

## Setting up the Analysis:

Verify that your estimator parameters match these next four screen shots.

The screenshot shows the 'Estimator and Ellipse Parameters' dialog box with the 'Location Estimators' tab selected. The 'Estimator' dropdown is set to 'Maximum Likelihood Estimator'. The 'Use Bearings With No Intersections' checkbox is checked. The 'Accuracy' field is set to 0.000001. The 'Huber/Andrews Constant' field is set to 1.5. The 'Total Iterations' field is set to 60. The 'Help' and 'Close' buttons are at the bottom.

Parameter	Value
Estimator	Maximum Likelihood Estimator
Use Bearings With No Intersections	Checked
Accuracy	0.000001
Huber/Andrews Constant	1.5
Total Iterations	60

The screenshot shows the 'Estimator and Ellipse Parameters' dialog box with the 'Bearing Adjustments' tab selected. The 'Constant Bearing Error (degrees)' section has two unchecked checkboxes: 'Use Standard Deviation' with a value of 2, and 'Use Bias of' with a value of 4.5. The 'Compass' section has one unchecked checkbox: 'Use Declination of' with an empty field. The 'Help' and 'Close' buttons are at the bottom.

Parameter	Value
Constant Bearing Error (degrees)	
Use Standard Deviation	Unchecked (2)
Use Bias of	Unchecked (4.5)
Compass	
Use Declination of	Unchecked (empty)

**Estimator and Ellipse Parameters** [X]

Location Estimators | Error Ellipse

Bearing Adjustments | On Estimate Error

On Failed M-Estimate:

- ☒ Try Maximum Likelihood Estimate
- ☐ Do Nothing

On Failed Maximum Likelihood Estimate:

- ☒ Use Best Biangulation
- ☐ Use Arithmetic Mean
- ☐ Use Geometric Mean
- ☐ Use Harmonic Mean
- ☐ Do Nothing

Help Close

**Estimator and Ellipse Parameters** [X]

Bearing Adjustments | On Estimate Error

Location Estimators | Error Ellipse

Error Ellipse:

- ☒ Calculate Ellipse
- ☐ Maximum Ellipse Size: 1.5
- Plotting Rotation Angle: 4
- Area Units: square meters

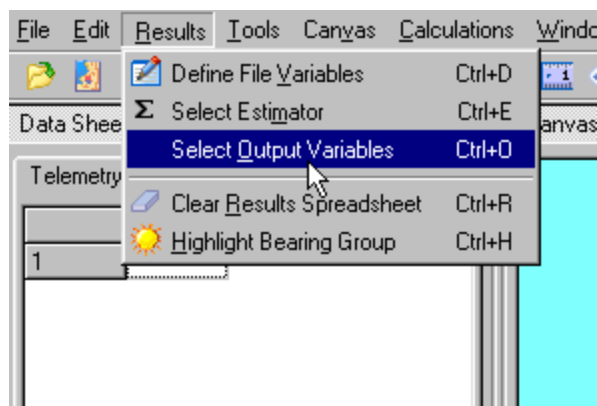
Confidence Distribution:

- ☒ Chi-square ☐ Adjusted F ☐ F
- Confidence Percentage: 95

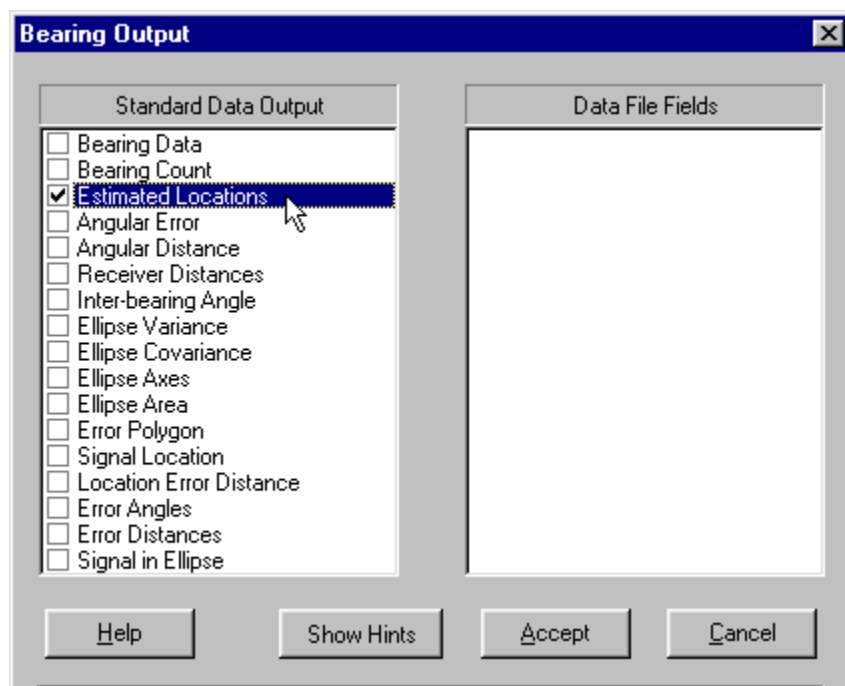
Help Close

**Analyzing Data and Exporting in LOAS:**

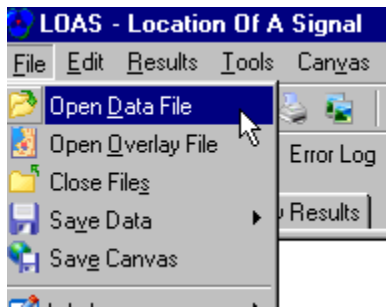
1) Open LOAS and click on the "Select Output Variables" main menu item.



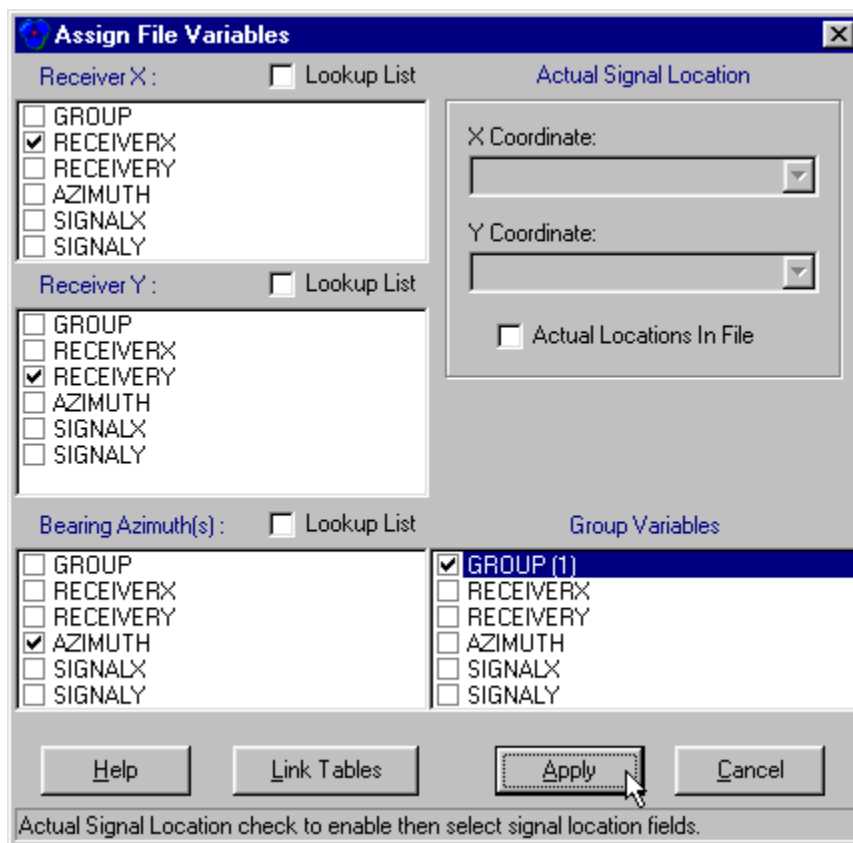
2) Select at least the "Estimated Locations" standard output.



3) Open the data file "Sample.dbf" enclosed in the ZIP file.



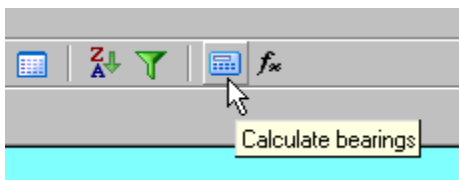
4) Select the below shown fields that represent the Receiver locations and the bearing and group variable.



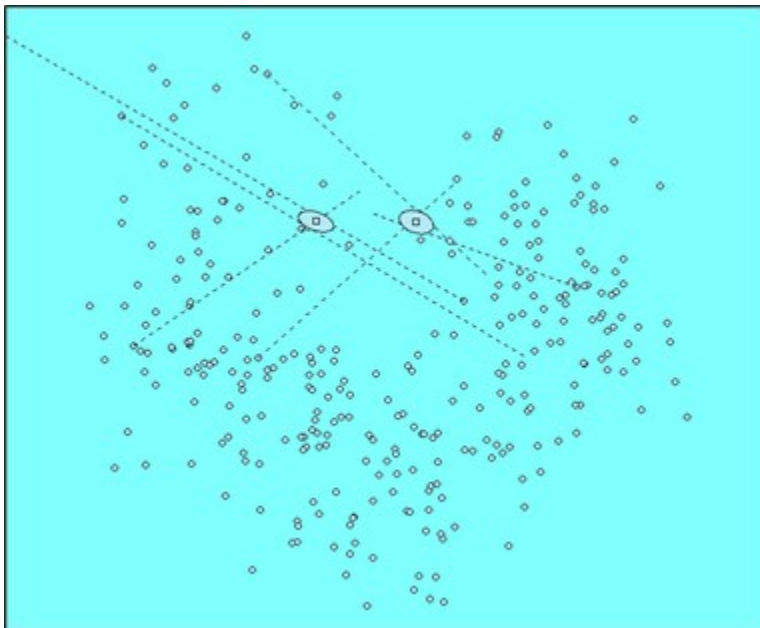
5) Highlight a section of the sheet, here shown are two records being selected, or the full sheet by left clicking in the upper left \*blank\* cell.

Telemetry Data		Telemetry Results	
	GROUP	RECEIVERX	RECEIVERY
1	0.0000	422.2705	13.2705
2	0.0000	-273.9715	-13.2705
3	0.0000	-253.9380	48.9380
4	1.0000	174.6252	-13.2705
5	1.0000	-546.8608	-10.8608
6	1.0000	-571.5300	39.5300
7	2.0000	524.9146	21.9146
8	2.0000	24.0250	-33.0250

6) Click the "calculate button"



7) You should then see this.



8) Select the "Telemetry Results" tab to view the data output.

**LOAS - Location Of A Signal**

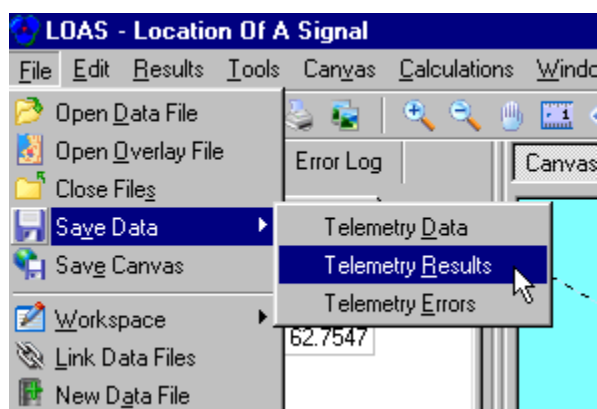
File Edit Results Tools Canvas Calc

Data Sheets Legend Error Log

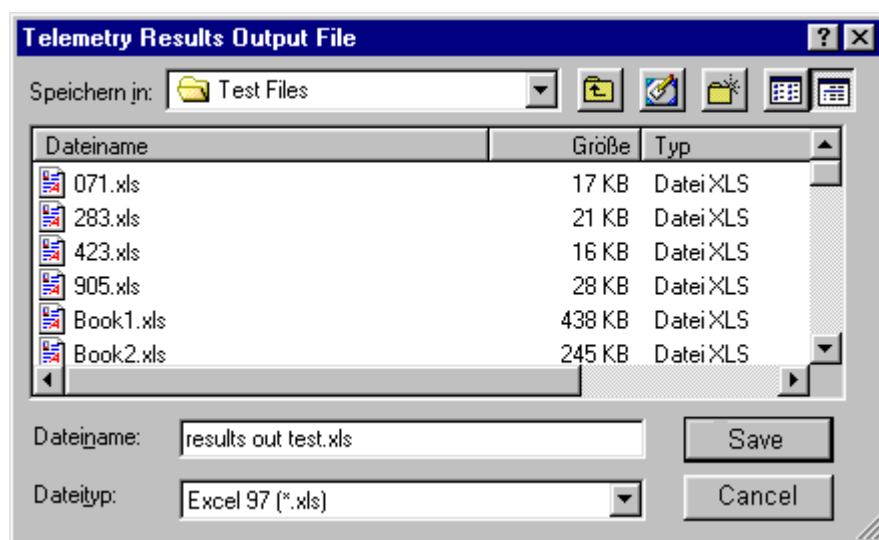
Telemetry Data Telemetry Results

	X_Estimate	Y_Estimate
1	71.7306	161.3724
2	-147.4522	162.7547

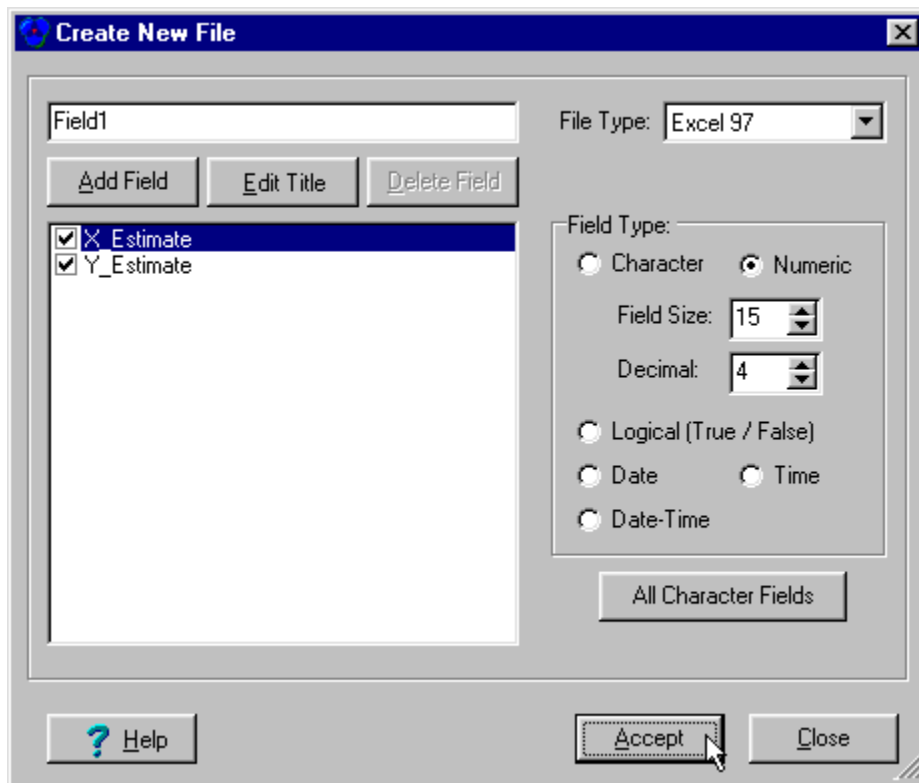
9) Select the "Save Data" menu item from the "Files" menu, then select the "Telemetry Results" sub menu item.



10) Type in a file name to save your data.



11) In the "Create New File" Window, click the "Accept" button



12) This is how the output results now look in a spreadsheet.

	A	B	C	D
1	X_Estimate	Y_Estimate		
2	71.7306	161.3724		
3	-147.4522	162.7547		
4				
5				

## Printing the Manual:

1) Left click on any help topic, then right click. Select the "Print All" option in the popup menu.

