



MT Timer Manual



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1. Description of Timer

The MT Timer is designed to work with SLUG urethane foam dispensing equipment to control dispense times. It is capable of controlling shot times in Manual Mode, Automatic Mode, Reactivity Mode, and Program Mode.

Manual Mode allows the foam operator to manually control dispense times.

Automatic Mode can be used for repetitive dispense times.

Reactivity Mode can be used for reactivity data collection.

Program Mode allows the user to preset up to 31 different dispense times into the timer's memory for sequential recall.

Cumulative Mode allows the user to keep track of time the equipment dispensed foam by accumulating sequential shot times.

The MT Timer weighs less than one pound and measures approximately 5" x 8½" x 1½". It is designed to be mounted either on the dispensing unit or at a remote wall location. The source voltage (120V AC) is reduced to 24V DC for operation of the timer.

2. Operating Instructions

2.1 General

Read this operating guide in its entirety and become familiar with the operation of the MT Timer before using the timer to control foam shots.

Provide power to the timer by plugging the power supply into a 120V AC, 60Hz outlet. If the source voltage is prone to occasional spikes, a surge protector is recommended. Be sure that the power cord is properly attached to the three-pin connector on the timer and that the solenoid/trigger connector is attached to the four-pin receptacle.

The ON-OFF button in the bottom right hand corner of the timer controls power to the electric solenoid. If you are ready to pour foam, the timer needs to be ON.

Keep the timer clean and free from foam and solvent splashes. Avoid jarring the timer as some electronic components are sensitive.

2.2 Manual & Manual + Modes

When operating the Manual Mode, the MT Timer functions very much like a manual pull-trigger device.

To Operate Manually:

1. Press mode button until “Manual” appears on the LED display.
2. Start foaming by depressing the trigger switch for as long as you desire to dispense foam. Simply release the trigger switch to stop.

NOTE: While in manual Mode, the timer can either reset to zero seconds every time the trigger is depressed, or cumulative shot time may be displayed by using “Manual +” Mode.

3. Press the program button while in Manual Mode and a “+” appears on the LED display next to the word “Manual”. If the program button is pressed again, the “+” sign is displayed, and the timer will not reset to zero each time the trigger is depressed. To reset the timer to zero while in the “Manual +” Mode, simply press the RESET button.

2.3 Auto & Auto - Modes

This mode allows a single set shot time to be initiated repeatedly. This single shot time may be changed at any time.

To Set the Shot Time:

1. Press the mode button until “Auto” is displayed on the LED display.
2. The LED display will read 0.0.
3. Press the reset button to set the shot time. “Set Time” will appear on the LED display.
4. Enter the desired shot time (in seconds) and press enter. This shot time will be saved if the timer is turned OFF or changed to a different mode. After the shot time has been entered, the display will reset to 0.0.

NOTE: Press the program button while in Auto Mode and a “-” appears on the LED display next to the word “Auto”. Press the program button again and the “-” will disappear. While the “-” sign is displayed, the timer will erase the shot time after each shot.

To Operate in Automatic Mode:

1. Depress and release the trigger switch. The display will show the preset shot time. This confirms that the next time the trigger switch is depressed, the dispenser will pour foam for the preset time and then automatically stop.
2. Depress and release the trigger switch again. The dispenser will begin to pour and the timer display will begin counting down toward zero. When it reaches zero, the foam pour will stop and the timer display will show 0.0 to confirm that the entire shot was dispensed.
3. Repeat steps 1 and 2 to dispense the preset shot time as many times as desired.

To Pause During Dispense:

If for any reason the automatic foam shot must be paused or stopped while foam is being dispensed, depress and release the trigger switch. The unit will stop pouring and the timer display will freeze at that point in the cycle. the displayed time will indicate the number of seconds remaining in the paused shot. Two options are available for continuing. If you are ready to resume the pour quickly (before the foam will gel in the dispense head/mixer), depress and release the trigger switch once again to continue the shot from where you left off. Alternatively, if the shot must be aborted, press the RESET key and be sure to purge the mix tube right away.

2.4 Reactivity Mode

The Reactivity Mode operates similar to Automatic Mode. the only difference is that after the shot is done dispensing, the timer will display a stopwatch that starts when the foam starts dispensing and continues after the dispensing has stopped. The stopwatch may be stopped by depressing the trigger or pressing the RESET button.

The Reactivity Mode is intended for making Gel, Tack-Free, and Demold measurements.

To Set the Shot Time:

1. Press the mode button until “React” is displayed on the LED Display.
2. The LED display will read 0.0.
3. Press the RESET button to set the shot time. “Set Time” will appear on the LED display.
4. Enter the desired shot time (in seconds) and press ENTER. This shot time will be saved if the timer is turned OFF or changed to a different mode. After the shot time has been entered, the LED display will reset to 0.0.

To Operate in Reactivity Mode:

1. Depress and release the trigger switch. The display will show the preset shot time. This confirms that the next time the trigger switch is depressed, the dispenser will pour foam for the preset time and then automatically stop.

2. Depress and release the trigger switch again. the dispenser will begin to pour and the time display will begin counting down toward zero. When it reaches zero, the foam pour will stop and the timer display will show a stopwatch that will count off seconds until the operator depresses the trigger or presses RESET.

NOTE: Once time has been stopped and recorded, press RESET to display 0.0 on REACT screen.

3. Repeat steps 1 and 2 to dispense the preset shot time as many times as desired.

To Pause During Dispense:

If for any reason the automatic foam shot must be paused or stopped while foam is being dispensed, depress and release the trigger switch. The unit will stop pouring and the timer LED display will freeze at that point in the cycle. The displayed time will indicate the number of seconds remaining in the paused shot. Two options are available for continuing. If you are ready to resume the pour quickly (before the foam will gel in the dispense head/mixer) depress and release the trigger switch once again to continue the shot from where you left off. Alternatively, if the shot must be aborted, press the RESET key and be sure to purge the mix tubes right away.

2.5 Program Mode

This timer mode allows up to 31 preset shot times to be programmed in sequence. After one foam shot is completed, the time will automatically index to the next shot time in sequence and await the signal to start the next pour. Any shot may be skipped or repeated by pressing a sequence of keys on the key pad.

To Set the Number of Preset Shot Times:

1. Press the mode button until “Prog” appears on the LED display. Next to “Prog” the program number will be displayed. the program number lets the operator know which shot in the sequence is next.
2. Press the ENTER button and 6 at the same time to view the number of programmed shots in the sequence.
3. To change the number of programmed shots in the sequence, press RESET, the number of programmed shots that are to be in the sequence, and ENTER.

NOTE: The maximum number of programmable shots in a sequence is 31.

To Set the Shot Time Sequence:

1. Press the mode button until “Prog” appears on the LED display. Next to “Prog” the program number will be displayed. The program number lets the operator know which shot in the sequence is next.
2. The LED display will read “Shot Time” and the program number. **NOTE: You will NOT need to start with programmed shot #1.**
3. Press the RESET button to set the shot time for that programmed shot number. “Set Time” will appear on the LED display.
4. Enter the desired shot time (in seconds) and press ENTER. This shot time will be programmed. After the shot time has been entered, the read out will display the shot time and program number.
5. Press PROG on the keypad and go to the next program number.
6. Repeat steps 3, 4, and 5 to continue programming shot times.

NOTE: If a programmed shot time is 0.0, simply depressing the trigger or pressing the PROG button will advance to the next program number in sequence.

To Operate in Program Mode:

1. Depress and release the trigger switch. The dispenser will begin to pour and the time display will begin counting down toward zero. When it reaches zero, the foam pour will stop and the timer will display the next programmed shot time.
2. Repeat step 1 to continue dispensing the programmed shot times in sequential order.

To Pause During Dispense:

If for any reason the programmed foam shot must be paused or stopped while foam is being dispensed, depress and release the trigger switch. The unit will stop pouring and the timer will indicate the number of seconds remaining in the paused shot. Two options are available for continuing. If you are ready to resume the pour quickly (before the foam will gel in the dispense head/mixer) depress and release the trigger switch once again to continue the shot where you left off. Alternatively, if the shot must be aborted, press the RESET key and be sure to purge the mix tube right away. The time will remain on the aborted time. Press the PROG button to move onto the next programmed shot time.

To Review Programmed Shots in Memory:

While in Program Mode, repeatedly press the PROG button to scroll through shot times. If changes need to be made simply follow the procedure for setting the shot sequence.

2.6 Cumulative Mode

Cumulative Mode is intended to be used for shot time accumulation. While the Cumulative Mode is ON, it will accumulate all the shot times (in seconds) that have been shot since the mode has been reset.

To Use Cumulative Mode:

1. Press mode button until “Cum” is displayed on the LED display. The LED will display ON or OFF. The number of seconds that have been accumulated will also be displayed.
2. To switch from ON to OFF or from OFF to On, press the ENTER button.
3. To reset the cumulative time to zero, press the RESET button.

2.7 Shot Time Limit

The MT Timer has a limit feature which prevents longer than desired shot time to be entered. The default limit is 60 seconds. The shot time limit can be viewed and reset while in Manual, Automatic, Reactivity or Program Mode.

To View and Set the Shot Time Limit:

1. While in any of the modes listed above, press the ENTER button and the 3 button simultaneously.
2. This will display the current shot time limit.
3. To change the shot time limit, press the RESET button. “Set Limit” will appear on the LED display.

4. Enter the desired time (in seconds), then press ENTER.
5. The new shot time limit will be saved.

NOTE: the shot time limit is the same for all modes. (Changing the shot time limit in any one mode will also change the limit in all other modes.)

2.8 Automatic Shut-Off

The MT Timer is equipped with a safety feature that automatically shuts the timer off after not being used for a specified amount of time. The default shut-off time is 1 hour, but may be changed.

To View and Set the Shut-Off Time:

1. While in any mode, push the ENTER button and the 9 button simultaneously.
2. This will display the current automatic shut-off time.
3. To change the shut-off time, press the RESET button. “Set Limit” will appear on the LED display.
4. Enter the desired time (in minutes), then press ENTER.
5. The new shut-off time will be saved.

3. Operation Examples

- A. For small shots where the exact amount of foam required is not calculated, use the Manual Mode of operation. Example: Patching an item that did not completely fill. Similarly, the item may be patched by initiating any timed shot and using the pause feature to stop the flow of foam.
- B. For a long shot, over 1 minute, to fill a large void, use “Manual + Mode”. Make sure that the limit is set high enough to allow for a shot as long as needed.
- C. For a single shot time required repetitively over a long period of time, use the Automatic Mode. Example: Insulated panels of the same dimensions are manufactured during one or more eith hour shifts.
- D. For 2 to 31 different shot times (any or all may actually be the same) required in sequence use the Program Mode. Example: truck body wall cavities.

NOTE: You are free to switch between modes at any time without fear that the programmed shot times in the Automatic, Reactivity and Program Modes will be lost.