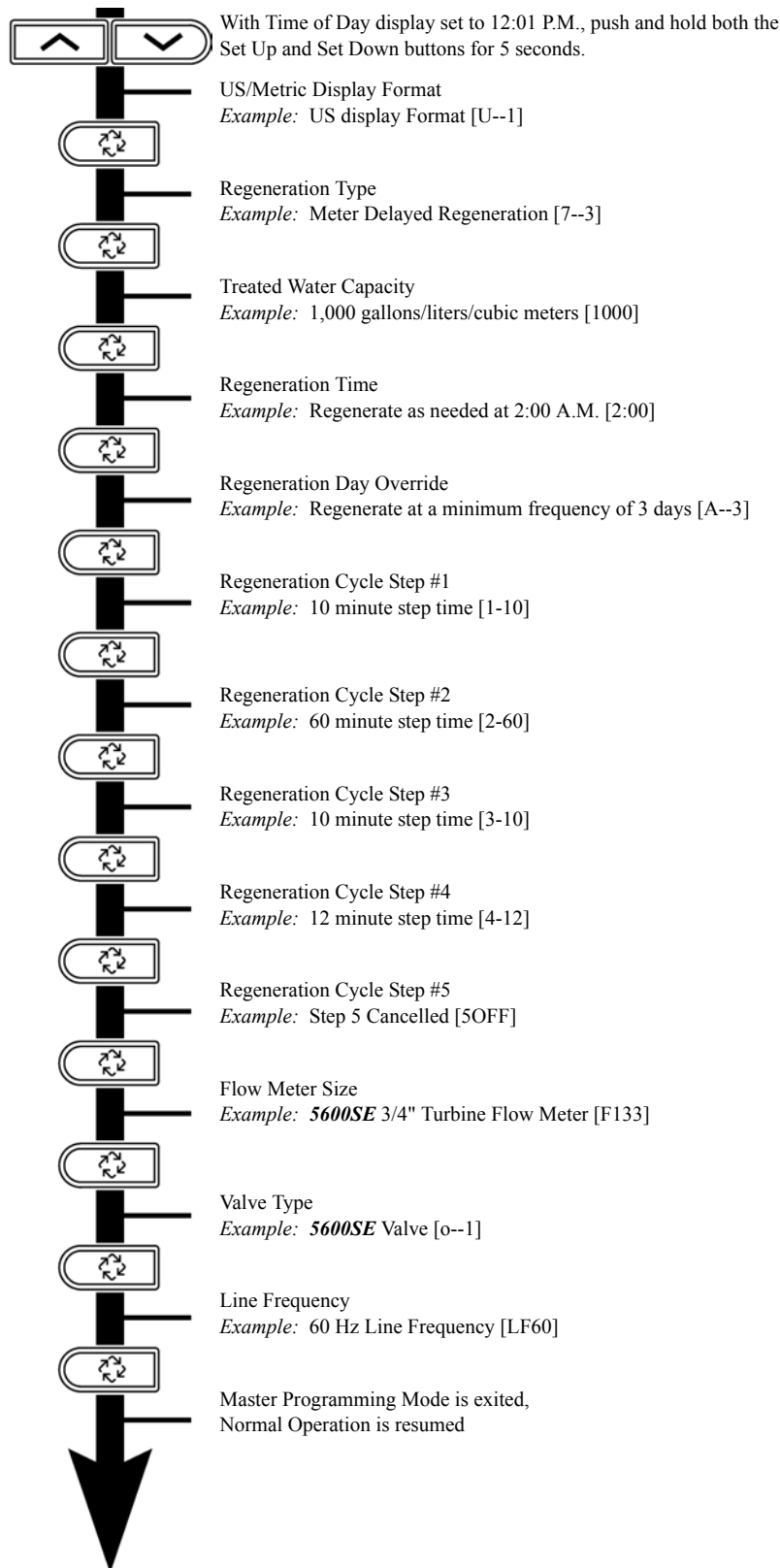


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Master Programming Mode Flow Chart for Single Backwash Valves

NOTE:

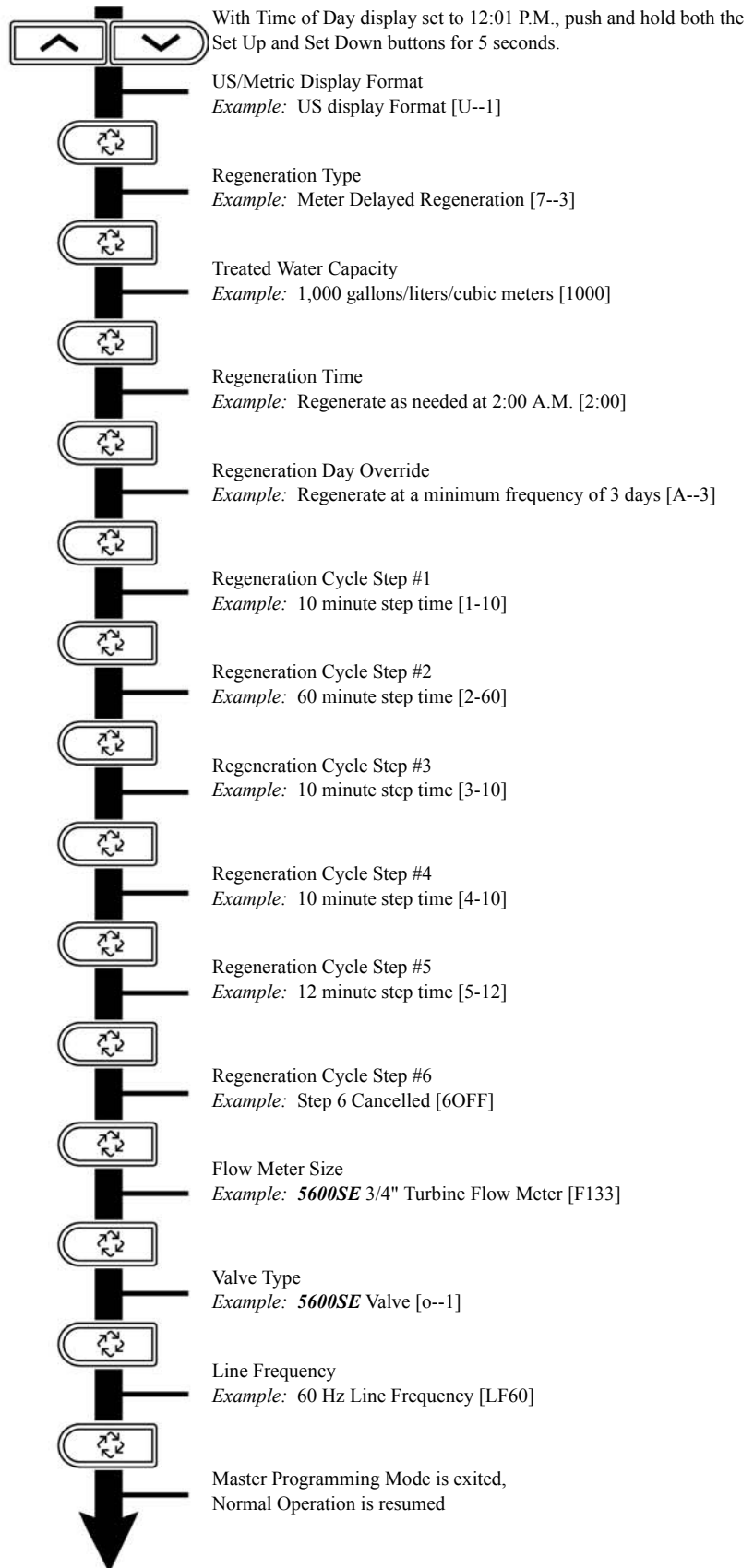
1. Set Time of Day display to 12:01 P.M.
2. Push and hold both the Set Up and Set Down buttons for 5 seconds.
3. Push Extra Cycle button once per display until all displays are viewed and Normal Operation is resumed.
4. Option setting displays may be changed as required by pushing either the Set Up or Set Down button.
5. Depending on current valve programming certain displays will not be able to be viewed or set.
6. Reference programming instructions for complete list of available settings.



DF047-0

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Master Programming Mode Flow Chart for Double Backwash Valves

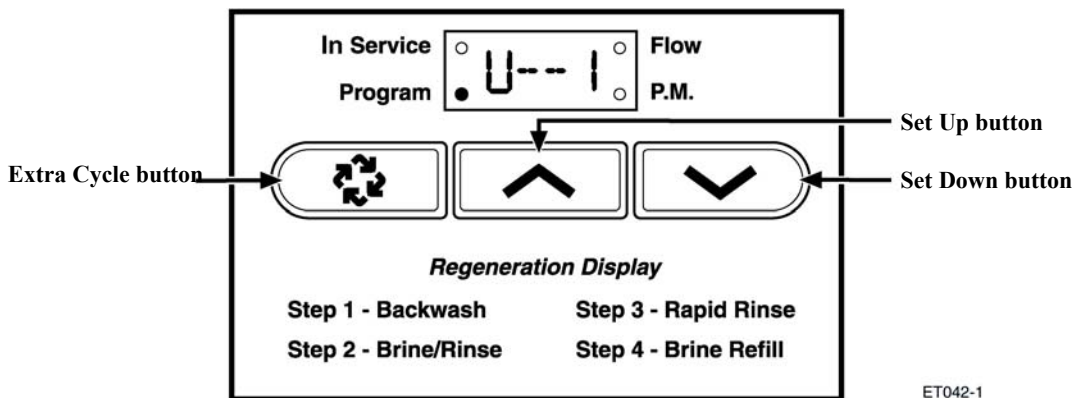


NOTE:

1. Set Time of Day display to 12:01 P.M.
2. Push and hold both the Set Up and Set Down buttons for 5 seconds.
3. Push Extra Cycle button once per display until all displays are viewed and Normal Operation is resumed.
4. Option setting displays may be changed as required by pushing either the Set Up or Set Down button.
5. Depending on current valve programming certain displays will not be able to be viewed or set.
6. Reference programming instructions for complete list of available settings.

DF125-0

Master Programming Mode



When the Master Programming Mode is entered, all available option setting displays may be viewed and set as needed. Depending on current option settings, some displays cannot be viewed or set.

Entering Master Programming Mode

Set the **Time Of Day** display to 12:01 P.M. Push and hold the **Set Up** and **Set Down** buttons together until the Program Dot turns on (about 5 seconds). Depending on current option settings, some displays cannot be viewed or set.

Exiting Master Programming Mode

Push the **Extra Cycle** button once per display until all are viewed. The Program Mode is exited and normal operation resumes.

Resetting Permanent Programming Memory

Push and hold the **Set Up** and **Set Down** buttons for 25 seconds or until the **Time Of Day** display resets to 12:00 P.M. All option settings reset to default values. Control programming must be reset as necessary.

1. US/Metric Display Format (U)

Push the **Extra Cycle** button. This display is used to set the desired display format. This option setting is identified by the "U" in the first digit. The possible settings are:

US Format uses gallons for volume with a 12-hour timekeeping format. Regeneration timing in minutes.

Example: [U - - 1]

Metric Format uses liters for volume and a 24-hour timekeeping format. Regeneration timing in tenths of minutes. Use the **Set Up** and **Set Down** buttons to adjust this value.

Example: [U - - 2]

Cubic Meter Format uses cubic meters for volume and a 24-hour timekeeping format. Regeneration timing in tenths of minutes. Use the **Set Up** and **Set Down** buttons to adjust this value.

Example: [U - - 4]

2. Regeneration Type (7)

Push the **Extra Cycle** button. Use this display to set the Regeneration Type. This option setting is identified by the number "7" in the first digit. There are three possible settings:

Timeclock Delayed

The control determines the day that a regeneration is required by the **Regeneration Day Override** setting (A). Once this day is reached, a regeneration cycle starts at the set **Regeneration Time**.

Example: [7 - - 1]

Meter Immediate

The control determines that regeneration is required when the available volume of treated water drops to zero. Regeneration begins immediately.

Example: [7 - - 2] (This setting is typically used by the 9000SE)

Meter Delayed

The control determines that a regeneration is required when the available volume of treated water drops to zero. Regeneration begins immediately at the set **Regeneration Time**. Use the **Set Up** and **Set Down** buttons to adjust this value.

Example: [7 - - 3]

3. Treated Water Capacity (No Display Code)

Push the **Extra Cycle** button. Use this display to set the amount of water (gallons/liters/cubic meters) that can be treated by the unit before a regeneration cycle is required. With Meter Delayed Regeneration Type set, it is necessary for the programmer to determine a reserve capacity and subtract that value from the calculated full capacity of the unit. This display cannot be viewed with Timeclock Regeneration Type set. Use the **Set Up** and **Set Down** buttons to adjust this value.

Example: Regenerate every 700 gallons/liters/cubic meters — [7 0 0]

4. Regeneration Time (Clock Display Without a Flashing Colon)

Push the **Extra Cycle** button. The next display that appears is the option setting for **Regeneration Time**. It is identified by a clock display without a flashing colon. Set the desired time of day that a regeneration may occur. This display cannot be viewed with Meter Immediate Regeneration Type set. Use the **Set Up** and **Set Down** buttons to adjust this value.

Example: 2 o'clock A.M. **Regeneration Time** — [2: 0 0] (A.M. Indicator Dot On)

5. Regeneration Day Override (A)

Push the **Extra Cycle** button. Use this display to set the maximum amount of time (in days) the unit can be in service without a regeneration. This option setting is identified by the letter "A" in the first digit.

- With Timeclock or Meter Delayed Regeneration Types selected, regeneration begins at the set **Regeneration Time**.
- With Meter Immediate Regeneration Type selected, regeneration begins at the same time of day that the last regeneration cycle was initiated. An OFF setting cancels this feature with all regeneration types except Timeclock Regeneration were it must be used. Use the **Set Up** and **Set Down** buttons to adjust this value.

Example: Override every 7 days — [A - - 7]

Cancel setting — [A O F F] (Meter Immediate or Delayed Regeneration Types Only)

Master Programming Mode (Cont'd.)

6. Regeneration Cycle Step Programming (1) (2) (3) (4) (5) (6)

Push the **Extra Cycle** button. The next 2–6 displays that appear are part of a series of option settings used to program the Regeneration Cycle. Each display is used to set in minutes (or tenths of minutes - Metric). A step # turns on for the regeneration cycle step being programmed.

- Skip regeneration steps by setting the display to 0
- End a regeneration cycle by setting the step # after the last active step to OFF, as shown below:

Example: Regeneration Cycle Step #1, 8 minutes — **[I - - 8]** (US Format)
 Regeneration Cycle Step #3, skipped — **[3 - - 0]** (US Format)
 Regeneration Cycle Step #4, 8.5 minutes — **[4 - 8.5]** (Both Metric Formats)
 Regeneration Cycle Step #4, cancelled — **[4 O F F]** (All Formats)

Push the **Extra Cycle** button once per display to advance through Regeneration Cycle Step Programming.

Proper softener operation requires the calculation of a brine tank refill time:

(Pounds of Salt Used per Regeneration Cycle ÷ 3) ÷ BLFC Size = Refill Time in Minutes

Example: (10 lbs salt ÷ 3) ÷ 0.25 gpm = 13.3 minute refill
 (Consult valve service manual for actual step location)

Use the **Set Up** and **Set Down** buttons to adjust this value.

7. Flow Meter Size (F)

Push the **Extra Cycle** button. The the next display sets the flowmeter size. Use this display to set the proper amount of pulses generated by the flow meter for each gallon or liter of water flow. This setting cannot be viewed with Timeclock Regeneration Type selected.

Example: **[F I 2 6]** 3/4" Turbine Flow Meter used with the **2510SE** (US Format)
Example: **[F 3 3.2]** 3/4" Turbine Flow Meter used with the **2510SE** (Metric Format)
Example: **[F 1 3 2]** 3/4" Turbine Flow Meter used with the **TwinFlo100E** (US Format)
Example: **[F 3 4.9]** 3/4" Turbine Flow Meter used with the **TwinFlo100E** (Metric Format)
Example: **[F 1 3 3]** 3/4" Turbine Flow Meter used with the **5600SE** or **9000SE** (US Format)
Example: **[F 3 5.1]** 3/4" Turbine Flow Meter used with the **5600SE** or **9000SE** (Metric Format)
Example: **[F - 2 0]** 3/4" Paddle Wheel Flow Meter (US Format)
Example: **[F - 5.3]** 3/4" Paddle Wheel Flow Meter (Metric Format)
Example: **[F - - 8]** 1.0" Paddle Wheel Flow Meter (US Format)
Example: **[F - 2.1]** 1.0" Paddle Wheel Flow Meter (Metric Format)

Use the **Set Up** and **Set Down** buttons to adjust this value.

8. Valve Type (o)

Push the **Extra Cycle** button. Use this display to set the type of valve used with the control. This option setting is identified by the letter "o" in the first digit. When #2 is selected, the current Tank # in Service must be entered in the next display.

Example: **[o - - I]** **2510SE, 2750SE** or **5600SE** Valve Operation.
Example: **[o - - 2]** **9000SE** or **TwinFlo100E** Valve Operation.
Example: **[o - U I]** Unit #1 Tank in Service. (Viewed with #2 set only)

Use the **Set Up** and **Set Down** buttons to adjust this value.

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Master Programming Mode (Cont'd.)

9. Line Frequency (LF)

Push the **Extra Cycle** button. Use this display to set the frequency of the power applied to the control. When properly set, all timekeeping functions remain accurate. This option setting is identified by the letters "LF" in the first two digits. There are two possible selections.

Example: [L F 5 0] 50 Hz Line Frequency Operation.

Example: [L F 6 0] 60 Hz Line Frequency Operation.

Use the **Set Up** and **Set Down** buttons to adjust this value.

Push the Extra Cycle button once more to exit this programming mode.