

## 8071 Programmer Plus and 8081 Radio Programmer Plus Operating Instructions

### Application and Features

The Nelson 8071 Programmer Plus and 8081 Radio Programmer Plus consoles are used to program 8030 Series Remote Programmable Actuators or 8050 Series PG Multi-Station Actuators. The programming is accomplished through a secured, waterproof, telephone plug. A cord is provided with the Programmer to attach to the actuator. The Programmer can program up to 16 watering schedules per day with watering times from 1 minute to 24 hours in one-minute increments. Each independent schedule has a start time, a finish time, a 14-day watering calendar and valve assignment (PG Multi-Station Actuators only). There is also a timed manual operation from 1 to 99 minutes. The Programmer Plus console can program an interruption of starts (rain mode), which interrupts all watering schedules without disturbing the original program.

### Additional 8081 Radio Programmer Plus Features

The 8081 Radio Programmer Plus console communicates via radio link with 8050 Series PG Multi-Station Actuators equipped with a model 8060 Radio Adapter. With the radio link, all programming features may be utilized. The Programmer must be within 6 feet (2 meters) of the actuator unit, if the actuator is in a standard plastic valve box. If the actuator is above ground and in line of sight to the Programmer, the units must be within 60 feet (18 meters) for proper operation.

### Operation

To turn the Programmer on, press "+". To turn the programmer off, return to the opening screen and press "-". The Programmer will automatically turn off after five minutes of inactivity.

Programming is accomplished by following the directions on the screen and using these four buttons:

- > **Advance** to the next screen or advance the cursor to the next value
- < **Go back** to previous screen or make the cursor go back to the previous value
- + **Increase** the value (or turns value on) of the number in the  
blinking cursor
- Decrease** the value (or turns value off) of the number in the

blinking cursor

Most operations are selected by choosing an option on the Programmer display. The following are for your further reference.

### **Disconnected Menus**

The following menus are available when the Programmer is not connected to an actuator.

**Setting Time and Day (TIME)** - The current time and day can be set for the Programmer. The Programmer will ask if you want a 12 hour (AM/PM) or 24 hour clock. When the Programmer is connected to an actuator, the programmer automatically updates the actuator time and day.

**Choose Language (LANGUAGE)** - Select your choice of English, French, Spanish, Italian or Portuguese.

**Set Programmer Code (PROGRAMMER CODE)** - Each programmer has a four digit code. This code is important if you are communicating via radio link with the 8081 Radio Programmer Plus. The actuator will only communicate via radio with one specific code number 8081 Programmer.

**Establishing Radio Connection (RADIO CONNECT)** - See later section: "Radio Connection 8081 Only".

**Advanced Menus (ADVANCED)** - See later section: "Advanced Menus".

Connected With a Cord to 8030 Series Remote Programmable Actuator or 8050 Series PG Multi-Station Actuator Menus

Once the telephone cord is plugged into the 8030 Series Remote Programmable Actuator or 8050 Series PG Multi-Station Actuator, a new series of menus is accessible.

**Programming Actuator (PROGRAM ACTUATOR)** - You may set a start time, a finish time, a 14day watering calendar and valve assignment (PG Multi-Station Actuators only) for 16 independent watering schedules. Use the four buttons to move the cursor and change the values in the blinking cursor. You may clear any program by simultaneously holding down "<" and "-" while the cursor is blinking in the **PROGRAM No: ##** position.

**Manual Operation (MANUAL)** - You may run a timed manual operation at any time by selecting **START**. Before executing the timed manual operation, the actuator will delay 30 seconds after the Programmer is disconnected before beginning watering. If you leave zero minutes for **RUN TIME**, the actuator will open immediately and close when disconnected (will open and close immediately when communicating via radio). Choosing **STOP** will close a valve that is running. If the valve was running a normal watering schedule, the valve will open again and finish its schedule when the programmer is disconnected.

**Rain Mode (RAIN)** - Prevents the actuator from watering when you select **RAIN**. The program will still be retained, but no watering will occur. To resume watering, you need to use the same menus and select the normal **SUNNY** mode. The initial status screen will indicate if the actuator is in the **RAIN** or **SUNNY** mode.

**Choosing the Actuator ID Code (ACTUATOR ID)** - This is a three digit code that identifies the actuator. You must know the actuator ID code to connect via radio (see next section). In addition, the code number of the Programmer that sets the actuator ID is the only Programmer code that may communicate via radio with that actuator.

**Advanced Menus (ADVANCED)** - See later section: "Advanced Menus".

### **Radio Connection Menus - 8081 Radio Programmer Plus Only**

The actuator must be attached to a radio adapter. To establish a radio connection the Programmer must be within 6 feet (2 meters) of the actuator unit, if the actuator is in a standard plastic valve box. If the actuator is above ground and in line of sight to the Programmer, the units must be within 60 feet (18 meters) for proper operation.

**Establish Radio Connection (RADIO CONNECT)** - You must enter the three digit actuator code. The Programmer will take a few seconds to establish a radio link. The programmer will display **RADIO CONNECTION** to confirm the link. If you cannot establish a link, refer to the following troubleshooting chart:

Cause	Solution
low battery in actuator	change actuator battery
incorrect actuator or programmer code	connect with cord and set a new actuator code with Programmer Plus Radio
too far away from actuator	move to within 10 feet (3 meters) in valve box or 60 feet (18 meters) line of sight

**Other Menu Choices** - Most all cord connected menu choices are available through the radio link including programming the actuator (**PROGRAM ACTUATOR**), manual operation (**MANUAL**), rain mode (**RAIN**) and the advanced menus (**ADVANCED**). For security purposes, the only menu not available through the radio link is setting the actuator code (**ACTUATOR ID**).

**Disconnect Radio Link (DISCON.)** - As you make changes to the program, the changes are automatically downloaded to the actuator, so you may leave the site without disconnecting. You may also choose **DISCON.** to immediately disconnect the radio link.

### **Advanced Menus**

The following advanced features are available under the **ADVANCED** menus both when the Programmer is disconnected or when connected to the actuator via cord or radio link.

**Program Memory Schedules in Programmer (PROGRAM MEMORY), Disconnected Menu** Memory watering schedules are programmed directly into the Programmer. These schedules may be downloaded at a later time to any 8030 Series Remote Programmable Actuator or 8050 Series PG Multi-Station Actuator. Up to 36 memory watering schedules can be programmed in each Programmer, but only when not connected to an actuator. The watering schedules are programmed in the same manner as the programming of an actuator.

**Copy Watering Schedules from Memory to Actuator (COPY FROM MEMORY), Connected with Cord or Radio Link** - After choosing **COPY FROM MEMORY**, the Programmer will ask which memory location (1-36) to copy from. Then the programmer will ask which actuator watering schedule number (1-16) to copy to. On PG Multi-Station Actuators, the Programmer will also ask which valve to assign the watering schedule. The watering schedule will now be downloaded to the actuator.

**Group Copy Watering Schedules from Memory to Actuator (COPY FROM MEMORY), Connected with Cord or Radio Link** - The following group copy function works only for 8030 Series Remote Programmable Actuators or the model 8051 PG Actuator (1 zone). After choosing **COPY FROM MEMORY**, the Programmer will ask which memory location (1 -36) to copy from. Immediately press ">". The programmer will ask for the first and last memory watering schedules in a sequence to copy as a group. This sequence will be downloaded into the actuator beginning with actuator watering schedule number 1.

**Clear All Watering Schedules in Actuator (CLEAR ACTUATOR), Connected with Cord or Radio Link** - This allows you to clear all 16 watering schedules out of the actuator.

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