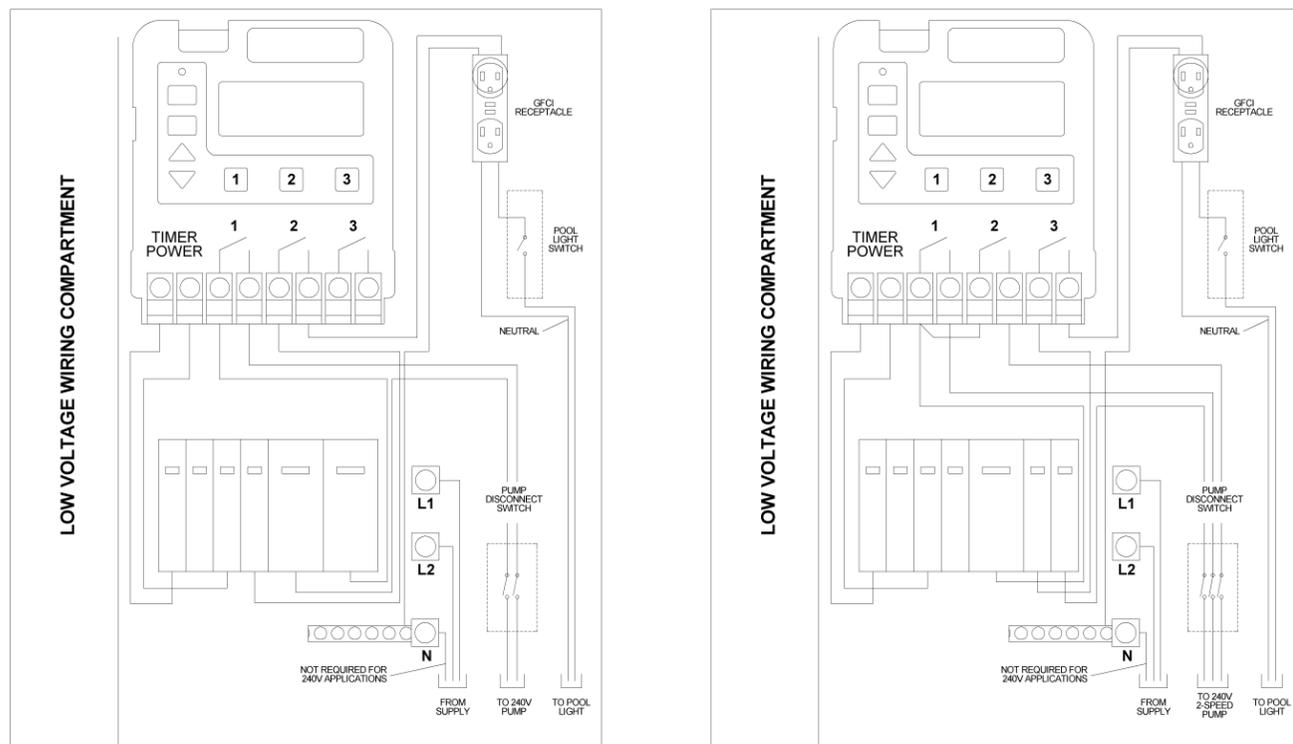


WIRING DIAGRAM

Wiring Guidelines for Modes 1 & 3
(Circuit 3 can be wired similar to Circuit 1)

Wiring Guidelines for Modes 2 & 4



NOTE: Refer to P1353ME instruction manual booklet for description of modes.

OPERATION

P1353ME Operating instructions

1. Press PROG Key to cycle through menu options.
2. Press UP and DOWN arrow keys to change program settings.
3. Press ENTER key to save changes and exit programming mode.
4. Press ON/OFF keys to manually turn devices ON or OFF.

For more details, please refer to instruction manual booklet

- NOTES:**
1. Grounding connections are not shown but must be provided. Refer to the National Electrical Code for details.
 2. Diagrams above are only two of the many variations this Panel can accommodate.

LIMITED ONE YEAR WARRANTY

If within the warranty period specified, this product fails due to a defect in material or workmanship, Intermatic Incorporated will repair or replace it, at its sole option, free of charge. This warranty is extended to the original house hold purchaser only and is not transferable. this warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LED's and batteries; (f) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs. INTERMATIC INCORPORATED WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY MODIFIED TO EXIST ONLY AS CONTAINED IN THIS LIMITED WARRANTY, AND SHALL BE OF THE SAME DURATION AS THE WARRANTY PERIOD STATED ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON THE DURATION OF AN IMPLIED WARRANTY, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Warranty service is available by mailing postage prepaid to: Intermatic Incorporated/After Sales Service, 7777 Winn Rd., Spring Grove, IL 60081-9698/815-675-7000 <http://www.intermatic.com>

Because of our commitment to continuing research and improvements, Intermatic Incorporated reserves the right to make changes, without notice, in the specifications and material contained herein and shall not be responsible for any damages, direct or consequential, caused by reliance on the material presented.

INTERMATIC INCORPORATED, SPRING GROVE, IL 60081-9698
<http://www.intermatic.com>

INTERMATIC®

PE SERIES POOL/SPA EQUIPMENT CONTROLS

INSTALLATION OPERATION & SERVICE MANUAL

Model: PE20000 Series CONTROL PANEL FOR INDOOR/OUTDOOR USE

Suitable for Pool Equipment Control and for Direct Connection to a Wet-Niche or No-Niche Luminaire

ELECTRICAL RATINGS:

PANEL: See inside enclosure door.

P1353ME Digital Time Clock: See rating inside enclosure door (Clock not included with all models)

Digital Time Clock: See rating inside enclosure door

The short circuit current rating of this panel board is 10,000 symmetrical amperes.

DANGER! TO AVOID RISK OF INJURY:

...do not permit children to operate the Control Unit or use the Pool/Spa unless they are closely supervised at all times.

...test GROUND FAULT protection regularly. If it fails to reset, DO NOT USE THE POOL or SPA!

Contact a qualified service technician.

...always disconnect electricity before servicing this control or the equipment connected to it.

READ, FOLLOW AND SAVE THIS INSTRUCTION MANUAL

GENERAL INFORMATION

Many of today's energy efficient pools and spas utilize the advantages of a single electrical panel, containing all the necessary controls for the safe, efficient and automatic operation of the pool/spa equipment. In addition, this panel can also be used to control any outdoor equipment, sign or pump within its rated capacity.

As an option this all-weather enclosure contains a heavy-duty, industrial grade P1353ME Digital Time Clock. It also comes standard with a breaker base for up to four full size circuit breakers. In addition, it has provisions to install wiring devices inside, as well as a switch or GFCI receptacle on the outside.

The P1353ME Digital Time Clock (optional) is designed to operate any pump, within its rated capacity. However, if protection to prevent dry start is required by the pump manufacturer, it must be provided in addition to this control. Contact pump manufacturer if not sure and/or for more details.



IMPORTANT SAFETY INSTRUCTIONS

When installing and operating this product and other associated equipment, basic safety precautions should always be followed, including the following:

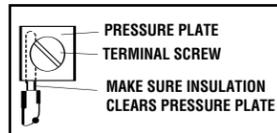
1. Read and follow all instructions.
2. This control must be installed by a qualified electrician, according to National and Local Electrical Codes.
3. Install this control not less than 5 feet (3 meters in Canada) from inside edge of pool. USE COPPER CONDUCTORS ONLY.
4. Do not exceed the maximum ratings of individual components, wiring devices, and current carrying capacity of conductors.
5. For control grounding, bonding, installing and the wiring of underwater lights, refer to Article 680 of the National Electrical Code or Article 68 of the Canadian Electrical Code.
6. This control should not operate any equipment which would cause bodily injury or property damage should it be activated unexpectedly.

READ, FOLLOW AND SAVE THIS INSTRUCTION MANUAL

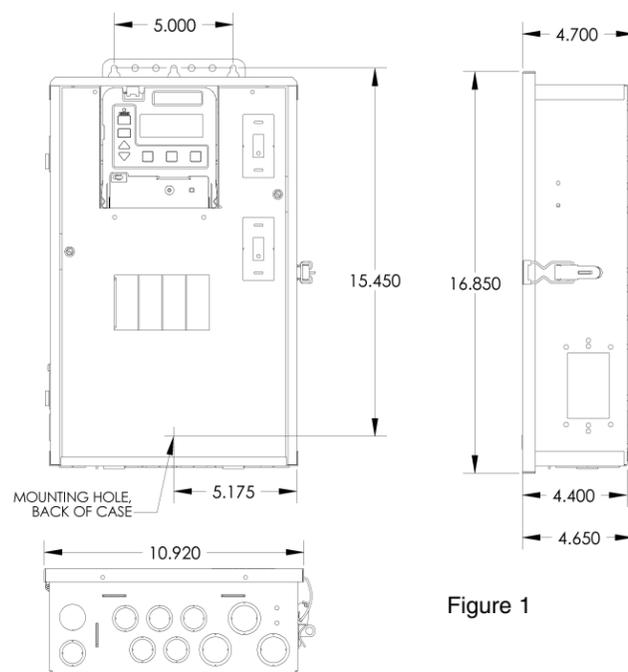
INSTALLATION

1. Remove the two #10 hex head screws from the *back* of the enclosure and attach mounting bracket to enclosure.
2. Select the proper location for the control panel and hang enclosure on a flat vertical surface or other support. When mounting the enclosure, be sure to use hardware capable of supporting its weight.
NOTE: The main feed may enter through any one of the 1-3/4 inch knockouts at the bottom or back of the enclosure. A dimple is positioned on the top of the enclosure for piloting a drill to create an overhead entrance into the panel. The main feed must also pass through a listed outdoor conduit hub, mounted at the time of installation.
3. Prepare the necessary conduit runs, terminate them at both ends and pull in the conductors as specified by the installation layout.
*If this control is to be used for direct connection to under-water lights, a Nonmetallic Hub Kit shall be used. Order 156PA13713A for a 1/2" Kit, 156PA13714A for a 3/4" Kit or 156PA13715A for a 1" Kit.

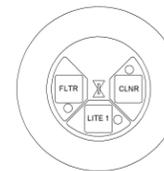
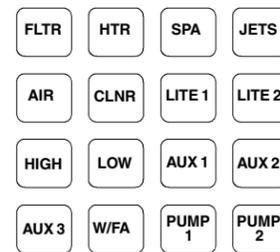
4. Refer to Figure 1 below. Note that though this figure shows a P1353ME Digital Time Clock installed, the P1353ME is not included on all models. See door panel for the specific configuration and rating of the model you are installing. A breaker base for up to four full size circuit breakers is included on all models. To wire the panel, follow the wiring diagram located inside the enclosure door. When the P1353ME, make sure that the connections are tight (25 lb.-in. minimum) and **insulation clears the pressure plate** (see illustration).
5. If required by the heater manufacturer, the P1353ME includes a connection for a fire-man switch. This switch only works in conjunction with circuit #1 (Load #1) on the P1353ME. Refer to pages 6 & 7 of the instruction manual for connection information, and refer to page 28 for fireman switch programming information. Use at least #18 AWG wiring with insulation rated 300 volt or higher. Some heaters may require a special connecting harness, contact heater manufacturer for details. Place heater ON/OFF switch on heater to ON position.
6. To install additional wiring devices inside the enclosure, first remove rectangular knockout(s) in dead front. Next, remove hex head screws in back of enclosure and install stand-offs* in place of screws. Attach wiring device to stand-offs.



- *Stand-offs are not furnished. Order 21T156A for a set of four (4) stand-offs and mounting hardware.
7. If external bonding is required, install a bonding lug at bottom of enclosure and bond installation according to code requirements (Order 156T11047A for Bonding Lug Kit).
 8. Testing of the installation is optional and recommended only if the desired loads are securely in place and will not be damaged by this test:
 - a. Turn ON power at breaker panel.
 - b. P1353ME display should fully illuminate and then start to blink 12:00 a.m. Time clock will not blink only if time has been maintained by internal battery.
 - c. Push each of the ON/OFF buttons to verify devices cycle on and off. In case of unsatisfactory results, turn OFF power, check your wiring, refer to Troubleshooting on Page 3.
 9. Install front panel over wiring compartment. The control is now ready for programming, see OPERATION section on Page 4.

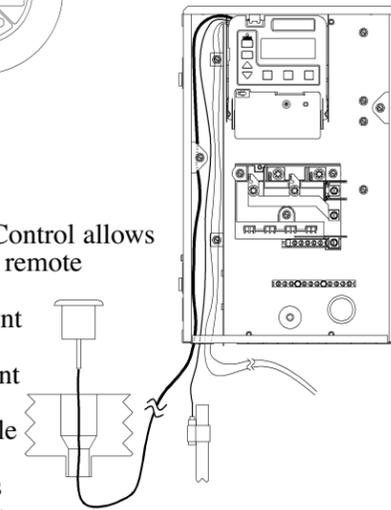


ACCESSORIES



External Wired Remote Accessory Part Number 133PE1484A (not included with all models)

The New Intermatic Wired Remote Control allows you to control the P1353ME from a remote location. Included with the Wired Remote Control is a label arrangement allowing you to identify each button specific to your pool or spa equipment pad. The new wired remote control comes standard with 100 foot of cable and is designed to slip fit into any standard 1 1/2" conduit adapter. This remote works in conjunction with the P1353ME and displays feedback information on the present state of the pool or spa equipment pad. For more information refer to instructions provided with the accessory.



Freeze Probe Accessory Part Number 178PA28A (not included with all models)



The New Intermatic Freeze Probe allows you to protect your pool or spa equipment during an unexpected freeze condition. The freeze probe comes with a 10 foot cable and plugs into the back of the new P1353ME. The P1353ME can be programmed to turn on

each or all-individual loads at any desired outside temperature.
Heater Protection (Fireman) Switch is standard with each P1353ME. It comes standard with a Fireman Switch connection for your pool or spa heater. Simply connect the two wires from the heater thermostat to the back of the P1353ME. The fireman switch is only associated with circuit one on the P1353ME, therefore the filter pump should be connected to circuit one. Program the time desired for the cool down period and the P1353ME will take over. For more details, refer to instruction manual.

TROUBLESHOOTING

SYMPTOM	CAUSE(S)	CORRECTIVE ACTION
1. Display will not come "ON" when unit is powered up?	1a. Jumper on back of clock is missing or set incorrectly.	Set Jumper to proper location. See Pg.7 of instruction manual.
	1b. Fuse on back of clock blown open.	Replace fuse with 1/8 amps fuse. See Pg. 7 of instruction manual.
	1c. Power to clock not present.	Check connections to clock. Check circuit breakers.
2. Freeze protection circuit not working?	2a. Freeze Probe (P/N 178PA28A) not installed or bad.	Install Intermatic freeze probe. See Pg. 7 of instruction manual.
	2b. Clock programming not setup.	Setup freeze programming. See Pg. 7 of instruction manual.
3. Unit does not turn "ON" or "OFF" at desired times?	3a. Internal ON/OFF Times have not been defined.	Setup ON/OFF programming. See Pg.'s 24-27 of instruction manual.
	3b. ON or OFF time is in override mode.	Cycle through programming menu. See Pg.'s 24-27 of instruction manual.
	3c. Clock is in Freeze protection Countdown Mode.	Review programming menu. See Pg.'s 29 & 33 of instruction manual.
4. Display continues to blink ON and OFF?	4a. Power to clock was interrupted long enough to loose time of day.	Set time of day on clock. See Pg. 23 of instruction manual.
	4b. Clock still in programming mode.	Press "ENTER KEY" or wait 1 minute for clock to time out.
5. Fireman switch not working?	5a. Fireman switch wires not hooked up correctly from heater.	Connect fireman switch wires to clock. See Pg. 7 of instruction manual.
	5b. Fireman switch programming not defined.	Program fireman switch settings. See Pg. 28 of instruction manual.