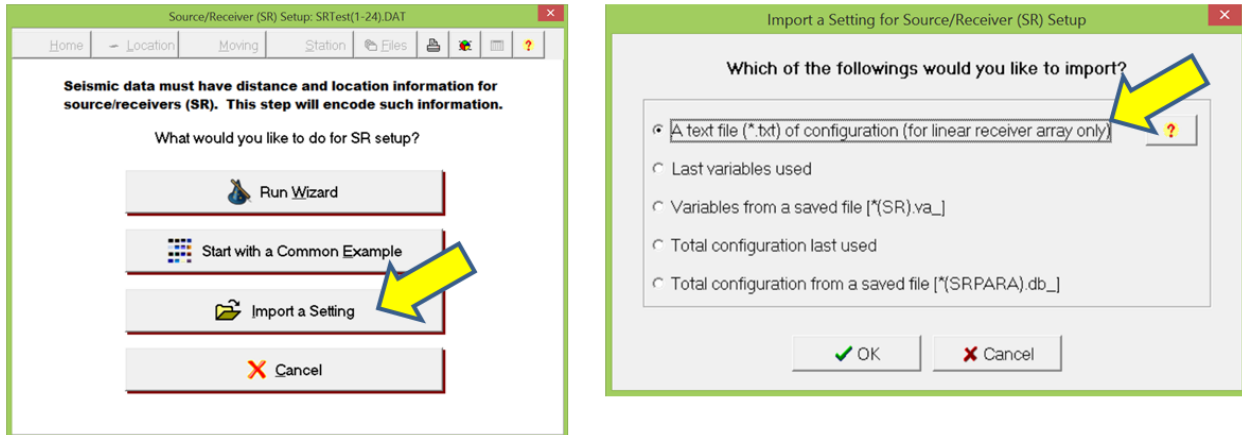


## Source/Receiver (SR) Setup By Importing a Text File (\*.TXT)

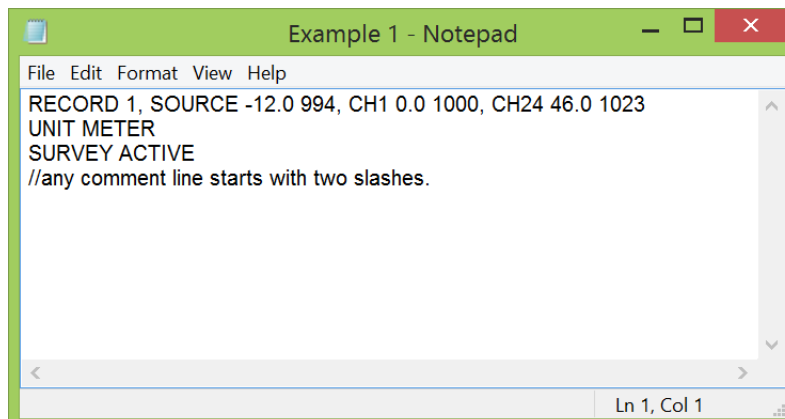
When clicking the 'Import a Setting' option in the front page of the SR setup dialog shown below left, another dialog pops up (below right). On top of this dialog, there is now a new option added that enables user to import a text file previously prepared. The other four (4) options listed in the box are explained in section 2.3 of the user guide "Setup Source/Receiver (SR)." This new option can be used only for surveys using the linear receiver array. It is, however, not limited by survey type, which can be one of the following three types; active, passive, and active-passive combined surveys.



This new option applies the SR setup to the input seismic data according to the scheme specified in the imported text file where the configuration of source and receivers (SR) is listed according to the format described below. The format consists of several fields characterized by unique keywords with each field separated by a comma (','),. Each keyword is then accompanied with one or two numerical values as explained below by using three different examples.

### Example 1 (Specification with Both Distance and Station Number)

Following is an example text file created by using Windows Notepad that has only one line of SR specification and other supplementary specifications of distance unit and survey type, both of which are optional:



**RECORD** is the keyword to specify a record number (1). It should be always accompanied with one record number.

**SOURCE** is the keyword to specify location of the source for this particular record number. It should be accompanied with, at least, one number that represents the surface distance (-12.0) in meters or feet. (The distance unit specification—for example, meters or feet—is made by a separate line as described below). It can also be accompanied with a second number (994) that represents the station number corresponding to the source location (-12.0). It should be noted that station numbers are always consecutive between the two adjacent receiver locations. Although one receiver spacing can be a number of any value (e.g., 2.0), the corresponding station interval is always one unit (1).

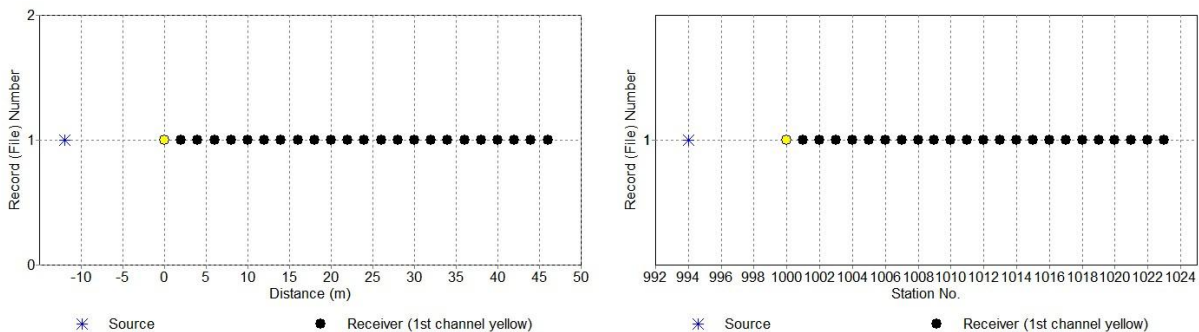
**CH** is the keyword to specify a channel number and corresponding location. CH1 represents the channel #1, while CH24 represent the channel #24. There is no space between the 'CH' and the channel number. This channel-number keyword is accompanied with, at least, one number that represents the surface distance (e.g., 0.0), which can optionally be followed by a second number that represents the corresponding station number(e.g., 1000). There should be, at least, two fields of channel specification separated by comma (,) between them. The specifications for the in-between channels will then be linearly interpolated based on these two bounding specifications. The channel specifications in the above example indicate that each channel's surface location increases by 2.0 m in distance (i.e., a 2.0-m receiver spacing), while it increases by 1 in station number toward increasing channel numbers.

**UNIT** is the keyword to specify distance unit either in meters (METER or meter) or in feet (FEET or feet). This specification is optional and, if this line is missing, the default unit is the same as the unit specified in the input seismic data. If this information is missing in the seismic data, then the default unit is FEET.

**SURVEY** is the keyword to specify the type of MASW survey among the three available ones; active (ACT or ACTIVE), passive (PAS or PASSIVE), and active-passive combined (COM or COMBINED) survey types. If this keyword is missing, the default survey type is ACTIVE. Both active and combined surveys require the 'SOURCE' specification included in each SR line after the 'RECORD' specification as illustrated in the above example, while the passive survey should not include the 'SOURCE' specification.

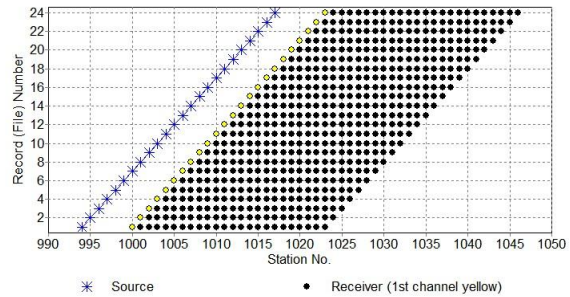
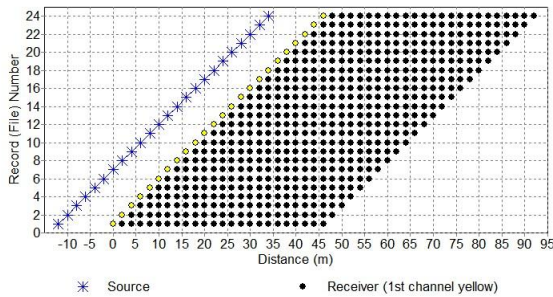
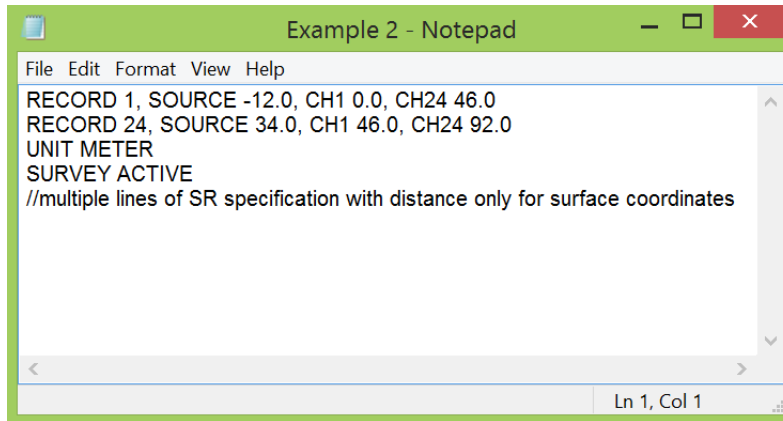
Any line that starts with two slashes ('//') indicates a comment line, and is ignored during the import.

The source/receiver (SR) configuration constructed by the above example file is graphically displayed below with a surface coordinate of distance (left) and station number (right), respectively.



### Example 2 (Specification with Distance Only)

Following is another example of text file that has multiple lines of SR specification with two bounding record numbers (1 and 24). The SR configurations for those records in-between these two numbers are linearly interpolated in surface coordinates for both source and receivers. In addition, only distances are specified for both source and receivers without station numbers. In this case, the program will assign station numbers automatically with a convention of '1000' for zero ('0') distance. The resultant SR configuration for all 24 records in an input seismic data is displayed below with distance (left) and station (right) surface coordinates used, respectively.



### Example 3 (Specification for Passive Survey)

Following is another example that is identical to the previous case of active survey (i.e., Example 2), but without 'SOURCE' specifications because survey type is specified as 'PASSIVE' in the last line. The resultant SR configuration is displayed below with distance (left) and station (right) surface coordinates used, respectively. It shows locations of the receivers only.

# SR Setup From a Text File

