

Uploading firmware to MIDNIGHT TECHNOLOGIES timeclocks



You will need:

- (i) A computer running Windows 98 or higher.
- (ii) The computer must have a serial port with a D9 or D25 connector – USB ports will not work unless you have installed a working USB to serial converter.
- (iii) Computer to timeclock serial cable.
- (iv) M16C_FLASH_V105.EXE This is the application that sends the firmware file to the timeclock - available from MIDNIGHT TECHNOLOGIES by request. Install this file in a specific directory on the computer.
- (v) A valid firmware file, the name will change depending on the timeclock application and client however the filename extension will always be '.MOT'. Install this file in to the same directory as the M16C_FLASH_V105.EXE application.

Step 1 – Retrieving Data from the Timeclock

- (i) The process of uploading a new version of firmware will erase all data in the timeclock. If the timeclock has any clocking data ensure that you retrieve this data before continuing, this is a standard command within ClockComms.
- (ii) Make note of the timeclock ID – this is displayed when the timeclock is first turned on. An example would be timeclock ID '0001.0001', this will need to be reloaded after uploading the new firmware version
- (iii) If the time clock is connected via an Ethernet connection you should write down the IP address, subnet and gateway (if used) as these settings will also need to be re-loaded. Refer to the BundyPlus users manual to get in to programming mode to retrieve these settings.

Step 2 – Connecting Everything Together

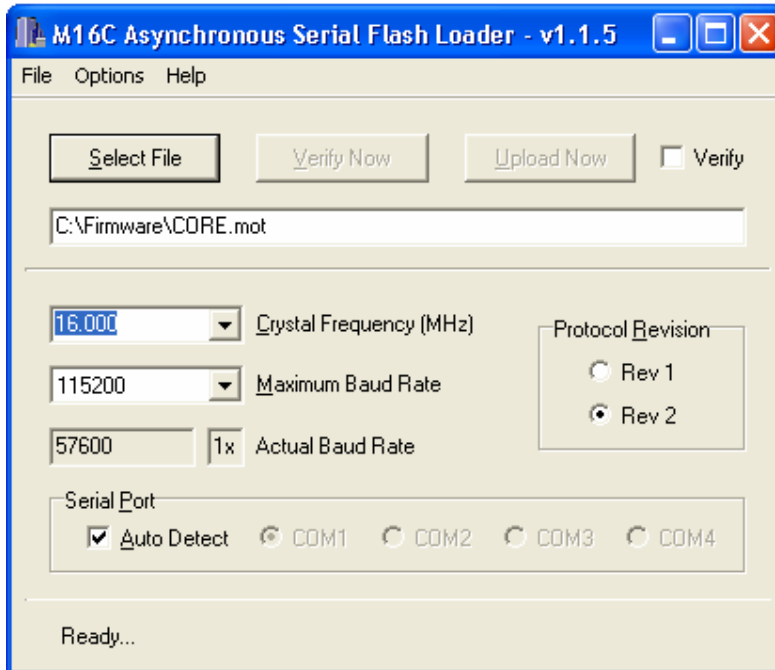
- (i) Turn the timeclock off .
- (ii) If there is a cable connected to Com1 (Host) - disconnect it.
- (iii) Connect the D9 or D25 connector of the timeclock serial cable to the computer serial port.
- (iv) Connect the RJ11 connector of the timeclock serial cable to Com1 (Host) on the timeclock.
- (v) Link together the two pins of the programming jumper – Marked PROG on the pcb – located on the bottom left hand corner of the clock (looking at the component side).

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- (vi) Turn the timeclock on.

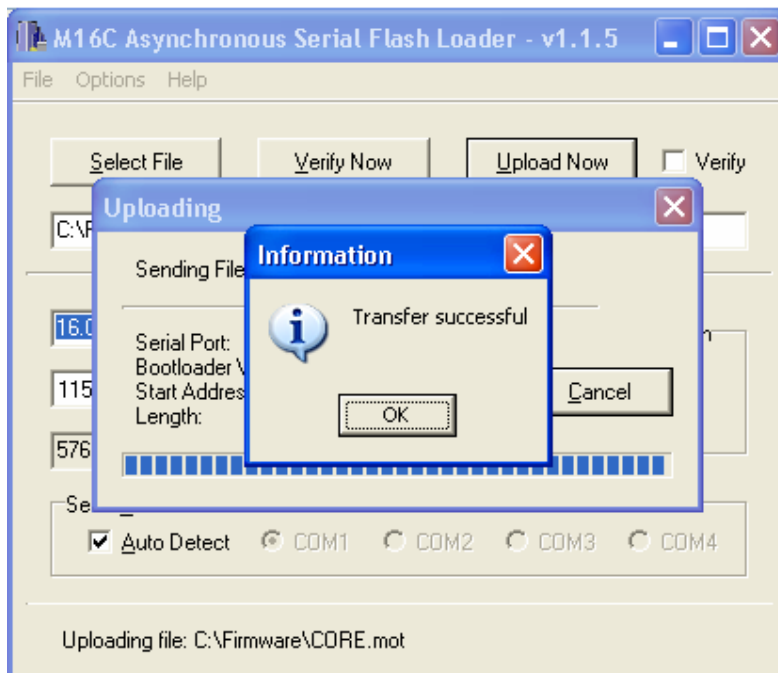
Step 3 – Upload the Firmware

- (i) Run the M16C_FLASH_V105.EXE application
- (ii) You will see the following screen



- (iii) The application will default with the directory you have installed it in to, in our example above we have installed it into 'C:\Firmware' and the default file name is 'CORE.MOT'. Click on the 'Select File' button and select from the list the appropriate firmware file – you will be advised of the appropriate file name to use.
- (iv) The application will Auto Detect the serial port you are using.
- (v) It is **VERY** important that the power is **NOT** turned off during this upload process click on the 'Upload Now' button – the firmware will now be sent to the timeclock, at completion of the upload you will see the following screen.

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Step 4 – Resetting the timeclock

- (i) Turn the timeclock off
- (ii) Un Link the two pins of the programming jumper, put the link (Shunt) on one pin of the two pin jumper
- (iii) Disconnect the RJ11 connector of the timeclock serial cable to Com1 (Host) on the timeclock.
- (iv) Disconnect the serial cable from the computer serial port.
- (v) Turn the timeclock on - the timeclock will now reboot.

Step 5 – What needs to be reloaded into the timeclock

Uploading a new version of firmware will reset a number of settings, which will need reloading.

- (i) The Timeclock ID will have been reset back to '0001.0001', this will need to be reloaded.
- (ii) If the time clock is network connected then you will need to re-load the IP address, subnet and gateway (if used). Again refer to the BundyPlus users manual to get in to programming mode.
- (iii) Once tall settings have been re-programmed you will need to set the time and date via ClockComms.
- (iv) Any Employee messages must be reloaded to the timeclock by ClockComms.

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- (v) Any Relay Events must be reloaded to the timeclock by ClockComms.
- (vi) Any Daylight Savings Events must be reloaded to the
- (vii) timeclock by ClockComms.



All done – If you have any problems with the steps above please Contact Midnight Technologies on the number listed below.

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