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**STD-11-2**  
**PRECISION TIMER**

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**STD-11-2 PRECISION TIMER**  
**REV 10/04/04**

**DESCRIPTION**

The STD-11-2 Precision Timer measures and displays accurate elapsed time from 0.000 to 9999.999 seconds. The large, .56-inch high, super bright red LED digits are visible up to 25 feet away.

Operation is easy. Power ON/OFF and Range selection are the only front panel controls. Since the STD-11-2 measures elapsed time over the complete range of 0 to 9999.999 seconds, the range can be changed at any time during the timing process without affecting the measurement.

Start, Stop, and Reset controls are easily connected using the 8-foot control cable provided. These inputs are compatible with dry contacts or transistor outputs from a variety of control devices such as switches, relays, photo-electrics, or PLC's

A precision crystal time base provides an accuracy of 0.003%, +/- 1 digit on any range.

The rugged, black ABS enclosure can stand alone on a shelf, or tabletop, or it can be panel mounted. Interchanges with earlier models from Standard Electric Time.

The STD-11-2 Precision Timer operates from 120 VAC, 60 Hz power. A six foot power cord is provided. Other power is optional.



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**SPECIFICATIONS**

Display: Four .56-Inch High, Super Bright Red LED Digits. Visible up to 25 feet away.

Function: Measures elapsed time from 0 to 9999.999 Seconds. Displays elapsed time on four ranges:

- 0 - 9.999 seconds
- 0 - 99.99 seconds
- 0 - 999.9 seconds
- 0 - 9999 seconds.

A front panel push-button switch selects the desired range.

Accuracy: A precision crystal time base provides an accuracy of 0.003%, +/- 1 digit on any range. 0 to 50 degrees C.

Inputs: Inputs are negative true logic, opto-coupled and internally pulled up to a 18 VDC max. through a 1000 ohm resistor.

Use only dry contacts from switches or relays, or open collector NPN transistors to control these inputs. Do not apply voltages of any level to these inputs.

The Start and Stop functions are controlled by the Count input. Upon contact closure, the timer measures elapsed time and continues until the contact opens. Closing the contact again continues the elapsed time where it left off.

The Reset input requires a momentary contact closure, only. Upon contact closure the timer will reset the count to all zeroes.

An 8-foot, three conductor control cable is provided from the back panel, or it can be routed through the hole on the front panel. See the drawings at the back of this manual.

Enclosure: Rugged black plastic (ABS). The enclosure can stand alone on a shelf, or tabletop, or it can be panel mounted. Interchanges with earlier models from Standard Electric Time. Measures 5"H x 5"W x 5"D.

See the drawings at the back of this manual.

Power: 120 VAC, 60 Hz (less than 2 VA). A 6-foot power cord is provided on the back panel. Optional power is available.

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**INSTALLATION**

**MOUNTING**

The STD-11-2 enclosure can stand alone on a shelf or table top, or it can be panel mounted.

For panel mounting the timer's front panel is installed on the front of the panel and the remainder of the enclosure is re-assembled to the front panel from the back of the panel. A 4 5/8" x 4 5/8" square cut-out is required. Panel can be up to 1/8" thick. See the drawing at the back of this manual for more detail.

**WIRING**

**Control Wiring**

An 8-foot, 3-conductor control cable is provided at the back panel.

When using dry contacts from switches or relays:

Connect the Start/Stop control to the Red and Black wires.

Connect the Reset control to the Green and Black wires.

For solid state controls such as open collector transistors refer to the wiring diagrams at the back of this manual.

**Power wiring**

A 6-foot 120 VAC power cord provided at the back panel.

All wiring must be done to meet local codes.

***BE SURE ALL SYSTEM WIRING IS COMPLETE  
BEFORE APPLYING POWER TO THE SYSTEM.***

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**OPERATION**

**APPLYING POWER**

Before applying power, be sure all field wiring is completed to meet all local codes. Apply power to the STD-11-2 Precision Timer by plugging the power cord into the 120 VAC power outlet.

Use the front panel Power switch to turn on the timer.

The timer will display 0.000 seconds.

Press the Range switch to display the desired readout. The range can be changed at any time during the elapsed time measurement process without affecting the elapsed time measurement.

Apply the Start/Stop signal (count). The timer will begin measuring and displaying elapsed time.

Remove the Start/Stop signal. The timer will stop and hold the count.

Apply the Start/Stop signal again. The timer will resume measuring and displaying elapsed time from where it left off.

Remove the Start/Stop signal. The timer will stop and hold the count.

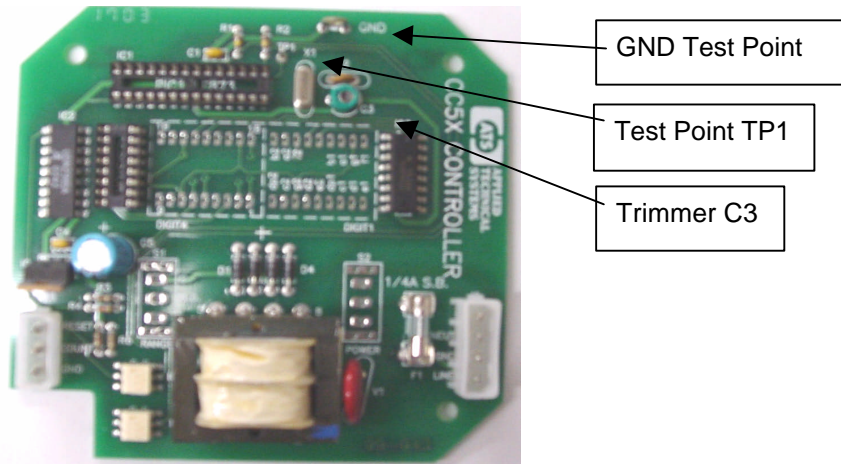
Apply the Reset signal. The timer will display all zeroes.

**CALIBRATION**

Only one calibration adjustment required.

A six-digit frequency counter with a minimum 10-PPM accuracy is required for setting the 32 KHz crystal time base.

Power on the STD-11-2 and wait about 5 minutes. Connect the signal lead from the counter to the test point (TP1). Connect the ground lead from the counter to the test point labeled "GND". With a small flathead screwdriver, adjust the trimmer (C3) until the counter reads 32.0000 KHz. (+/- 2 counts). The STD-11-2 is now calibrated. See the picture below.



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**TECHNICAL SUPPORT**

For any questions concerning installation and operation of this product, contact our factory at:

**PHONE (800) 444-7161  
OR  
FAX (318) 797-4864**

**SERVICE POLICY**

It is recommended that all service for this product be done by the factory or by a factory authorized service representative. Applied Technical Systems will provide ongoing service support in and out of warranty. Send your repairs to:

**APPLIED TECHNICAL SYSTEMS  
849 KING PLACE  
SHREVEPORT, LA 71115**

**APPLIED TECHNICAL SYSTEMS  
WARRANTY POLICY**

ATS warrants its products to be free of defects in material and workmanship for a period of 24 months from the date of purchase. ATS will repair or replace any product returned to its authorized factory service center within the warranty period so long as there is no evidence that the product has been abused, misused, damaged by lightning, overloads of any kind or water, or altered in any way.

Products returned for warranty must be returned with freight prepaid. ATS will pay normal freight charges to return the product to the customer. Special premium freight requested by the customer will be charged to the customer.

ATS disclaims any warranties expressed or implied, including merchantability and/or fitness for a particular purpose. In no event shall ATS be held liable for incidental or consequential damages.