

DL3000 Demonstration

2017





- High Resolution demonstration
- Dynamic 30KHz mode demonstration
- Slope 5A/us demonstration
- Battery Discharge demonstration

1、 High Resolution Demonstration

Equipment List

Equipment	Model	Requirement	Remark
Power Supply	DP811	Voltage > 5A Current > 10A	
Chroma	63103		5V 10A Comparison
Itech	IT8512		5V 10A Comparison
E-Load	DL3000		5V 10A Comparison

Operation Procedure

- 1、 Set DP811 as CV mode, Voltage is 5V, Current is greater than 10A
- 2、 Set as CC Mode for 3 E-Load, and set the current as full measurement range.
- 3、 Observe the Voltage and Current variation on the LCD Display of 3 E-Load.

Demonstration Performance

For the indication of right picture, the variation of Voltage and Current was occurred at the fourth digit on the screen, BTW, the variations on 63103 and IT8512 were occurred at the third digit.



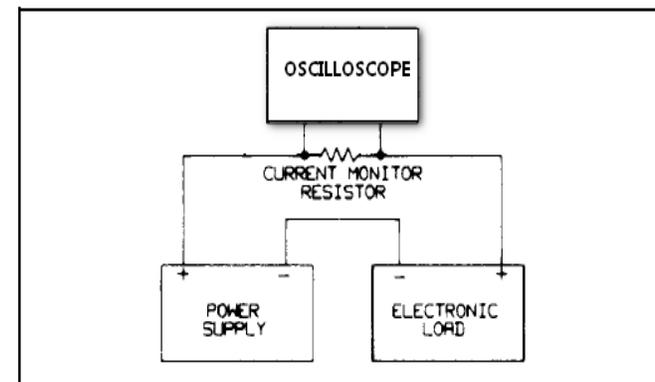
2、 Dynamic 30Khz Mode Demonstration

Equipment List

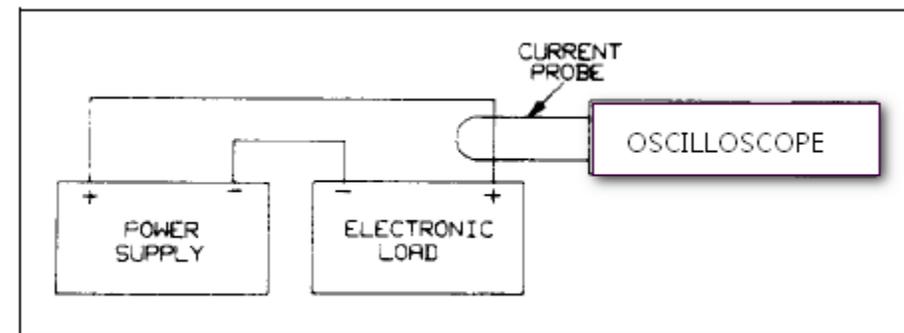
Equipment	Model	Requirement	Remark
High Power PS	IT6723C	Power > 350W, Output Current > 65A	Depends on the Options
Oscilloscope	DS2072A		
Sampling Resistor	10mΩ		Can be replaced by Current Probe
Current Probe	RP1002C	Measurement Range > 60A , Bandwidth > 1M	The Current Probe is 40A
E-Load	DL3000	"A" Version	Experiment Equipment

Ex: The Experiment offers two connection methods : Sampling Resistor mode and Current Probe Mode. Users can choose anyone as he likes.

Sampling Resistor Diagram



The Current Probe Connection Diagram

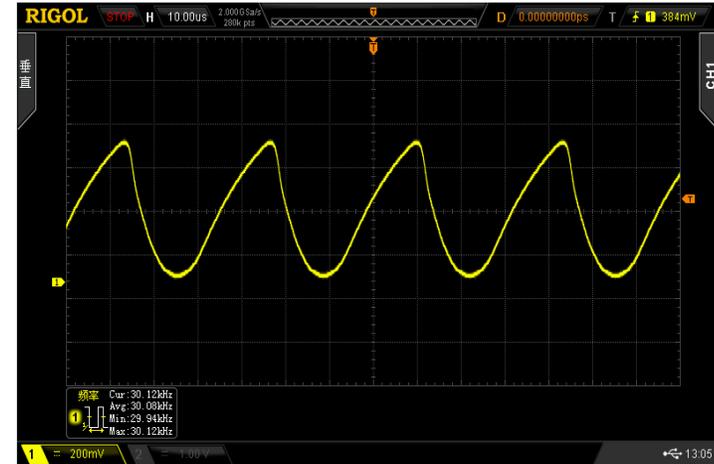


2、 Dynamic 30KHz Mode Demonstration

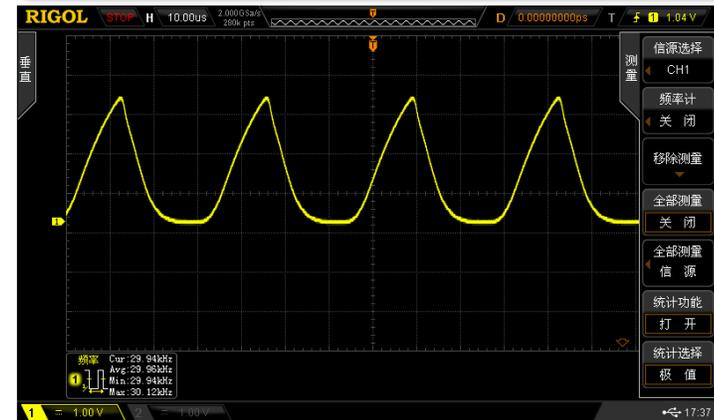
Experiment Procedure

- 1、 Press the “CON” button on DL3000 and enter the Continuous Mode.
- 2、 Set the Measurement Range as 60A, A value: 60A, B Value: 0A, The Rising Slope is 5A/us, Falling Slope is 5A/us, Frequency : 30khz, Duty Cycle: 50%, Trigger Source: TRAN, Click the “App” Button.
- 3、 Set the Power Output : 5.833V/68A (Because the Current is larger, so the wire has a little Voltage drop, the Voltage is 5.833V), turn on the Voltage Output.
- 4、 Click the “Tran” Button on E-Load.
- 5、 Adjust Oscilloscope, and get the most suitable waveform (10mΩ Resistor as an example: 200Mv/10us)

The Testing Diagram of Sampling Resistor



The Testing Diagram of Current Probe



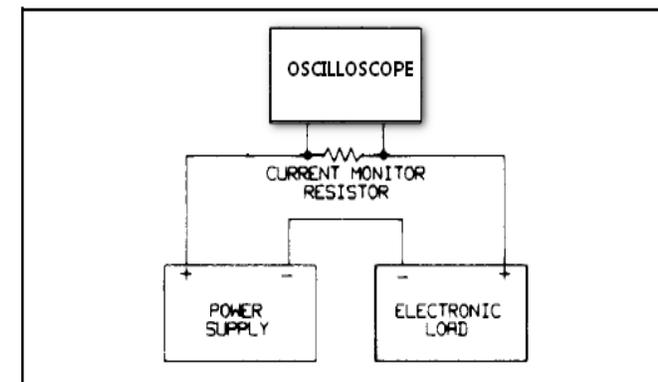
3、 Slope 5A/us Demonstration

Equipment List

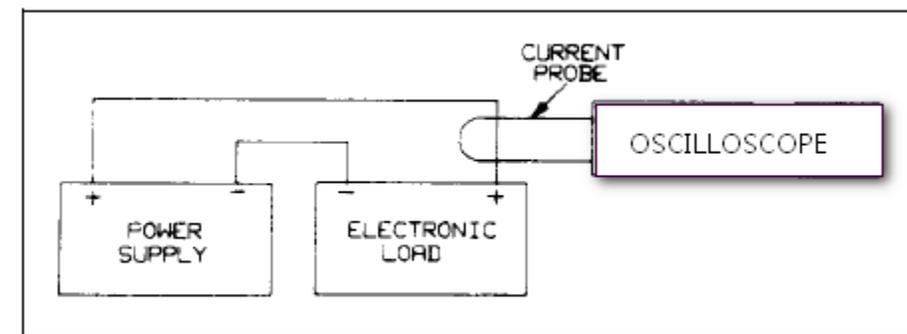
Equipment	Model	Requirement	Remark
High Power PS	IT6723C	Power >350W , Output Current >65A	Depends on the Options
Oscilloscope	DS2072A		
Sampling Resistor	10mΩ		Can be replaced by Current Probe
Current Probe	RP1002C	Measurement Range > 60A, Bandwidth >1M	The Current Probe is 40A
E-Load	DL3000	"A" Version	Experiment Equipment

Ex: The Experiment offers two connection methods : Sampling Resistor mode and Current Probe Mode. Users can choose anyone as he likes.

The Testing Diagram of Sampling Resistor



The Testing Diagram of Current Probe



3、 Slope 5A/us Demonstration

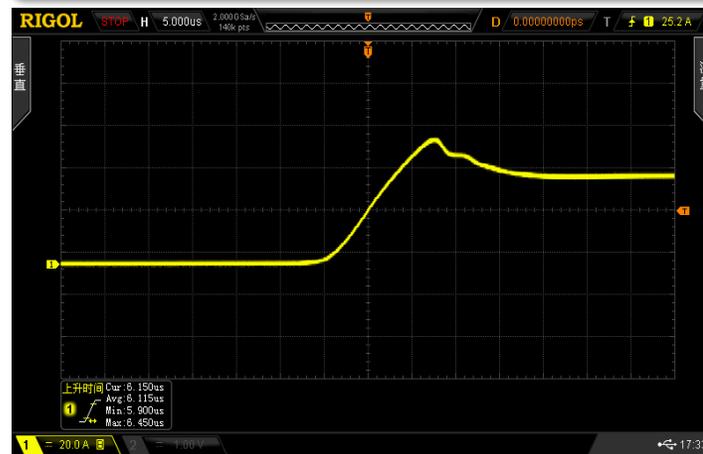
Experiment Procedure

- 1、 Press the “CON” button of DL3000, and then enter “Continuous” Mode.
- 2、 Set the measurement range as 60A, A Value: 60A, B Value: 0A, the Rising Slope is 5A/us, Falling Slope is 5A/us, Frequency: 1khz, Duty Cycle: 50%, Trigger Source: TRAN, and Click the “App” Button.
- 3、 Set the Power Output: 8.75V/68A (Because the Current is larger, so the wire has a little Voltage drop, the Voltage is 8.75V), turn on the Voltage Output.
- 4、 Click the “Tran” Button on E-Load.
- 5、 Adjust Oscilloscope, and get the most suitable waveform (10mΩ Resistor as an example: 200Mv/10us)
- 6、 Calculate the limitation of 10%~90% for 40A Current: $40 \times 80\% / 6.35\mu s = 5.0039A/\mu s$

The Testing Diagram of Sampling Resistor



The Testing Diagram of Current Probe



4、 Battery Discharge Demonstration

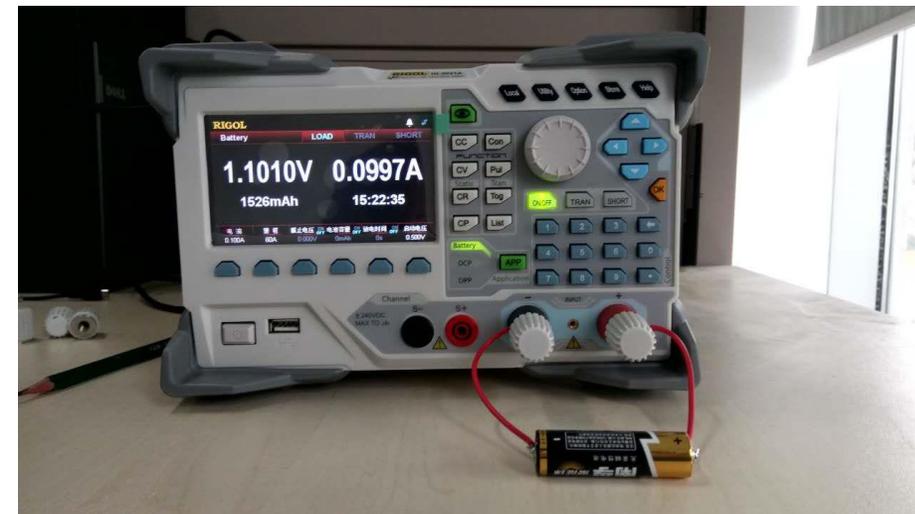
Equipment List

Equipment	Model	Requirement	Remark
E-Load	DL3000		
Battery	NO.5 Battery		Use NO.5 Battery

Operation Procedure

- 1、 Set the DL3000 as Battery Mode.
- 2、 Set the Discharge Current is 0.1A.
- 3、 User can set 3 kinds of Cut off Conditions, Discharge Capacity, Discharge Time, Cut off Voltage. The Experiment has no Cut off condition, so it will be stopped until the battery is used out.

Demonstration Diagram



THANK YOU

