

Procedure, Software Update

ProgTerm with Auto Upload

Application

Software Version:	1.50
ACU Model Compatibility:	DAC-03 / 2200 / 2202 / 2302
PCU Model Compatibility	F97 / x07 / x03 / x04 / x06 / x09
DVB Model Compatibility	DVB V4 / DVB V5
Modem Compatibility	400 MHz modems
Auto Upload functionality	All ACU and all PCU modules (Serial port version only)

Electrical Hookup

DAC-2200 / 2202 / 2302 Software Version 5.xx / 6.xx / 7.xx.

Connect a straight serial cable, P/N 120643, between the ACU M&C port, J3, and an available Comm Port on your PC.

DAC-03 Software Version 4.5x.

Connect a PC-DAC / Null Modem serial cable P/N 116298 between the ACU M&C port, J11, and an available Comm Port on your PC.

Software Setup

1. Open the zip file or folder that contains the installation program. Click on the ProgTerm1.xx_Install.exe program. Click on "Install" when the program asks for extraction confirmation. This will copy all the required files to a directory named ProgTerm in the Program Files directory on your C drive and place three shortcuts on your desktop and in your Start menu under 'All Programs \ Sea Tel'. One shortcut labeled "ACU PCU Update Instructions" which opens this document, one shortcut labeled "ProgTerm" which is used to update the Flash programmable ACU, PCU, DVB and Modem modules via a serial port and one shortcut labeled "ProgTermIP" which is the IP version of the same program.
2. If upgrading from a previous version, the program will ask for file replacement confirmation. Click on 'Yes to All'. You may get additional prompts to overwrite system level files, type Y to confirm.
3. The install program will ask for file registration confirmation. Click on OK for all files.
4. Click on the desktop shortcut to open the serial ProgTerm program.
5. From the CommPort menu, select "Properties". Verify the correct COM port for your system is selected. Press OK to confirm any changes.

Programming Operation, Auto Upload (Serial port version only at this time)

1. From the CommPort menu:
Click the 'DAC 03 to ACU' or 'DAC 2K to ACU' menu item to configure ProgTerm for updating the below decks Antenna Control Unit (ACU).
Click the 'DAC 03 to PCU' or 'DAC 2K to PCU' menu item to configure ProgTerm for updating the above decks Pedestal Control Unit (PCU).
2. Verify the 'Port Status' LED on the right side of the program is GREEN indicating the port is open and functional. Click the LED to toggle its state.
3. Click Auto Upload. ProgTerm will show the module selected for programming and ask for confirmation. Click Yes to confirm the module selection

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4. A dialog box will appear to allow you to locate the S19 hex file to be programmed. Select the desired file and press Open or double click on the desired file. ProgTerm will check the selected file for compatibility with the selected module and warn you if there are any discrepancies.
5. ProgTerm will then automatically check for all proper communication parameters, setup the selected module for programming, erase the current program, upload the new program, check for transfer errors and restart the selected module. If any errors are detected during this sequence, the program will try up to 3 times to correct the problem. If there are conditions that the program cannot resolve by itself, it will prompt the user for manual intervention (such as a manual ACU reset or a PCU power cycle).

Programming Operation, Manual Legacy Mode (All versions, all modules)

This procedure will require you to select Tools / Expert Mode to enable the Legacy menu items and toolbar buttons.

1. From the CommPort menu:
Click the 'DAC 03 to DVB' or 'DAC 2K to DVB' menu item to configure ProgTerm for updating the below decks DVB receiver.
Click the 'DAC 2K to ADE Modem' or 'DAC 2K to BDE Modem' to configure ProgTerm for updating the 400 MHz ADE or BDE modems.
2. Verify the 'Port Status' LED on the right side of the program is GREEN indicating the port is open and functional. Click the LED to toggle its state.
3. Press the Paper Clip and the Eye Ball tool bar buttons which ask for the Module Status and Module Version. The actual data in the response is not critical but both of these data requests must function properly before you can continue.
4. Click "Tools / Expert Mode" to display the legacy menu items and tool buttons.
5. Click "Tools" then "Remote Upload / PCU Reboot" to put the ACU in the REMOTE UPLOAD mode.
6. Press 'START' to put the selected module into programming mode. After 2 to 3 seconds, you should see an echo of something like:

0050 (Checksum of memory after serial load, 0050 for initial start)
V11 (Version number of module bootloader)
7. Press 'ERASE' to clear the current Flash program memory. The screen should now respond with '^0578*', '*' or '+'. If you do not see a '*' or '+' response, press 'ERASE' again, up to 3 times to obtain a '*' or '+' response. DO NOT PROCEED if you do not see a '*' or a '+' response.
8. Press 'UPLOAD' to select the S19 hex file to send to the selected module. A dialog box will appear to allow you to locate the file to be programmed. Select the desired file and press Open. ProgTerm will display an "Upload" dialog box with a "Cancel" button and send the update file to the selected module.
9. For DVB or Modem programming you will see continuous lines of '*' characters indicating successful programming for each S19 record line. A '-' character indicates a failed S19 programming line. A '!' character indicates a protected memory warning.

If you see any '-' characters, cancel the programming operation immediately and resume at step 5 above. Never continue with an upload that is reporting errors!!

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10. When finished, the "Upload" dialog box will disappear and the last few lines will remain on the screen. It is not uncommon to see an 'RxIF To!' message. This is not an error.
11. If the bootloader is successful, the module will reboot. After a few seconds it will respond to correctly to the Paper Clip and Eye Ball tool bar button requests. In this case, you are done.
12. If the bootloader fails you will see a display something like this:
AD68 (checksum)
V21 (bootload version)
In this case, press ERASE again, verify you see a '*' or '+' response, then press UPLOAD and re-select the same file to upload again.

Locked or Erased module recovery.

As long as you do not do a Bulk Erase or proceed with an upload that is reporting '-' errors, it is not possible to render an ACU, PCU, DVB or Modem module inoperative. The bootloader modules are protected and will always allow access to be re-programmed.

Repeat the proper Setup, Start, and Erase sequences for the selected module and you will get a '+' or '*' response. Proceed with the Upload sequence to complete the update process.