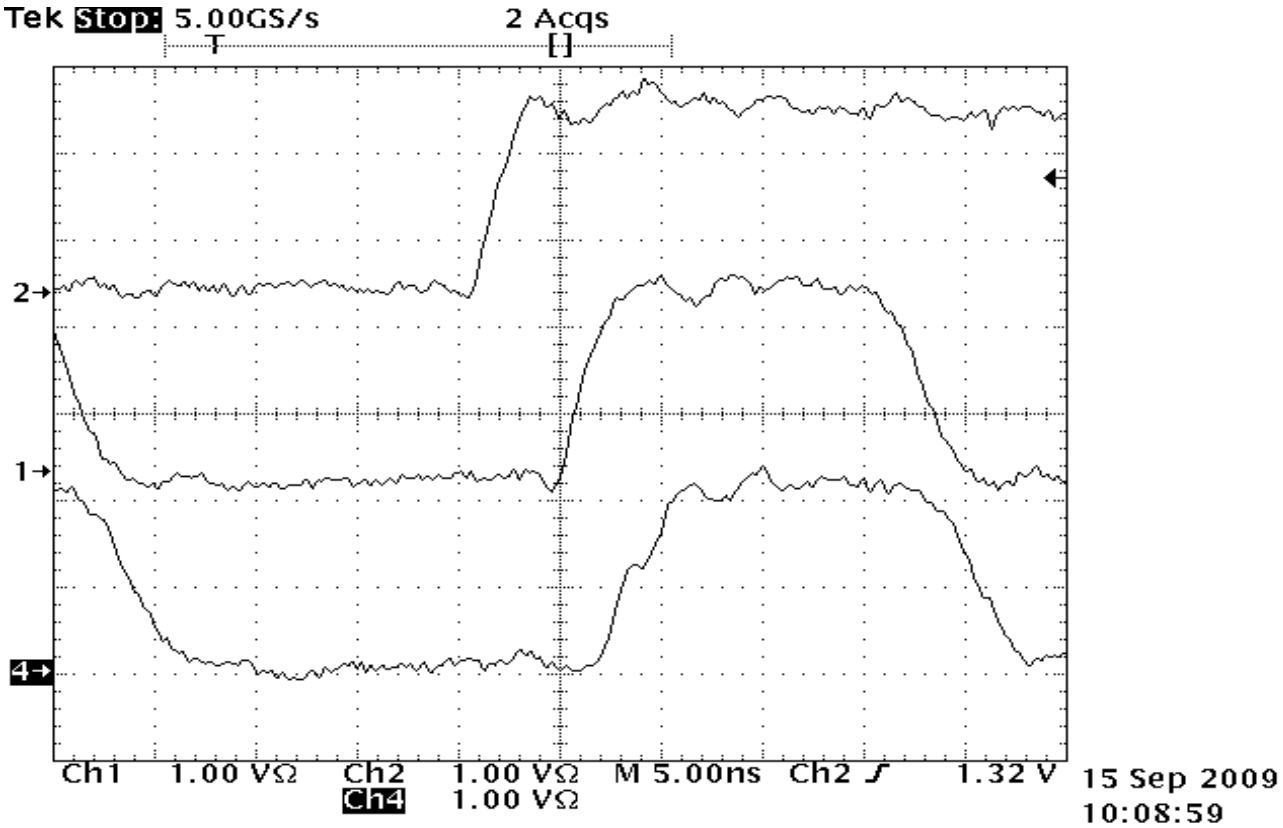
1. Sancode100 Timing set resolution is 2ns

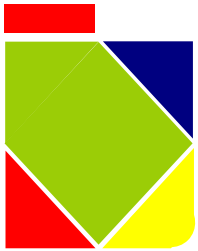
```
TS4(40ns)
    {
            Channel2{'0ns' D/U;}
            //NRZ
            Channel3{'0ns' D/D; '4ns' D/U; '14ns' D/D;}          //RZ
            Channel4{'0ns' D/D; '6ns' D/U; '16ns' D/D;}          //RZ
    }
```



* See Test Pattern 41st line.

Test Pattern：

```
PATTERN(test_pat, H_ALL);
/*          */
/*          */
/*          */
/*          */
/*       ccc*/
/*       hhh*/
/*       123*/
/* 01*/ *XXX* TS=TS1;//10ns
/* 02*/ *110*;
/* 03*/ *111*;
/* 04*/ *110*;
/* 05*/ *111*;
/* 06*/ *110*;
/* 07*/ *111*;
/* 08*/ *110*;
/* 09*/ *111*;
/* 10*/ *110*;
/* 11*/ *111*;
/* 12*/ *110*;
/* 13*/ *111*;
/* 14*/ *110*;
/* 15*/ *111*;
/* 16*/ *110*;
/* 17*/ *111*;
/* 18*/ *110*;
/* 19*/ *111*;
/* 20*/ *110*;
```



```
/* 21*/ *111*;
/* 22*/ *110*;
/* 23*/ *111*;
/* 24*/ *110*;
/* 25*/ *111* TS=TS2;//40ns
/* 26*/ *110*;
/* 27*/ *111*;
/* 28*/ *110*;
/* 29*/ *111*;
/* 30*/ *110*;
/* 31*/ *001* TS=TS3;//40ns CHANGE FORMAT
/* 32*/ *000*;
/* 33*/ *111*;
/* 34*/ *000*;
/* 35*/ *111*;
/* 36*/ *000*;
/* 37*/ *111* TS=TS2;//40ns
/* 38*/ *110*;
/* 39*/ *111*;
/* 40*/ *110*;
/* 41*/ *111* TS=TS4;//40ns
/* 42*/ *110*;
/* 43*/ *111*;
/* 44*/ *110*;
/* 45*/ *111* TS=TS5;//40ns
/* 46*/ *110*;
/* 47*/ *111*;
/* 48*/ *110*;
/* 49*/ *111* TS=TS6;//40ns
/* 50*/ *110*;
/* 51*/ *111*;
/* 52*/ *110*;
/* 53*/ *111* TS=TS7;//40ns
/* 54*/ *110*;
/* 55*/ *111*;
/* 56*/ *110*;
/* 57*/ *111*;
/* 58*/ *110* HALT;
END_PATTERN;
```