FLTR
Purple Engineering

Tekleen

GB6-B *USERS' MANUAL*

Check List for Optimal Filter Performance

☐There should be no back-pressure on the flush line. A 1” valve should have a 2” waste line, and 1.5" and 2” valve should have a 3” waste line. Do not use rubber hosing or flexible tubing for the waste line.

☐ The differential pressure gauge should be mounted within 3 feet of the filter. Long tubing lines will result in faulty gauge readings.

☐ The water supply line to the piston should be connected to the neck of the flush outlet and filtered by a ¼” mini filter.

☐The fitting on the side of all pistons is for venting only. It should be open to atmospheric pressure and pointing toward the ground.

☐Sealant should be applied on the contact points on the backside of the d/p gauge to protect it from water. The d/p gauge should be mounted such that the blue fitting is closest to the ground to prevent shorting of the contact points in the event of a water leak.

☐If the filter outlet discharges to a tank, or to open atmosphere, a valve should be installed at the filter outlet to maintain a minimum working pressure of 40 PSI during the cleaning cycle.

☐If the flush valve fails to open or close, verify the connections to the controller are wired correctly (see diagram on pg. 15).

☐A surge protector should be installed before the electronic controller.

☐It is recommended that a pressure gauge be installed on the inlet of the filter.

☐The filter should be oriented so that the unfiltered media source is directed to the inlet, the manifold closest to the cover. The outlet, the manifold closest to the flush line is the source of filtered media.

GB6-B
USERS' MANUAL



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SECTION I: Introduction

Automatic Filters, Inc. features state of the art electronic backwash controllers in the GB series. GB6-B controllers are complete with a differential pressure sensor, and a backwash counter. The GB6-B controller may backwash a single filter along with a master valve or two filters. The controller will initiate a backwash cycle in three ways: when the differential pressure gauge is triggered, periodically by timer, or when manually activated. They are designed for remote operation when A/C power is not readily available.

SECTION II: Installation

GB6-B controllers come factory-prepared and are ready for use. The only steps necessary for installation are:

1. Mounting the controller
2. Connecting the tubing and wires of the PD gauge
3. Installing the (4) AA Lithium batteries provided
4. Connecting the wires of the solenoids

Mount the electric controller on a convenient wall or panel as close as possible to the filter to minimize the length of the pressure tubing. The pressure differential (PD) gauge/switch is to be installed on the bottom of the controller housing with the blue fitting closest to the ground. The ¼" tubing from the high pressure connection (red) on the center of the PD gauge goes to the high pressure side of the filter or manifold (inlet). The low pressure connection (blue) of the PD goes to the low pressure side of the filter or manifold (outlet). If desired, the gauge may be removed from the housing and mounted at a suitable location on or near the filter.

SECTION III: Header Settings

To access the header settings remove the front panel of the controller by unscrewing the (5) screws. Please refer to **Figure 1** below to see the header and jumper settings for the controller.

NO JUMPER: Single filter configuration without a master valve.
JUMPER A-B: Single filter configuration with a master valve.
JUMPER B-C: Two filter configuration without a master valve.

Note: The 'RESET' button on the front panel must be pushed for the change to take effect. Use a blunt object to press the button recessed under the front panel.

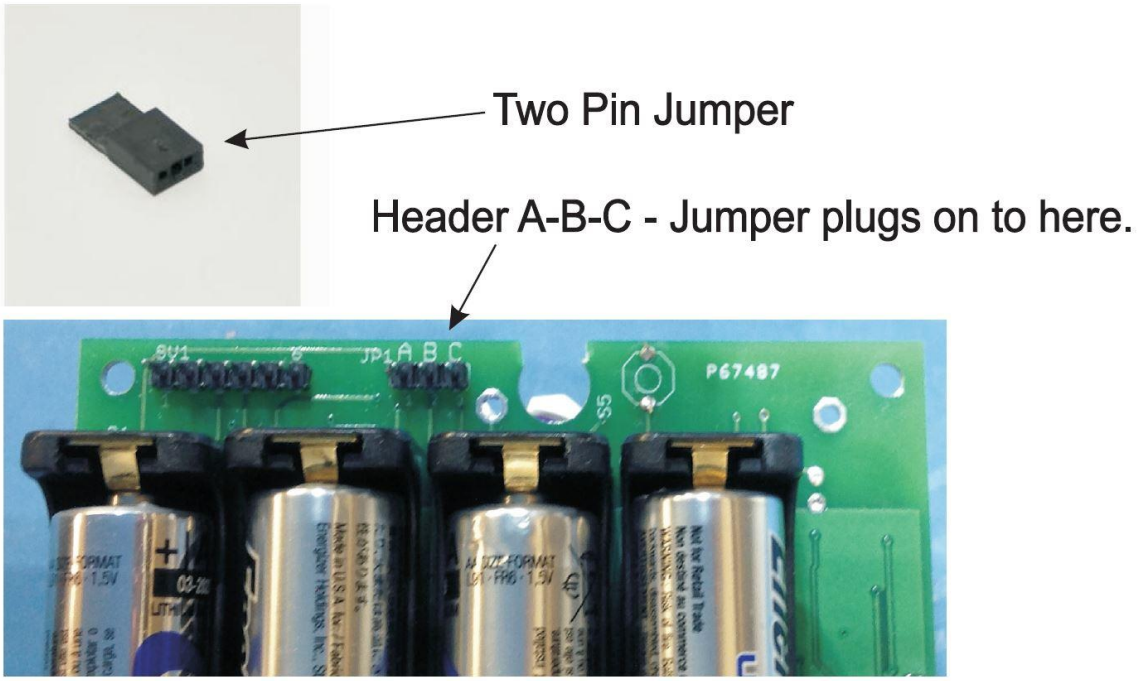


Figure 1 Two Pin Jumper and Header Setting

SECTION IV: Front Panel Controls & Settings

The GB6-B has 4 push-buttons and the recessed reset button as mentioned previously. Once the batteries are installed, the controller may be awakened by pushing and holding any of the buttons. The controller display will go to sleep after 90 seconds of inactivity but the controller will remain fully operational. See **Figure 2** below for further details.

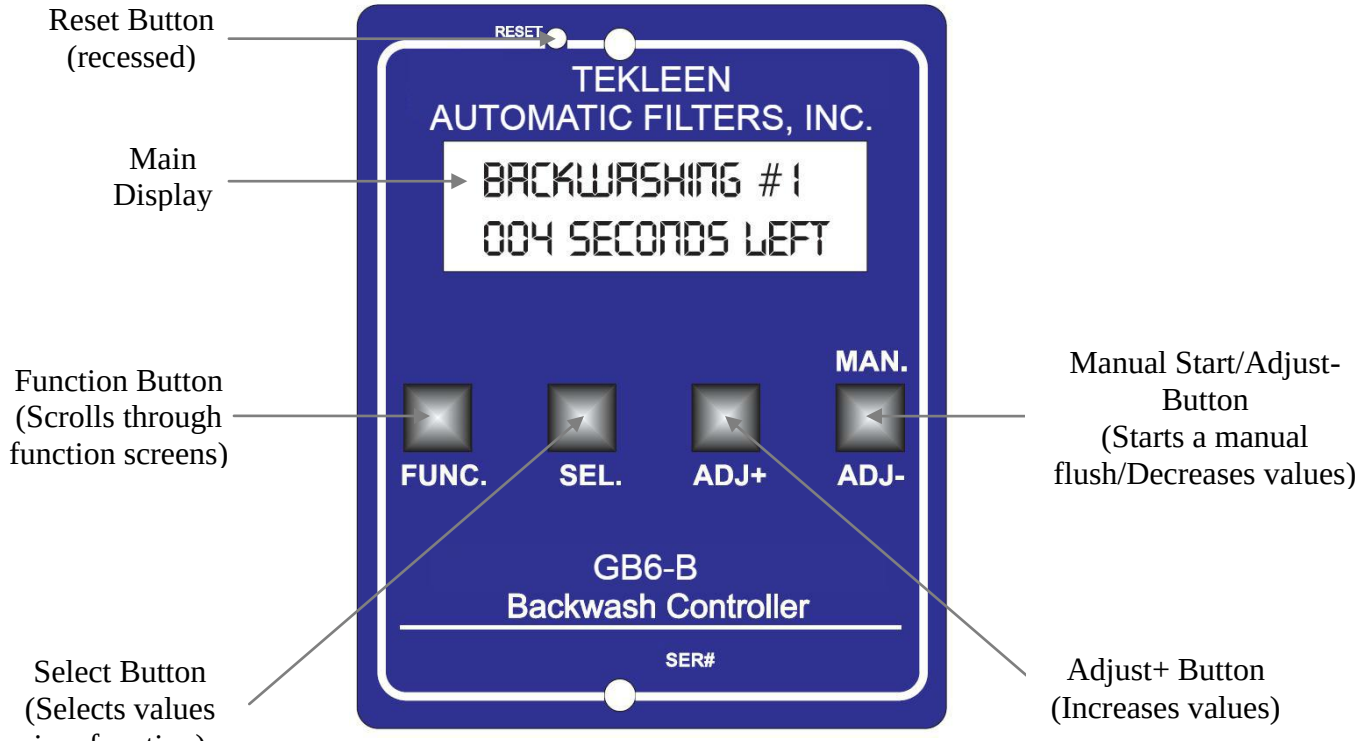
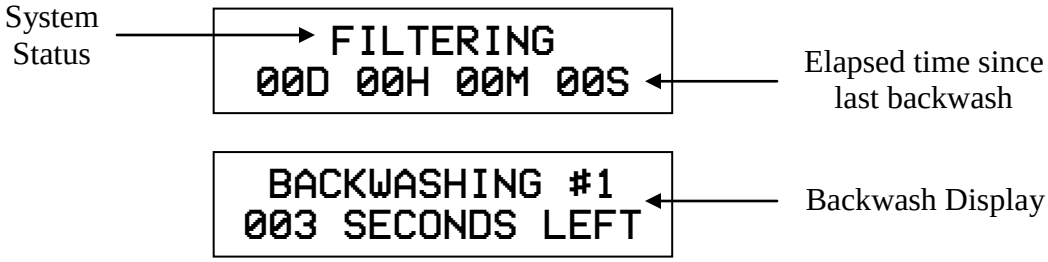


Figure 2 Controller Front Panel

4.1 Status Screen

This display shows the status of the system and the time elapsed since the last backwash. Whenever a backwash cycle is initiated (via any of the three methods) the time elapsed is reset and begins counting up towards the user-defined periodic time.
Note: Elapsed time will not start if periodic time is not set.



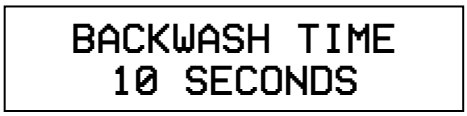
4.2 DP Set Point

Due to the use of an analog Murphy DP Gauge, there are no user defined settings on this screen. Instead, the differential pressure set point should be set with the dial on the Murphy DP Gauge. It is recommended that the user set this value at 7 PSI.



4.3 Backwash Time

This display allows the user to set the duration of the backwash per filter. Press SEL. and the ADJ+ or ADJ- to set the value. It is recommended that the user set this value in a range of 4 to 12 seconds.



4.4 Dwell Time

This setting is only available when the controller is configured for two filters. This value determines the time between successive filter flushes. It allows the 1st filter's flush valve to close before the 2nd filter begins flushing. Press SEL. and then ADJ+ or ADJ- to set the value. It is recommended that the user set this value in a range of 5 to 10 seconds.



4.5 Periodic Time

This display allows the user to set the amount of time the controller will wait after any flush to start a periodic flush. Press SEL. and then ADJ+ or ADJ- to set the value. When set to 0, periodic flushing is disabled.



4.6 PD Delay Time

This display allows the user to set the time that a high DP must be consistently present before the controller initiates a flush cycle. This prevents intermittent pressure surges or false readings from causing unnecessary flushes. Press SEL. and then ADJ+ or ADJ- to set the value. It is recommended that the user set this value in a range of 3 to 5 seconds.



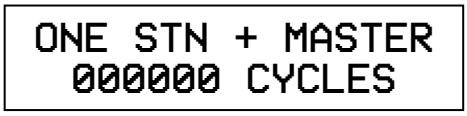
4.7 Controller Configuration/Flush Cycle Counter

This display will reflect the Header Setting initiated in **Section III** above and the number of flush cycles that have occurred. To reset the counter press SEL., then SEL. again to select 'Y', and finally MAN. to clear the count.

Displayed when Jumper is not installed.

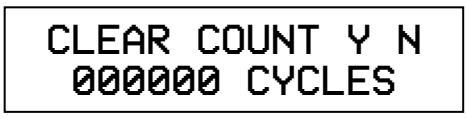


Displayed when Jumper is installed across A-B.



Displayed when Jumper is installed across B-C.





4.8 Differential Pressure Setting

This display allows the user to set the mode of DP detection. The GB6-B uses a Murphy PD Gauge and should be left on this setting.



SECTION V: User Connections

The GB6-B has a row of connections set behind the controller front panel. See **Figure 3** below for further details on connecting the PD gauge and solenoids.

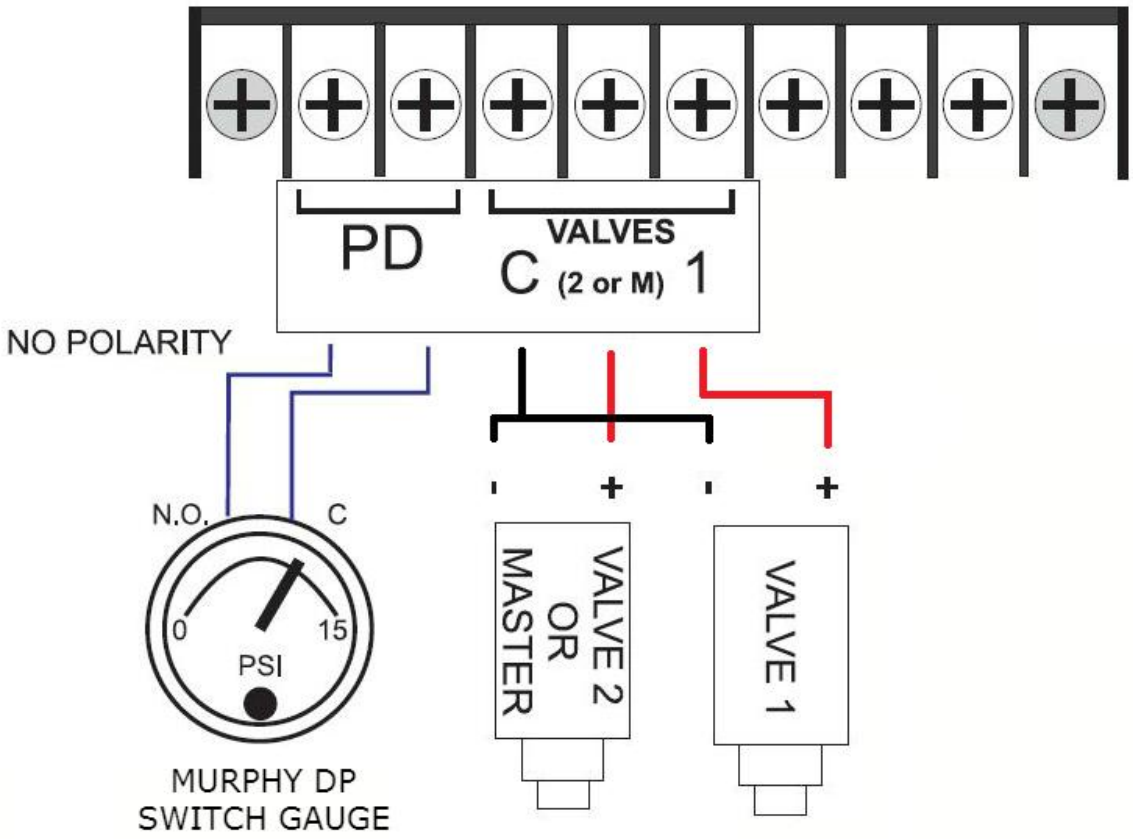


Figure 3 User Connection Terminals

5.1 PD

These are the terminals for the PD gauge. Polarity is not important. The gauge should be mounted such that the blue fitting is closest to the ground to prevent shorting of the contact points in the event of a water leak. You may cover the contact points with silicone or any water sealant to prevent shorting.

5.2 VALVES

The GB6-B is only compatible with two-wire latching solenoids. The negative (typically black) wire on the solenoid(s) should be connected to terminal C. The positive (typically red) wire on the solenoid(s) should be connected to the corresponding terminal(s) (1, 1 and M, or 1 and 2).

SECTION VI: GENERAL NOTES

6.1 Installation

- The controller may be installed any desirable distance from the filter(s) granted the DP Gauge is installed near the filter. The tubing running from the DP Gauge and the Filter header should not exceed 3 ft.
- The inside of the controller should be kept free of moisture and loose debris to prevent shorting out the terminals.

6.2 Battery Power Supply

Under normal operating conditions the GB6-B's batteries will last for approximately 10,000 actuations of a latching solenoid. Ambient temperature, environmental factors, and battery quality can affect this approximation. All batteries should be replaced at the same time and should be identical to each other. Do NOT use different battery types together. 'Energizer L91-FRG' Lithium batteries are recommended but alkaline batteries may be used for reduced cycle count applications. It is recommend that batteries be replaced annually to prevent unexpected usage disruptions.

Note: Changing the batteries or pressing the reset button will clear backwash cycle counter and user settings.

WARRANTY

Automatic Filters, Inc. (AFI) warrants its filters and controllers to be free from original defects for one year from the date of original sale. The manufacturer will replace, free of charge, any part found defective under normal use and service within the guarantee period, provided the product is installed, used, and maintained in accordance with good engineering practice and all applicable instructions or limitations issued by AFI. The manufacturer assumes no liability for incidental or consequential damage sustained in the adoption or use of our engineering data, service, or products. Liability is limited to the repair or replacement of the products. No agent or representative of AFI has the authority to waive or add to this agreement. Altered products or use of products in a manner not intended shall void this warranty. All warranty claims must be sent along with the defective product, freight prepaid to AFI at its business address. All warranty shipments are for the account of the buyer. The warranty period shall be 12 months from the date of shipment to the client.

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