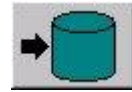




3 INPUT

The Input Module is used to input a UKOOA P2 raw dataset, perform integrity and format checking, and create all the necessary database files to evaluate the data and process the line.



Select *Execute | Input P2/9x* from the main menu or click on the *Input* button to display the dialog as seen in Figure 3.1 below.

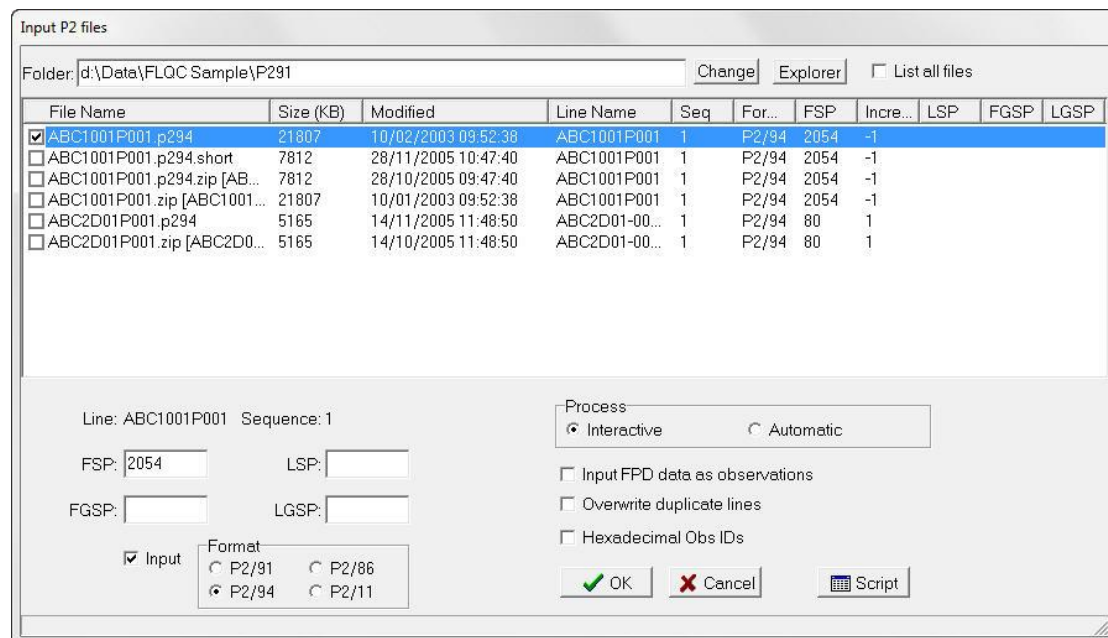


Figure 3-1

3.1 Files

The initial folder whose contents are displayed is that which has been specified as the project P2 folder. Click on the *Browse* button to select files from a different location.

Only valid UKOOA P2/91 and P2/94 files are displayed i.e. the first record in the file must commence with "H0000".

3.1.1 Zip Files

P2 files within zip archives can be input without unzipping. Files within an archive will be listed in the file column in the format *archive name [P2 file name]*.

Note: To select a file for input check the checkbox on the left of the list. Multiple files may be selected (see Duplicate Lines below).



3.1.2 Multiple Selection

To flag multiple files for input, as an alternative to checking each individual checkbox it is possible to highlight all required files then check the *Input* checkbox.

3.1.3 Input Script

As an alternative to checking the files displayed, a script can be used to specify files and FGSP-LGSP range to input. To use this option set the click the *Script* button. The format is comma separated as follows:

Filename,FGSP,LGSP

The filename can be either the filename only or the full path. If only the filename is specified then the folder as appears at the top of the Input dialog will be assumed.

The FGSP and LGSP parameters are described below under 3.2.

Other input parameters should be set before clicking the *Script* button.

Only uncompressed files can be input using the script option.

3.1.4 Viewing a File

To view a file right click on it and from the popup menu select *View* to view the whole file or *View Header* to view the header. The contents of the browser may be saved by right clicking and selecting *Save As* from the popup menu.

3.1.5 Explorer

Click on the *Explorer* button to view the P2 folder in Windows Explorer.

3.2 Line Parameters

For each file selected, the following parameters may optionally be specified by first highlighting the required file then entering the parameters:

- First SP:* The first shotpoint to input. If left blank input will start from the first shotpoint in the file.
- Last SP:* The last shotpoint to input. If left blank input will end with the last shotpoint in the file.
- First Good SP:* The default first shotpoint for the Network Adjustment, Output and QC modules. If 0, or left blank or is outside the range of the shotpoints found in the file then the default will be the first shotpoint.
- Last Good SP:* The default last shotpoint for the Network Adjustment, Output and QC modules. If 0, or left blank or is outside the range of the shotpoints found in the file then the default will be the last shotpoint.
- Format:* Specify the file format. If a different format from the one specified is detected the user will be prompted to confirm the format if Interactive Processing is specified.
-



Note: the file format is initially detected from the P2 header, therefore this should only be changed if the header is known to be incorrect in this respect.

3.3 Duplicate Lines

If a line already exists in the database the user may choose between overwriting that line's database or creating a new database for that line by checking or unchecking, respectively, the *Overwrite Duplicate Lines* checkbox.

3.4 Automatic/Batch Processing

Automatic Processing, i.e. processing from P2 to P1, may be carried out on one or more files if the individual SeisPos module parameters have been previously set interactively. It follows that Automatic Processing cannot be done on the first line of a project.

To implement Automatic Processing set the Process to *Automatic* by clicking on the radio button.

Batch Processing, i.e. inputting or processing more than one line, can be carried out by selecting more than one file to input. If multiple lines are selected and the *Process* is set to *Interactive* then all selected lines will be input into the database only and not processed.

Once *Automatic* Processing has started it may be stopped by selecting from the main menu *Execute | Stop Batch Processing*.

3.5 Field Positioning Data

Field Positioning Data (FPD) ,i.e. node positions recorded in the H12@0 records, may be input as observations by checking the *Input FPD data* checkbox. This may be necessary if no raw data has been recorded to position a required network node, e.g. a tailbuoy. The observation types will be either Latitude and Longitude or Easting and Northing, and identified as types FPD EASTING and FPD NORTHING. If the observations are geographical coordinates then the conversion to grid coordinates will take place automatically in the same way as GPS observations.

3.6 Hexadecimal Observation IDs

There may arise occasions when the observations in the P1 are numbered using hexadecimal numbering (1 to F). Check the *Hexadecimal Obs Ids* checkbox to support this situation.

This option is checked by default when the project acquisition system is set to QMARINE.

3.7 Execution

Click the *OK* button to start the input. For each line input, if the line name found in the file is identical to one already in the database One of the following will occur:

If the *Overwrite Duplicate Lines* checkbox is checked the existing line will be deleted



and the new line input.

If the *Overwrite Duplicate Lines* checkbox is not checked the new line will be renamed with “_#” appended where # is a sequential number starting with 1 and incrementing each time a duplicate name is found in the database. The actual line name in the header records will not be changed.

After clicking the OK button Input will commence, and the input log, as shown in Figure 3.2, updated onscreen. The following controls are available from the toolbar on the Log window:

Stop: Abort input.

Pause: Pause input – useful for browsing the log. The *Pause* button changes to a *Resume* button.

Resume: Resume input.

Close: Close the log window once input has completed/aborted.

CPU: Control the CPU priority of the input process.

If the input is aborted for an reason automatic processing, if specified, will no longer be executed.

Note: Raw GPS data is not input



3.8 Log

The following details written to the log as input proceeds:

SeisPos version
Date and time
P2 format
Creation of files
Warnings
Format violations
Shot number

On completion of input, the total number of warnings and format violations will be written to the log, and the date and time of completion.

Node: On certain installations of Windows 95/98, due to a known operating system bug, the log is limited to 64KB in size. Under these circumstances only the last 64KB of the log will be shown. The complete log can still be viewed from the main menu under *View | Log*.

3.9 Integrity Checking

Warnings will be written to the log for the following header and data integrity failures:

Duplicate nodes
Duplicate observations
Observations to undefined nodes
Absence of transformation between satellite datum and survey datum
UTM projection zone
Non co-location of streamer depth sensors with compasses
Mismatch of redundant information:
 No. vessels
 No. streamers
 No. sources
 No. buoys
 No. nodes

Non-critical warnings are suspended after 1000 warnings have been reported.



3.10 Format Checking

Format violations will be written to the log. Although not all format violations are critical to the processing of the line, rigorous checking is implemented in strict accordance with the UKOOA formats. Some format inconsistencies have been overcome by allowing for all possible implementations of the format where these shortcomings have been found.

Format checks are provided for:

Missing records

Field placement within the record

Data type

Illegal values

Violations are reported in terms of the line number in the file and the column numbers within the record where the violations are detected. The record itself appears immediately after the violation report.

If any format violations are found in the header, this will be flagged, with the option to abort the input.

Only the first 1000 format violations are logged. This is considered sufficient to check the header and the first shot of the line, avoiding the creation of an excessively large log.

```
Input D:\Data\P291\seq155.short.p294
Stop Resume Close Lo cpu Hi
created D:\Data\Database\STBEXT-P2175-155\393.dat...Obs 630
WARNING: H620# record duplicate id node 334 VTRIGPS
created D:\Data\Database\STBEXT-P2175-155\10188.dat...Obs 631
created D:\Data\Database\STBEXT-P2175-155\20188.dat...Obs 632
created D:\Data\Database\STBEXT-P2175-155\10189.dat...Obs 633
created D:\Data\Database\STBEXT-P2175-155\20189.dat...Obs 634
created D:\Data\Database\STBEXT-P2175-155\10190.dat...Obs 635
created D:\Data\Database\STBEXT-P2175-155\20190.dat...Obs 636
created D:\Data\Database\STBEXT-P2175-155\10191.dat...Obs 637
created D:\Data\Database\STBEXT-P2175-155\20191.dat...Obs 638
created D:\Data\Database\STBEXT-P2175-155\10192.dat...Obs 639
created D:\Data\Database\STBEXT-P2175-155\20192.dat...Obs 640
Input shot 4131
FORMAT VIOLATION: line 1698 col [63,63]
T6202019030031117.767N0061557.942E 47.80010311151831 9a 011812350
FORMAT VIOLATION: line 1700 col [36,36] [37,40] [41,41] [42,45] [46,46] [47,50] [51,51] [52,55] [56,73]
T6212018921.0411.5311.54711.6621.40 6.1 3.533816.20.41812350
FORMAT VIOLATION: line 1701 col [36,36] [37,40] [41,41] [42,45] [46,46] [47,50] [51,51] [52,55] [56,73]
T6212019030.3230.4880.91812.4421.40 1.8 1.2002 1.80.41812350
FORMAT VIOLATION: line 1702 col [36,36] [37,40] [41,41] [42,45] [46,46] [47,50] [51,51] [52,55] [56,73]
```

Figure 3-2

3.11 Observation Groups

During input, observations are grouped according to a) the positioning system



identifier recorded in the H52 records, and b) the observation type.

Additional groups are created for observations related to the streamers, these typically comprising the acoustic networks. These groups are formed by dividing the streamer into three equal lengths and grouping together all non-inline observations in each length. A further group comprises all inline observations i.e. those whose *AT* node and *TO* node are on the same streamer.

3.12 RSO Projections

It is common for the angle from Rectified to Skew (a) to be logged in the P2 header as the angle from Skew to Rectified (b), which is very close to the azimuth of the Initial Line. The *Input* module detects this and converts from (b) to (a).