

AQUATRIP[®]



SAVING EVERY DROP



MODELS: AT201B & AT201E

Water Trip Switch Operating Instructions

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* On model AT201-E only

How to turn the water back on !

If the AquaTrip shuts off the water, press the **BLUE RESET** button on the Control Valve and the water will come back on. You will need to locate the reason for the water shutting off (tripping). *See page 6, Section 7.*

Blue Reset Button

System Message Display (Only activates when Button is pressed) *See page 6.*



Message Display Summary

C.L - Check (for) Leak(s)

The water went off because the trip time was exceeded. This may be caused by a tap left on, a toilet running on, or you could have a leak somewhere. Check around your property for the cause.

For more information on water leaks, *See page 8.*

C.b - Change Battery

The water went off because the AquaTrip battery is flat. Replace the battery immediately.

For battery replacement, *see page 16.*

If you do not have a replacement battery on hand, *see page 17.*

How to Override the whole system in an Emergency

Locate the **Control Valve**, which will be on the incoming main water pipe, most likely just after the water meter. Rotate the **WHITE** body of the Control Valve **half a turn anti clockwise** - The system will now be permanently deactivated. For detailed information, *See Page 7.*

You must read this Manual to understand the many advanced features of the AquaTrip.

SECTION 2 - HOW IT WORKS

The AquaTrip monitors the flow of water into your property and is able to shut off the water automatically in the event of a water leak, a burst pipe or if a tap is inadvertently left running. This minimises water wastage and reduces the likelihood of property damage.

The AquaTrip is programmed (by you) with an adjustable time out period, anywhere up to 180 minutes. For example, if you set the Trip Time period to 30 minutes and the water flows continuously for more than 30 minutes, the AquaTrip will shut off the water supply.

Under normal water use, the water is highly unlikely to run continuously for more than 30 minutes. Household appliances like dish washers and washing machines, start and stop the water supply many times during their cycle. As long as the water is turned off (and there is no flow) at some point within the 30 minutes, the timer is reset, and is restarted when the water flow resumes.

The AquaTrip has a selectable Early Warning System, which will alert you THREE MINUTES before the water is to be shut off. For example, if your trip time is set to 20 minutes, the flow of water will pause for 5 seconds (default time) after 17 minutes of CONTINUOUS water use. JUST WAIT, and the water will come back on. This will alert you, that there are only THREE minutes of water flow remaining, before the Trip Time is exceeded and the water will be shut off. If you turn OFF the water at this point for 10 seconds or more, the timer will reset, and you will now have another 20 minutes of flow. *(See Section 8, Page 14.)*

A temporary override function is provided for times when you require a long flow time, like filling a pool. *(Page 13.)*

Once installed the AquaTrip requires very little user input. If the water trips (goes off), simply press the BLUE RESET button on the Control Valve and look for the reason it tripped. E.G. Toilet running, tap left on, or water pipe leaking.

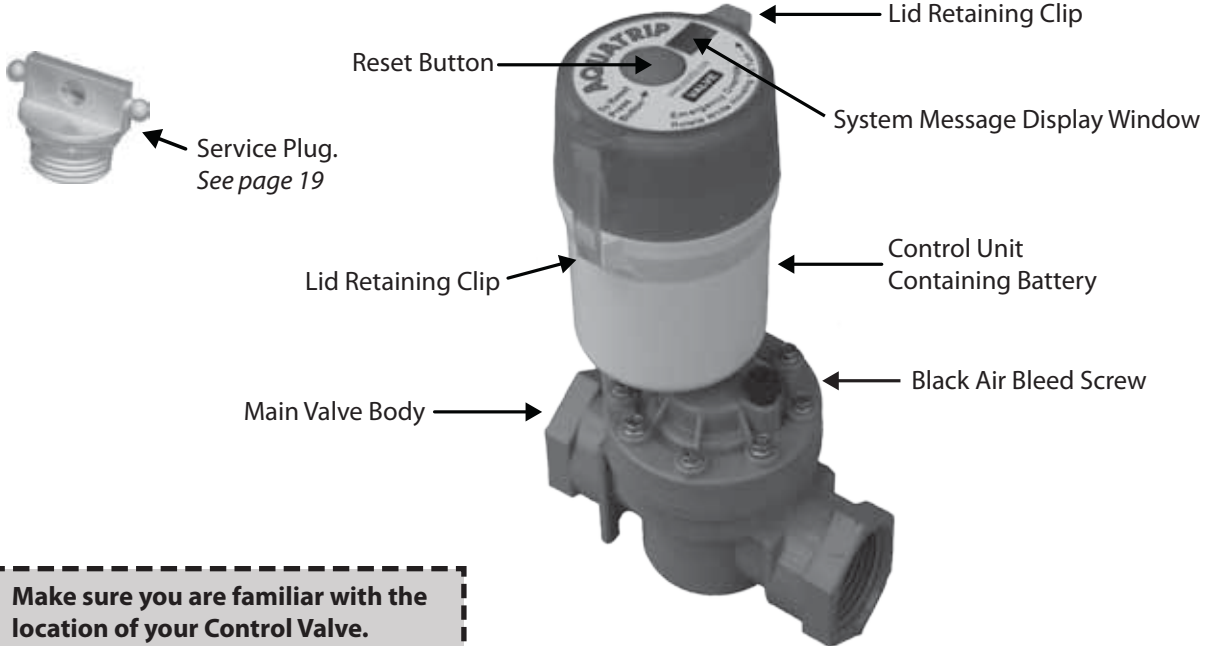
IMPORTANT: It is essential to show everyone who uses the water supply on your property how to reset the AquaTrip in the event that it turns the water off.

NOTE: *The AquaTrip is to be installed by a licenced plumber in accordance with local government regulations.*

SECTION 3 - OVERVIEW OF COMPONENTS

The AquaTrip AT201 Water Control Valve is mounted in line, on the incoming main water pipe, usually just after the water meter. It is powered by a single 9 volt Alkaline battery.

Water Control Valve Assembly



Make sure you are familiar with the location of your Control Valve.

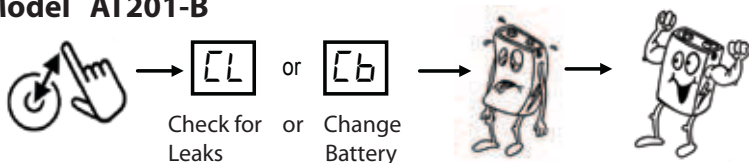
SECTION 4 - TURNING THE WATER BACK ON

To Reset - If your AquaTrip detects a water leak or a tap left on, it will shut off the water supply. To turn the water back on, press the BLUE RESET button on the top of the Control Valve. The water will turn on, and you should hear a 'click' and 'whooshing' sound from the Valve. You will now need to identify the cause of the 'Trip'. See Section 7, Page 8.

If the water still does not turn on, check if the Council have turned off the street water supply for maintenance.

When you press the BLUE RESET button, the System Message will appear in the Display window as follows:-

On Model AT201-B



On Model AT201-E



After using the BLUE RESET button on the Control Valve to turn the water on, a message will appear in the two digit display window on the lid. Please refer to the diagram above for the meaning of the Digits.

On Model AT201-E, the display will tell you the day and time the water was shut off, (the trip time).

SECTION 5 - EMERGENCY MANUAL OVERRIDE

The AquaTrip is fitted with an Emergency Manual Override, which ensures that you cannot be without water. The manual override is used when the AquaTrip's battery has gone flat and you do not have a replacement, or in the unlikely event of a malfunction.

WARNING: When the AquaTrip is in Emergency Manual Override, it cannot shut off the water should you have a leak. DO NOT forget or leave the AquaTrip in this mode as you will have no leak protection.

1. To place the AquaTrip in Emergency Manual Override rotate the Control Valve housing 1/2 turn anti clockwise.
2. To cancel Emergency Manual Override gently rotate the Control Valve housing 1/2 turn clockwise.
Make sure it is seated firmly, but DO NOT OVERTIGHTEN.
3. To confirm that the AquaTrip is functioning correctly, run a Water Off Test (*see page 13*) & System Check (*page 12*).

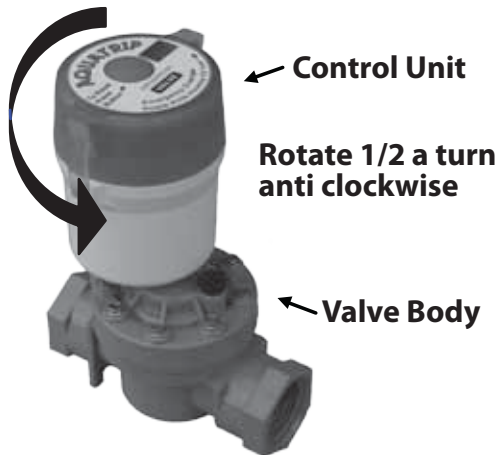
WARNING: If you need to completely remove the Control Unit from the Valve Body, BEFORE unscrewing it follow these steps:-



1. Turn off the main water supply tap.
2. Once the main water supply tap is off, release the water pressure in the properties water system by opening a tap located inside the property.



Failure to do this will result in a pressurised jet of water escaping from the valve body when the Control Unit is unscrewed. Injury could result.



SECTION 6 - FIRE FIGHTING

To prevent the water turning off during fire fighting the AquaTrip should be placed in **Emergency Manual Override** - ROTATE VALVE HOUSING 1/2 A TURN ANTI CLOCKWISE.

SECTION 7 - WATER LEAKS

If the AquaTrip has detected a water leak, it is important that you find the cause of the leak, or the AquaTrip will keep turning off the water. Finding the cause of leaks can be difficult, but generally they can be traced to something simple to fix. The AquaTrip can detect very low water flow rates. It is more sensitive than most water meters and in some cases it will detect water flow before the water meter begins turning. Use the AquaTrip's 'System Check' mode to test for water flow. **See Section 8 page 12** on how to check your plumbing system for leaks.

Common causes of easy to find leaks

- Worn tap washers causing taps to drip.
- Garden hoses left on with the Spray Nozzle or Trigger Gun closed but not fully shut off.
- Toilet flush button/lever not returning properly or staying down.

Common causes of hard to find leaks

- Toilet cisterns not sealing properly.
- Toilet cisterns taking a long time to fill (Debris blocking supply pipe).
- Irrigation valves not sealing properly.
- Fractured underground pipes and pipe joints.
- Washing Machine and Dishwasher inlet pipes leaking straight out to the waste line.
- Inlet pipe on fridges with a water or ice dispenser.

For more information on finding water leaks see **Section 10, page 17** or visit www.aquatrip.com

SECTION 8 - HOW TO OPERATE AND PROGRAM THE AQUATRIIP

The AquaTrip Control Valve is located in line, on your incoming water main pipe, usually directly after your water meter. You control your AquaTrip using the BLUE multifunction (Reset) button on the lid of the Control Valve.

Use the “Key” below to understand how to operate the BLUE BUTTON in the instructions that follow.

Blue Reset Button - KEY to operation diagrams



= **Hold Down Button**



= **Release After Hold**



= **Press Once**

The System Message Display window will show a Two Digit code, indicating the status of the function that you are programming or observing. A summary of possible codes is as follows :-

bt

- **Battery Level** follows (in %)
(Indicated as Lo, Actual % or HI = 100%)

Pr

- **Program Mode** follows
(Used for setting Trip Time)

CL

- **Check for Leaks**
(Unit has exceeded set Trip Time)

Cb

- **Change Battery**
(Unit has Tripped due to Low Battery)

SC

- **System Check**
(System will begin Countdown Test)

Or

- **Override Mode** selected
(System has entered 1 Time override)

AU

- Country Code = **Australia**
(Software Version & Model Type Follows)

Extra Codes for Model AT201E

Ct

- **Current Time**
(Current Day and Time Display follows)

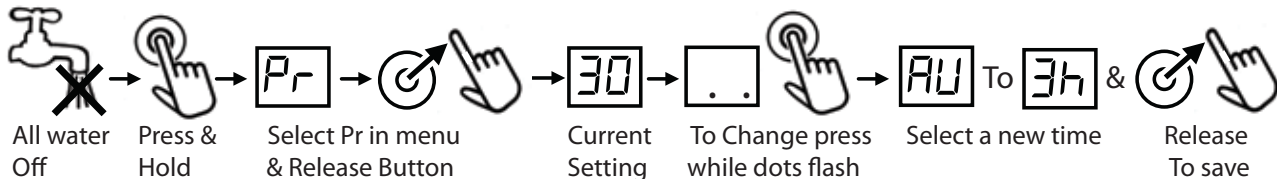
EP

- **Exclusion Period** Setting Follows
(Enter 5h - Start and Fh - Finish Hours)

HOW TO PROGRAM THE TRIP TIME

The AquaTrip may be re-programmed with a new trip time whenever necessary. This is the setting for the longest **continuous** time your water will flow before it is cut off. Follow the procedure below to adjust the setting:-

Setting Procedure



Note: AquaTrip's are supplied pre-programmed to 30 minutes.

1. The AquaTrip can **only** be programmed when there is **no water flowing** (within the entire property)! If there are water leaks on the property turn off the Water Main Tap prior to programming.
2. When programming a water Trip Time, it is better to choose a short time to start with (30 or 45 minutes is recommended). Ideally, the shorter the better. The Trip Time can be re-programmed whenever you like.
3. HOLD the BLUE Reset button down, until "Pr" appears on the display, then release the button. The currently programmed time first appears on the display, then two dots will begin flashing. Now press and HOLD the button down until you see your desired time on the display. Now release the button, and the chosen time is stored. If you make a mistake, simply start over. (Program times range up to 3 hours).
4. **AU** - Auto Trip Time function. If you choose this setting, the AquaTrip will start with a 30 minute time selected. It will then monitor your water use over several days and automatically adjust and set the time to suit your water use. In AU mode, the program time will be automatically re-evaluated and adjusted if the unit trips.

HOW TO SET THE EXCLUSION PERIOD (Available on model AT201-E only)

This function allows you to exclude certain periods of the day from your AquaTrip's detection schedule.

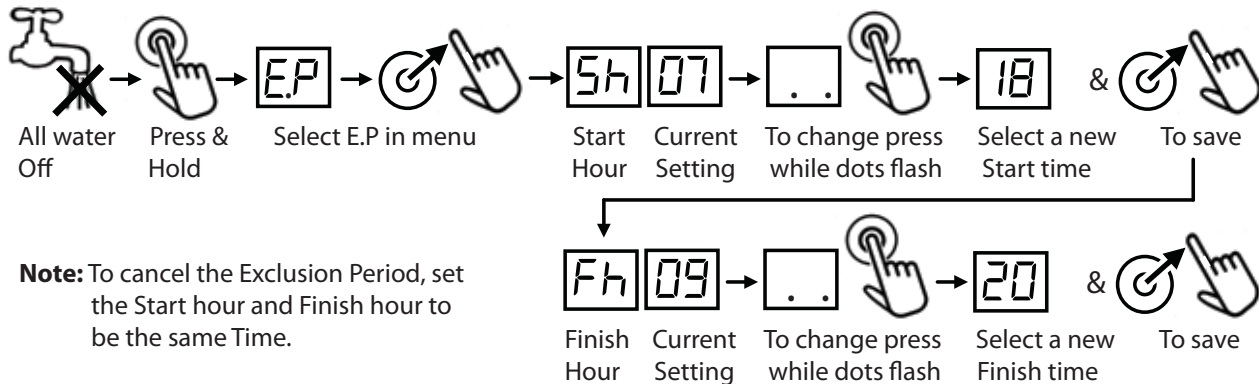
Irrigation If you have garden irrigation that turns on for say two hours at 6 pm, you can program the AquaTrip to ignore this particular time period. This will prevent the AquaTrip from turning off the water, if your irrigation run time is set to LONGER than the AquaTrip Trip Time setting..

Commercial When fitted to a commercial building the AquaTrip can be programmed to ignore water use during working hours of say 7 am to 6 pm, by setting an exclusion period. (See example screens below).

NOTE: The system uses a 24 hour clock, and may ONLY be set to whole Hour periods.

Warning: The AquaTrip will not detect leaks or shut off the water during the exclusion time period.

Setting Procedure (Example below shows changing from 7 am - 9 am to 6 pm - 8 pm)



Note: To cancel the Exclusion Period, set the Start hour and Finish hour to be the same Time.

HOW TO CONDUCT A SYSTEM CHECK

You can test to see if the AquaTrip is functioning correctly, and also check your property for Leaks using this feature.

NOTE: Water MUST be flowing for this test to function. Follow the instructions below for correct operation :-



Turn the
water on



Press and
Hold button



'SC'
appears



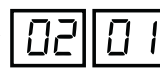
Release Button



Countdown
Begins



Shut All
Taps



Countdown Should
Stop Before Zero

Hold Blue button down till SC - **System Check** appears on the display - Release the button. The display will count down from 60 seconds.

After the 'countdown' has started - **Shut the Tap**
The countdown should stop **before** zero - If it does not, there is water flowing somewhere!

- The seconds counting down indicate water is flowing. When the water stops flowing, the countdown stops. If the countdown does not stop after closing all taps, you may have a leak somewhere. *See section 7 page 8.*
- The countdown should stop within 5 to 25 seconds of closing the tap. Large properties, or slow leaks (like a weeping tap) may cause a longer countdown before stopping. Repair all leaks and re-test.
- Should the countdown reach zero, the AquaTrip WILL shut off the water. Press the BLUE Reset button once, and the water will come back on again.
- If you cannot get the countdown to stop, **you can test that the AquaTrip is working correctly**, by repeating the above procedure and **closing the incoming water main tap**. If the countdown **STOPS** when you close the main tap, then the AquaTrip is functioning correctly. If the countdown does not stop then the Control Valve may be faulty. *See Section 12 Page 19.*

How to Temporarily Override the System:

Usually for a SINGLE extended water use (Like Pool Filling).



Turn Water ON



Now Press and
release button



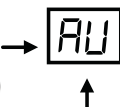
'Or' appears
in window

NOTE: This Override is automatically cancelled as soon as ALL water flow stops (All taps closed).
OR
Automatically 12 hours after the override was set.

How to do an 'Extra Fast Test' to see if the AquaTrip is functioning correctly:



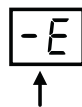
Turn the
water on



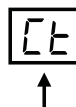
Press and hold button till 'Au' appears in window



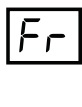
Software
Version 5.1



Unit Type



(*Current Day and Time)



NOTE: The water will turn off after displaying the software version (*and Current Day and Time on Model AT201E).
Reset the water when you have finished testing.

How to check the Battery Level:



Turn the
water OFF



Press & Release



Battery



9 volt



100%



* Displays on model AT201-E only

Power-Up Settings

These are initial installation settings, generally for use by the installer!

1. Remove the battery holder, to power down the Control Valve.
2. Press reset switch on Control Valve for 1 second with no battery in the unit.
2. Re-insert the battery holder to initialise the power up sequence.

AU 5.1 -6

Country Code, Software Version and Model Type



PE

Pause Time
(Default = 5 Sec)



PU

Pump Select
(Default = No)

Early Warning Pause Time

(5 Seconds Std)



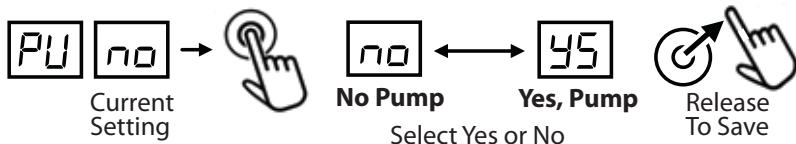
Pause Time Function - As an early warning, the AquaTrip will PAUSE the water flow for a set number of seconds, **3 minutes** before the programmed 'Trip Time' is exceeded. If you don't require this Pre-Trip Warning, set this value to 0 (zero). You may set this Pause Time period to 5, 10 & 15 seconds.

If there is extensive plumbing, or a long pipe run to your water meter, it may be necessary to increase this pause time, so that it is more noticeable whilst showering or watering the garden.

Pump Select

(Default = No Pump)

Pump Select Mode - This special mode needs to be enabled if the water supply being used is supplied by a pressure pump **without an accumulator vessel**, (used to maintain constant water pressure). If you are on mains water supply, or use a pump WITH an accumulator vessel, please DO NOT enable this feature. This mode can only be selected on Control Valve power up when the initial setup is done, or after a new battery is installed.



Note:

The PU and PE settings are NOT lost on Battery Removal or in the event of a flat battery.

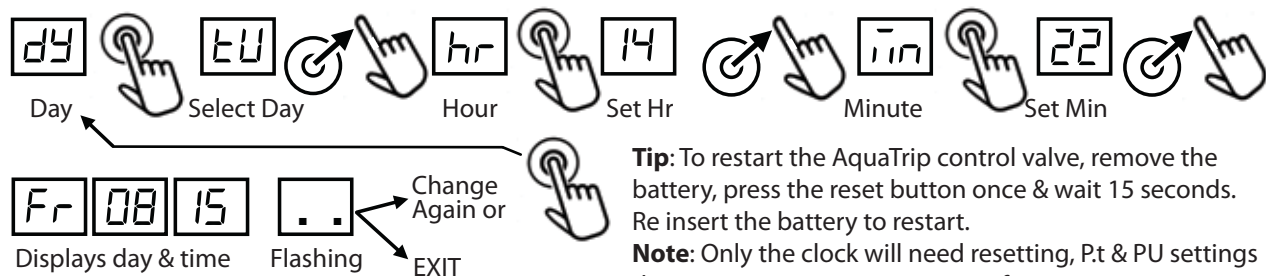
SETTING THE CLOCK (Available on model AT201-E only)

The clock must be set to the correct day and time in order for the Exclusion Period function of the AquaTrip to work correctly. The AquaTrip does not have a date function, only shows the days of the week and the time.

To access the clock setting menu, you will have to remove the battery holder and press the reset button once, then reinsert the battery holder and the clock setup menu will appear.

NOTE:- The clock is displayed in the 24 hour format.

Clock Setting Procedure (After battery removal & replacement)



Tip: To restart the AquaTrip control valve, remove the battery, press the reset button once & wait 15 seconds. Re insert the battery to restart.

Note: Only the clock will need resetting, Pt & PU settings do not require re-programming after a restart.

Tip: To view the current day and time, see the section **How to do a 'Fast Test'** on page 13

SECTION 9 - HOW TO REPLACE THE BATTERY

Control Valve Battery - Use 1 x 9V Alkaline 6LF22, 6LR61 or MN1604

WARNINGS: **DO NOT** open the battery lid in the rain or allow **ANY WATER** to get inside the Control Valve. Water damage **WILL VOID** your warranty. If the lid and housing are wet, dry carefully with a tissue or paper towel prior to opening.

If the Valve battery is not replaced when flat, the system will keep shutting off the water until it is replaced.

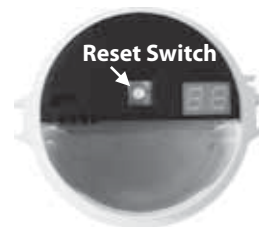
Remove the AquaTrip Valve lid by squeezing the top of the lid lock tabs and gently rocking the lid side to side until the lid comes off. The lid is a tight fit, to prevent any water ingress. Lift out the Orange battery holder by gripping the small handle, and replace the battery (note correct polarity). **Before re-inserting the holder, press the Reset Switch for one second**, then slide the battery holder back into the valve until it seats firmly.

Before replacing the lid, please check there is enough lubricant on the contacting surfaces. If not, please lubricate **liberally** with Petroleum Jelly (Vaseline). Replace the lid, making sure you line up the display window and the two clips. **To secure the lid, ensure both lid lock tabs are fully clipped and seated onto the White Housing by squeezing them at their lowest point.** (Now see Page 13, on how to check the battery level).

NOTE: The AT201 only requires 1 x 9V battery. **Do not install AA batteries in the holder.**

IMPORTANT: You must ONLY use ALKALINE or LITHIUM type batteries!

Battery Holder, Contained
Within the Control Valve



SECTION 10 - TROUBLE SHOOTING AND LEAK LOCATION

Q - My water often goes off during the night, but not during the day?

A - This is usually caused by the fact that at night, there are less people accessing the mains water supply, so the water pressure in your neighbourhood is higher and more constant. This higher pressure causes smaller leaks to appear, that often do not occur when the pressure is lower or fluctuating.

Q - My water goes off occasionally and I cannot find a leak?

A - The AquaTrip cannot be triggered unless water is actually flowing, even if it is only a small amount. Therefore, a small amount of water is leaking somewhere. The most common areas of leakage are toilet cisterns, irrigation solenoids, garden hose fittings, washing machine and dishwasher fittings, fridge ice makers and taps.

Q - My water goes off continuously but I cannot find a leak?

A - Check the battery level of the Control Valve. If it is flat or at a very low level, replace the batteries. If the batteries are OK, then you need to make sure the AquaTrip is not faulty. This is done by referring to *Section 8 Page 12*, and performing a System Check to **test that the AquaTrip is working correctly**. If the AquaTrip is not faulty then you have a leak somewhere in your plumbing - *See Section 7, Page 8*.

Q - How do I find where the leak is?

A - The best way to find the leak is to look at the likely causes. Firstly check the toilets. To do this simply turn off the supply tap to each individual toilet cistern, then you can either wait to see if the AquaTrip trips again, or you can use the System Check facility on the Control Valve - *See Page 12*. Use a process of elimination, by cutting off the water supply to each water consuming appliance or fitting, to work out which one is leaking. For more information on water leaks - *See Section 7 Page 8*.

Q - The AquaTrip has cut off my water as the batteries are flat, and I do not have a replacement available?

A - You can manually override the System by following the instructions in *Section 5, on Page 7*. Obtain a new 9V alkaline battery and replace it as soon as possible..... **(Battery MUST be Alkaline or Lithium)**.

Q - What do I do if I cannot find the leak?

A - In some cases the leak will be underground or may be under the slab of the house or within the walls. In this case, you will need to contact a Leak Detection company, who will have the equipment to locate and arrange repair of the leak. Your AquaTrip will need to remain in Emergency Manual Override mode until the leak is repaired.

IMPORTANT: DO NOT forget to re-engage your AquaTrip after your leak has been repaired. See Section 5, Page 7.

SECTION 11 - TECHNICAL SPECIFICATIONS

Flow range	-	0 - 100 L/min (0 - 22.2 Gal/min)
Normal pressure range	-	70 - 1000 kPa (10 - 145 psi)
Maximum operating pressure	-	1000 kPa (145 psi)
Maximum operating temperature	-	50°C
Pressure loss	-	@ 60 L/min - 8 kPa (@ 13.2 Gal/min - 1.16 psi)
9v Battery type	-	1 x 9 volt alkaline
Flow sensing range	-	30 mL/min - 100 L/min
Valve thread	-	DN - 25 (1" BSPT)
Watermark Certification	-	23037 & ATS 5200.030
Construction Material	-	UV Stable PVC

The AquaTrip is to be installed by a licenced plumber in accordance with local government regulations.

NOTE: Specifications are subject to change without notice.

SECTION 12 - MAINTENANCE & SERVICE

- The **battery** will last between 12 and 24 months depending on the frequency of use. (See Section 9, Pg 16.)
- There is a **small mesh water filter** in the base of the Control Valve which prevents debris entering the device and interfering with the Flow Sensor. If you notice pressure loss or are using rainwater tanks, this filter screen may be blocked & require cleaning or replacement. On tank/bore water systems this should be cleaned and checked and/or replaced once a year. To replace the filter, turn off your mains water supply, release the pressure in the house water system by opening a tap for ten seconds. Now unscrew the Control Valve, and check to see if the filter is dirty, contaminated or blocked. Clean using an old toothbrush, or lift the filter out using a pin/needle and replace it with a new one. (**DO NOT** use the AquaTrip without this filter installed - Visit www.aquatrip.com to order service and replacement parts).
- Conduct a **System Check** to test for normal operation, at least once every twelve months. (See page 12).
- If your Control Unit ever requires servicing, you can turn off your water main supply tap, and remove the white Control Unit (see page 7) and replace it with the Service Plug provided. You can then turn the water main tap back on, and resume using water. The Control Unit may then be sent for servicing. (See www.aquatrip.com)

SECTION 13 - WARRANTY / INDEMNITY

WARRANTY

AquaTrip Pty Ltd, warrants the AquaTrip unit for a period of one year from the purchase date, against manufacturing defects. Failure due to: incorrect installation; misuse; water ingress into the control housing; flat, leaking and corroding batteries are not covered by the Warranty. The Warranty is limited to the replacement of the faulty parts or components, and does not cover the cost of removal and installation of the replacement components or AquaTrip. The warranty becomes null and void if the unit has been tampered with, repaired, or damaged by any unauthorised person.

INDEMNITY

AquaTrip Pty Ltd, indemnifies itself against any claims or damages arising directly or indirectly from the use of any of its products and/or failure albeit due to design, manufacture, quality, components, recommended installation techniques and or any consequential claims by third party, accident, fire, theft, insurance or any other manufacturers guarantees or for any reason whatsoever that may arise from the use, misuse or installation of its products.

AquaTrip®

AquaTrip Pty Ltd

Need more information, visit

www.aquatrip.com



WaterMark

