This guide will step through the StarFire™ licensing process via NavCom's StarUtil GUI program and binary data interpretation.

For all receiver models, the end-user and purchasing agent are required to complete an End User License Agreement (EULA) form in addition to a Purchase Order. The EULA can be obtained from any NavCom authorized reseller or NavCom Sales. NavCom recommends that end users submit license renewals 15 to 30 days in advance to ensure uninterrupted service for field hardware.

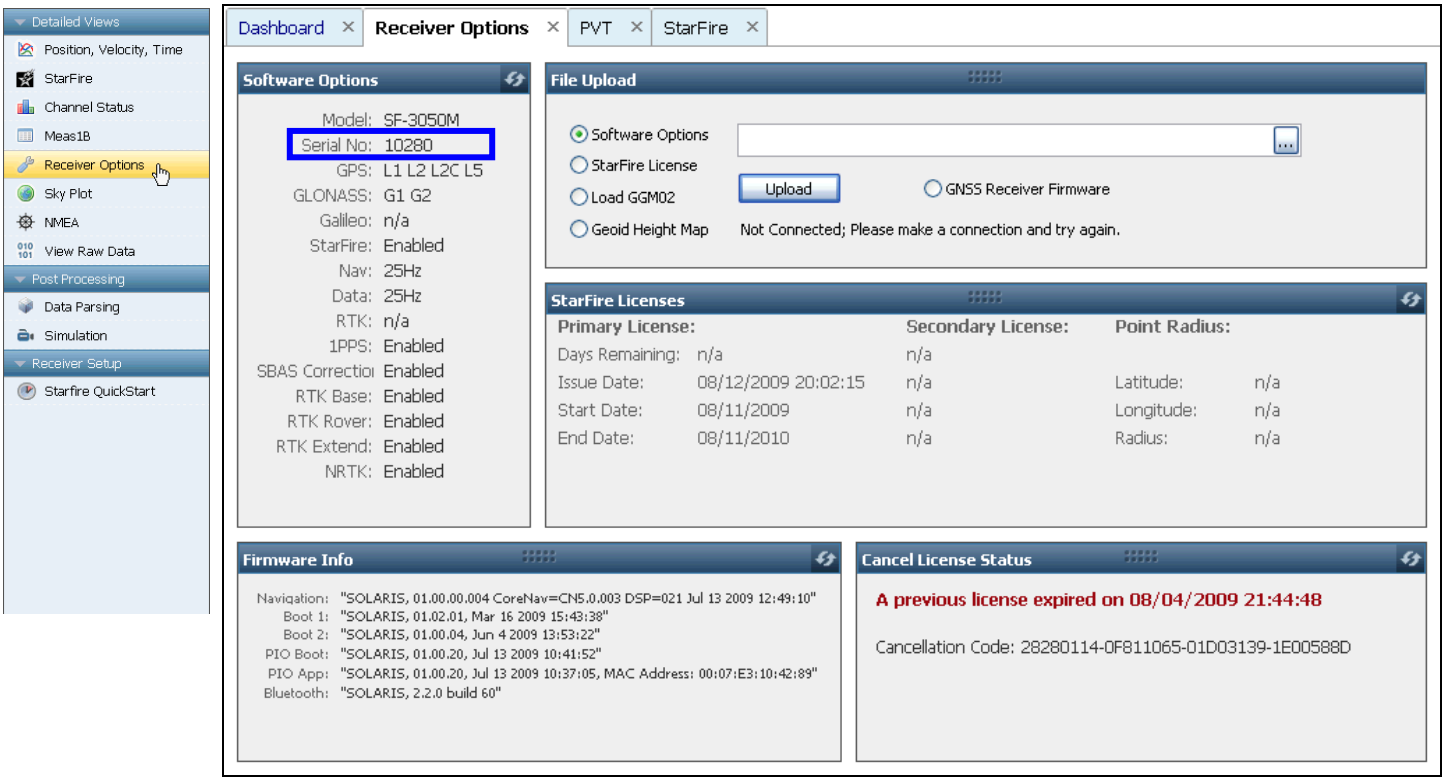
SF-3050 GNSS Receivers

Required information:

- ✓ Unit serial number, located on the side panel of the SF-3050. The digital serial number matches the unit serial number. In this product design, the StarFire receiver is located on the same board as the GNSS receiver, which differs from older NavCom products as a result of technology advancements.

To retrieve the digital serial number from the receiver with StarUtil, follow these steps:

- ✓ Select *Receiver Options* from the *Detailed Views* menu



Renewal licenses are supplied to the end-user by Over-The-Air (OTA) broadcast. The customer selects the date and time in GMT for the Over-The-Air broadcast of the StarFire license.

- ✓ The scheduled broadcast must be at least 3 business days after a valid P.O. is received by NavCom Sales.
- ✓ Specify broadcast date and time in GMT on the P.O.
- ✓ NavCom confirms the date & time of broadcast via email.

The broadcast procedure for Over-The-Air StarFire licensing is subject to change.

For special-case scenarios, customers may request to receive the StarFire license via email to upload via data cable using StarUtil-3000, or another controller solution. The request must be specified in the P.O.

Over-The-Air Broadcast

The StarFire license is broadcast at the scheduled time and 5 minutes later as a backup.

⚠ To ensure reception, turn on the receiver before the specified broadcast time. Do not turn off the receiver until verifying that the license is saved.

⚠ The receiver must be tracking StarFire satellites at the broadcast times, though the receiver is not required to be operating in StarFire mode during the broadcasts.

To retrieve the digital serial number from the receiver with a terminal program like HyperTerminal, follow these steps:

- ✓ At the command line, enter [MSGPRODUCTINFO]
- ✓ The receiver will respond with:

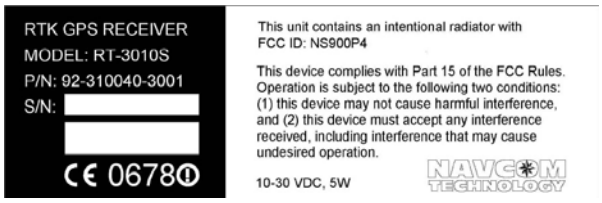
  [MSGPRODUCTINFO]SF-3050M,12345,1

  The response shows the product type, digital serial number, and system revision number

SF-2110, SF-2040 and SF-2050 GPS Receivers

Required information:

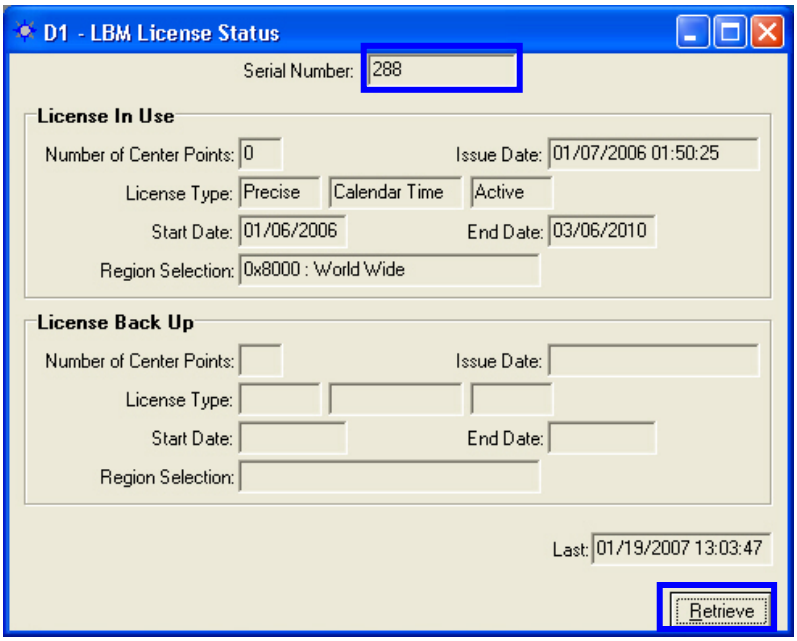
- ✓ Unit serial number, located on the bottom panel of the SF-2040 and rear panel of the SF-2110 and SF-2050
- ✓ LBM digital serial number, located in hex data record D1



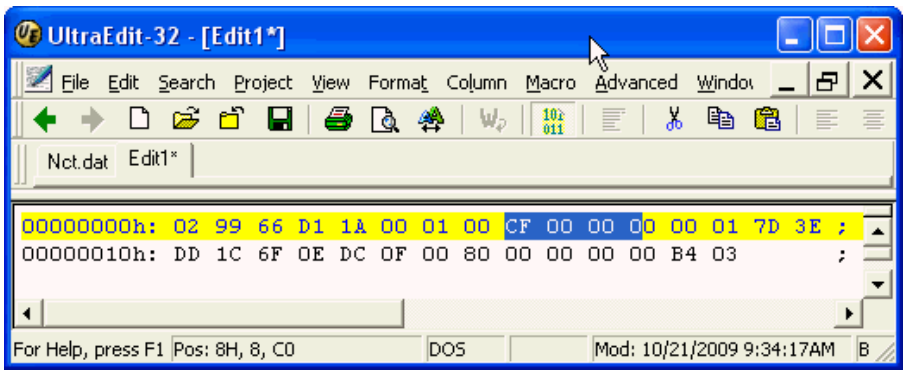
Renewal licenses are supplied by email and must be manually loaded to the receiver.

To retrieve the hex data record D1 from the receiver with StarUtil, follow these steps:

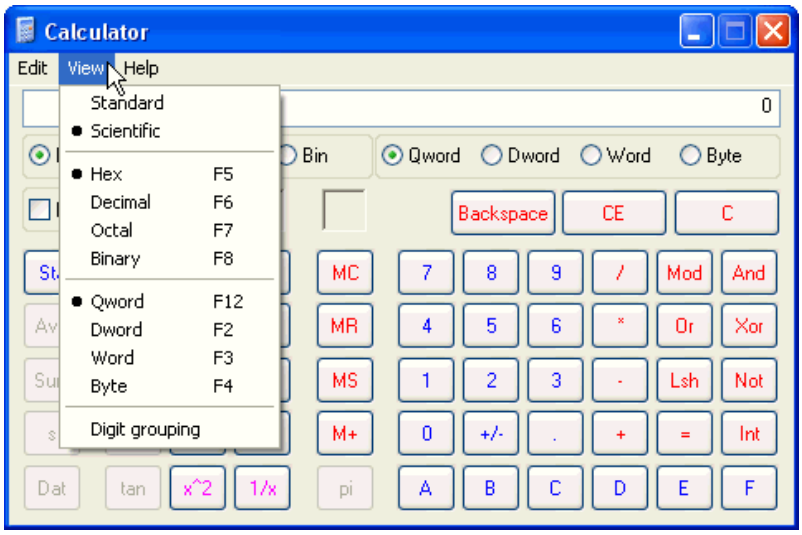
- ✓ *View → D1 - LBM License Status*
  - o Click *Retrieve* in the lower right-hand corner
  - o The LBM serial number is located at the top of the window
  - o If the end-user is unable to retrieve the serial number, StarUtil must establish communication to receiver's control port



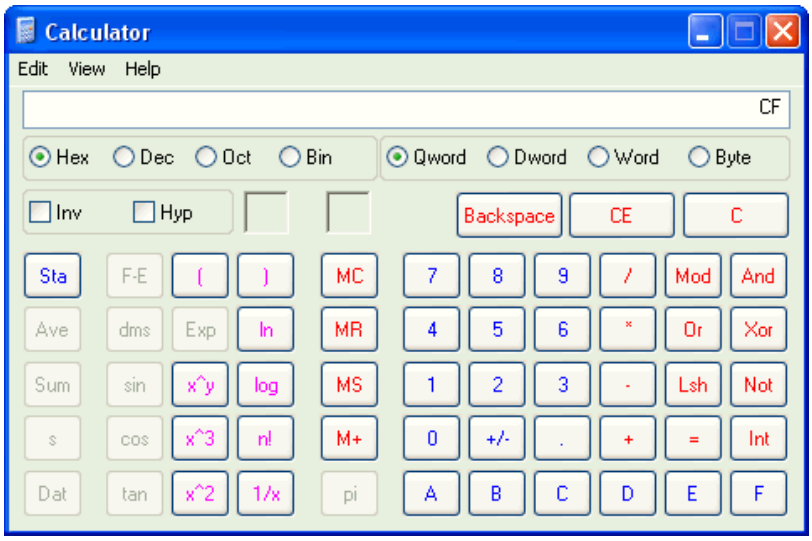
✓ If only hex data is available, view the hex D1 message from the data port in a hex editor like UltraEdit



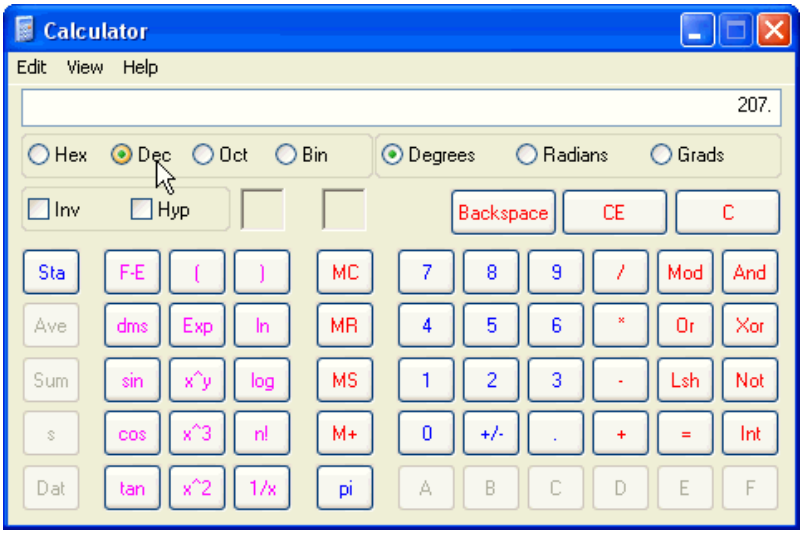
- Search for 02 99 66 D1
- The LBM serial number is located beginning at the 5th byte following D1 and is 4-bytes long. In this example, the serial number is CF 00 00 00.
- Use the MS Calculator to convert this hex value to decimal



o Enter the value in reverse-paired order; i.e. 00 00 00 CF



- Select the *Dec* option; the value converts to decimal



- In this case, the decimal value converts to 207