



**ABBERFIELD**  
**INDUSTRIES**  
PTY LTD ABN 61 000 112 569

**PBC61**

*series*

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**PUSH  
BUTTON  
SHOWER  
CONTROL**

**TECHNICAL & SERVICE DETAILS**

**ABBERFIELD INDUSTRIES PTY LTD**  
32 Cross Street, Brookvale, Sydney, NSW 2100 Australia  
Tel: +61-2 9939 2844 Fax: +61-2 9938 3462  
Email: [contact@abberfield.com.au](mailto:contact@abberfield.com.au)  
Internet: [www.abberfield.com.au](http://www.abberfield.com.au)

## GENERAL DESCRIPTION

The PBC61 will control showers to minimise water and energy waste. With sealed battery and electronics this shower control device fits between the wall and the shower rose.

Control is achieved by requiring the user to press a touch panel, allowing shower water to flow for a predetermined period. After that period the shower will disconnect and cannot be restarted for another predetermined period. Warning of water disconnection is given by a buzzer before the end of the period. At the end of the "off" period the buzzer beeps 2 times notifying that the shower may be used again. As supplied the showers "on" time will be set for 5 minutes and the "off" time for 1 minute. These times can be reset.



## FEATURES

1. Three models are available, **Economy, Standard, and Premium.**
2. The shower can be turned off prior to the time out by pressing the button again.
3. Since the controller turns off the shower, the hot and cold taps can be left on. This saves time, water and heating costs in establishing the ideal shower conditions.
4. The special control system should operate for up to 20 years or a considerable number of shower operations, typical life of the economy model; in excess of 10,000 showers. Standard model; in excess of 15,000 showers. Premium Model in excess of 30,000 showers.
5. Both shower "on" and "off" times are fully adjustable at anytime by, following the instructions detailed below. This brochure is also on [www.abberfield.com.au](http://www.abberfield.com.au)
6. The timer operation can be by passed. Contact Abberfield Industries for details on this override mode.



## INSTALLATION

1. Remove the shower rose. This should leave a male 1/2 inch BSP thread extending from the wall.
2. Take teflon tape and wrap around the protruding threaded section. Do not allow the teflon tape or any other swarf to enter the plumbing waterway as this may cause the solenoid (electric tap) to not turn off properly.
3. As delivered the push button controller will have the solenoid valve loosely assembled. Disassemble the controller, taking care not to stress the electrical lead between the solenoid valve and the electronic controller.
4. With the **Premium** and **Standard** models unscrew the plastic lock nut securing the solenoid coil and slide the coil off the valve. This will simplify fitting the valve. Otherwise, take care not to stress the solenoid valve wires or control electronics during installation
5. Check the solenoid valve to note the arrow cast into the solenoid valve body, showing the direction of the water flow. If installed incorrectly the shower may not operate.
6. When sure which way around the solenoid valve is installed, screw this on to the plumbing thread coming from the wall.
7. When firmly attached, with out any breakages of any part, the solenoid valve coil should be facing down.
8. Take the 1/2 inch BSP (British Standard Pipe) union supplied and cover with teflon tape on both ends. Fit the union to the solenoid and tighten, but not so as to move the solenoid valve from the vertical position.

**NOTE:** The economy model uses a plastic bodied solenoid valve, whilst the standard and premium model uses brass bodied solenoid valves. The 1/2 inch BSP union is different between the plastic and the brass bodied solenoid vale. The union supplied with the brass bodied valve has a tapered thread and seals largely by wedging the thread as it is tightened.

However a tapered thread on the union may cause the plastic valve to split and therefore the union supplied with the plastic bodied valve will have parallel thread and seals by bottoming out at the end of its screwed in travel, plus the use of telfon tape.

9. Fit the moulded plastic housing over the solenoid valve and check that it sits on the solenoid, with the housing flush with the wall or just standing off the wall.
10. If the housing does not sit on the solenoid valve (ie. there is an air gap) then fit one or more of the stainless steel washers between the valve and the moulded cover.
11. Choose a moulded ring to act as a packing collar over the protruding brass threaded union, so that the shower rose will screw down and tighten against the moulded cover. The final installation will have the shower rose screwed on and pointing down and the moulded cover of the controller will remain vertical.
12. Getting the equipment fitted firmly, whilst maintaining the solenoid in the vertical position and having the shower rose positioned correctly, can be helped by two "plumbers tips":
  - a) To ensure the correct position of first the solenoid valve and then the shower rose, the amount of teflon tape used can be adjusted (ie. More tape equals less rotation and less tape equals more rotation.
  - b) When fitting the solenoid valve, leave this on a very slight angle, so that when tightening the shower rose the very last process is to finally position the rose (more or less tape) by twisting **both** the rose and the solenoid into the final position.
13. With some skill, fitting the push button shower control will take only a few minutes and the result will be a dead square and very secure housing. If loose or not square, try again, adjusting the tape or choosing a different dress collar. Another trick may be to fit the solenoid valve firmly and then before applying the teflon tape to the union, loosely install the union, then the cover and shower rose. The gap between the shower rose and the moulded cover will show what depth of collar is required.
14. NOTE: It is assumed that the hot and cold water are both mains pressure. If the hot and cold water are low pressure gravity feed of unequal pressure there may be a complications.

Note: Set the "off" time to the lowest period that gives effective control. This may be 30 seconds.

## PROBLEM SOLVING

Very few problems should be encountered and the following is only for installation difficulties. For clarification of any issues contact the Abberfield Industries support team on **(02) 9939 2844** or email [contact@abberfield.com.au](mailto:contact@abberfield.com.au)

1. Very occasionally the threaded outlet from the wall does not protrude far enough, usually because the shower area has been retiled. For those installations, purchase a 1/2 inch BSP/female to male thread extension nipple, available from any plumbers suppliers.
2. In some installations, very occasionally there can be water pipe banging or "water hammer" when the push button controllers solenoid turns off. This is because the plumbing installation in the wall, floor or roof, is not secured properly. The same problem occasionally occurs when clothes washing machines or dishwashers operate, because these appliances also have solenoid valves. It is the sudden on and off action of the valve that transmits energy as the water stops flowing, to become a movement of the inadequately secured water pipes, weather they are hot or cold pipes.

The best cure is to resecure the pipes with a saddle or to fit padding around the pipe where the pipe movement occurs.

However sometimes the loose pipe is enclosed in a wall or between floors and cannot be reached. In some cases squirting expanding foam through a small hole will secure the pipe. Pressure pack foam also comes from plumbing suppliers.

Where no means of securing the pipe is possible, then a hydraulic dampener can be fitted anywhere in the plumbing line, preferably somewhere near the cause of the problem. First check weather it is the hot or the cold pipe causing the problem and fit the hydraulic dampener to the problem pipe. The hydraulic dampener is just like a cars shock absorber, it allows a small amount of water movement by the water acting on a pressured diaphragm. These hydraulic dampeners are available from any plumbers suppliers. The pipe is cut and the small device fitted in the line. It usually consists of a very small T-section container housing the pressure diaphragm.

3. With the economy model the solenoid valve is in moulded glass filled plastic or occasionally alloy casting. These materials are not as hard as the brass bodied solenoid valves and a little care is needed to ensure the connecting tread is not over tightened, causing stripping of the tread, or overly wedged, causing splitting of the housing. Such failure does not constitute a warranty claim.  
To assist with plastic bodied solenoid valves the threaded connection union between the solenoid valve and the shower rose has been specifically made to have a parallel thread, instead of the more usual tapered thread. This protects against the wedging action splitting the solenoid body, though over tightening, the control of tightening is by carefully use of the teflon tape, more so than with the brass bodied solenoid valves.

## ELECTRICAL

The **Standard** and **Premium** Models use a long life lithium based battery. Unused, the battery should maintain its capacity for over 20 years. Operating the system will slowly flatten the battery and there is yet limited experience of its capabilities. However accelerated life tests indicate the design life of the **Standard** model would exceed 4 showers per day for 10 years. The **Premium** model would be twice this usage. The Economy model may have a different battery, maintaining capacity for 10 years, but still provide 4 showers per day for 5 to 10 years.

Shower controllers can be returned to Abberfield in the unlikely event that battery replacement is required. This would almost certainly be outside the one year warranty period.

## TIMING ADJUSTMENT

### PROGRAM MODE

- To enter program mode, hold the **PRESS** button down until a descending two tone beep is heard or 3 green LED flashes are seen, this takes about 12 seconds.
- Once program mode is entered, select one of three parameters
  - Press once for **FLOW ON TIME**
  - Press twice for **FLOW OFF TIME**
  - Press three times for **PRE WARNING TIME**

*If **PRESS** button is pressed more than three times, a double beep will be heard and then the parameter number can be re-entered. When a valid parameter number is entered the red LED flashes and a beep will sound the number of times that the **PRESS** button was pressed, to confirm the parameter number selected.*

- The value of the selected parameter can now be set by pressing the **PRESS** button the required number of times. Refer to the table below.

*If the button has been pressed outside the minimum and maximum range allowed (see table) a warning tone will be heard. A low single tone beep will be heard, if the value is too low and a low tone double beep if too high.*

- Once the settings have been entered, press and hold the **PRESS** button until you hear a long beep (approx. 5 seconds) to save the settings entered.

*If the value entered is in range then the red LED will flash and a beep will sound the same number of times to confirm the parameter.*

- At anytime in program mode, if the **PRESS** button is not pressed for 30s, the program mode will be exited. Therefore, if a mistake has been made or there is uncertainty, don't press "start" for 5 seconds and the uncertain setting wont be saved. Just wait 30 seconds or more and then start again.

The equipment is effectively maintenance free during its operating life. If service should ever be

Table 1 - Programmable Parameters

| No. | Parameter   | Units of Value | Default Value        | Range                                     |
|-----|---|----------------|----------------------|---|
| 1   | FLOW_ON_TIME<br>The maximum showering time permitted                  | 1 minute       | 5<br>(i.e. 5 minute) | 2 to 20<br>(i.e. 2 to 20 minute)          |
| 2   | FLOW_OFF_TIME<br>The minimum time permitted between showers.          | 15 seconds     | 5<br>(i.e. 5 minute) | 1 to 20<br>(i.e. 15 seconds to 5 minutes) |
| 3   | FLOW_WARNING_TIME<br>The warning time before the shower time expires. | 30 seconds     | 5<br>(i.e. 5 minute) | 0 to FLOW_ON_TIME<br>(i.e. 0 to 1 minute) |

## MAINTENANCE

needed contact Abberfield Industries or its service agents. This and other brochures will be found on [www.abberfield.com.au](http://www.abberfield.com.au) in the **Technical** section of **Push Button Controllers**.

Abberfield Industries also produces a more industrial style of Push Button Shower Control, suited for high use applications. Details on the **model PBC60** controller are also found on [www.abberfield.com.au](http://www.abberfield.com.au).

**Economy** model **PBC61E** white housing- blue / white label

## MODELS AVAILABLE

**Standard** model **PBC61S** white housing - blue / white label

**Premium** model **PBC61P** beige housing - dark brown / golden yellow label  
(available in white housing - blue / white label on request)

The **Premium** grade product has increased battery capacity and commercial grade components, suitable for heavy duty usage.

### CUSTOM COLOURS

Alternate housing and label colours available, contact Abberfield Industries for details.

***Abberfield Industries offer a wide range of related products including coin operated shower controls***