# CPR 4 Loader Quick Start Guide

RTC Manufacturing has a product for moving programming in and retrieving programming from its Time Switches. This program is called CPR 4 Loader.

This program runs on any Windows computer with a serial port. The serial port is used to connect to the Time Switch. The program can work with either the CPR2102R or the AP22 Time Switch.

Basic Overview

The groups and their programming are displayed in the left side of the program window. Notice in the picture below that the group named "Kennedy Jr High" is expanded to show the programming. In this instance the Default Week Plan has a command at 7:02 AM.
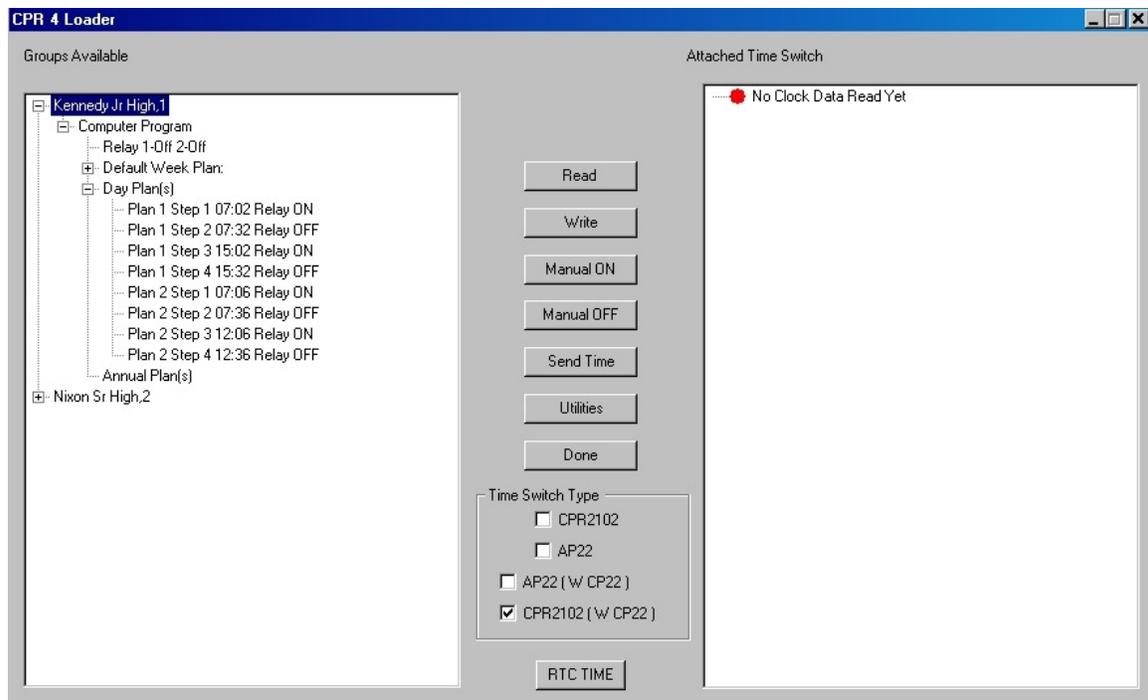
The Time Switch programming is displayed as either a CPR2102 format, or AP22 format depending on which selection is made. There is also a selection for both time switches using the CP22 chip. The program will work with all 4 types. Notice in the picture below the type of clock is set to CPR2102 (W CP22) .
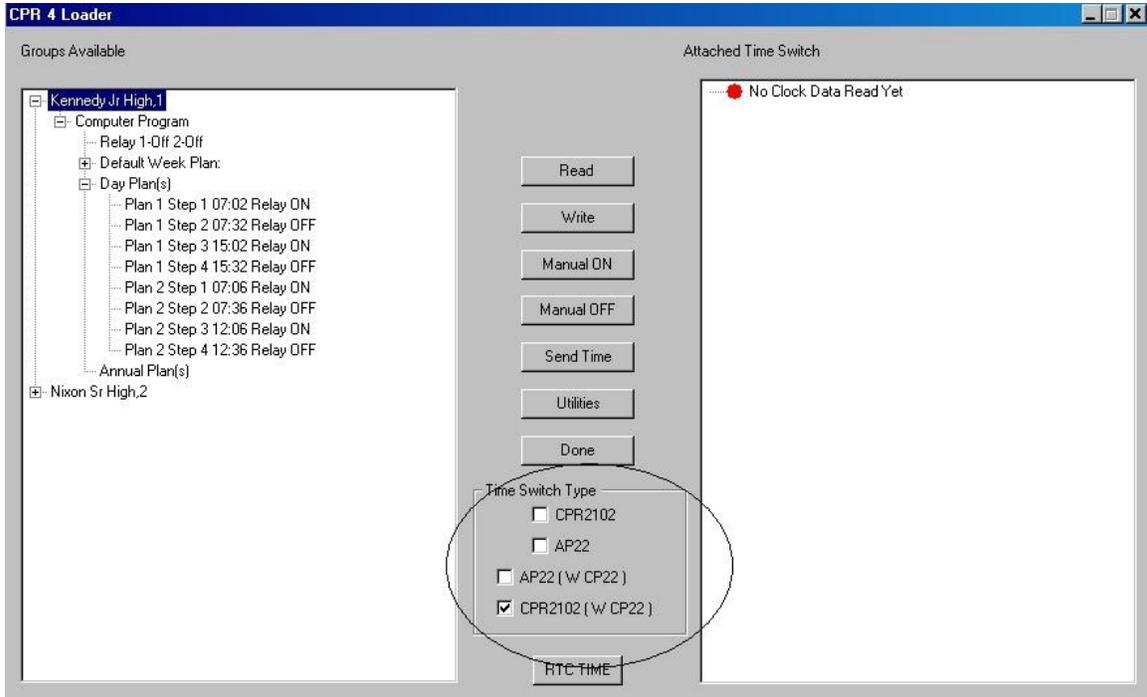
When first connected, the program will show that nothing has been read from the time switch. Notice this in the picture below.
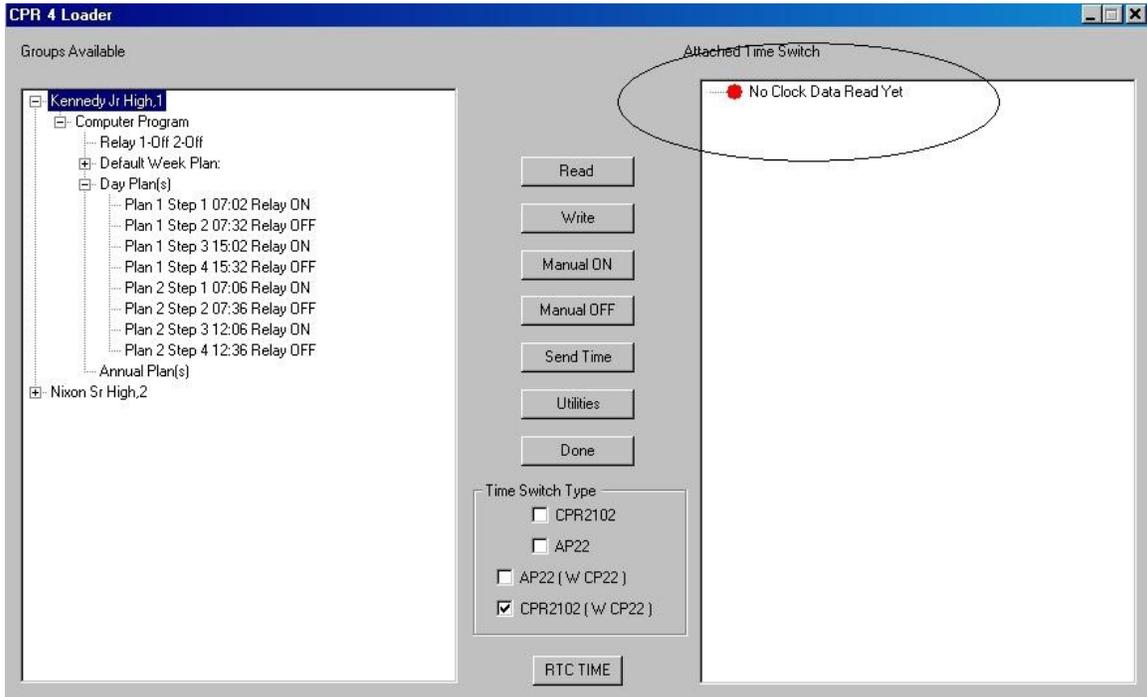
Files and CPR III programming

CPR 4 Loader is compatible with all versions of CPR III. Specifically Versions 6.x, 7.x and 8.x.

CPR 4 Loader needs to have the programming files from the computer running CPR III placed in it. This task is very easily accomplished using a flash or jump drive. This process is outlined below.

1. On the computer running the CPR III program locate the "c:\rtc\cpr3" directory.

2. Find all files with the extension csv.   For example "groups.csv", "steps.csv" etc.

3. Copy all these files to a flash drive, jump drive or some other removable media that can be used in both computers.

4. On the computer running the CPR 4 Loader program locate the "c:\rtc\cpr3" directory.

5. Copy the files from the jump drive to this directory.

6. Launch the CPR 4 Loader program. The data should be there. The program is installed in the same directory as the files, "c:\rtc\cpr3".

Communications

The CPR 4 Loader program only communicates to one clock at a time with a serial cable.

For AP22 clocks you will need the RTC cable part number 504567.

For the latest generation CPR2102R clocks you can also use the cable part number 504567.

For CPR2102R clocks before 2008 you need the adapter part number 504552.

If your computer does not have a serial port you can use a USB serial port adapter.

To setup the communications click 'Utilities' on the main screen. You will see this buttons circled in the picture below.
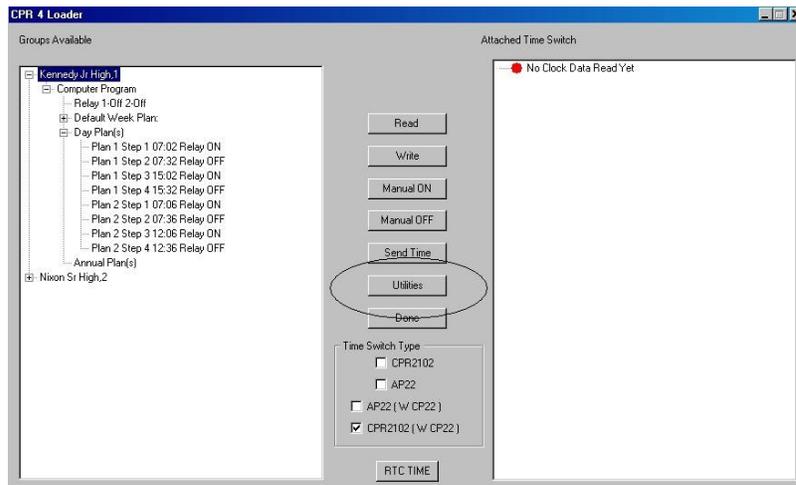
You will see this screen. Using this screen you setup which serial port you are using. You can select any of the ports listed or type in the COM number assigned to your serial port if not listed. This is often needed when using USB serial devices.
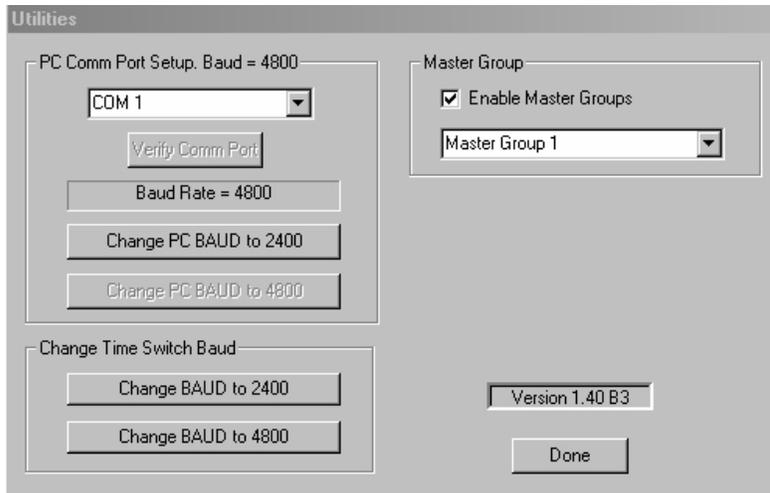

After you have selected your com port you must click 'Setup'. If CPR4 Loader can setup the port correctly you will see the following message.
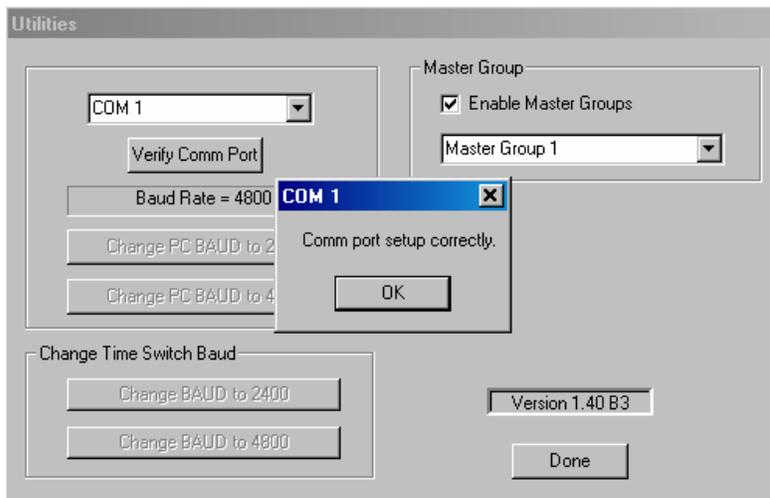
CPR4 Loader can run at either 4800 or 2400 baud. The reason for 48000 baud is for use with devices attached to the GPS time keeping device. This GPS unit will keep the time in the time switch accurate to within 10 seconds at all time.

To select 2400 or 4800 Baud you need only click either of the buttons labeled 'Change PCBAUD to 2400' or 'Change BAUD to 4800'. When you select eitherof these buttons you will see the screen shown below.
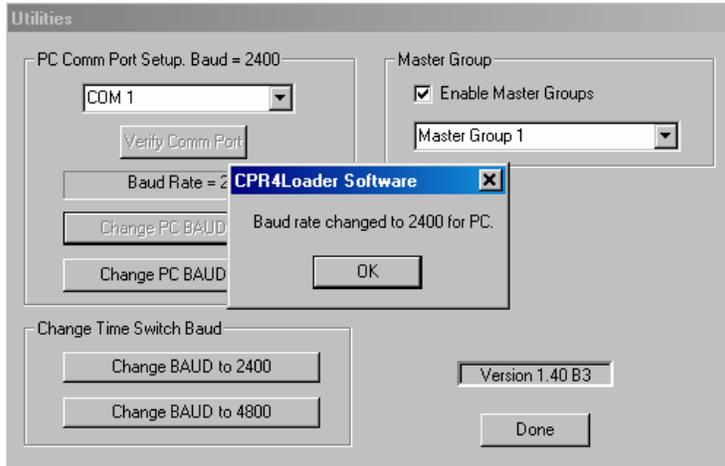

The time switch itself can be changed by the buttons circled below.
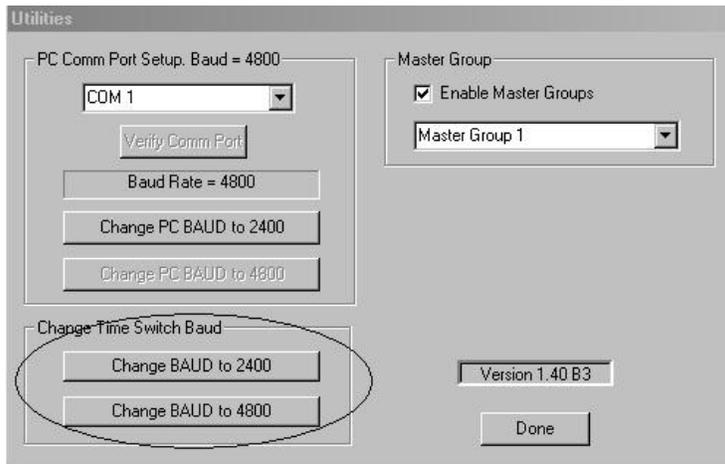
To change a baud rate of a time switch you connect it to the PC running CPR4 Loader. You then click either of the buttons circled above. If the buttons are greyed out then you do not have a CP22 device selected on the main screen. Only CP22 devices can change baud rate. CPR4 Loader will automatically make all the changes to the system to change and test the change. If the change is successful then you will see the screen below.
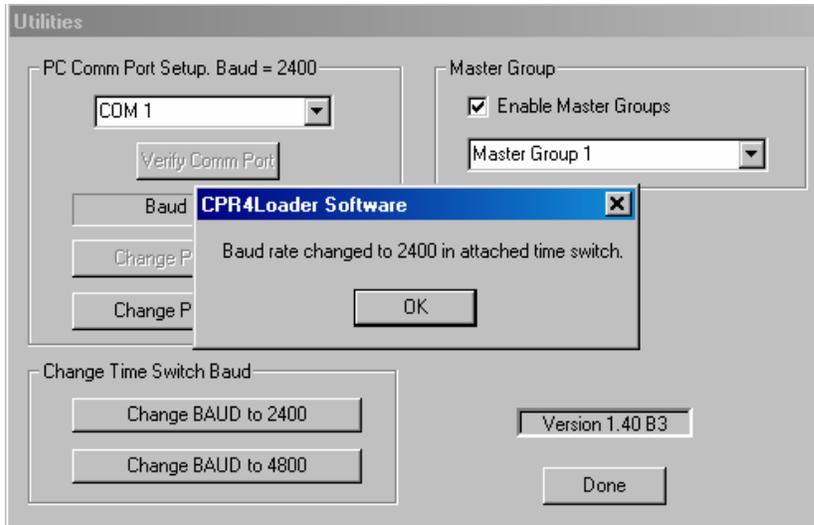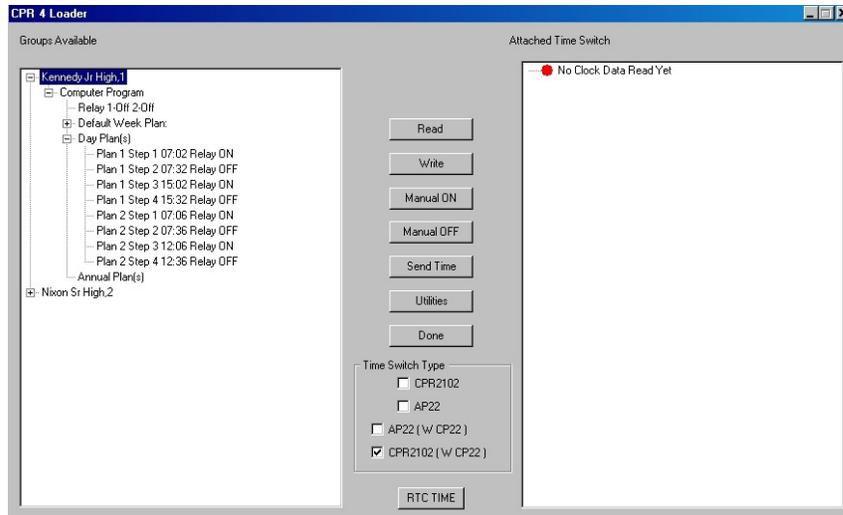

If the change is not successful you will see the screen below.
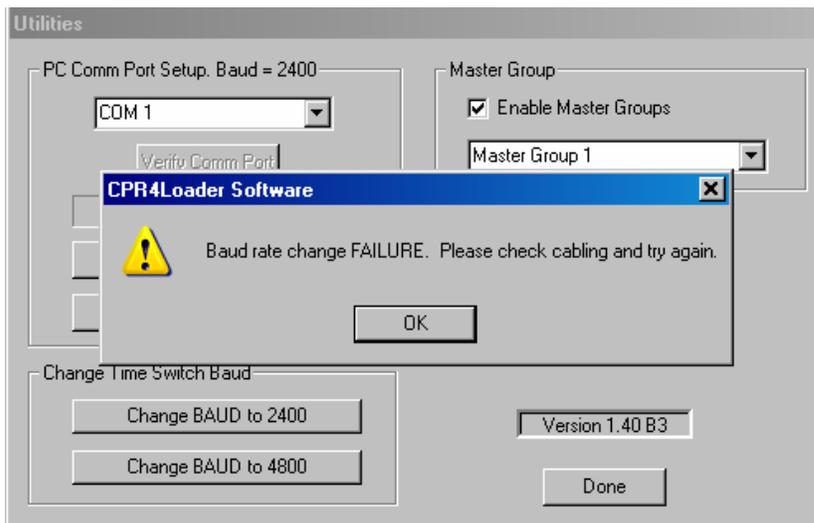
Reading and Writing a Time Switch

The first step is to select the type of Time Switch you are trying to connect to. In the case below the Time Switch type is an AP22. CPR4 Loader can work with either type.


The next step is to select the group that the Time Switch is a member of. You do this by simply click the group as labeled along the left side. In our example the group selected is "Nixon Sr High".
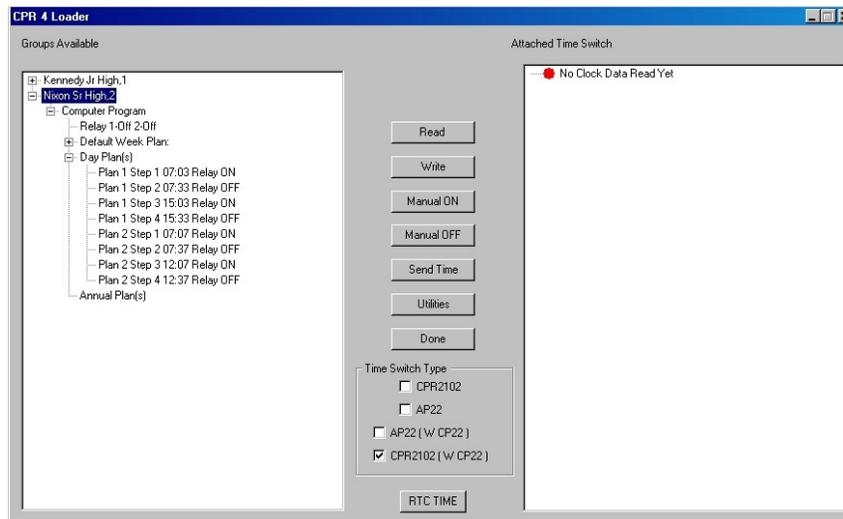

The next step is to connect to the Time Switch with the cable.   Once this is connected you can validate the communications by manually controlling the Time Switch. You do this by clicking 'Manual ON' or 'Manual OFF'. With the clock close to you can verify the relay turned on or off by listening for the relay or by looking at the clock relay status.

Once you have done this you can read the clock. This is done by selecting the "read" button as shown below.
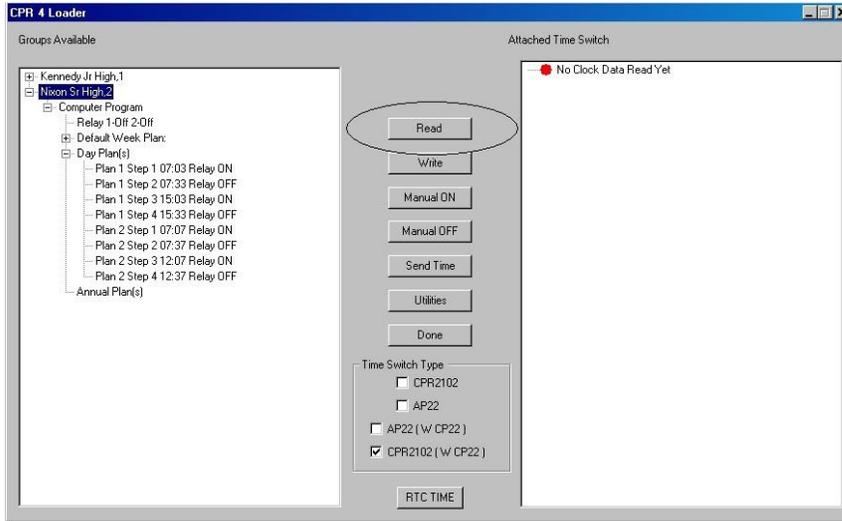

The reading of a Time Switch takes 7 seconds. After seven seconds the results are show. While reading the time switch you will see the screen displayed below. Notice in the example below I caught the reading progress at 2 seconds elapsed time.
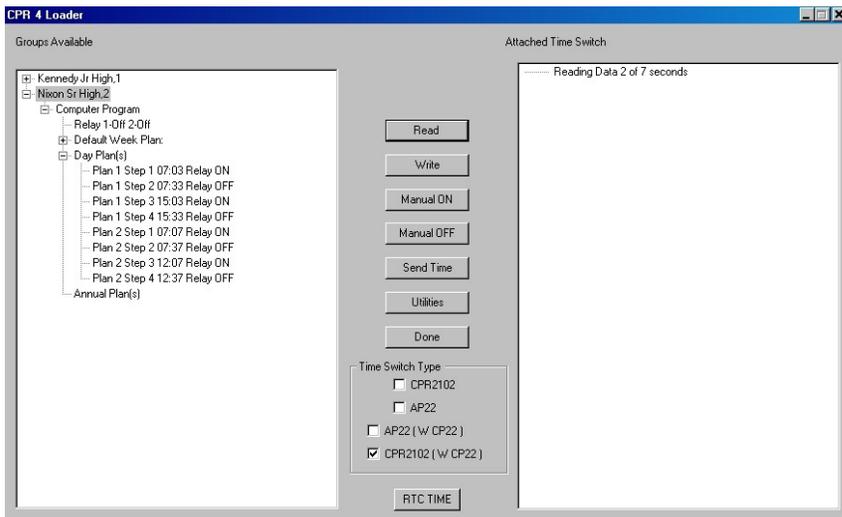
After the read is finished the results are shown. In the example below the Time Switch data does not match the Computer data so the window on the right is drawn with a red dot.
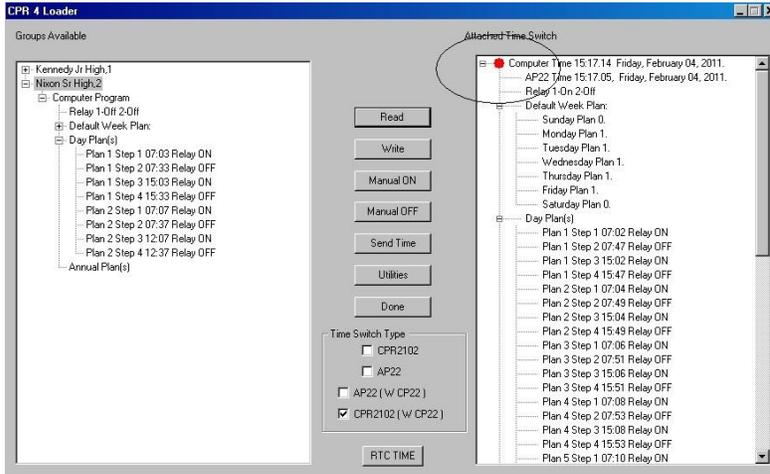
You can then write the data to the Time Switch with the 'Write button'. A write takes about 7 seconds. After the write, when you read the time switch again it should show a green dot to indicate success.
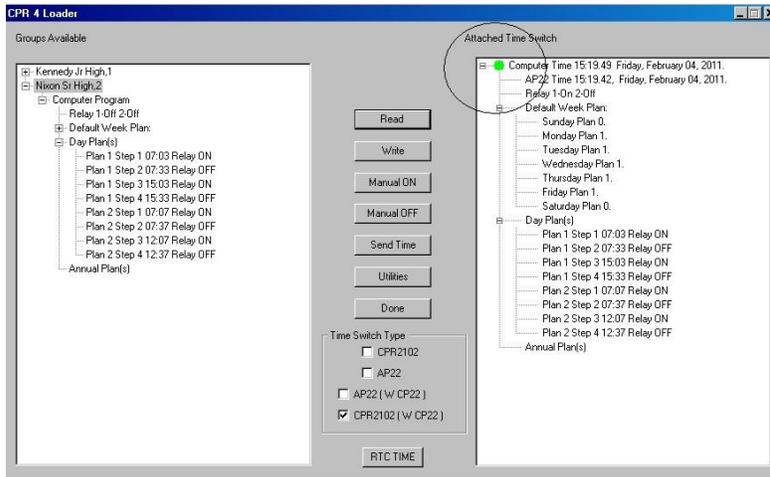
Finally

Please send any comments and suggestions to"

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