



Network LTC™ Plus Satellite v4.1 Timing Mechanism Upgrade Kit, P/N 102-0794 Installation Instructions

Introduction

The following new features are provided by installation of the v4.1 timing mechanism (TM):

- An output diagnostics routine to confirm electrical output to each 8-output board
- Retention of time, day of week and user-defined operating program for a period of 10 years
- Eliminated need for optional lithium battery required for clock time retention

For identification, firmware version v4.1 is visible in the SitePro central software and on the underside of the TM PCB.

Please review the following instructions completely before installing the new TM.

Installation Procedure

Note: If the satellite operates in the central mode, note the satellite address code prior to removing the TM.

1. Turn off power to the satellite using the On/Off switch on the power supply assembly.
2. Remove the black and white power cable and the ribbon cable connected to the TM. If a modem is installed, remove the green ground wire, ribbon cable between the modem and TM and the yellow and gray communication wire pair to the modem.
3. Remove the four screws holding the TM in position and lift the TM straight up to remove.
4. If a modem is installed, carefully remove the modem and standoffs.

▲ Caution: One of the four modem standoffs has a snap-in fastener instead of a screw and must be reinstalled in the same hole location on the new TM to avoid a possible electrical short on the modem PCB.

5. Install the new TM and reconnect the wires in the reverse order as described in step 2 above.

Initializing and Testing the TM

1. Remove the 3.5-amp fuse located on the power supply assembly. This will ensure that no field outputs will be momentarily energized during the following initialization process.
2. Press and hold the ▼ key (or if Radio Link-equipped, press the ▲ and ▼ keys simultaneously) while switching on power to the satellite. Continue holding down the key (or keys) until an audible “chirp” is heard, then release. The satellite will begin the initialization process which will clear the microprocessor and set other values to zero. The satellite will go through a self-test process, at which time LED’s will begin to blink on and off and audible clicking of the relays can be heard.
3. To end initialization/test process, press the ▲ and ▼ keys simultaneously.

Entering User-Defined Settings

1. Select the desired operating mode and enter the required data for operation as follows:

If the satellite operates in the Central mode:

- Select Central mode.
- Enter the satellite address code.

If the satellite will be operated independently:

- Select the Stand Alone mode.
- Set the current time of day, day of week and operating program schedule (active days, start times, repeats and station run time).

▲ Important: The following step is essential for the field satellite to retain user-defined settings. Failure to follow this procedure will result in some data being lost during subsequent power outages.

2. **Wait a minimum of 15 seconds after entering data before powering off the satellite for any reason.** This is only a one-time requirement. Any subsequent power loss of any duration will not affect the stored settings.
3. Reinstall the 3.5-amp fuse. Manually operate a station from each 8-output card to confirm 24-volt output to verify field output.

(continued)

Using the Output Diagnostic Feature

The output diagnostic feature of the v4.1 TM permits confirmation of the electrical signal to each 8-output board. Use the following procedure to perform this operation.

1. Select the Multi-Manual mode.
2. Simultaneously press the ◀ and ▶ keys and observe the display. If all 8-station modules are installed (denoting 64 stations), the LCD will display "00", otherwise the missing stations will be indicated. For example, if stations 17-24 are missing, these two values will be displayed. If additional 8-output boards are missing, press the ▶ key and the next set of missing stations will be displayed.
3. To exit the diagnostic mode, press the press the  key.
4. Reselect the appropriate satellite operating mode.

Troubleshooting

Problem: One or more TM LED's do not illuminate.

Solution: Verify all TM cables are properly connected.

Remove the TM and confirm that all LED's are installed in the appropriate holder on the underside of the TM PCB. Remove the PCB and carefully straighten any LED's which are out of alignment.

Problem: The TM's LCD display is blank upon power up.

Solution: Verify all TM cables are properly connected.

Using a volt meter, confirm that an acceptable AC voltage level exists to the satellite power supply terminal block.

Cycle the power supply On/Off switch several times to remove possible corrosion and/or insect infestation from switch contacts.

Verify the 4-amp circuit breaker on the power supply is not in the tripped (open) position. Reset the circuit breaker if tripped.

Problem: The TM displays "CL Err" upon power up.

Solution: The TM is defective and must be replaced.

