

EQSEARCH Version 3.xx (for Windows)

A COMPUTER PROGRAM FOR THE ESTIMATION OF PEAK ACCELERATION FROM CALIFORNIA HISTORICAL EARTHQUAKE CATALOGS

EQSEARCH, a computer program for the estimation of peak acceleration from historical California earthquake catalogs, is now available for Windows 95/98/NT/2000/XP. The program uses the familiar Windows environment to perform searches of a historical-earthquake catalog. The Windows interface for EQSEARCH was written and compiled in Visual Basic 6.0.

Search parameters (i.e., geographical limits, limiting dates, and limiting magnitudes) are specified and the user selects one of the available peak acceleration-attenuation relations. The selected attenuation-relation is used to estimate the peak horizontal ground acceleration that may have occurred at a specified site assuming that the energy from each of the earthquakes in the catalog that are found to be within a specified search area came solely from their epicenter locations. Repeatable High Ground Accelerations can be estimated using the method of Ploessel and Slosson (1974).

For each historical epicenter in the search area, EQSEARCH prints data-source, latitude, longitude, date, time, depth, magnitude, computed site-acceleration, computed site-Modified-Mercalli-Intensity, and the approximate epicenter-to-site distance in both miles and kilometers. This latest version of EQSEARCH reads the entire catalog into memory in one step to facilitate output sorting.

The program is shipped with a preliminary epicenter file that consists of supplemented data from an abbreviated

(M=4.0 and above) and modified version of the published California Division of Mines and Geology earthquake catalog for California. The catalog that is searched by EQSEARCH is updated semi-annually using the U.S. Geological Survey's Earthquake Data Base System. The catalog updates are available by e-mail, twice a year, for a cost of \$20.00 + tax for each update.

The Windows interface creates graphical output including earthquake recurrence curves and simple maps of epicenter locations. A User's Manual is provided with the EQSEARCH program to explain the operation and options of the program.

Besides its ability to use the familiar Windows interface, Version 3.xx offers improvements over previous versions. For example, graphic capabilities are now part of the program, so plots and maps can be generated directly by the program. If the user has the MapViewer program, EQSEARCH can generate a data file that can be used by MapViewer to create more-detailed epicenter maps. In addition, the user is given the option of sorting output by magnitude or distance. Median and median-plus-or-minus any number of standard deviations ground motions can be computed. Ken Campbell's updates and addenda to his Campbell (1997) attenuation relation and the new Bozorgnia, Campbell, and Niazi (1999) attenuation relation are also included.

To use EQSEARCH, you should have a Pentium computer with at least 128 MB of memory running Windows 95/98/NT/2000/XP. The program uses Windows compatible printers to generate program output. If you want to license the program, please use the order form at the bottom of this page. If you have any questions, please contact us. (Web site address: <http://thomasblake.com>)

Please make check payable to:

THOMAS F. BLAKE
4568 VIA GRANDE
THOUSAND OAKS, CA 91320-6712
(805) 499-1249 (fax)
(805) 499-5266 (voice)
Web site address: thomasblake.com

- _____ Upgrades from EQSEARCH (v. 2.20) \$95.00 each
- _____ Upgrades from EQSEARCH (v. 2.xx or lower) \$135.00 each
- _____ Branch-office upgrades (if already licensed with v. 2.20) \$80.00 each
- _____ Branch-office upgrades (if already licensed with v. 2.00 or lower) \$115.00 each
- _____ Copy(ies) of EQSEARCH, Windows Version (With User's Manual) \$525.00 each
- _____ Branch-office copies of EQSEARCH (with User's Manual) \$275.00 each
- _____ Copy(ies) of MapViewer program (\$199.00 with EQSEARCH license) (\$229.00 each, if licensed separately)
- _____ E-mail update of earthquake catalog \$20.00 each (Avail. Feb. & Aug. each year)

Prepayment required.

Amount enclosed: \$ _____

(Be sure to include 8.25% sales tax and \$8.00 shipping)
(Previous serial number for upgrade or branch office copy)

NAME: _____ EVENING PHONE: _____

COMPANY: _____ PHONE: _____

ADDRESS: _____ FAX: _____

CITY: _____ STATE: _____ ZIP+4: _____

E-MAIL ADDRESS: _____

SAMPLE INPUT SCREEN

EQSEARCH _ □ ×

Job Name (15 Character Max)

Job Number (15 Character Max)

Site Latitude (deg)	Site Longitude (deg)	Starting Year	Ending Year	Min. Mag.	Max. Mag.	
34.4708	119.6917	1800	1999	4.0	9.0	<input type="button" value="About"/>

Earthquake Catalog File Name (.DAT)

New **Write MapViewer Files to Disk**

Attenuation Relation File Name (.ATN)

New

Attenuation Relation Name **Output File Name**

New

Sorting of Output Listing

Sort Output by Distance

Sort Output by Magnitude

Do Not Sort Output

Search Options

Radius Search Rectangular Search

Radius (mi)

Latitude (deg)	Minimum <input type="text" value="32.7500"/>	Maximum <input type="text" value="34.7500"/>
Longitude (deg)	Minimum <input type="text" value="117.7500"/>	Maximum <input type="text" value="119.7500"/>

Soil Cond. (For Some Atten. Relations)

Deep Soil Shallow Soil (Bedrock)

Median or Sigma Accel.

Median Sigma (Number)

Assumed Source Type

SS DS BT

RHGA Factor

PGA RHGA

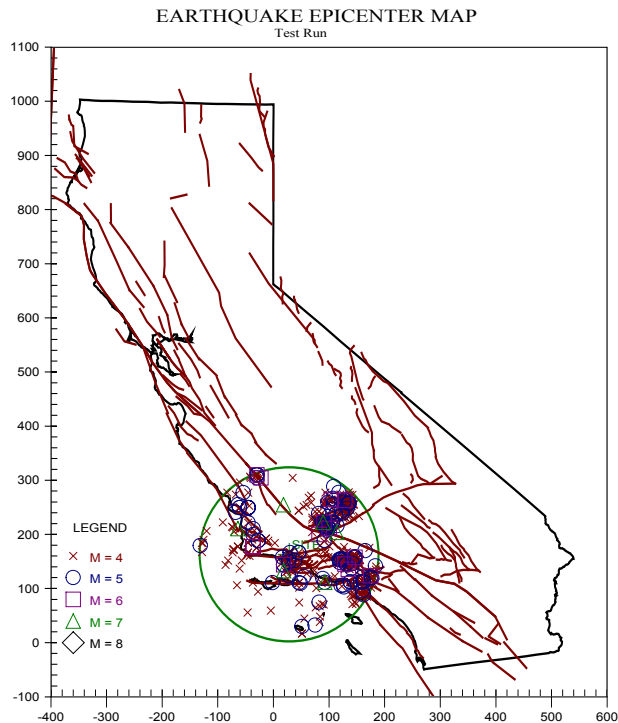
Output Options

Text Editor	View Attenuation Curves
View/Print Output File	View Earthquake Recurrence Curve
View Simple Epicenter Map	View/Edit RAW Earthquake Catalog

RHGA Factor [0.65]:

RHGA Distance (mi) [20]:

SAMPLE EPICENTER MAP



SAMPLE PLOT SCREEN

