1 Example Quick Start Manual

Among others, the following examples come with the TestmATE software:

- `script 3 loopback with leds.xlt`
- `script 4 diode characteristic.xlt`
- `script 5 calibration.xlt`
- `script 6 calibration with linear test.xlt`

In the package you find the hardware shown in the photograph. Please connect the colored wires that are soldered on a female SUBD plug to the 7706 add-on card as follows:

	Wire	7706 screw contact
1	Red	CH1-H
2	Green	CH2-H
3	Purple	CH23-H (analog out)
4	Browne	CH21-bit 0 (dig out)
5	Orange	CH21-bit 1 (dig out)

	Wire	7706 screw contact
6	Blue	CH1-L
7	Yellow	CH2-L
8	Pink	CH23-L (analog out)
9	Black	CH21-Digital ground

The 7706 add-on card must be installed in slot 1 of the Keithley 2700 Integra Series Multi Meter.

All examples presume that the multi meter is connected to COM1. If this is not possible, you need to edit the examples using Excel, or create a port mapping in the Tools|Options dialog.

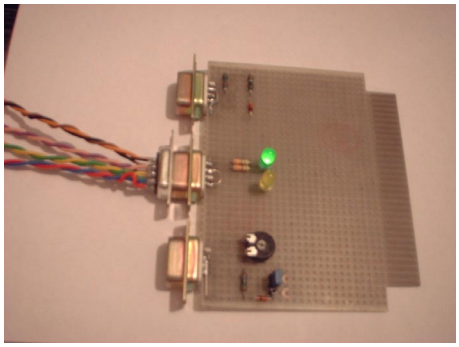
TestmATE communicates at **19200 baud**, **without flow control** and each protocol packet is terminated with a **carriage return-linefeed (CRLF)**. Make sure the multi meter is configured accordingly.

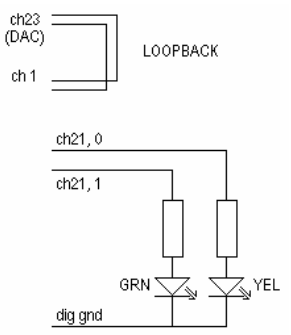
1.1 Loop back with digital output example

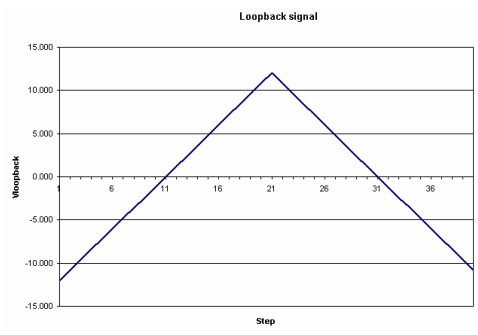
Plug in the SUBD plug in the **middle** connector of the supplied test board.

In this test circuit, the analog output channel 23 is connected to analog input channel 1. A triangular waveform is generated at channel 23 and read back on channel 1. Additionally two LED's are controlled depending on the level and edge of the waveform.

- Start the TestmATE application and browse for the '`script 3 loopback with leds.xlt`' file. Then press F5 and follow further instructions.
  Note that this example runs endlessly and can only be stopped using the ABORT button on the TestmATE dialog.





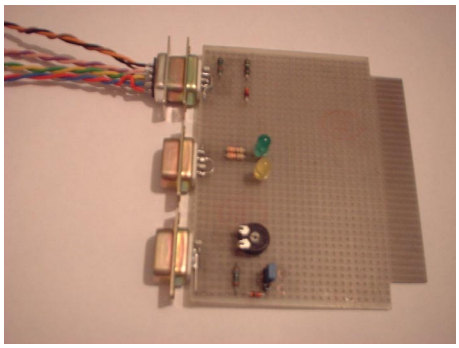


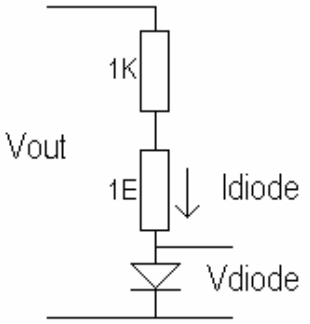
1.2 Forward diode characteristic example

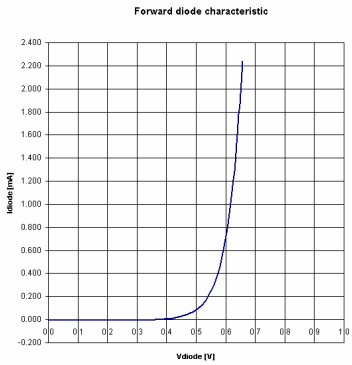
Plug in the SUBD plug in the **left** connector of the supplied test board.

This example determines the forward characteristic of a standard small signal diode, by taking 30 measurements.

- Start the TestmATE application and browse for the '`script 4 diode characteristic.xlt`' file. Then press F5 and follow further instructions.







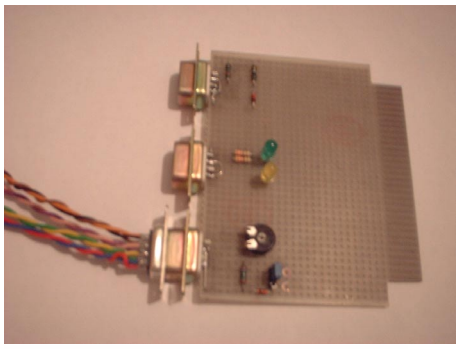
1.3 Calibration example with optional circuit distortion by closing jumper

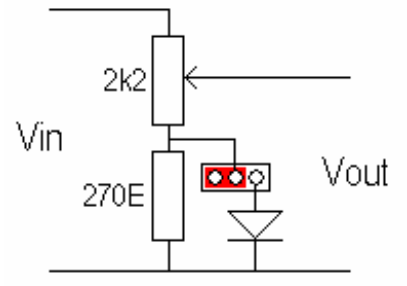
Plug in the SUBD plug in the **right** connector of the supplied test board. Two examples apply to this test circuit:

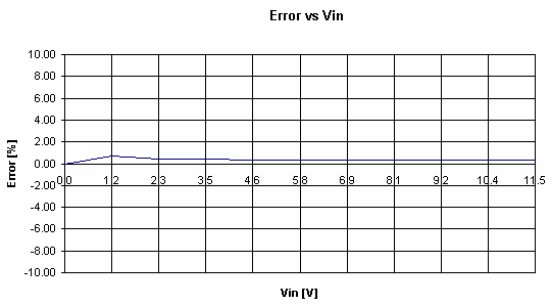
- `script 5 calibration.xlt`
- `script 6 calibration with linear test.xlt`

The first example only demonstrates how to instruct the user to do something. If the user is not working accurately, he or she is asked to repeat the instructions.
The second also performs a linear test after calibration is done. If the jumper on the test board is in the 'C' position, a diode will distort the system which causes an error > 2%, which is judged as NOT OK.

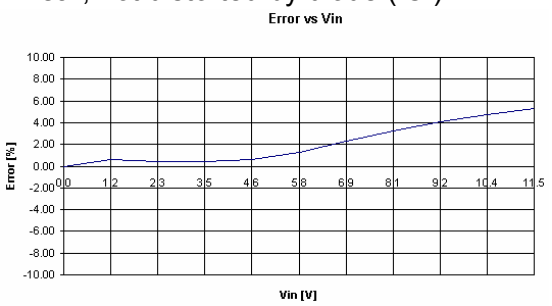
- Start the TestmATE application and browse for the file of your choice. Then press F5 and follow further instructions.







Linear, not distorted by diode ('O')



Not linear, distorted by diode ('C')