SETUP

ELECTRICAL CONNECTIONS

1) Connect the solenoid valve to the terminal block TB1, paying attention to the polarity, Brown wire is connected to the + terminal, Blue wire to the –Ve terminal.
2) Valve + terminal brown, - terminal blue.
3) Connect the battery lead into the header on the PCB, this is biased and will only fit in one position.

When powered for the first time, or when the batteries are changed, there is a delay of approximately 20 seconds before any control actions occur. This is to allow the PIR and its associated circuitry to 'settle' down. The unit is now ready for use.

SPECIFICATION OF THE ABF CONTROL

The controller is selectable for two functions:
1) Slow Fill.
2) Fast Fill.

Slow Fill.
The simplest control option. To select this function insert both jumpers into the headers HDR1 and HDR2 labelled slowfill/fastfill and Test/Run.

Operation
With slow fill option selected any movement detected by the sensor sets the 20 minute period and latches the header tank valve open. The pep cock has been adjusted to theoretically fill the header tank and siphon at the conclusion of the 20 minute period. In practice this will rarely happen due to pressure changes of the water supply or foreign matter restricting water flow. This will not be a problem as the system will re synchronise at some point in the cycle.
Further movement is ignored once the 20 minutes period has been set. At the conclusion of the 20 minute period the valve latches closed. It will stay closed unless further movement is detected or is operated by the hygiene timer.

***Test Link HDR2**
This function will test the controller action and alert the user to any defects.

Slow Fill:
WALK TEST
With HDR2 link removed the controller is set for the walk test. Move away from the controller and walk at right angles across the face. Verify that the walk test led flashes 3 times with movement. The walk test can be carried out 10 times before the controller defaults to its Slow Fill control. If the 10x is exceeded, to repeat the **WALK TEST** replace HDR2 and remove, the valve should close. You can now repeat the **WALK TEST**.

VALVE TEST
Operation:
Push to Open (SW1) tests fast fill 20 minute period.
Push to Close (SW2) tests slow fill 20 minute period.

With HDR2 link removed, push either the 'Push to Close' push button or the 'Push to Open' push button and keeping pressed move your other hand across the face of the controller. The walk test led illuminates for [1]4 seconds before the valve opens for [2]2 seconds, closes opens for [3]200mSeconds, closes for 200mSecs, opens for 200mSecs, closes for 200mSecs. No further action will occur until hand is moved in front of sensor. When satisfied ∗replace HDR2 link to set the controller to run. The controller is now functional.When set to slow fill with the valve in the open position, removal of the test link will close the valve.

SLOW FILL CHECK

Fit both jumpers into HDR1 and 2. Move your hand over the sensor, valve will open. Remove HDR2 valve will close. Replace HDR2

∗If the link has been left out either due to incompetence or forgetfullness the controller will revert to normal slow fill control after 10 detections of movement. This applies even if the unit is being actively tested. Should this occur putting the link back will re synchronise the control action.

[1]12 hour hygiene tested
[2]Period time 20 minutes tested
[3]Indicates successful operation of the hygiene timer.

Fast Fill.
To select this function insert jumper into HDR2 labelled Test/Run. Leave HDR1 empty

Operation
With fast fill option selected any movement detected by the sensor sets the 20 minute period. This is a delay at the end of which the fast fill timer is triggered and the header tank valve latches open. The pep cock is set fully open and theoretically fills the header tank and begins to siphon within the fast fill time. The siphoning action should occur approx 5 seconds before the end of the fast fill time. In practice this will rarely happen due to pressure changes of the water supply or foreign matter restricting water flow. This will not be a problem as the system will re synchronise at some point in the cycle.
Further movement is ignored once the 20 minutes period has been set. At the conclusion of the 20 minute period the fast fill timer is triggered and the valve latches open. When the fast fill timer, times out, the valve latches closed. It will stay closed unless further movement is detected or is operated by the hygiene timer.

Calibrating the Fast Fill timer:
Is straight forward. Remove the test link *HDR2 and push the tactile push buttons labelled 'Push to Open (calibrate) Fast Fill' and 'Push to Close (calibrate) Fast Fill'.
[If the valve is open push the tactile push button labelled 'Push to Close' until valve closes]
For correct operation the tank has to be empty. If it contains water, push the 'Push to Open' push button, wait until header valve opens and fills the tank until siphoning action occurs and the tank begins to empty. Push the 'Push to Close' push button wait until the header tank closes. Wait until the tank is completely empty. Push the 'Push to Open' push button, let the tank fill to the point where siphoning occurs, wait for a further 5 seconds, push the 'Push to Close' push button. FAST FILL TIME has been calibrated and will be stored in memory. Removal of the battery supply will not affect this setting.
Replace test link HDR2.

If the Fast Fill timer is not calibrated, it will run a default time of 5 minutes

***Calibration of fast fill timer will only occur with test link HDR2 REMOVED.**

FAST FILL CHECK
Fit jumper into HDR2, move your hand over the sensor, the valve should remain closed. Remove HDR2 the valve will open for the calibrated fast fill time. When valve closes replace HDR2 link and repeat if desired.

∗If the link has been left out either due to incompetence or forgetfullness the controller will revert to normal slow fill control after 10 detections of movement. This applies even if the unit is being actively tested. Should this occur putting the link back will re synchronise the control action.

LOW BATTERY
When low battery is detected, the valve is closed and the walk test LED will illuminate for 2 seconds and is extinguished for 12 seconds, on for 2 off for 12 seconds.
When the batteries are replaced the low battery condition is automatically reset or can be manually reset by pushing the 'push to close' push button SW2.
The valve will be set in the closed position but will re synchronise.

Valves with different coil voltages. Factory set.
The latching off/on times can be altered in software. The software will cater for different operating times for different valves.

The controller will operate a 9Vdc latching valve
The controller will work over the range 6 – 9V dc.
A micro power voltage detector will detect low voltage.
the low battery LED will be illuminated for 1 second on 10 second off and the latching valve will be set in the closed position. No action will open the valve until a new set of batteries is installed.
6 AA alkaline batteries, battery life 2 years

Low battery/walktest LED.
The walk test indicator indicator is also used as the low battery indicator.

The led will act as a walk test indicator when the controller is in the test condition.

The led will act as a low battery indicator when in the run condition.

12 Hour hygiene flush.
Set to time out after the 20 minute Fast/ Slow fill period has expired.
The hygiene timer is reset at the end of the slow fill or fast fill routines.
After the hygiene has timed out the valve will open for 20 minutes when set for Slow Fill.
After the hygiene has timed out the valve will open for the fast fill time when set for Fast Fill.