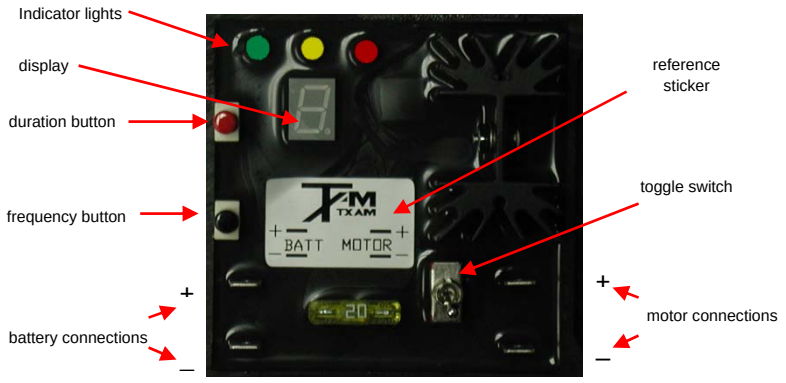
TXAM Smart Timer Instructions

The TXAM Smart Timer is a solid state controller 12v DC solar pumps. The timer has been designed to monitor battery voltage and prevent full discharge of the battery. This feature extends battery life and allows for faster recharge. During low light / no light conditions as battery voltage drops, the timer automatically recalculates and slows the frequency of injection. A sight glass or drum gauge should be used along with the TXAM timer to insure accurate injection rates of the chemical. Many factors will affect injection rates.

Wires should be connected from the battery and the pump motor to the timer as the picture indicates below. A sticker has been placed on the relay switch of each timer for your reference. Connecting the power incorrectly **will** damage the timer. **Using a fuse rated higher than 20 Amps (15 Amps on earlier versions) voids the warranty on both the timer and the pump.**

The TXAM timer is turned on by moving the toggle switch to the up or on position. **After turning the timer on, allow up to one minute for the timer to begin pump operation.** When the timer is powered on it will run through a self-check process. A letter will flash on the display indicating the software version of the timer followed by flashes of the green, yellow and red indicator lights. Next the display will flash CC and five numbers. CC indicates "cycle count" and the first four numbers let you know how many times the timer has cycled the pump to the nearest thousand, rounded down. The fifth number indicates the frequency rate. For example, CC01985 tells you the timer has cycled 198,000 times and the frequency is set to 5 cycles per minute. If the timer is turned off when the pump has cycled 198,999 times, the cycle count will show CC01985 when it is powered back on and will begin counting again at 198,000, not 198,999.



Picture 1 – TXAM Smart Timer

TIMER/VOLTAGE INDICATOR LEVELS CYCLES PER MINUTE				
GREEN-GREEN	GREEN-YELLOW	YELLOW-YELLOW	YELLOW-RED	RED-RED
12+ V	12- V	11.6 V	11.2 V	10.8- V
10	7	5	3	OFF
9	6	5	3	OFF
8	6	4	3	OFF
7	5	4	2	OFF
6	4	3	2	OFF
5	3	3	2	OFF
4	3	2	1	OFF
3	2	2	1	OFF
2	1	1	1	OFF
1	1	1	1	OFF

Chart 1 – Cycle Indicator

NOTE: If your pump has the adjustable stroke feature make sure you set the stroke before setting the injection rate.

The TXAM timer controls chemical injection rates in two ways: ***frequency*** and ***duration***. Frequency refers to the times (1 to 10) the pump is turned on or cycled per minute. Duration refers to how long each cycle lasts (1 to 5 seconds) before turning off. **The timer must be between cycles to make adjustments. Turning the dial during a cycle will make changes to the next cycle.**

Frequency is set by pushing the black button shown in picture 1 and determines the number of times the pump cycles per minute. Frequency can be one time per minute up to ten times per minute. The display digit on the timer indicates the level selected (the number 10 is indicated by letter F).

Duration is set by the red button shown in picture 1 and determines how long each cycle lasts. Duration can be set for 1 second up to 5 seconds per cycle. To set the duration push and hold down the red button. The display will scroll through numbers 1 to 5. Release the red button when the display shows the number of seconds you want.

To see the duration at any time you can push and release the red button. The display will show the duration number for five seconds after the button is pushed.

Adjustments to the timer settings will take effect after completion of the current cycle. Allow sufficient time (up to one minute) for new settings to take effect.

Pump Cycle and Battery Voltage

Battery voltage is shown by the indicator lights at the top of the timer which flash every ten seconds. The number of times the pump is cycled by the timer is directly affected by the voltage of the battery. Refer to Chart 1 for cycle/voltage relationships. When battery voltage reaches 12.0 or greater, the pump cycles at the selected frequency. During periods low light / no light conditions when the solar panel cannot charge the battery, the timer will lower the frequency of injections based on voltage. For example, if the user has the frequency set to 8 and the battery voltage drops to 11.8v, the timer will automatically lower the frequency from 8 to 6 (the display will continue to show 8 as the frequency).