

STARLOG

Portable Data Logger Low Battery & Input Tester

Model 6405A

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Table of Contents

1. INTRODUCTION	1
2. OPERATION	2
2.1. Green LED	2
2.2. Red LED	2
2.3. Voltage Testing	2
3. SPECIFICATIONS .	4

1. INTRODUCTION

The STARLOG Portable Data Logger (PDL) Low Battery and Input Tester (Model 6405A) has been designed to give users of the Model 6003A Portable Data Logger an easy method to check the Portable Data Logger battery voltage and calibration.

The high intensity red and green LEDs (Light Emitting Diodes) on the PDL Low Battery and Input Tester provide a quick diagnostic on the scan rate and battery condition of the Portable Data Logger.

The PDL Low Battery and Input Tester can be used in conjunction with a Model 6401B Field Test Unit to check the actual battery voltage as well as the calibration of the analog and counter channels.

The PDL Low Battery and Input Tester is a robust small lightweight tool which is totally maintenance free. .

NOTE: The Battery Test may only be applied to Data Loggers using an Alkaline Battery Pack. Lithium and Nicad Batteries will not operate the tester correctly.

2. OPERATION

Plug the PDL Low Battery and Input Tester into the input signals end of the UNIDATA Portable Data Logger. Be sure to face the labeled side of the tester away from the Portable Data Logger.

To measure the voltage under load condition or to conduct a simple calibration test, the tester may be used in conjunction with a Field Test Unit (Model 6401B) plugged into the computer side of the Portable Data Logger.

If no light flashes then the batteries in the Portable Data Logger have failed. Data is lost and not retrievable. The lights indicate the following:

2.1. Green LED

The green LED alights when the battery voltage from an Alkaline Battery Pack is above 6.45V. The green light flashes in time to the hardware cycle rate, ($\frac{1}{4}$ - 15 s), which is set by switches inside the Portable Data Logger.

2.2. Red LED

If the red light flashes then the alkaline battery voltage has fallen below 6.45V. This indicates that the replacement of the batteries is required and that only 10% charge remains. The data in the logger can be unloaded however the Portable Data Logger should be removed from the field.

2.3. Voltage Testing

1. Using the Model 6401B Field Test Unit select address 16 by pressing "A" followed by 16 then a carriage return.

Set the screen entry by pressing "E". Using offset 0 and 1 byte of data select formula "F". Set the minimum value to 0 and the maximum to 14.7. Use ##.# V.

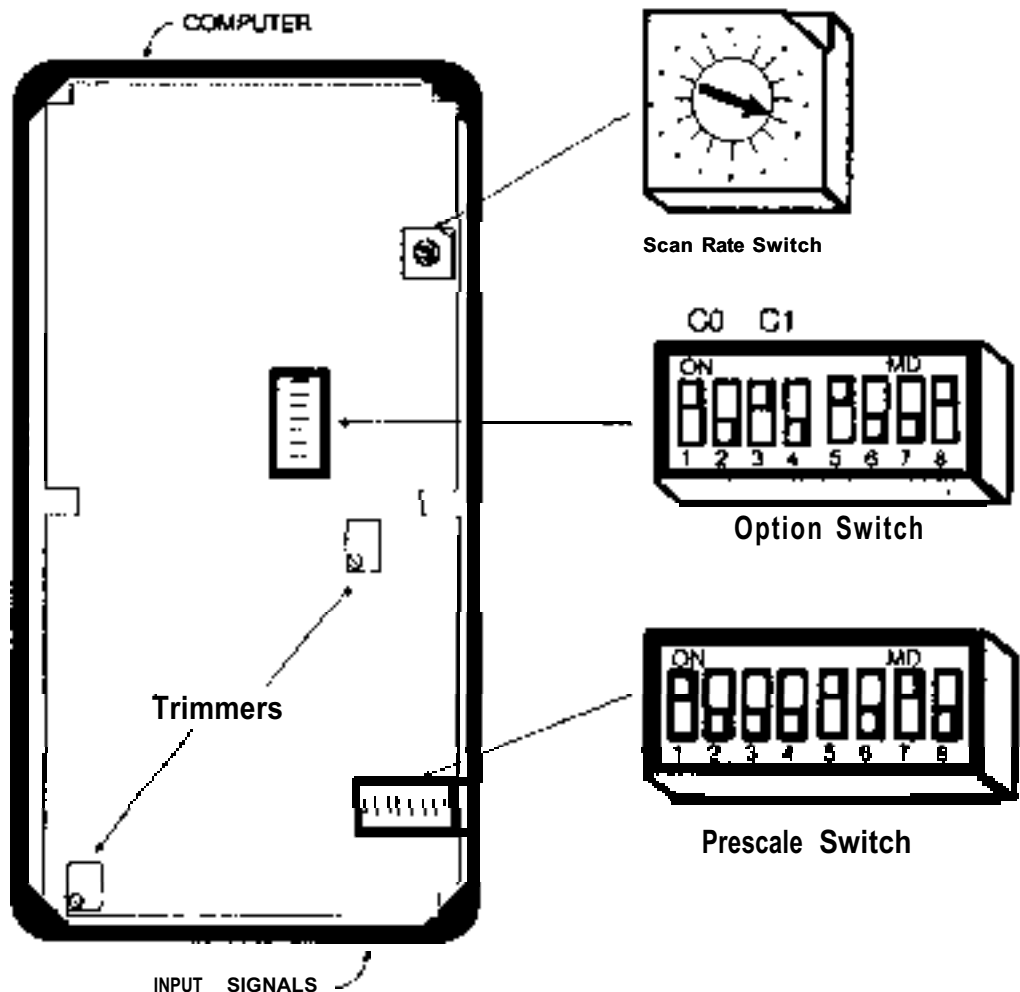
2. The real battery voltage appears in the top left hand corner of the FTU. A fresh battery will display approximately 9 volts. The minimum required voltage is 6.45V.

3. The other offsets display the values taken direct from the Analog to Digital converter in the PDL. These should be 200 ± 1 . If these are incorrect the data recorded may be incorrect.
4. The operation of the counter channels in the PDL can be checked by examining Address 24. Change the FTU address to 24, ["A" - 24 - Return]. The values now displayed will alter with the Portable Data Logger cycle. The two leftmost values will totalise as the data logger cycles. The other locations will be as below with a standard factory set up Portable Data Logger.

XXXX	1	1	0
	1	1	0

Address = 24

If these values are incorrect check the counter preset switches in the data logger. (See diagram below.) If these are standard then count data may be corrupted.



Standard Switch Settings on Model 6003B Portable Data Logger

3. SPECIFICATIONS

Size: 50H x 50W x15D mm
Weight: 50 gm including packaging

Accuracy

Battery Voltage: 5%
Analog Channel Inputs: 1 bit

Construction

Case: Black high impact PVC
Connector: Gold plated 25 pin "D" male plug

Functions

Display of low, good and failed battery conditions
Alkaline battery voltage data source for analog channel 0'
Analog to Digital Converter function and calibration test*
Counter channel test*

[* indicates functions which require a Model 6401B Field Test Unit for interrogation of the Portable Data Logger]