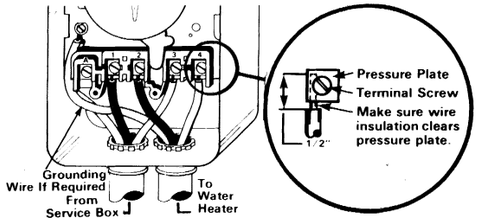
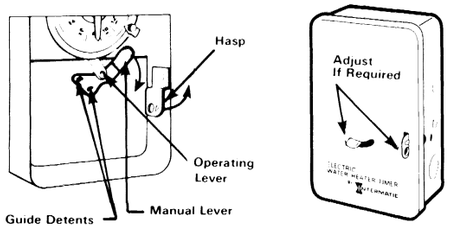


STEP 8

Using pliers, grip folded down hasp on side of case and rotate it upward as shown. Also, if your Time Switch has an EXTERNAL MANUAL LEVER, pivot Override Lever in direction shown until detents snap into position. Close cover to make sure the holes in cover line up. Adjust, if required.



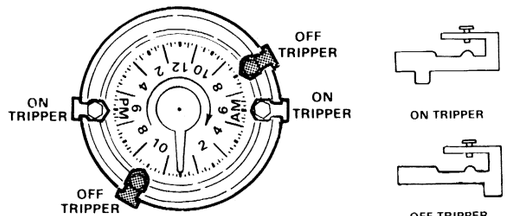
STEP 9

Set your daily program. - See operating instructions on page 7. Each individual household should determine a schedule to suit their own needs. Adjustments should be made for family size, hot water needs, appliances, etc. In areas where time-of-day rates are in effect, consult your electric utility company to find when the lowest rates apply. Then set your time switch to operate your water heater when your electric rates are lowest and adjust your schedule accordingly.

In setting your schedule, you must consider the facts that the temperature and quantity of hot water will decline during the "OFF" periods depending on amount used and lenght of "OFF" time. A typical schedule could be "ON" at 6 AM, "OFF" at 8 AM for your morning use, and "ON" again at 5 PM and "OFF" again at 10 PM.

DAYS OF WEEK	AM HOURS 2	4	6	8	10	12	PM HOURS 2	4	6	8	10
MONDAY											
TUESDAY											
WEDNESDAY											
THURSDAY											
FRIDAY											
SATURDAY											
SUNDAY											

Indicates when water heater is on.



VIEW OF DIAL AT MIDNIGHT
TYPICAL PROGRAM

STEP 10

Check wiring, time setting (AM/PM) and program.If hard wired, also close Water Heater Terminal Box. Restore electric service (the reverse of STEP 2). By looking through the oval motor check hole, you should be able to observe time switch clock motor gears in motion. Close time switch cover. Make sure it is latched and locked, if needed.

OPERATING INSTRUCTIONS

This Time Switch will repeat a preset schedule daily. It may also have an **EXTERNAL MANUAL LEVER** to override the automatic program. The diagram on the right shows the mechanism and typical wiring.

THE CLOCK DIAL - Turns in a ***clockwise*** direction once a day and has a 24-hour face.

THE TIME POINTER - is used to line up the correct time-of-day on the dial.

THE TRIPPERS - are attached to the dial, turn the water heater ON and OFF at times indicated by their respective position on the dial.

THE MANUAL LEVER - permits the user to turn the water heater ON and OFF ***ahead*** of schedule. The time Switch will resume the preset program by the next scheduled ON or OFF operation.

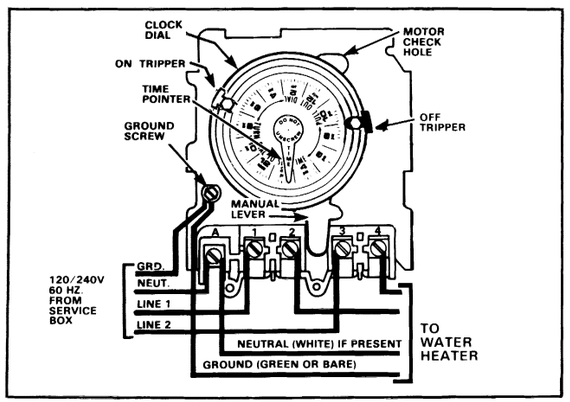
NOTE: The manual lever is inoperative for 15 minutes immediately after the automatic operation.

TO SET PROGRAM - ***First*** mount silver finished "ON" trippers at times you wish electric water heater to start operating. Place black "OFF" trippers at times you want to turn water heater off. Fasten trippers ***securely*** by turning screws ***tight*** against clock dial. ***Second, pull*** clock dial toward you and turn clock dial in either direction to the correct time-of-day as indicated by pointer. ***DO NOT MOVE POINTER.*** Close the time switch cover. Make sure it is latched and locked, if needed.

AFTER POWER FAILURE (or if water heater was disconnected at the main panel) - you must reset the clock dial to the correct time-of-day.

TO SUSPEND AUTOMATIC OPERATION - remove trippers from dial. Set manual lever as desired.

CAUTION: Always disconnect power at main panel before servicing this switch or the water heater.



INTERMATIC INCORPORATED
SPRING GROVE, ILLINOIS 60081

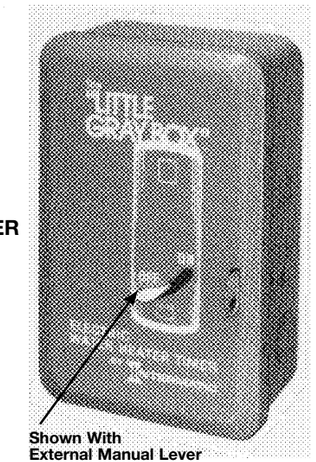
158--02038

ELECTRIC WATER HEATER TIME SWITCH

The "LITTLE GRAY BOX"®

BY THE MAKERS OF INTERMATIC TIME CONTROLS

- **HAS EXTERNAL MANUAL OVERRIDE SWITCH**
- **EASY TO INSTALL**
- **MATCH WATER HEATER OFF TIMES TO PEAK ENERGY PERIODS OF YOUR UTILITY TO REDUCE THEIR DEMAND**



Shown With External Manual Lever

STEP 1

A. CHECKING:

☐ Make sure the Time Switch and the water heater VOLTAGES are the same.

☐ Make sure your water heater rating in WATTS is not over the maximum capacity of this Time Switch.

☐ Make sure your water heater is wired with COPPER wire. **Do not connect ALUMINUM wires to the terminals of this Time Switch.** You may wish to consult an electrician if your existing wires are ALUMINUM.

CAUTION - Disconnect electricity before you attempt to remove or expose any wiring.

B. PLANNING AND MEASURING:

Here is how your water heater is wired now, **BEFORE** the installation of this Time Switch:

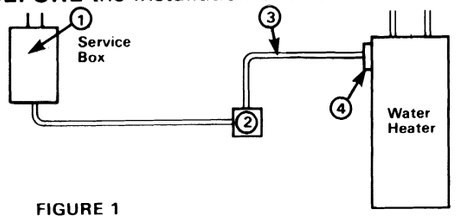


FIGURE 1

(1) SERVICE BOX - Your water heater should have its own (seperate) fuse or circuit breaker in the electrical panel.

(2) JUNCTION BOX - You may or may not have this convenience box. It may contain a disconnect switch and/or receptacle if water heater is cord connected.

(3) WATER HEATER CONNECTION - This is a rigid or flexible (metallic or plastic) cable containing 2, 3, or 4 insulated wires of different colors.

(4) WATER HEATER TERMINAL BOX - This is part of the water heater where the power supply wires are connected.

Here is your modified wiring, **AFTER** the Time Switch is installed:

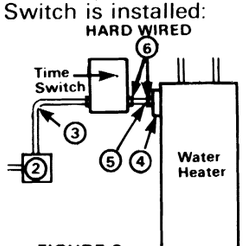


FIGURE 2

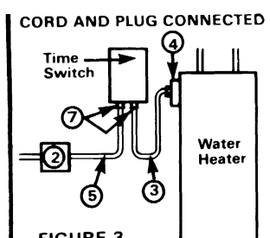


FIGURE 3

- Plan a convenient location for the Time Switch, preferably eye level (also out of reach of small children), and such that existing cable (Fig. 2, or Fig. 3 Item③ may be utilized.
- Measure the distance ⑤ from the Time Switch to Water Heater Terminal Box④. Also measure distance③from Time Switch to Junction Box if existing cable (fig. 2,Item③) is too short. Allow for slack and 6 inches of hook-up leads at each end to facilitate wiring connections.

C. MATERIALS YOU NEED

If your water heater is HARD WIRED: (See Fig. 2.)

1. Obtain a piece of cable, the SAME TYPE (that is, metallic or plastic) and SAME GAUGE with COPPER conductors to make Item⑤ connection (and Item③, if needed) as shown. See also gauge selection chart below.
2. Obtain 2 cable connectors (Item ⑥) to fit the cable above.

If your water heater is CORD and PLUG connected: (See Fig. 3)

1. Obtain the SAME TYPE and GAUGE cordset with plug as the presently used on (Item ③) and 2 strain relief grommets (Item ⑦) to fit THIS cordset.

D. TOOLS YOU NEED

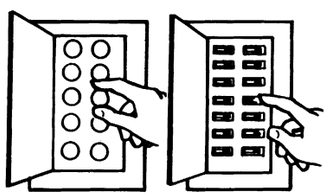
1/4 wide Screw Driver, Hammer, Drill, Pliers, Wire Cutter and Stripper.

SIZE OF FUSE OR CIRCUIT BREAKER	MINIMUM GAGE OF **COPPER** WIRE	125 OR 250V.	WATER HEATER CAPACITY	
			125 VOLT	250 VOLT
AMP.	**A.W.G.**	**AMP.**	**WATTS**	**WATTS**
15	14	15	1875	3750
20	12	20	2500	5000
30	10	30	3750	7500
40	8	40	5000	10000

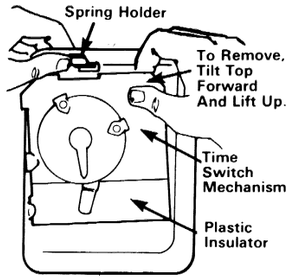
NOTE: Torque to 15.6 lbf-in.

STEP 2

Disconnect electricity to water heater. Pull plug, if cord connected; remove fuse or open circuit breaker if hard wired. **CAUTION:** - You may have to remove TWO fuses or switch TWO circuit breakers to the OFF position. If you are not sure which circuit(s) are for the water heater; use a tester or consult an electrician.

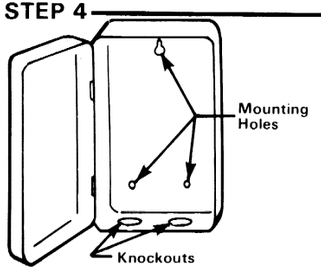


STEP 3



Remove time switch mechanism from case by depressing the spring holder at top left above the time switch mechanism, tilt the mechanism forward, and lift up and out to remove from case.

STEP 4



Mount time switch case on wall as outlined in STEP 1B. Mark mounting position, drill holes into mounting surface and drive screws into holes. Use anchors, if necessary.

STEP 5

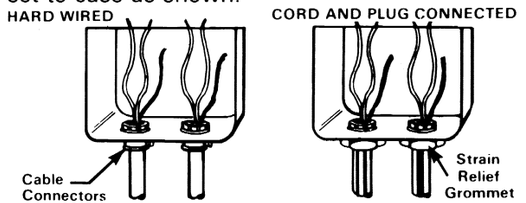
If your water heater is HARD WIRED:

Remove the cover of water heater terminal box (Fig. 1, Item④) **IS ELECTRICITY TURNED OFF? NOTE COLORS OF WIRES.** Disconnect wires and cable connector. Remove the most convenient knockout of the time switch case and attach cable (Fig. 2,Item③) and cable connector to case. Prepare another cable (Fig. 2,Item⑤) by stripping the ends of wires about half inch. Using cable connector (Fig. 2,Item⑥), attach this cable to water heater terminal box and then the wires to water heater terminals.

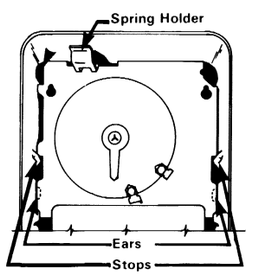
NOTE: If you had green and/or white wires in the terminal box before, you must connect the same colors to these same terminals. TIGHTEN TERMINAL SCREWS FIRMLY. Remove another knockout of the time switch case and connect the other end of this cable to the case, using the other cable connector, Item⑥.

If your water heater is CORD and PLUG connected:

Remove plug at end of water heater cord (Fig. 1, Item③). Split cord about 6 inches and strip wire ends 1/2 inch. Remove the most convenient knockout of the time switch case. Install strain relief grommet (Fig.3Item⑥) and attach cord to case as shown. Next, install strain relief grommet to the other cordset (Fig. 3, Item⑤) and attach cordset to case as shown.



STEP 6



Now, replace time switch mechanism in case. Slide in from above so plate goes between "ears" on either side of case. When in position, press top of plate until spring holder snaps in place over plate. Remove screw at the center of front insulator cover and move insulator out of the way.

STEP 7

Connect the wires coming from the service box and from the water heater to the terminals of the time switch mechanism. **For specific wiring connections regarding your model, refer to diagram inside the time switch door.** Attach wire ends to time switch terminals as shown in wiring diagram. Insert only the stripped copper ends of wires UNDER the pressure plates of terminal screws as shown. Use 3/16 or larger screwdriver, tighten screws to proper torque specification. **CAUTION:** Failure may occur if screws are loose. Now replace front insulator cover and secure it with screw furnished.