



# **Real Time Clock Synchronization**

**Bulletin 2711 PanelView 1200 Series F Terminals**  
**Bulletin 2711E PanelView 1200e/1400e Terminals**

## **Overview**

The PanelView terminals listed above may have Real Time Clock (RTC) operation outside of the accuracy ranges published in our manuals.

The present mean drift is 15 minutes per month with 95% of the terminals having a drift of 30 minutes per month or less (1 minute or less per day).

## **Clock Use**

The RTC is used primarily to time stamp alarm activity. The clock can also be displayed on the PanelView screen or sent to a PLC. Under present circumstances, it is not recommended that you use the PanelView RTC as the basis for other clocks or control functions.

## **Recommendations**

If you are using the RTC, we recommend that you synchronize the PanelView RTC with the PLC clock as described on the following pages. This procedure resets the PanelView clock on a regular basis and prevents the clocks from drifting apart over time.

If the PanelView terminal has an RTC drift that is still unacceptable even after using the synchronization procedure, contact Allen-Bradley for an exchange or possible field modification.

## Real Time Clock Synchronization

The PanelView 1200, 1200e or 1400e terminal's Real Time Clock (RTC) can be set by a PLC using the *PLC Controlled Time and Date* function. Two examples are provided. The first is an example of a PanelView 1200 terminal connected to a PLC-5 with Remote I/O communications. The second example is of a PanelView 1400e connected to a PLC-5 with DH+ communications.

### Example 1

#### PanelView 1200 to a PLC-5 with Remote I/O Communications

In PanelBuilder 1200 for Windows®:

1. Enable *PLC Controlled Time and Date Control Address* under Global Address Options.
2. Assign the *PLC Controlled Time and Date Control Address*.  
For example: (D O:010/0)

When this bit changes from 0 to 1, the PanelView sets its internal time and date to the values in the PLC Controlled Time and Date Data Address.

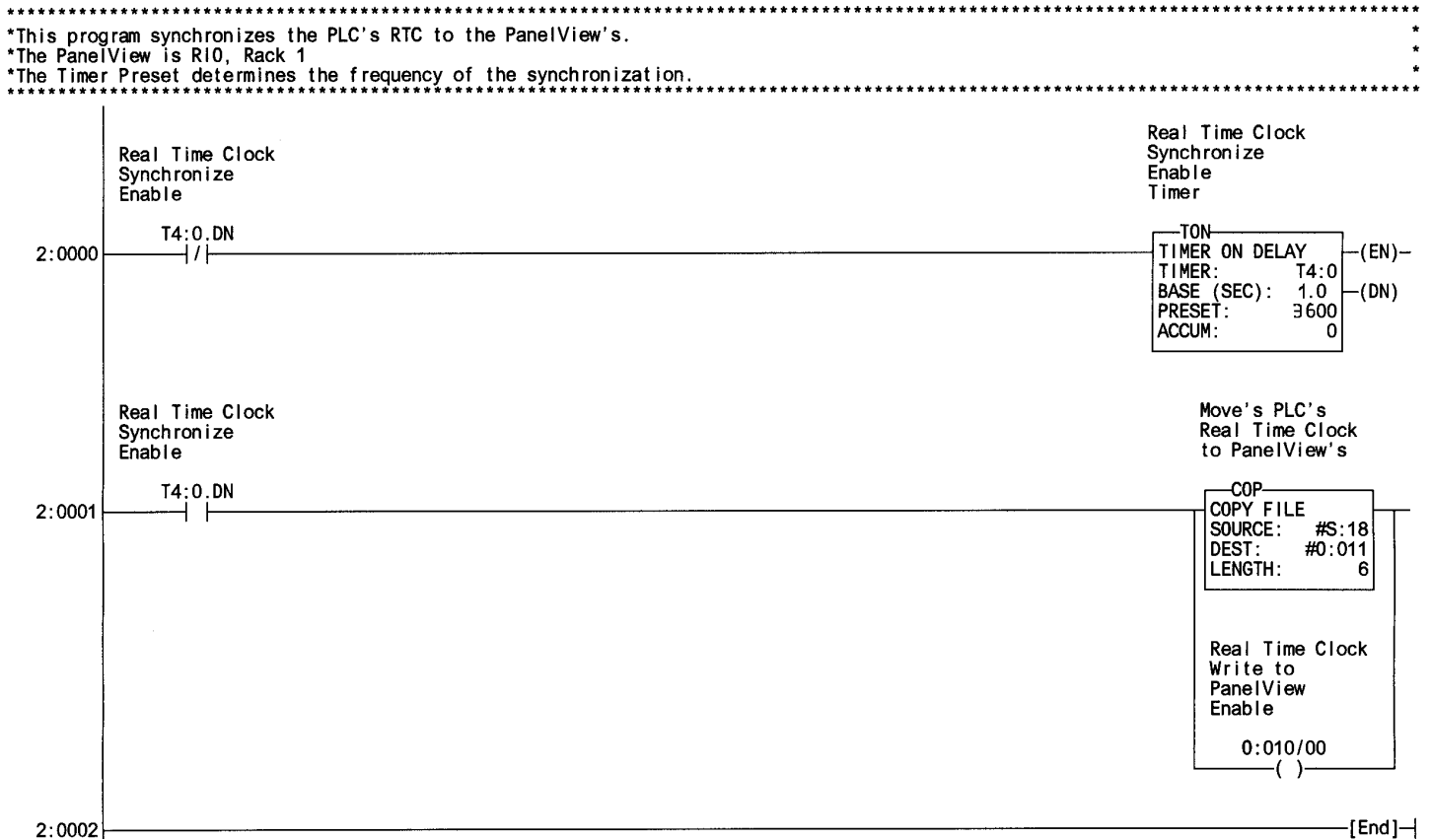
3. Enable *PLC Controlled Time and Date Data Address*.

This is the PLC address from which the PanelView terminal gets the time and date.

4. Assign the *PLC Controlled Time and Date Data Address*.  
For example: (D O:011/0 - 6/17). This must be 6 words with the data in the format shown below.

Word	Contents	Value (Range)
1	Year (2 or 4 digit)	94-99, 00-25 (2 digit)
2	Month	1-12
3	Day of Month	1-31
4	Hours (24 hr. format)	0-23
5	Minutes	0-59
6	Seconds	0-59

In the PLC, enter two rungs of ladder logic programming as shown.



**Rung 1:**

The timer preset determines the interval at which the PanelView RTC is updated. This example shows once every hour. The time interval should be set to the requirements of your application.

**Rung 2:**

The timer done bit is used to copy the PLC's status words that contain the time and date information (S:18 for PLC-5, S:37 for SLC5/03, 5/04) to the PanelView terminal's PLC Controlled Time and Date Data Address (D O:011/0 - 6/17) and set the PLC Controlled Time and Date Control Address which causes the PanelView terminal to update its RTC.

## Example 2

### PanelView 1400e to a PLC-5 with DH+ Communications

In PanelBuilder 1400e, select the *PLC Control* tab from the *PLC I/O Control* dialog. Enter the following tag addresses:

PLC Controlled Date and Time Tag	PLC Address	SLC 5/04
Year Tag	S:18	S:37
Month Tag	S:19	S:38
Day of Month Tag	S:20	S:39
Hour Tag	S:21	S:40
Minute Tag	S:22	S:41
Second Tag	S:23	S:42

The PanelView's RTC will automatically be updated at the foreground rate of the scan class that you define for the PLC controlled date and time tags.

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