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## *F i r m w a r e   C h a n g e   I n s t r u c t i o n*

**DATE:** July 17, 2009  
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### ***Firmware change instructions; Subscriber:***

1. Review and record all programming data in the Subscriber. This information may be needed later to reprogram the Subscriber to the same configuration.  
<Ctrl> F1, <Ctrl> F2, <Ctrl> F3 and <Ctrl> F4.  
Some of these functions may also be performed using software at the central station.
2. Remove all AC and DC power from the Subscriber.
3. Identify the existing microprocessor, which usually has a label identifying its part number, firmware revision number and date. It is U1 on the 7744, 7788 and most other Subscriber boards. Determine location of pin 1 or orientation of the micro and carefully remove it. AES suggests using an IC removal tool, but a small flat tip screwdriver can be used if you are careful and lift the IC straight up not bending its pins.  
\*\*\* Refer to diagram on reverse side (page 2) for assistance with locating U1 and pin 1. \*\*\*
4. Carefully insert the new Micro, paying close attention to orientation and inserting all pins into their correct location in the socket. Check for bent pins, especially those that may have inadvertently bent inward under the IC, which typically are difficult to detect.
5. Return power to the Subscriber.  
A "SELF TEST FAIL..." message is not unexpected.
6. You **MUST** perform a RAM Reset to restore memory to factory default and reset subscriber model and revision identifiers stored in memory. Each firmware revision frequently uses different locations in memory for its stored data and the same locations to store different data. Failure to reset RAM may result in unpredictable Subscriber behavior.  
Press <Ctrl> F5 then Y and <Enter>.  
Subscriber will perform a reset after memory is restored.
7. After performing the chip change and RAM Reset, confirm that the firmware version number on the display is the same as on the label of the Microprocessor.
8. Look for the Self Test message. It should read, "...Pass".  
A Self Test Fail 100 means no AC is detected.  
A Self Test Fail 200 means Charger trouble.  
A Self Test Fail 001 means low battery is detected.  
A Self Test Fail 101 means low battery and no AC is detected.  
A Self Test Fail 300 means Charger Fail and no AC are both detected.
9. Reprogram the Subscriber parameters as necessary or as recorded in step 1 above. It is possible on some Subscribers, although not usually expected, that the ID and/or Cipher code may change during the above procedure. Except for ID and Cipher all other programming can be optionally performed remotely using software at the central Station.
10. Test the functions of the Subscriber.

## Firmware Change Instruction: (Continued)

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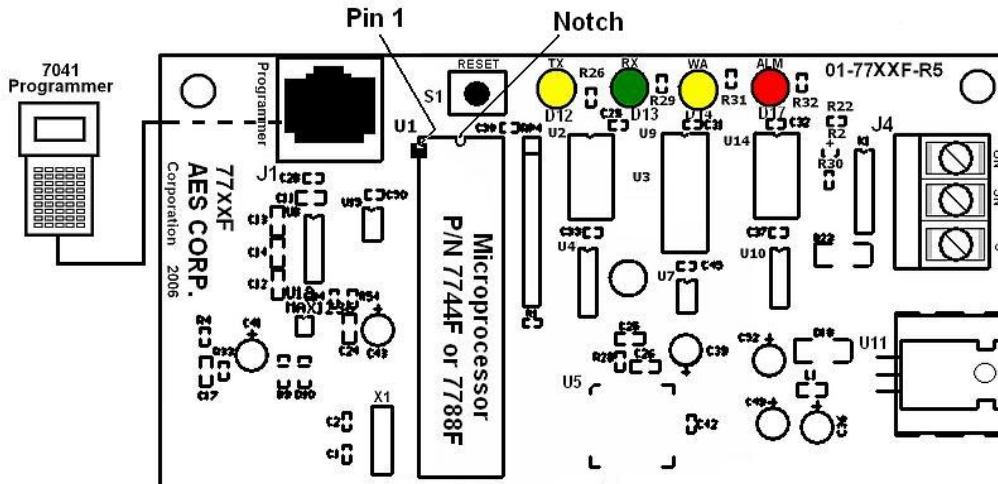


Diagram above illustrates location of Microprocessor U1 and the location of Pin 1 on the 7744 and 7788 Printed Circuit Board

Other Subscriber's Microprocessor location may differ, but should easily be identified by the label.

Also note the Notch that identifies the end of the chip that has Pin 1