

The **ETsz()** instruction requires the user to input latitude, longitude, elevation, and crop type for a station's location in order to generate accurate calculations of ET. The Generic_ET_107_ETsz.CR1 and Generic_ET_107_ETsz_Windsonic.CR1 programs included in this zip file use the **ConstTable()** instruction to create a constants table that allows the user to easily input these values using Loggernet, PC400, or a keyboard display. Note: these values only need to be set once, during station set up.

****Note that Longitude and Latitude must be entered in Decimal Degrees (DD). If you need to convert from Degrees/Minutes/Seconds to DD, the conversion formula is shown at the end of these instructions.***

<https://www.campbellsci.com/videos/overview-and-software-setup-quickstart-part-1>

<https://www.campbellsci.com/videos/use-loggernet-to-send-a-program-and-collect-data-quickstart-part-3>

Add Selection [X]

Tables

- DataTableInfo
- ET107_Day
- ET107_Hour
- Public
- Status
- USER_ENTRY**

Fields

- RecNum
- TimeStamp
- SCANRATE
- LATITUDE
- LONGITUDE
- ELEV_m
- ELEV_ft
- CROP_TYPE
- ApplyAndRestart

☐ Stay On Top ☐ List Alphabetically

Paste Close

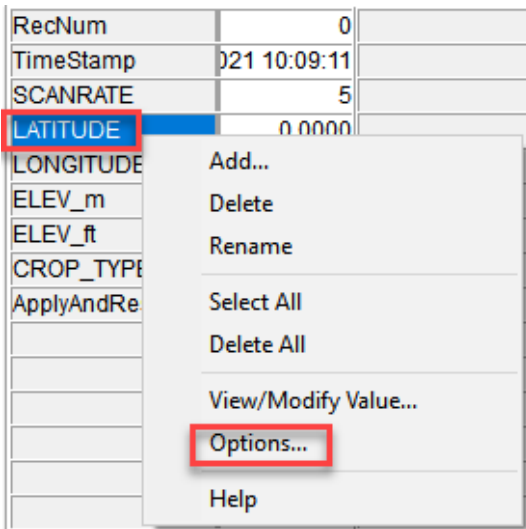
ET107 Numerical Display 2: Real Time Monitoring

< **RecNum**

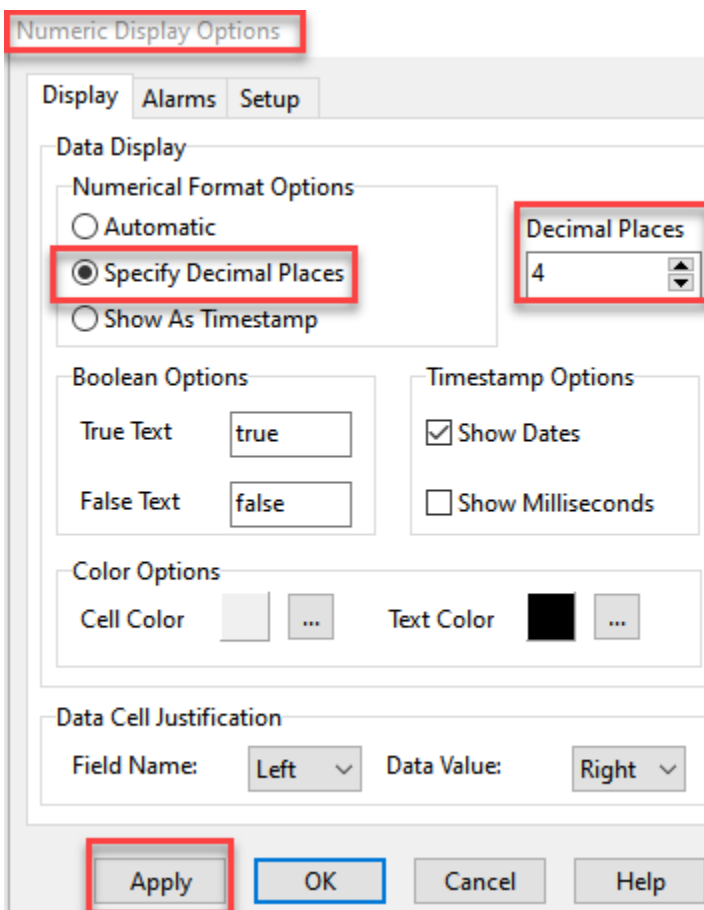
- TimeStamp
- SCANRATE
- LATITUDE
- LONGITUDE
- ELEV_m
- ELEV_ft
- CROP_TYPE
- ApplyAndRestart

Add... Delete Delete All Options... Stop

2) Next, set the number of decimal places to use for latitude and longitude. Right-click on **LATITUDE**, then click **Options**.



The **Numeric Display Options** window will open. Click **Specify Decimal Places** and set **Decimal Places** to 4 and click **Apply**.



Repeat the steps above to set **Decimal Places** for **LONGITUDE** to 4.

3) After specifying the number of decimal places for both latitude and longitude, enter the correct latitude and longitude in decimal degrees using the steps below:

Right-click on **LATITUDE** and select **View/Modify Value...**

ET107 Numeric Display 2: Real Time Monitoring (Connected)

Parameter	Value	Units
RecNum	4	
TimeStamp	021 14:05:50	
SCANRATE	5	
LATITUDE	0.0000	
LONGITUDE	0.0000	
ELEV_m		
ELEV_ft	45	
CROP_TYPE		
ApplyAndRestart	false	

Enter in the Latitude in decimal degrees for the ET107 location, then click the Apply:

View/Modify the Current Value

USER_ENTRY.LATITUDE

41.7350

Apply

Repeat this process to enter the longitude in decimal degrees.

4) Enter the elevation of the station location by right clicking on either the **ELEV_m** or **ELEV_ft** and use the **View/Modify Value** method that was used to enter latitude and longitude. Note that the ETsz instruction must use the elevation in meters, so this GenericET107 program will convert the **ELEV_ft**, if used, into meters for the ETsz instruction. If the **ELEV_m** is used instead, this meter value will be used in the ETsz instruction.

Assuming Turf Grass is the intended crop, leave the **CROP_TYPE** set to 0.

if the crop is Alfalfa, set this **CROP_TYPE** to 1 using the same **View/Modify Value** method as above.

5) Click on the **False** button for **ApplyAndRestart**. This will toggle the button to true, which causes the data logger to restart and recompile the program with the correct values of latitude, longitude, elevation, and crop type needed in order for the ETsz instruction to calculate ET.

ET107 Numeric Display 2: Real Time Monitoring (Connected)

<div>Add...</div> <div>Delete</div> <div>Delete All</div>	<	RecNum	7
		TimeStamp	021 14:08:28
		SCANRATE	5
		LATITUDE	41.7350
		LONGITUDE	111.8340
		ELEV_m	0
		ELEV_ft	4534
		CROP_TYPE	0
	ApplyAndRestart	true <input type="checkbox"/>	

*Formula to Convert Latitude and Longitude to Decimal Degrees:

Latitude and longitude must be entered in decimal degrees (DD). If you need to convert from Degrees/Minutes/Seconds to DD, the conversion formula is:

$$DD = d + (\text{min}/60) + (\text{sec}/3600)$$

For Example:

Latitude 41 Degrees 44 Minutes 7.76 Seconds.

$$44/60 = .733, 7.76/3600 = .002$$

$$41 + .733 + .002 = 41.735$$

Longitude 111 Degrees 50 Minutes 3.80 Seconds

$$50/60 = .833, 3.80/3600 = .001$$

$$111 + .833 + .001 = 111.834$$

DD LATITUDE = 41.735

DD LONGITUDE = 111.834