ACU3 – ACU5

TR-31 Software Update Instructions

Beginning with software version V05.00.45c (ACU3/5) – we have added support for TR-31, which is an improved method of PIN encryption.

There are two steps for upgrading your ATM to support this new encryption.

1) Update the ATM software to version 45c or higher.
- see instructions on next page for tips on this process

2) Upgrade EPP Firmware
- This firmware update is supported by EPP-B3 and EPP-B5 keypads

The firmware update is a one-time step that must be performed at the ATM. Once the firmware had been updated, that will remain with the keypad.

For most model ATMs, this procedure is fairly easy and only takes a few moments once you're ready to go. If you are working with a GT3000, T4000 or other model ATM where the keypad may not be readily accessible – consider the tools and time to access the keypad into your upgrade plans.

Note: This upgrade process does not delete the Master Keys.
* however you will need to know the Secure Mode passwords to upgrade an EPP-B5

WARNING:

The TR-31 Setup for ACU3/5 mainboards involves some new procedures that you may not be used to – please take the time to read all the instructions and be familiar with this process before you proceed. If you have questions, please contact Support and ask before you start. These older mainboards are easy to lock up if you're not careful, which can then require sending the board back for repair.

With these older mainboards – we recommend you have a back-up plan (extra board for example) just in case you have a problem in the field.

Preparing the Mainboard for new software:

If your ACU3/5 mainboard currently has older software – before updating, check the following:

- Go To Diagnostics Menu and 'Check Disk' (memory values may be in center of screen)
- You should have 10 MB or more of 'Free Memory' before trying to update.

- If you do not have >10 MB – you should delete the Journal and clear NVRAM before trying to update, or you'll potentially risk locking up the mainboard.

- ATM OP Menu → Customer Setup → Press the button in the bottom right corner for a 'Hidden' Clear NVRAM menu. Clear 'Both' to delete both the Journal and NVRAM.

- Before clearing the Journal, you can back it up if needed, along with your settings from the Journal Menu.

- Reboot the ATM once after clearing NVRAM and/or the Journal - before loading the new software. Recheck the 'Free Memory' value above.

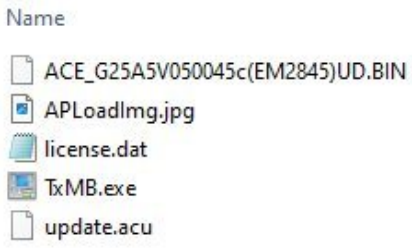
Preparing SD Cards

For ACU3/5 mainboards, you must use 2GB (or less) SD memory cards to load software at the ATM. It's critical that the files are copied correctly (see below).

For TR-31, you'll need one SD card to load software, and a second SD card to perform the keypad firmware update. If you only have one SD card, you can use a Laptop to change the files and perform both steps. However having 2 SD cards will be easier.

Below is how your SD cards should look (depending on ATM model) – make sure to load this software from a Windows PC (not a Mac).

Software Update



Firmware Update



WARNING: - Do NOT combine the files above onto one SD card. Do not add any additional files to the Firmware Update – only what is shown above.

Loading ATM Software ACU3/5

With the files prepared as shown previously – and the mainboard memory checked, power off the ATM and insert the update SD card into the socket.

Power on, and the mainboard should read the software update as it boots up.

When the board finishes booting, enter the Operator Menu, and verify the software has loaded.

You should see the new AP Version (V05.00.45c) in the main screen as shown →



If the software does not update:

- Check the SD card and make sure it's 2GB or less, make sure the files are copied per the previous page, and make sure you used a Windows PC to load the files.

- If above is verified, then you may need to clean the socket where the SD card installs.
- Power off the ATM and blow out the socket with canned air. You can also use 'Electrical Parts Contact Cleaner' or a fast-evaporating electronics cleaner - to spray dust / dirt from the socket. Let it dry completely before powering back on.
- Try inserting and removing the SD card several times – doing this can clean the contacts inside the SD socket - and then try again.

Once the software has been updated per above – then you're ready to do the keypad firmware update.

Loading EPP Firmware Software ACU3/5

Once the ACU3/5 mainboard has been updated with .45c software, you're ready to load the Firmware update. Verify the files are loaded on your SD card as shown on page 2.

Because the older ACU3/5 boards have a limited amount of memory – it's necessary to run the firmware update files from the SD card. This means that the firmware SD card will remain in the mainboard during this process.

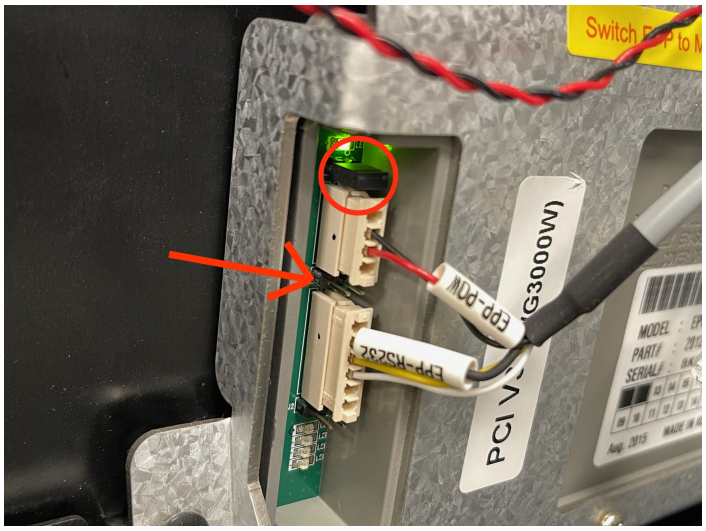
Note – this process can take several minutes, so please be patient.

EPP-B3 Keypad Firmware Update

At this point, .45c software is loaded, and you verified this in the Operator Menu.

Power off the ATM and insert the SD card with 'Firmware Update' software.

Now install the jumper on the pins between the cables – on the backside of the keypad.
- Per photo below, jump the two pins on the back of the keypad (red arrow)
- You can remove the jumper at the top (red circle) and temporarily place it over the pins
- Alternatively, you can also jump the pins with a screwdriver or piece of metal, if you're able to hold it in place during the update process (5-6 minutes)

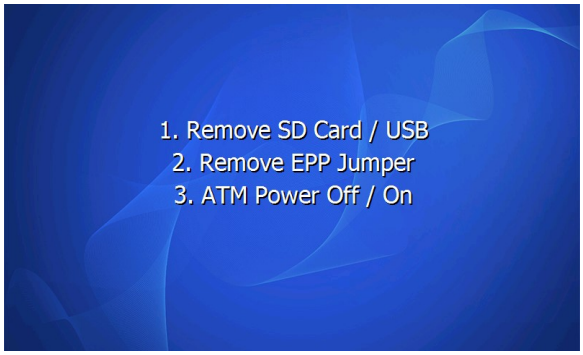


With the Firmware SD card inserted – and the jumper placed over the pins – you can power on the ATM.

The ATM will stop at the 'Temporarily Out of Service' screen during this process. Please note that this can take 5-6 minutes (ACU3) – so it's important to be patient.

You will not see anything on the screen to indicate that this process is occurring.

Once this step is complete – the board should stop at this screen below.



Now you can remove the SD Card and remove the jumper and place it back on the top pins. Power the ATM off and back on, and let it boot up as normal.

When you enter the Operator Menu, in the upper left corner, you should see ‘TR-31 Supported’



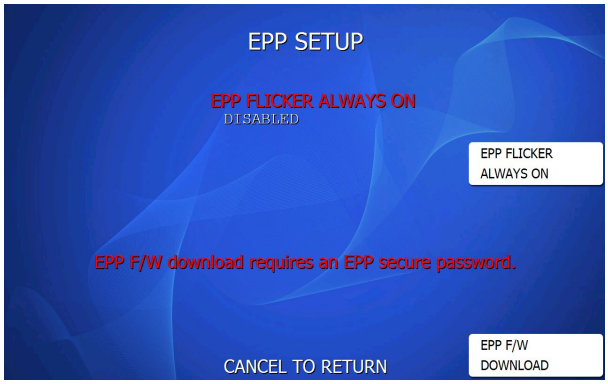
At this point, the ATM is now ready to support TR-31 transactions.

EPP-B5 Keypad Firmware Update

At this point, .45c software is loaded, and you verified this in the Operator Menu.

Power off the ATM and insert the SD card with 'Firmware Update' software.
Power on and wait for the ATM to boot up.
- it may take a little longer at the Temporarily Out of Service screen.

Once it boots up:
- Go to the 'System Setup Menu
- Then go to 'Device Setup' Menu
- Then choose 'EPP Setup'

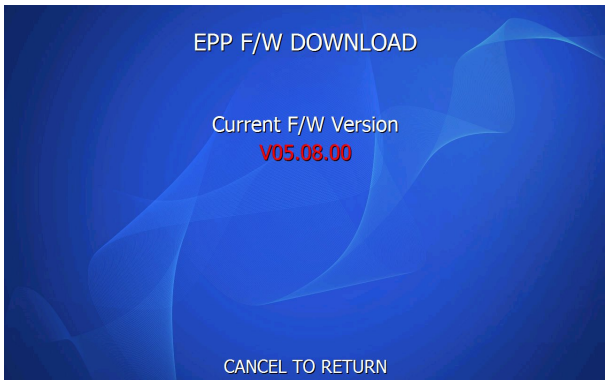


You should now see the EPP F/W Download button in the bottom right corner of the screen.

Note – you will need to know your 'Secure Mode' (Key Management) passwords to perform this step. If you do not remember what passwords were used, then you'll have to reset the keypad and re-enter new master keys.

Press the [EPP F/W Download] button and the process should start.
- do not power off the ATM while this is taking place.

When this process is complete – you should see this screen below, with the new firmware version. V05.08.00



Remember to remove the SD card after this process is finished.

You can now exit the menu – at the main OP Menu screen, you will see [TR-31:Supported] in the upper left corner of the Operator Function Menu screen.



At this point, the ATM is now ready to support TR-31 transactions.

Troubleshooting – Problems

1) The most common problem will be mainboards that are not reading the SD card.
- See page 3 for tips on how to clean the SD socket
- If you're unable to get the board to read an SD card, you may need to send it in.

2) Board locks up trying read Update Software
- Make sure you have enough free memory before trying to load the software
- Have a 'Recovery' SD card with you in case something goes wrong.
- If you're working on critical locations, have a back up mainboard with you in case something goes wrong.
- Have a laptop available in case you need to reload files

3) Make sure you're jumping the correct pins on the keypad (B3)
- Have a jumper with you to make things easier if the keypad doesn't have one
- If you will be manually jumping the pins with a key, make sure you can hold that for 5-6 minutes. You will need to start over if the key moves during the loading process.

4) B3 – Does not move past 'Temporarily Out of Service' when loading firmware
- Give the board a good 10 minutes, if the screen doesn't change – start that step over