SEISMOGRAPH

File Formats

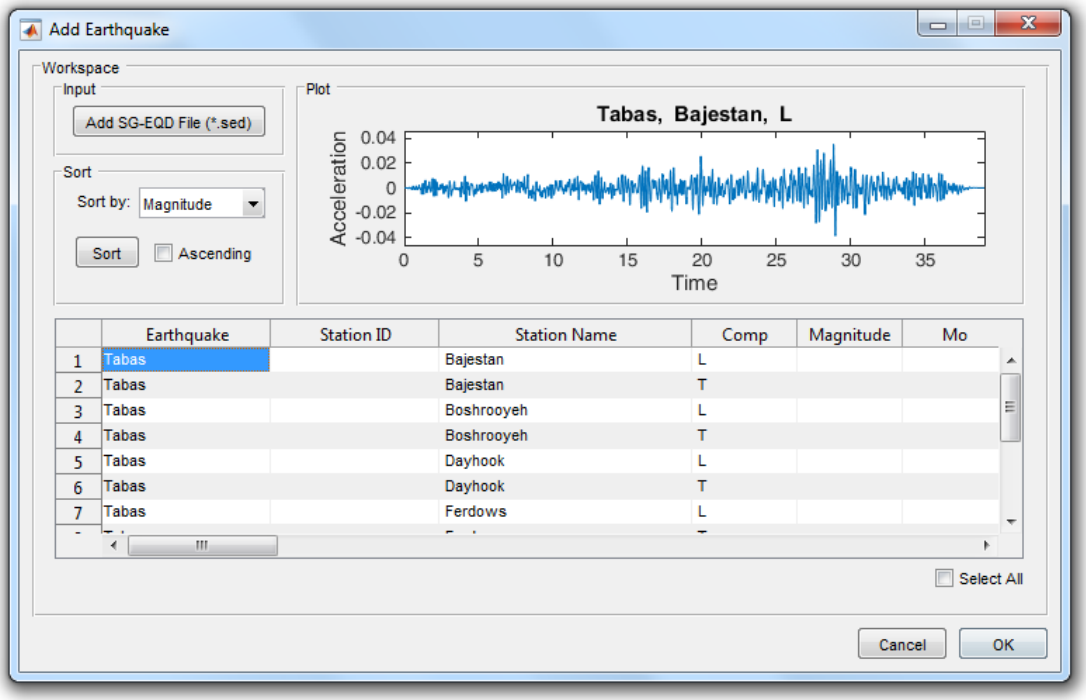
Scale Tool File Formats

Supported file formats are listed in the following Table.

Load Project	Seismograph Scale Project (*.ssp)	
Save Project	Seismograph Scale Project (*.ssp)	
Import EQ	SG Earthquake Dataset (*.sed)	
	No Header Text Files (*.txt, *.acc, *.cor)	
	data Files (*.dat)	
	AT2 Files (*.AT2)	
	K-Net Files (*.NS, *.EW, *.UD)	
	BHRC Files (*.ASC)	
	RAN Files (*.asc)	
	MATLAB Files (*.mat)	
Export Data	All Available Data	Excel Files (*.xlsx)
	Spectrum Data	Text Files (*.txt)
	Corrected EQ	SG-EQD Files (*.sed)
		Text Files (*.txt)
	QuickSave Images	PNG Files (*.png)

1. SG-EQD Files (*.sed)

Seismograph Earthquake Database file. Multiple selections are enabled.



2. No Header Text Files (*.txt, *.acc, *.cor)

Space or *Tab* delimited "Time and Acceleration (g)" without any header.

```
0.000000  0.001656
0.020000  0.005453
0.040000  0.007242
0.060000  0.003412
0.080000  0.000657
0.100000  0.002645
0.120000  0.010092
0.140000  0.009961
0.160000  -0.003124
0.180000  -0.006525
0.200000  0.003635
0.220000  0.008488
0.240000  0.005314
0.260000  -0.003319
0.280000  -0.000943
```

Note: You can include some basic information in the file's name, separated by a comma: *EventName, StationName, Component.txt* (OR: *EventName, Component.txt*)

3. data Files (*.dat)

Includes conventional “Time and Acceleration (g)” format and “Multiple Acceleration (g) per Line” format with appropriate header.

```
The Imperial Valley (USA) earthquake of October 15, 1979.
Source: PEER Strong Motion Database
Recording station: USGS STATION 5115
Frequency range: 0.1-40.0 Hz
Time[s] Accel[g]
0.0000-0.0002
0.0100-0.0002
0.0200-0.0002
0.0300-0.0002
0.0400-0.0003
0.0500-0.0004
0.0600-0.0005
0.0700-0.0005
0.0800-0.0005
0.0900-0.0005
```

```
Original File : '3154.V1', Eartquake Name : bam
Unit : G ,NPTS : 6656 ,dt : 0.005, Component No : 3
Station Name : Bolvard, Station Altitude : 2088
Date : 1382/10/5 (2003/12/26), Time : 01:56:56
Distance : 226.2 km
0.000826292 0.000826292 0.000826292 0.000826292 0.000826292
0.000338012 0.000338012 0.000338012 -0.000150268 -0.000150268
-0.000638548 -0.000638548 -0.000638548 -0.000638548 -0.000638548
-0.000638548 -0.000638548 -0.000638548 -0.000638548 -0.000150268
-0.000150268 -0.000150268 -0.000150268 -0.000150268 -0.000150268
-0.000150268 -0.000150268 -0.000150268 -0.000150268 -0.000150268
-0.000150268 -0.000150268 -0.000150268 -0.000150268 -0.000150268
0.000338012 0.000338012 0.000338012 0.000826292 0.000826292
0.000826292 0.000826292 0.000826292 0.000826292 0.000826292
0.000826292 0.000338012 0.000826292 0.000338012 0.000826292
```

4. AT2 Files (*.AT2)

PEER NGA STRONG MOTION DATABASE RECORD with 2 different headers.

```
PEER NGA STRONG MOTION DATABASE RECORD
Chi-Chi Taiwan, 9/20/1999, TCU051, E
ACCELERATION TIME SERIES IN UNITS OF G
NPTS=  18000, DT=   .0050 SEC,
.2193271E-03   .2192234E-03   .2191184E-03   .2190135E-03   .2189122E-03
.2188183E-03   .2187098E-03   .2185954E-03   .2185079E-03   .2184307E-03
.2183141E-03   .2181798E-03   .2180790E-03   .2179663E-03   .2178402E-03
.2177367E-03   .2176845E-03   .2175442E-03   .2172707E-03   .2171355E-03
.2172441E-03   .2173205E-03   .2170630E-03   .2164659E-03   .2161907E-03
.2164483E-03   .2165513E-03   .2165054E-03   .2165307E-03   .2162205E-03
.2156891E-03   .2156554E-03   .2162138E-03   .2162340E-03   .2154496E-03
.2149570E-03   .2151138E-03   .2152647E-03   .2149053E-03   .2146965E-03
.2147665E-03   .2145276E-03   .2136976E-03   .2133585E-03   .2144863E-03
.2151383E-03   .2139988E-03   .2133134E-03   .2144631E-03   .2156030E-03
.2153280E-03   .2142295E-03   .2138328E-03   .2137375E-03   .2132531E-03
```

```
PEER NGA STRONG MOTION DATABASE RECORD
CAPE MENDOCINO 04/25/92 1806, SHELTER COVE AIRPORT, 000 (CDMG STATION 89530)
ACCELERATION TIME HISTORY IN UNITS OF G
1800    0.0200    NPTS, DT
-0.231944E-02   0.491636E-03   0.824177E-03   0.177574E-02   0.184781E-02
-0.417469E-02  -0.937363E-02  -0.585389E-02   0.105474E-02   0.520889E-02
0.637675E-02   0.215614E-02  -0.162089E-02  -0.120354E-02  -0.247237E-02
-0.141047E-03   0.377315E-02   0.529741E-02   0.195943E-02  -0.367635E-02
0.194592E-02   0.500499E-02  -0.258502E-02  -0.232766E-02   0.301136E-02
0.701462E-03   0.259296E-02   0.232768E-02  -0.255495E-02  -0.162911E-02
0.778771E-03  -0.529149E-02  -0.516854E-02  -0.123395E-02  -0.454438E-04
0.716363E-02   0.498423E-02  -0.120674E-02  -0.713102E-02  -0.691452E-02
-0.466586E-02   0.408155E-02   0.115292E-01   0.269436E-02   0.505266E-02
0.147322E-02  -0.261272E-02  -0.520005E-02  -0.559749E-02   0.261137E-02
0.315737E-02   0.255940E-02  -0.207299E-02  -0.167844E-02  -0.345178E-03
```

5. K-Net Files (*.NS / *. EW / *.UD)

Includes standard K-Net “Multiple Acceleration (gal) per Line” format.

```
Origin Time       2016/04/14 21:26:00
Lat.              32.7
Long.             130.8
Depth. (km)       10
Mag.              6.4
Station Code      EHM001
Station Lat.      33.9810
Station Long.     133.5490
Station Height(m) 63
Record Time       2016/04/14 21:28:03
Sampling Freq(Hz) 100Hz
Duration Time(s)  60
Dir.              N-S
Scale Factor      7845(gal)/8223790
Max. Acc. (gal)   1.195
Last Correction   2016/04/14 21:28:03
Memo.
-3090    -3090    -3071    -3051    -3037    -3036    -3051    -3071
-3094    -3122    -3152    -3176    -3207    -3246    -3277    -3296
-3304    -3299    -3295    -3287    -3268    -3245    -3227    -3215
-3204    -3194    -3180    -3157    -3138    -3118    -3090    -3064
-3040    -3003    -2972    -2959    -2953    -2952    -2959    -2971
-2992    -3017    -3036    -3049    -3059    -3064    -3068    -3078
-3088    -3088    -3087    -3098    -3099    -3086    -3071    -3071
-3068    -3060    -3056    -3061    -3060    -3056    -3057    -3052
```

6. BHRC Files (*.ASC)

BHRC “One Acceleration (gal) per Line” format.

```
EVENT NAME: IR201711121818
EVENT ID: IR201711121818
EVENT DATE YYYYMMDD: 20171112
EVENT TIME HHMMSS: 181816
EVENT LATITUDE DEGREE: 34.81
EVENT LONGITUDE DEGREE: 45.91
EVENT DEPTH KM: 18
HYPOCENTER REFERENCE: BHRC
MAGNITUDE W: 7.3
MAGNITUDE W REFERENCE: BHRC
MAGNITUDE L:
MAGNITUDE L REFERENCE: BHRC
FOCAL MECHANISM:
NETWORK: I1
STATION CODE: AAD
STATION NAME: Abadan
STATION LATITUDE DEGREE: 30.3568
STATION LONGITUDE DEGREE: 48.29
STATION ELEVATION M: 20
LOCATION:
SENSOR DEPTH M: 0
VS30 M/S:
SITE CLASSIFICATION EC8:
MORPHOLOGIC CLASSIFICATION:
EPICENTRAL DISTANCE KM: 541.9974
EARTHQUAKE BACKAZIMUTH DEGREE: 336.287
DATE TIME FIRST SAMPLE YYYYMMDD HHMMSS:
DATE TIME FIRST SAMPLE PRECISION:
SAMPLING INTERVAL S: 0.005
NDATA: 9362
DURATION S: 46.81
STREAM: HNE
UNITS: cm/s^2
INSTRUMENT: sensor = Unknown [Unknown] | digitizer = Unknown [Unknown]
INSTRUMENT ANALOG/DIGITAL: D
INSTRUMENTAL FREQUENCY HZ:
INSTRUMENTAL DAMPING:
FULL SCALE G:
N BIT DIGITAL CONVERTER:
PGA CM/S^2: 8.4248
TIME PGA S: 13.925
BASELINE CORRECTION: BASELINE NOT REMOVED
FILTER TYPE:
FILTER ORDER:
LOW CUT FREQUENCY HZ:
HIGH CUT FREQUENCY HZ:
LATE/NORMAL TRIGGERED: NT
DATABASE VERSION: IRANCA 1.0
HEADER FORMAT: IRANCA 1.0
DATA TYPE: ACCELERATION
PROCESSING: converted to cm/s^2
DATA TIMESTAMP YYYYMMDD HHMMSS:
DATA LICENSE: http://smd.bhrc.ac.ir/Portal/en/pages/show/copyrightsen & http://sm
DATA CITATION: https://ismn.bhrc.ac.ir
DATA CREATOR: ISMN, BHRC
ORIGINAL DATA MEDIATOR CITATION: Iran Strong Motion Network http://ismn.bhrc.ac.i
ORIGINAL DATA MEDIATOR: Iran Strong Motion Network http://ismn.bhrc.ac.ir/en
ORIGINAL DATA CREATOR CITATION: Iran Strong Motion Network http://ismn.bhrc.ac.ir
ORIGINAL DATA CREATOR: network: I1 (Iran Strong Motion Network); owner: Road,Hous
USER1:
USER2:
USER3:
USER4: The original file number from BHRC is 7342.V1
USER5:  - Orientation: 90
0.246235
0.727160
0.246235
0.246235
0.246235
0.246235
0.246235
0.246235
0.246235
```

7. RAN Files (*.asc)

RAN “One Acceleration (nm/s^2) per Line” format.

```
############################################################
# NetCode: IT      Station: POZM    Channel: HNE
# Latitude:  40.8239 Longitude:  14.1435 elevation:  151.00 m
# Reference time: 2024:141:18: 9:58.595
# First sampl:  0.000000 sec
# points:     24555
# sampling interval:   0.005 sps
# Units: nm/sec/sec
# Component azimuth:  90.0000 degree clockwise from nord
# Component incident angle:  90.0000 degree from vertical
############################################################
  -111940848.
  -112255424.
  -112305096.
  -112238872.
  -112191560.
  -112201024.
  -112191560.
  -111900632.
  -111784736.
  -111706688.
  -111678304.
  -111772912.
  -111810752.
  -112018896.
  -112132432.
  -112191560.
  -112203392.
  -112106416.
  -112085128.
```

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earthquake engineering software