63600 Timing Measurements: L. Sharp

The Chroma 63600 Load Modules have an advanced feature called TIMING. This test will measure the time between 2 points these points are specified by a TRG_S (Trigger Start Voltage) and TRG_E (Trigger End Voltage) There are 3 different modes for this test and they are RISE Time, FALL Time, and HOLD-UP Time.

To set up and run this test is very easy the steps are listed below:

Step 1   Select the Advanced Features on the 63600 Load Module by pressing the ADVA button. (Fig 1)
Step 2   Select 1. TIMING by turning the rotary knob CW till TIMING is highlighted then press ENTER.
Step 3   Press the EDIT button to change the settings for the timing test.   (Fig 1)
Step 4   Press the ENTER button after changing each parameter in the timing test.   (Fig 1)
Step 5   Exit editing the timing test by pressing the EDIT button again.
Step 6   To activate the test hit the LOAD button and it will light up.   (Fig 1)
Step 7   Activate your UUT to create either a Rising turn on condition or a Falling turn off condition.
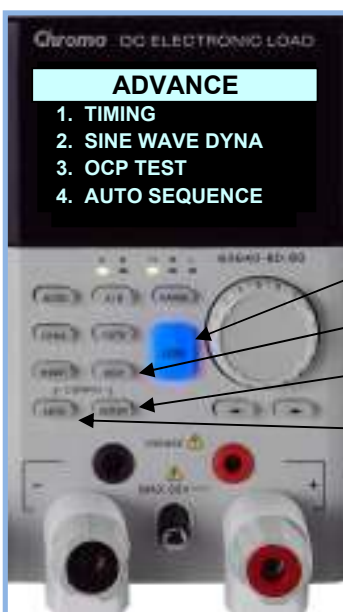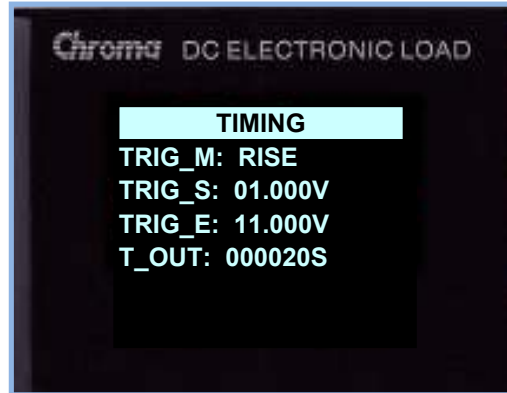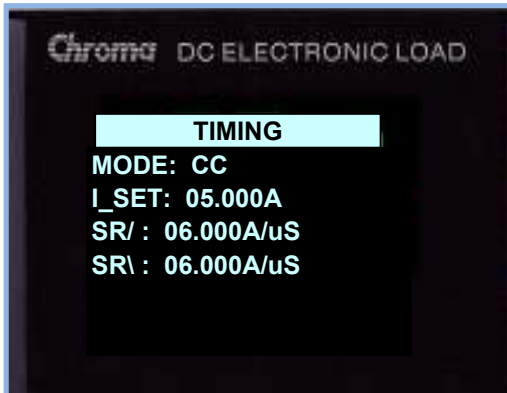Step 8   The reading on the display are more than 1 screen so to see all the measurements press the DATA key.

FIG 1.0

LOAD   This button Activates the Load

EDIT   This button opens the edit mode

ENTER   This button enter/stores settings

ADVA   This button opens the Advance menu

Following shows the setting for a RISE time test on a 12Vdc power supply. The measurement is set
to measure the time it takes the output to go from 1.0Vdc to 11.0Vdc. The load is set to 5Amps in CC mode.
The setting parameters for this test include TRIG_M (Trigger Mode); TRIG_S (Trigger Start Voltage);
TRIG_E (Trigger End Voltage, T_OUT (Time Out or Maximum run time of test); MODE (select the load mode CC);
I_SET (sets the current of the load); SR/ & SR\ (Slew rate of the load on the rising and falling edge.

Chroma DC ELECTRONIC LOAD

TIMING

MODE: CC
I_SET: 05.000A
SR/ : 06.000A/uS
SR\ : 06.000A/uS

Chroma DC ELECTRONIC LOAD

TIMING

TRIG_M: RISE
TRIG_S: 01.000V
TRIG_E: 11.000V
T_OUT: 000020S

Results of the above test: There are other measurements displayed such as VOLTAGE, CURRENT
and Ampere Hours to see the Time measurement use the DATA button.

Chroma DC ELECTRONIC LOAD

TIMING

980.00mS

Tek ● Acq Complete M Pos: −440.0ms CURSOR

Type
Time

11.0V

Source
CH2

△t 980.0ms
△t 1.020Hz
△V 9.92V

Cursor 1
−820ms
1.20V

1.0V

Cursor 2
160ms
11.1V

CH2 2.00V   M 250ms   CH2 ∕ 9.04V
7−Oct−11 08:23   <10Hz