APPLICATION NOTE

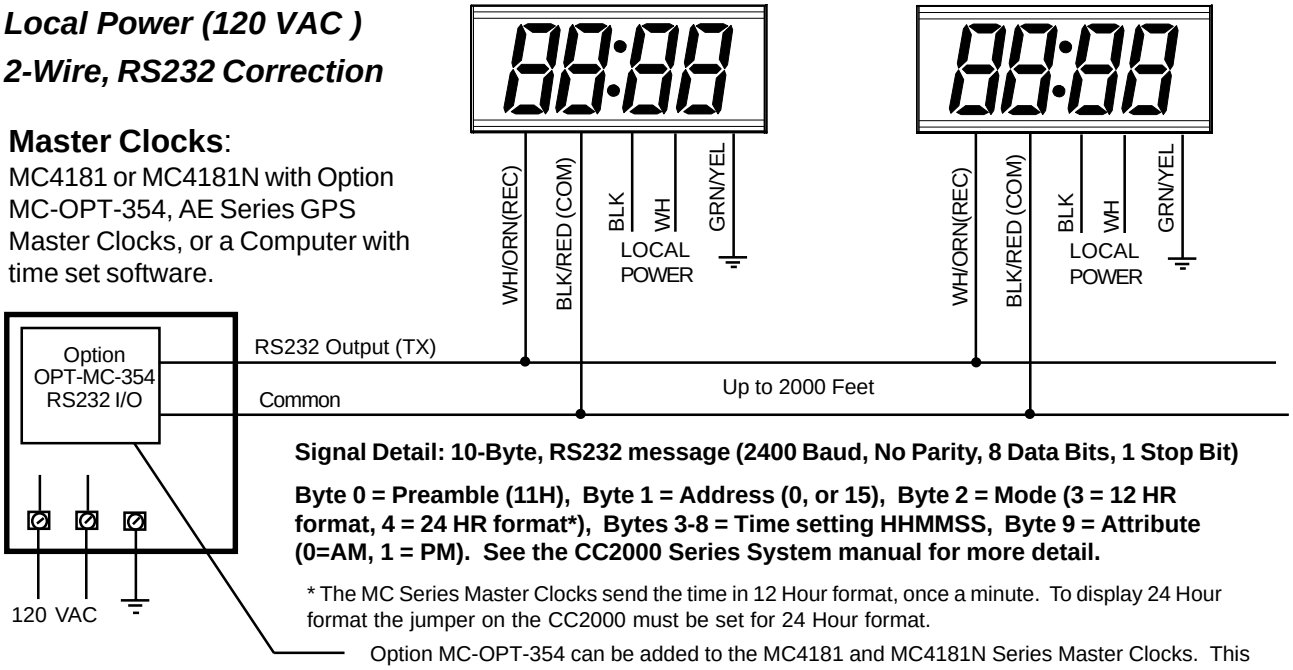
ANCC-04

CC2000 Series . . . RS232 Correction (Instant Updates)

Local Power (120 VAC)

2-Wire, RS232 Correction

Master Clocks:
MC4181 or MC4181N with Option MC-OPT-354, AE Series GPS Master Clocks, or a Computer with time set software.



Signal Detail: 10-Byte, RS232 message (2400 Baud, No Parity, 8 Data Bits, 1 Stop Bit)

Byte 0 = Preamble (11H), Byte 1 = Address (0, or 15), Byte 2 = Mode (3 = 12 HR format, 4 = 24 HR format*), Bytes 3-8 = Time setting HHMMSS, Byte 9 = Attribute (0=AM, 1 = PM). See the CC2000 Series System manual for more detail.

* The MC Series Master Clocks send the time in 12 Hour format, once a minute. To display 24 Hour format the jumper on the CC2000 must be set for 24 Hour format.

Option MC-OPT-354 can be added to the MC4181 and MC4181N Series Master Clocks. This option provides a serial data I/O Interface (RS232) that transmits time in the 10-Byte message format for use by the CC2000 System Clocks

APPLICATION

The CC2000 Series System Clocks have three different, built-in correction plans to fit virtually all types of clocks systems. For *RS232 Correction*, use any of the standard CC2000 Series models. These models can be powered by 120 VAC or 24 VAC, 50 or 60 HZ. An RS232 Signal containing the 10-Byte (MC-OPT-354 format) message is is applied to the RS232 Signal input. This 10-Byte message is available from ATS Master Clocks with option MC-OPT-354, AE Series GPS Master Clocks, or from a computer with an available RS232 port (program is required). Programs are available from ATS to run on MSDOS type computers for sending the computer's time to a system of CC2000 Clocks.

WIRING *Be sure to follow all local wiring codes.*

For this example connect local 120 VAC power to the Black, White and Green/Yel wires of each clock. Connect the WH/ORN (REC) wire to the RS232 Output (TX), and the BLK/RED (COM) wire to Common. Wire size for the RS232 signal can be 22 gage or larger (Belden 8442). Up to 50 CC2000's can be connected to a single RS232 port up to 2000 feet away. For more clocks and/or longer distances add AE-455DR6 Drivers as required. See the CC2000 Series System manual for more detail.

Power:	CC2001 and CC2001F	120VAC, 6VA Max, 50/60 Hz (Internal Jumper for 50 HZ)
	CC2001W2 and CC2001C2	120VAC, 8VA Max, 50/60 Hz (Internal Jumper for 50 HZ)
RS232 Signal:	All models	10-Byte mesage - 2400 Baud, No Parity, 8 Data Bits, 1 Stop Bit
Backup:	All models	Capacitive - approx 1 hour
Set Switches:	Increment Hours and Minutes, access from back panel or from inside (CC2001and CC2001F only)	

APPLIED TECHNICAL SYSTEMS

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