



Museum Technology Source, Inc.

## 4321 Count Down Timer

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*2 Component  
System with Display  
and Control*

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*Can be mounted in  
any custom exhibit*

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*Easily Adaptable*

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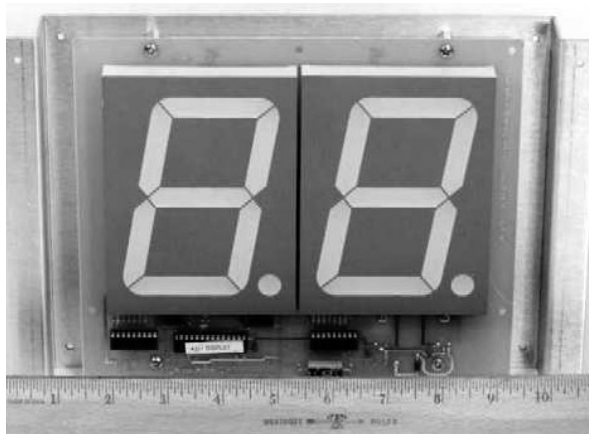
*Switches provide  
several modes of  
operation*

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*Additional displays  
can be used for mul-  
tiple entrances*

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*Starts show and  
notifies public when  
the next show will  
start*



Display section with 4 inch digits



Control Unit

For presentations that start on a regular cycle, the 4321 provides an easy method to automatically start the show, as well as to indicate to the waiting public how long it will be before the next show starts.

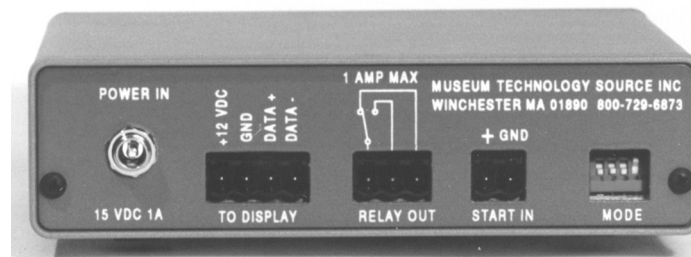
The 4321 consists of two components: the control unit, and the display. The control unit may be installed where most convenient, usually next to the equipment to be started, while the display, with its two 4 inch high digits, may be mounted for optimal visibility to the public.

In operation, the control unit is preset with the desired intermission time. When placed in run mode, the remote display will display the preset time, and proceed to count down, in one minute increments, to zero. When zero is reached, a relay in the control unit closes for one second. This contact is used to activate show control equipment, such as DVD or audio control units.

For venues with multiple entrances, multiple displays may be employed. The display units are merely connected in parallel. The RS-485 data transmission technique used, allows the displays to be hundreds of feet apart if required.

Several modes of operation are available, set by DIP switches on the rear panel.

## 4321 Count Down Timer

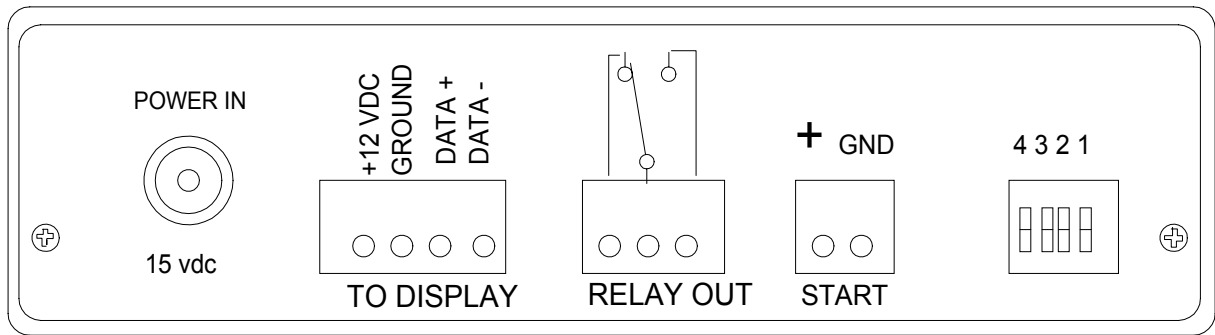


Rear Panel View of Control Unit

### Technical Specifications

<b>Display</b>	Two digit, 4 inch high LED. Red standard; green available
<b>Time Range</b>	1 to 99 minutes in 1 minute increments
<b>Operating Modes</b>	a) counts down continuously; upon reaching zero reverts to present number and starts counting down again. b) counts down as long as contact is maintained across start terminals. c) Starts counting upon momentary contact across start terminals. d) same as (c) but if momentary contact while counting will cause display to revert to preset count
<b>Start Input</b>	Optoisolated input. Start switch must be capable of switching 12 VDC @20mA. Screw terminals on plugable block
<b>Relay Output</b>	SPDT relay rated at 2 Amps, 24 VDC. Activates for 1 second. three screw terminals on plugable block
<b>Display Connection</b>	4 wires; 2 for RS-485 data; 2 for 12 VDC power @ 700mA
<b>Power</b>	Supplied 15 VDC 900 mA external power supply. Sufficient for control unit and one display; multiple displays require additional power
<b>Controls</b>	Front panel Run/ Set toggle. In Set mode, Increment pushbutton is held until desired time is indicated on 2 digit display control unit. Toggle in Run position enables normal operation. Front panel display reads same as remote display. Two LED's indicate status
<b>Display Physical</b>	Display is mounted on 9.4"x7.1" metal plate which is attached to 13.5" x 9.5" red Plexiglas drilled with 4 countersunk holes for mounting to exhibit surface. Weight 3 lbs.
<b>Control Physical</b>	1.5" high x 5.5" wide x 9.0" deep. Weight 3 lbs.
<b>Included Accessories</b>	Power supply, 20 foot 4 conductor interconnect cable
<b>Optional Accessories</b>	RK-3 Rack Mount Kit; additional display units.

# REAR PANEL, 4321 COUNTDOWN TIMER



DISPLAY DRAWS 600 MA MAX  
DATA IS RS-485

TO DISPLAY:  
1 +12 VDC  
2 GROUND  
3 DATA +  
4 DATA -

RELAY OUT  
NORM OPEN AND  
NORM CLOSED  
CONTACTS  
TO START EXTERNAL  
DEVICE AT END OF  
COUNT

START TERMS  
MOMENTARY  
CONTACT STARTS  
COUNTDOWN

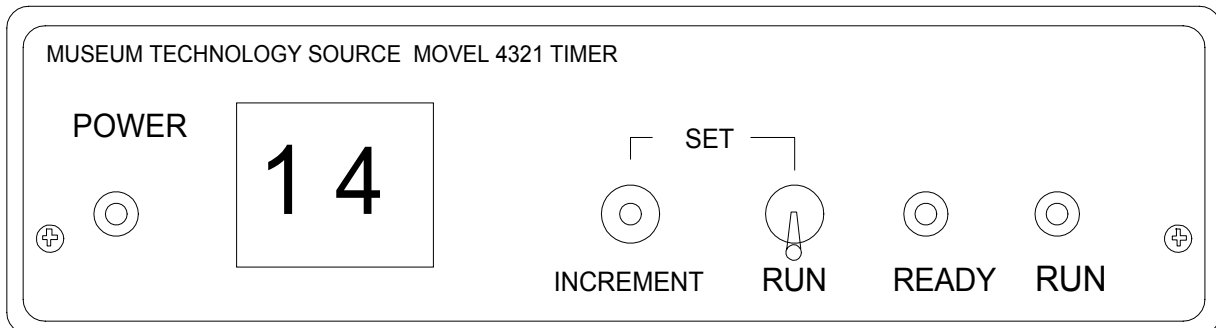
DIP SWITCHES TO  
SELECT VARIOUS  
OPERATING  
MODES

PLUGGABLE TERMINAL BLOCKS

DIP SWITCH MODE SETTINGS 0 = DOWN 1 = UP

- 0 0 0 0 COUNT STARTS WITH MOMENTARY CONTACT ACROSS START TERMINALS. ADDITIONAL START CONTACTS IGNORED.
- 0 0 1 1 SAME AS ABOVE EXCEPT ADDITIONAL START COMMAND WHILE COUNTING WILL CAUSE DISPLAY TO REVERT TO PRESET NUMBER
- 0 0 0 1 DISPLAY COUNTS DOWN CONTINUOUSLY
- 0 0 1 0 DISPLAY COUNTS DOWN AS LONG AS CONTACT IS MAINTAINED ACROSS START TERMINALS

ALL MODES: RELAY OUTPUT PULSES AT ZERO



POWER ON  
LAMP

DISPLAY DUPLICATES  
REMOTE READOUT

IN "SET" MODE USE  
TO INCREMENT TO  
DESIRED TIME

UP TO SET  
TIME, DOWN  
FOR NORMAL  
OPERATION

LIGHTS  
WHEN  
READY

FLASHES  
WHILE  
COUNTING

# FRONT PANEL, 4321 COUNT DOWN TIMER

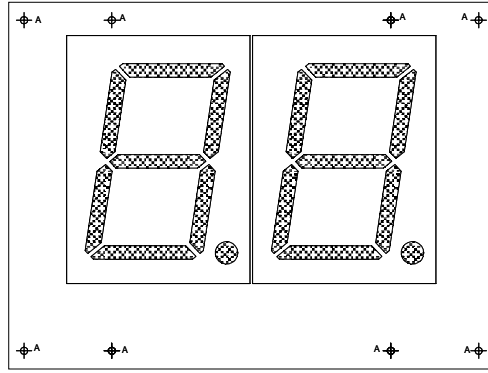
FRONT AND REAR VIEWS  
4321 COUNT DOWN TIMER

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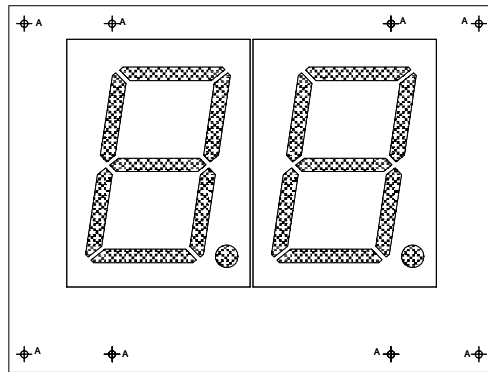
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OPTIONAL SECOND DISPLAY



DISPLAY



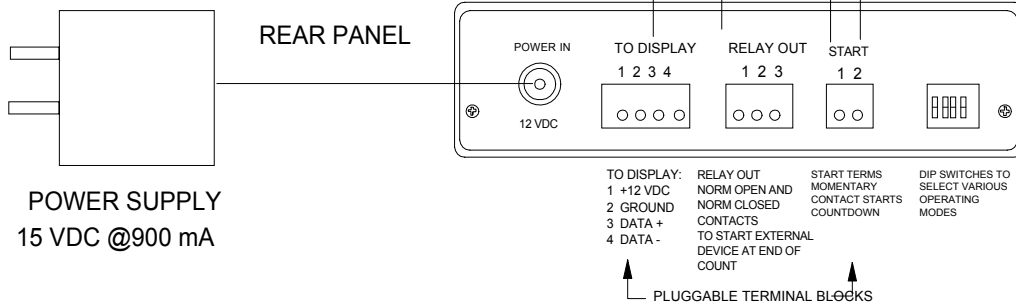
Note: If distance between Control Box and Display causes excessive voltage drop, a local power supply for the display may be used. The Control Unit provides 15 VDC, and the Display requires at least 12 VDC, allowing for a 3 volt drop in wiring.

The local power supply should provide at between 12 and 17 VDC at 500 mA.

DEVICE TO BE STARTED  
(VIDEO, AUDIO ETC)

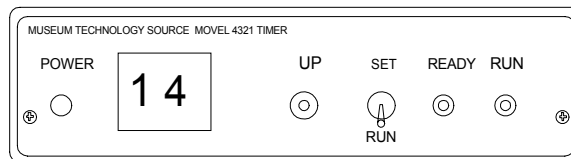
START SWITCH

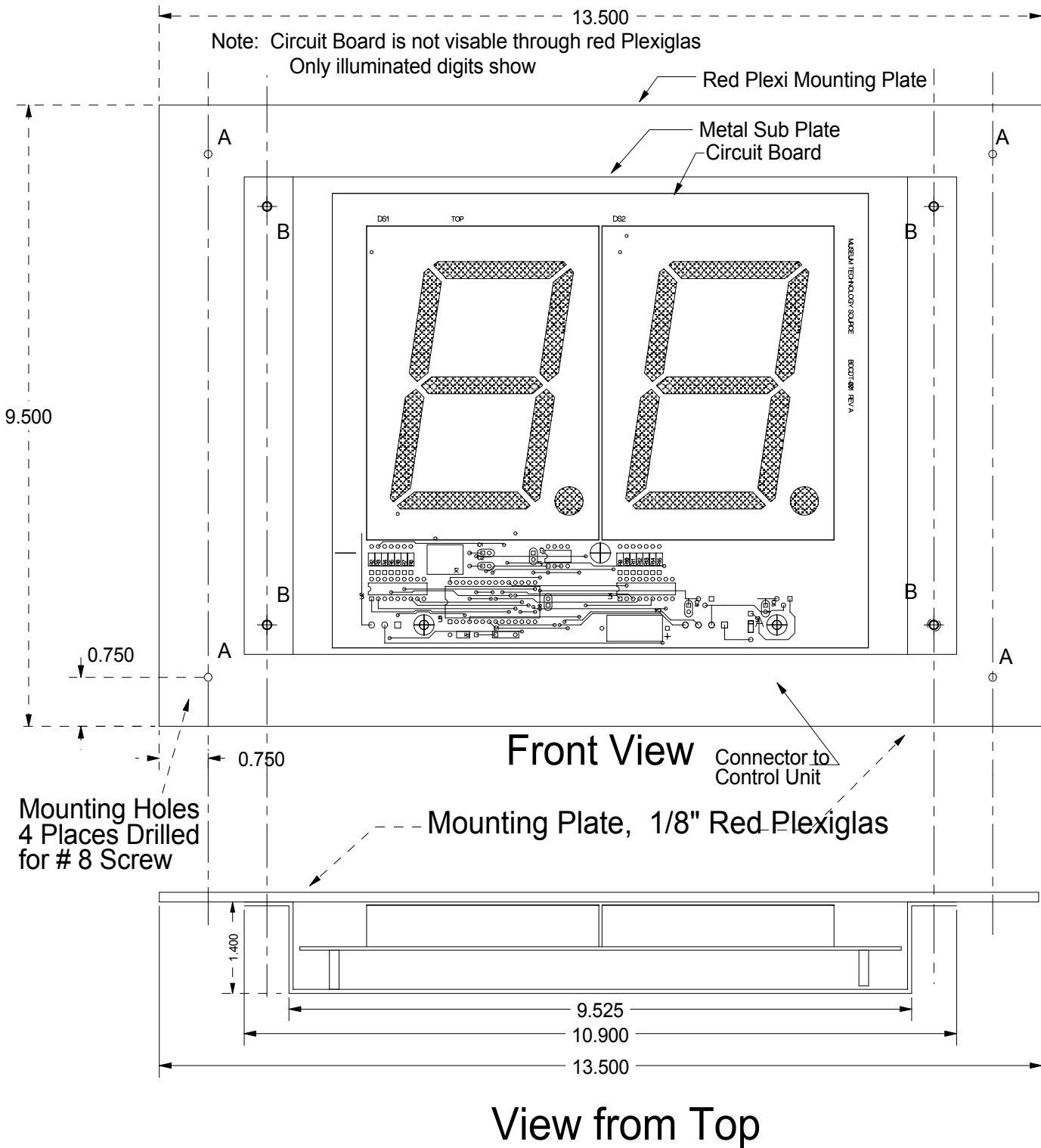
2 PAIR CABLE  
POWER AND DATA



POWER SUPPLY  
15 VDC @900 mA

FRONT PANEL

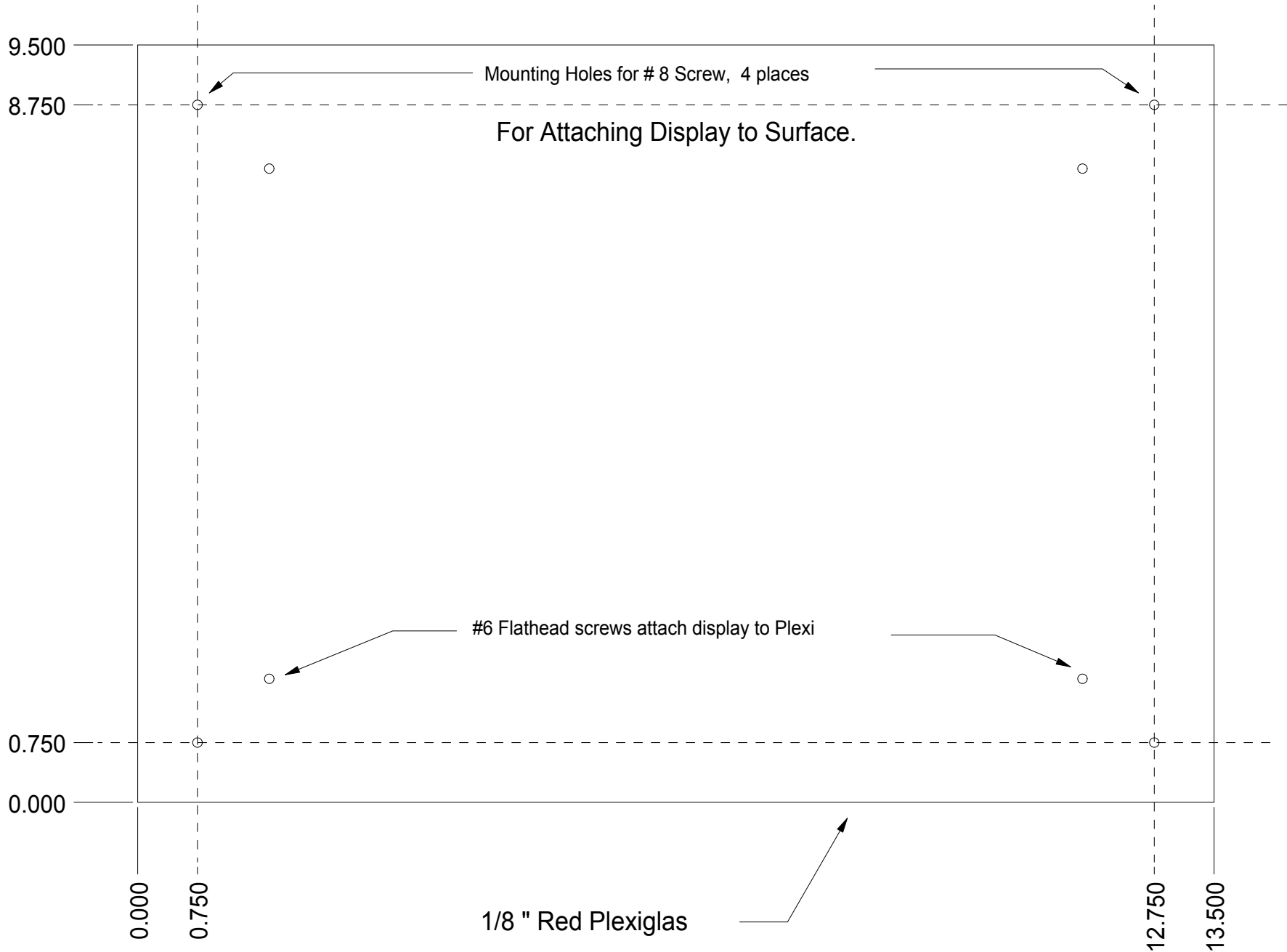




# 4321 Count Down Timer Display Mounting Dimensions

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