OLD STYLE MK-1/MK-2

Basic Check Out For Old Style Mk-1/Mk-2 Control Unit
Check all connections and reset the clock. The clocks with black buttons have a reset button you can press with a pen point or similar sharp object.
The older clocks with red buttons will have to be unplugged from the circuit board as follows: Leave the 6 volt battery connected and unplug the blue (or white) clock plug from the back of the circuit board. Wait for 45 seconds to a minute and then plug the clock back in to the circuit board.

Press the 'Clock' button and the clock should read 12:00AM with the colon blinking. Hold 'Clock' button down and press the 'Hr' & 'Min' buttons to make sure they work. Press the 'Feeding Times' button and make sure it cycles through all 6 on/off times. Press the 'Clock' button to return to the time of day and push the 'Press to Test' button. If all of the buttons work, the display goes from "off" to "on" when you 'Press to Test' and the control unit spins for the time set on the feed rate knob, the control unit is working fine. Reset the clock again as described above and set your times.

The Clock Has No Display
Check the battery first. If you don't have a volt meter you can run a jumper wire from the negative of the battery (black wire) to the negative of the motor (gray wire). If motor runs battery is good.
Next check the wires and plug that go from the clock to the circuit board. Wiggle the 3 wires that come out of the back of the clock to see if you can get a display. If any of the wires come out of the clock; replace the clock. Wiggle the blue (or white) plug on the circuit board to get a display. If the display blinks, you have a cold solder joint or loose solder pad on the circuit board; replace the circuit board. If you still do not get a display; replace the clock.

The Clock Does Not Display Properly
If you have missing segments on the display; replace the clock. If the display appears scrambled or frozen you need to reset the clock. The clocks with black buttons have a reset button you can press with a pen point or similar sharp object.
The older clocks with red buttons will have to be unplugged from the circuit boardas follows. Leave the 6 volt battery connected and unplug the blue (or white) plug from the back of the circuit board. Wait for 45 seconds to a minute and plug the clock back in to the circuit board.
Press the clock button and the clock should read 12:00AM with the colon blinking. Push the 'Press to test' button and make sure the control unit spins.

Motor Does Not Spin
Spin spinner with your finger and make sure it spins freely (the spinner should coast with a flick of your finger). You can use Teflon or silicon based lubricant on the motor shaft to free it up. Caution: Make sure there is no additive in the lubricant that will react with plastic! Connect 6 volt battery and run a jumper wire from the negative of the battery (black wire) to the negative of the motor (gray wire). If the motor does not spin you have a battery or motor problem (the battery is most likely). If you are sure that your battery is good, replace the motor.
If motor runs reset the clock and check all of the buttons to make sure they work (see 'Basic Checkout' above). Push the 'Press to Test' button. If the display on the clock goes from "off" to "on" and the motor does not run; replace the circuit board.

Control Unit Spins All of The Time Replace the circuit board.

BATTERIES AND SOLAR PANELS

Battery Does Not Hold A Charge

The life span of a rechargeable battery is 3 to 5 years. If the control unit is not throwing strong at the beginning of the season and your battery is near the end of it's life cycle; replace the battery with a fresh one.

You can use a volt meter to check the solar panel. Checking at the battery wires with the battery disconnected you should get 7 to 9 volts on a sunny day. If you do not get any voltage at the battery wires disconnect the solar panel from the control unit and connect the meter to the solar panel plug. You should get 7 to 9 volts on a sunny day.

If you get a good volt reading at the solar panel plug, but not at the battery wires you can bypass the circuit and wire the solar panel directly to the battery. Unplug the solar harness from the back of the circuit board and cut off the red plug. Strip the wires and connect them to the battery terminals. For best results use new battery wire terminals.

If you do not get a good reading at the solar panel plug check the wire for breaks or flat spots. Cut and strip the wire and take another reading with the volt meter. If all of the wire appears to be bad all is not lost. There is about 4" of wire inside of the solar panel that you can access by removing the solar panel bracket and opening the back of the solar panel. If you cannot get a good voltage reading inside of the solar panel; replace the panel.

Storage And Care of Rechargeable Batteries

Operating your control unit year round even if the barrel is empty will give you the best results for a rechargeable battery. If you do take it down for any reason try to store it some place where you can leave the solar panel plugged in and facing the southern sky. If you don't have a place for the solar panel, you will need to charge the battery about every 90 days with a plug in the wall type charger.

The rechargeable batteries are lead acid batteries. They have the same characteristics as a car battery. If you leave them on the shelf they will die. If you let the charge go to zero volts, there is a good possibility they will die. If you have a battery that has been on the shelf for an unknown period of time, charge it for 24 hours then let it stand for 24 hours. Test the battery under some kind of load (i.e. the control unit motor). Rechargeable batteries may read 6 volts or more with a volt meter, but when you apply a load like a motor the voltage will drop. If the voltage drops below 5 volts replace the battery.