U UFO DATABASE
MAPPING and RESEARCH TOOL

NOTE: Please see README.DOC file on enclosed diskette, or in your C:\UFO subdirectory after installation. New routines, data, sources and errata may make this manual partly out-of-date!

WHAT is *U*? *U* is a DATABASE of quality UFO sightings worldwide, from antiquity to the present. *U* runs under DOS, directly or from within Windows 95/98.   There is no Macintosh / Apple version.

WHAT does *U* do? QUITE A FEW things! From the MAIN MENU:

EXIT PROGRAM! (We make it easy.)... press [0] or [Esc] key.

OPTION 1) Here you display the text of actual sightings. You may modify or delete existing records.   You may ADD YOUR OWN listings. Special keys show instant maps of the highlighted record.

OPTION 2) Plays the 'Flying Saucer Theme' on a simulated theramin.

OPTION 3) SEARCHES entire database for records matching your Search Limits (filters). Records are displayed sequentially.

OPTION 4) Is a repetitive DEMONSTRATION ROUTINE.

OPTION 5) Calls a completely separate STATISTICS FUNCTIONS menu with numerous specialized routines.   More on this later.

OPTIONs 6, 7 and 8 display Flat, Spherical or Overlaid color maps of UFO sightings worldwide, in any scale. Option 8 permits overlays of up to FOUR different SETS of sightings in contrasting colors.

OPTION 9) Is a Data Search like Option 3, but echoes the filtered records to the printer. At least one source reference shows.

OPTION R) Displays a pop-up REFERENCES window for quick lookup. This usually shows full publishing information.

OPTION U) Calls a separate menu of Files Maintenance UTILITIES.

>> ALL FUNCTIONS are FULLY FILTERABLE by some 90+ Search Paths, in ANY COMBINATION, to any degree of complexity.

SYSTEM REQUIREMENTS: (minimal)
>> IBM Compatible PC with DOS and/or Windows.
>> 80386, 486 or Pentium Microprocessor; 1MB RAM. Mouse.
>> VGA Video: 640 x 480 pixels by 16 colors, or better.
>> HARD DISK DRIVE REQUIRED. *U* needs approx 4.MB of disk space.
>> 1.44 MB 3.5"/90mm diskette drive to load the package.

FOR CUSTOMER SUPPORT email Larry Hatch at < larry@larryhatch.net
> for fastest response.   Email is checked twice daily. (/LH May,2002)

U INSTALLATION INSTRUCTIONS:

>> See README.DOC for possible changes in installation procedure.

1) DO you already have a subdirectory C:\UFO? IF SO, the *U* Database files will go right in there with any previous files. IF NOT, the installation diskette will automatically create the new folder C:\UFO. Program, data etc. will all go there.

2) Insert diskette in any 3.5" / 90mm drive, usually drive A:

3) Execute INSTALL.EXE directly from the diskette. Do NOT copy INSTALL.EXE or any other diskette programs elsewhere. They need to see the original diskette to work! It is best to do all of this in Windows 95 or 98. There is no need to drop to DOS.

4) *U* will start up automatically and immediately after installation. NOTE: You might see a false "Out of Memory" error message. Ignore this! It is caused by INSTALL and *U* itself both running at the same time.   It will go away and stay away.

For subsequent sessions, simply execute U.EXE from the the C:\UFO subdirectory. Windows 95/98 users will want to create a shortcut to U.EXE, which is the main program in this application.

U OPERATING INSTRUCTIONS As soon as you execute U.EXE...

Green messages show proper files and sufficient memory are found. Problems will show up in RED. BLUE lines suggest corrective action.

ALL MENUS and most displays offer a HELP SCREEN. Press [F1] whenever a screen or display is not self-explanatory.

THE MAIN MENU screen will then appear. Some Files Statistics are windowed on the right. >> The MAIN MENU is on the LEFT. <<

TO SELECT AN OPTION: Press a single key, (0 - 9, R, U..) -or- Use up/down arrow keys and press [Enter] -or- Click your mouse.

Option [0] EXIT. *U* and returns to your operating system, i.e. Windows or DOS.

Option [1] EXAMINE RECORDS. 3 to 5 records will show at screen bottom. The ACTIVE RECORD has YELLOW characters and TAN background. TAGGED records will have a GREEN BACKGROUND. You may tag or untag any record.

4 other records usually show, with BLACK characters for perspective and comparison. Records are kept in chronological order. [See UTILITIES MENU to sort records back into order.]

A Green Box above the Records Window shows the Active Record Number.
>> Any editing changes you make affect the ACTIVE RECORD ONLY. <<

At the Upper Left is the ATTRIBUTES matrix. Blue-background Attributes apply to ACTIVE RECORD only. [See Appendix II for definitions.] More fields show at screen upper-right; Date/Time accuracy, Reference, Environment, Strangeness/Credibility ratings and so on...

MAIN MENU: OPTION 1) EXAMINE/EDIT. Records (cont.)

[F1] key calls a HELP window which explains the keystrokes below.

[Esc] The "Escape" key returns you to the MAIN MENU.

[Esc] will back you out of practically any undesired screen or routine.

The 4 ARROW KEYS: UP/DOWN arrows step you forward/backward, one record at a time.
Left and Right arrows shift the cursor for the green boxes at screen bottom.
[Enter] key executes selected action immediately. Click mouse on any green box.

The [Ctrl] Control key magnifies the effect of many OTHER keys you may hit. For
example, [Ctrl]-[Up Arrow] shifts you up by 100 records instead of one.

[Page Up] and [Page Dn] shift you up/down by 10 records.

[Ctrl][Page Up]/[Page Dn] jump 100 records up or down.

[E] (The regular E key) is "EDIT ACTIVE RECORD"
Caution! You will be asked which fields to alter!   Press [Esc] to get out of this
for now.   Full editing instructions follow on page 11.

[F] FLAT MAP. This displays a map with the Active Record centered, and pointed out
by green arrows.

[Z] ZOOMED MAP. The same as [F] above, but "zoomed-in".

[@] (asterisk, the shifted '2' key) does an EXTREME zoom-in.

[M] JUMP AHEAD ONE MONTH.

[N] JUMP BACK ONE MONTH.

[F9]/[F10] These keys jump to previously 'found' or altered records, if any,
resulting from previous searches and editing.

[Y] or [G]: JUMP to a given YEAR. For years prior to 1920, key in ALL 4 digits.
For 1920 onward, type in the LAST TWO digits only. The FIRST RECORD for that year
becomes the ACTIVE record.

[R] REFERENCES POP-UP WINDOW: *U* References shown by number.

UP/DOWN ARROW keys step through reference list. [Esc] exits.

[P] Planetary Positions at date and time of the ACTIVE RECORD. Horizon Coordinates
(Azimuth, Altitude and Distance) replace the usual data at screen upper-right. See
APPENDIX VII for details. Press [P] again to toggle back to the regular display.

[T] TAGS a record. [U] UNTAGS it. [V] FINDS all tagged records.

Ctrl-T (Control-T) and Ctrl-U will perform a BATCH TAG or BATCH UNTAG. You
definitely want to set search limits for a batch-tag operation! Tagged records are
windowed with a green background.

[F4] Forces an instant 3-line hardcopy printout of the active record. All fields
will print except for the box-matrix of 64 Attributes.

[F5] Is a pop-up window; a lookup routine for acronyms and abbreviations. E.g.
Type in AFOSI and press the ENTER key. A subroutine will look up this Air Force
acronym.

[F6] & [F7] are exactly like [F5], BUT definitions appear in (poor) French, or
Spanish.

[Home] jumps back to Rec #0001. [End] Jumps to most recent record.

MAIN MENU: OPTION 2)
Two bars of flying saucer music. (Sorry, I couldn't resist. -LH)

MAIN MENU: OPTION 3) DATA SEARCH.
Sequential Screen-Dump.

YOU impose SEARCH LIMITS based on any/all or none of the 90+ Search Paths, in any
combination. Records which PASS ALL TESTS are displayed sequentially. Press
[Enter] (etc.) to see the next one. [Esc] = quit.

EACH Search Limit will EXCLUDE some records. You may filter records by ranges of
dates, attributes, continent and/or country, environment, strangeness and/or
credibility, longitude/latitude ranges, reference, time of day ranges or date-time
accuracies, a custom set of months-of-the-year.. See APPENDIX I, full instructions
setting SEARCH LIMITS.

After the final record shows, you return to EXAMINE/EDIT mode. Choose MAIN MENU
OPTION 9 for DATA SEARCH with Hardcopy Printout.

MAIN MENU OPTION 4)
Demo Routine. An endless Display of various screens, turned on and off at
random, until you exit. Press [Esc] 2 or 3 times to return to the Main Menu.

MAIN MENU OPTION 5) STATISTICS OPTIONS MENU.
All Statistics functions may be filtered by search limits; (See Appendix I.) Press
[0] or [Esc] to exit from Statistics Menu.

Here, we loop out of the Main Menu for a full listing of the Statistics Menu
Options:

STATS #1: SIGHTINGS FREQUENCY HISTOGRAMS: (several displays)

After crunching numbers, nine (or so) displays will appear in sequence. Press the
UP arrow to see the previous screen, and the DOWN arrow to show the next display.

Display #1: A dual histogram of YEARS and MONTHS. Years are on top. The RED year
is broken down into months on the bottom. Use Left/Right ARROW keys to shift
years. [Page Up] and [Page Dn] keys shift left and right by 10 years. Month-bar
sizes are RELATIVE to one another for one year only, and re-scaled as space allows
for each Year.

Sightings counts for years and months appear under each bar. 01 is January, 02 =
February ... 12 = December. Keystroke instructions show in white so there is no
[F1] HELP here. DOWN ARROW takes you to Display #2...

Display #2: Sightings by Months, cumulative, REGARDLESS of year.

Display #3: Sightings counts by weekdays. This is cumulative, without regard to years, months etc.   Set search limits as needed.

Display #4: is an HOURLY breakdown, without regard to day or date. With NO Search Limits, you get a very noteworthy curve which may represent peoples' sleeping habits in part. As always, UP and DOWN Arrow keys navigate between these displays.

Display #5: A Histogram of "Year-days" (1 to 366) for all years permitted by search limits. Major meteor showers are shown in colors. The white curve is an 11-day moving-average.

Display #6: The sky is divided into 24 "hours" of longitude. For any UFO sighting, some stellar meridian is directly overhead; depending on date, time of day, and local longitude on Earth.

Roughly equivalent to "Right ascension" in astronomy tables; "Zero hours" is on the Vernal Equinox, 19 hours is in Sagittarius toward the galactic center. Declination is not factored in here.

Display #7: is "Moon-Hours". "Moon-Noon" occurs when the moon is directly over the local meridian (not necessarily overhead). This has NOTHING to do with moon phases or time of day. IF the moon is on the meridian when an event occurs, the 12 hrs count increments.

Display #8: divides data by "Continents", or more accurately Global Regions. Many regions provide little useable information.

Display #9: divides records into "environs" such as Urban, Farm, Residential, High Seas, Desert, Road and Rails etc.

STATS #2: SIGHTINGS CONCENTRATIONS. You enter SEARCH RADIUS in miles. Press DOWN ARROW for default value of 75 miles. You enter a TIME RADIUS. (Press DOWN ARROW for default +/- 30 days). The algorithm scans for events falling within the TIME AND SPACE RADII, i.e. the same general time and place.

Set search limits (or not) as usual.   Data retrieval is automatically limited to years after 1900.   If your miles or days "radii" are too restrictive, you may find nothing at all.

STATS #3: STATE/PROVINCE BREAKDOWN: Again you may set Search Limits. Records crunched are limited to the USA (incl. Puerto Rico), Canada, Britain and France. Sightings are counted by State and Province for USA and Canada.   France and Britain are included for comparison. 8 screens will show the ratios of Sightings per 1000 square-miles area, per 1000 Population, and other ratios. Listings are sorted by highest and lowest ratios, to find which geographic areas stand out. Use up/down arrow keys to move thru 8 different summary text-screens.

STATS #4: STRANGENESS / CREDIBILITY COUNTS. Based on Search Limits, Strangeness and Credibility ratings are counted for each of 16 levels from 0 through 'F' (in hexadecimal notation).

STATS #5: SIMPLE EVENT COUNT: Set Search Limits as usual. The function counts records that pass the filter. Totals are displayed, broken down by continents and countries .. quick and dirty numbers.

STATS #6: ATTRIBUTES COUNTS: Set Search Limits as usual. Each of 64 attributes will display the number of times it was set "true", for all records that pass the search-limits filter.

STATS #7: REFERENCE COUNTS: You set Search Limits. Each of 255 References shows how many times it was cited as primary reference.

STATS #8: LOCAL RECURRANCY SPECTRUM: This looks for any regular TIME INTERVALS between UFO REPEAT APPEARANCES in any general area.

>> SET AT LEAST ONE SEARCH LIMIT (Continent, dates .. something!)

You are allowed only 9000 base records for any one execution. For each record, a sub-search scans ahead thru ALL subsequent records, for events within about 5 miles (8 km) radius.   If these are found, the time interval is tallied in months. For 9000 records, this is over 40 million cross-checks, thus the 9000-record limit.

The result is a graphics screen, with a running average which makes trends more visible. Different Continents, Decades, Attributes etc. result in very different "curves" on the graph. This routine is extremely slow due to its recursive nature!

STATS #9: 50 YEARS of SIGHTINGS. White dots indicate event counts for 600 months from 1947. An 11 month "running average" smooths the data, showing trends as a violet curve. The slow grey curve is Venus proximity to Earth in Astronomical Units (AU). The red curve is for Mars.   Note particularly close approaches in 1956, 1971 and 1988.

STATS #A: ASTRONOMICAL CLOCK: Given YOUR Longitude, Latitude, Date, Time, time-zone and Daylight Savings (Summer) time switch, the Sun Moon and Planets are constantly updated in 3 coordinate systems. You may enter any HYPOTHETICAL coordinates etc. See APPENDIX VII.

STATS #B: BUSIEST DAYS IN THE DATABASE. Set Search Limits as usual. The function counts events for every calendar day. The dates with the highest scores are sorted to the top of the list. Press [Esc] to abort the search, and see the busiest days found so far.

STATS #D: DAY versus NIGHT: Sightings are divided into Day, Night and "fringe" hours. Fringe hours are those which may be light or dark depending on latitude and season.   Sightings counts are broken down by decades, to show some dramatic changes in day / night ratios over long periods of time.   The causes of this effect are unknown.

STATS #E: FILE EXPORT: Function creates an ASCII (text) file you can send to any drive from A: to D:. Exportable fields are Year; Month; Month-day; Year-day (1-366); Longitude/Latitude (East and South are NEGATIVE); Time of day; Strangeness and Credibility. To prevent software piracy, not all fields are exportable

All characters are ASCII encoded for import into other applications. Each Field ends with a TAB character (Ascii 9) for even columns and separate fields.   Each Record ends with a Carriage Return (0D0A hex). An End of File character ("EOF" = FF hex.) terminates the Export file.

STATS #F: FREQUENCY SPECTRUM: Data is divided into WEEKS, with counts for each week in UFO history (per the data, and any search limits you may set). A pseudo-spectrum-analysis looks for recurrent time-spans between sightings, regardless of where or when they took place. The violet curve plots a running average of recurrency in weeks. Peaks in this curve indicate the time between waves and so

on. The green karat symbol ^ indicates KNOWN intervals between some major waves. Colored letters V,M and J indicate the regular periods between close approaches of Venus, Mars and Jupiter. Oddly, Venus and Jupiter play minor roles compared to Mars in these displays. This may partially reflect the systematic exclusion of junk (night light) sightings from the data.

STATS #L: LONGITUDE / LATITUDE COUNTS: This simple routine counts sightings by unit degrees of Longitude / Latitude. Negative Longitudes are East of Greenwich. Negative Latitudes are South of the Equator. Especially high counts are highlighted with a blue background.

STATS #P: PLANETARY PROXIMITIES: The SOLAR LONGITUDES of Venus, Mars, Jupiter and Saturn are compared to Earth for each sighting. Histograms show 24 zones of RELATIVE sidereal longitude. Zone 12 means the planet is CLOSEST to Earth, zone zero means it is on the opposite side of the Sun; WITHOUT REGARD to the stellar sphere. Set search limits as usual.

STATS #T: TRAJECTORIES COUNTS. For about 23% of the data, a FINAL direction of travel is indicated as >N (etc.) 'which way they WENT'. Trajectories are divided into the 4 compass points N. S. E. and W. >NE, >NW, >SE and >SW each increment TWO counters; >NNE becomes North, >ESE becomes East (etc.) giving equal weight to N.S.E and W. Findings are then subdivided into Continents and decades. THIS concludes the STATISTICS MENU. Other features may have been added since this printing. See README.DOC. Now, back to the Main Menu.

MAIN MENU OPTION 6) FLAT MAPS.
Flat maps are projected with PARALLEL Longitude and Latitude lines, much like those old school-maps showing Greenland larger than South America. Flat Maps and allow Mouse Retrieval of UFO records by clicking on the corresponding pixel. When you call Option 6, a list of keystroke instructions appears.

[F1] HELP: A small Help window explains where you are, and suggests further keystrokes. IF you already have a map displayed, [F1] simply returns you to the initial keystrokes list.

[M][L] calls a list of pre-programmed maps; 2 or 3 letter MAP-CODES like CA for California, or CHI for the Chicago area. All US States, Canadian Provinces, and most countries have their own Map Codes. The Map List is 2 screens long. Press space-bar for the 2nd page.

Press any Map Code (e.g. SP for Spain) to display a map. Sightings on that map appear as white dots, subject to Search Limits if any.

[S][L] calls for SEARCH LIMITS, the same filters used everywhere else.

[T][M] switches to the TRIG-MAP (Option 7 below). The same area shows, search limits unchanged. [F][M] switches back to a Flat map.

>> You may Shift and Zoom to show any part of Earth, in any scale.

Use the 4 ARROW KEYS to shift the map UP, DOWN, LEFT or RIGHT by 25%. [Ctrl]-{arrow key} shifts by about 50%.   [Alt]-{arrow} shifts ~ 75%. Note the arrows on the numeric keypad, also up, down, right and left. THESE make HALF shifts, about 12% for finer positioning.

Use the [Insert] key to ZOOM IN, enlarging the center of the Map. Press [Delete] to ZOOM OUT, viewing a wider area for perspective. Again, the [Ctrl] key (held

simultaneously) gives a DOUBLE ZOOM, and the [Alt]-key yields a triple zoom. You may change the colors of the map outlines, and the "UFO dots".

Type DB, DG, DO, DV, DW or DY for blue, green orange, violet, white or yellow UFO dots. The default is WHITE. Type in OB, OG, OO, OV, OW or OY for black, green orange, violet, white or yellow outlines. The default is YELLOW (subject to change!) Black makes the "map" disappear, leaving only the UFO dots. Green outlines are quite dark. Orange outlines look 'spooky'. Color settings remain active until you change them, or exit *U* entirely. RC restores default colors.

UFO DOT BRIGHTNESS is 2-pixels wide by default. Press B1 for 1-pixel UFOs for greater precision of placement. Press B3 for 3-pixels and greater visibility. B2 returns to the default 2-pixel UFO dots.

[L][+] turns on Longitude/Latitude lines.   These will help show the difference between flat and trig maps.   [L][-] removes the LL-lines to reduce screen clutter.

The [Page Up] key displays 2 and 3 letter place-names on the map like ON for Ontario, and NM for New Mexico. These markers appear only where map-space is available.(A "zoom-in" will create more space.)[Page Down] turns this feature off.

 [S][+] turns on a noise-maker that 'beeps' as UFO-pixels are placed on the map. Beeps are higher in frequency (pitch) to the East and South, lower to the West and North. [S][-] turns the noise off.

R][+] ROTATION. Usually, all valid UFO dots appear on the same map. In Rotation, 200 sightings appear. Then, as more UFO-dots appear, the OLDEST UFO dots are removed! You see activity move from place to place over time. Try this!

The [SPACE BAR] will FREEZE the dot placement cold. Another [Space Bar] resumes dot placement .. and so on. This works in regular or rotation map displays.

[S]. STOP sightings dot placement. Further S keystrokes will place ONE UFO sighting dot at a time. To resume automatic placement, press the Space Bar once or twice. Rotation, Single-Step and [S][+] Sound, with OO (Orange map outlines) gives an almost eerie effect. Try holding the [S]-key down to slow the Rotation placement down. Try all of the above with TJ (trajectories) maps.

[D][D] limits sightings to a SINGLE DAY. Try 1990, 11, 05 (05NOV90) showing the USA map .. then try France.   Use Statistics option #6 to find the busiest days in the database, then use the DD map feature to display them. These one-day wonders are usually clustered in particular countries or regions. D- turns off the one-day feature.

[F][S] sends a "Flying Saucer" sailing right across your map in case a group presentation is getting too tedious. (sorry.)

[T][J] SHOW TRAJECTORIES! Some 23% of sightings show direction of travel as >N or >>ESE in the 78-character text field. If you type TJ, the map will be redrawn with red arrows extending away from the sighting. ONLY the sightings with the > or >> arrows are plotted, the other are omitted.   >ENE and >NNE are rounded off to >NE. >WSW and SSW are similarly plotted >SW.

[T][J] works with the DD (single-day) map displays. Try the "busiest" days again, with TJ active. T- shows the regular map, all dots, and no trajectory arrows.

Ctrl-H (Control H) is HARD COPY.   THIS ONLY WORKS on CANON BJ-200e Bubble-Jet printers or the EXACT equivalent. IF you have such a printer, you can reproduce

most maps and graphics screens. IF NOT, you will only print JUNK. Time and cost
constraints prohibit writing graphics drivers for other printers.

==> Use Windows [Print Scrn] to reproduce graphics screens on paper.

Press [S][M] to re-display the same map, or any default map. Map Features (Sound,
Color, Long/Lat lines, Rotation etc.) will stay active until you shut them off (S-
, L-, R-...) - or - until you return to the Main Menu, where they are ALL reset.

MOUSE RECORD RETRIEVAL! [Flat map only!] When the "Saucer" Mouse Cursor appears
at screen upper-left, position it so the 'antenna' just touches one of the
"sighting" dots. A tight (2-pixel) tolerance helps isolate closely placed
sightings.

Now, click the RIGHT button. Record Number, date and general location for that
event will appear at screen lower left. This same record now becomes the ACTIVE
RECORD. IF you call the EXAMINE/EDIT screen, this sighting will be high-lighted in
the text window.

If you press the LEFT mouse button, the routine will look for other nearby
sightings.   Center mouse button, (or both buttons together on 2-button mice) will
exit the Mouse Retrieval algorithm.

IF you Click (Right-Button) in a cluster of sightings, several will show in
sequence. Use LEFT button to step through them. Use MIDDLE button (or both
OUTSIDE buttons) to stop the search on any sighting. Anytime you press the LEFT
mouse button, the Longitude/Latitude of the Mouse-icon will show in the upper left
corner of the screen. NOW type CC. The map shifts so that the Mouse-Clicked
sighting is centered on the map.   You can jump to a different map anytime.

MAIN MENU OPTION 7) TRIGONOMETRIC MAPS.
A "TRIG MAP" is a section of the spherical Earth projected directly onto the
screen.   These maps work just like Flat Maps, EXCEPT:
a) No Mouse appears ... you cannot retrieve records from the map.
b) Execution is slower on 286/386 systems with no Math Co-processor.
c) Large distances and geometries are much more accurate.

MAIN MENU OPTION 8) LAYERED MAPS.
This option overlays 2, 3 or 4 maps with different sets of Search Limits. Each
layer shows corresponding events in different colored dots. The first layer is
light blue, followed by red, green and white.

The Layered Maps default to "Flat Map" display. You can present them more
realistically by pressing [T][M] (Trig Map) after the first display. All the
features described in Option [6] Flat Map apply here.

MAIN MENU OPTION 9) HARDCOPY FILE DUMP.
+Hardcopy works exactly like Option 3 (Screen File Search) ... EXCEPT:
a) All sightings automatically are echoed to the PRINTER.
b) You hit no keys between records .. these just print and display until the end of
   the file. Press [Esc] key to halt printout.
c) The Hardcopy output does NOT include the Attributes Matrix.

It is best to run any file search to the screen (Option #3) before executing Option
#9. Make sure you are zeroed-in on the data you want, and avoid wasting time, paper
and ink.

MAIN MENU OPTION R) REFERENCES WINDOW.
Press [R] for the same "references window" available in the EXAMINE/EDIT mode.
References are subject to occasional changes.

MAIN MENU OPTION U) UTILITIES MENU.
See Page 23 for a full description of Utilities Options. This concludes the Main
Menu options.

EDITING RECORDS:
==> You are EDITING whenever you ADD, DELETE or CHANGE any record. <==

Select Main Menu Option #1, and center the desired record as the ACTIVE RECORD,
with the TAN background showing.

To EDIT the ACTIVE RECORD, press the [E] key. The Records Window stays in place.
A NEW list of Options appears at screen top-left. 9 sets of fields are shown.
Either Click the Mouse left button, or use UP/DOWN Arrows to step to the proper
field, then press Enter.

Data entry for chosen field is exactly the same as for a NEW entry, (see INSERTING
below). Have your new data ready beforehand. Each Field has separate indications
how to enter the data. The [F1] HELP key is available at every step. Use it.

New fields will keep appearing for editing. When you have edited the fields you
wanted, press [Esc] to return the the EDIT screen. A pop-up box will ask if you
want to save the changes or restore the original data. Press [Esc] again for the
EXAMINE screen.

INSERTING and DELETING RECORDS
There is only ONE way to add a NEW record: you "INSERT" it using the [Insert] key,
in the EXAMINE/EDIT mode.   When you press [Insert], the routine searches for a
DELETED record first, one that it can overwrite.

One of two things will happen:
a) record search will locate a record with a year greater than 2999 (i.e. a
   DELETED record). IF FOUND, THIS becomes the new Active Record. All fields are
   blanked and ready for a new record.
b) Finding no DELETED records, a brand-new record-space is APPENDED to U.RND, with
   blank (dummy) fields, ready for a new sighting.
>> IF you INSERT a new record by mistake, simply DELETE it. <<

NOW you will be asked for all the sighting details, field by field.
>> Have the following information ready BEFORE you INSERT: <<

YEAR: (-999 to 2049 AD)   Year of the sighting/event.
MONTH: (01-12) If unknown use 01, or reconsider excluding the data.
DAY: (00-31) Day of the month. 00 = unknown.
HOUR: (00-23) LOCAL Military 24 HR clock. Remember that each DAY,
          and hence its DATE begins at 00:00, and ends at 23:59.
MINUTES: (00-50) Minutes after the hour, in 10-minute increments.
ACCURACY: For YEAR, MONTH, DAY and TIME, enter accuracy rating:
          0 = DOES NOT APPLY/irrelevant.   1 = UNKNOWN/Unspecified.
          2 = APRX: within 1 or 2 Years or Months; within 3-4 Days, Hours.
          3 = KNOWN: EXACT year, month, day: Time within one hour.

CONTINENT and COUNTRY: SEE APPENDIX III for list and details.

STATE/PROVINCE: SEE APPENDIX IV for full details.
            Continent, Country and State are not always obvious. For example:
            Puerto Rico is under Continent 0 (North America), Country 2 (USA),
            STATE/PROV = PRC for Puerto Rico.

LONGITUDE and LATITUDE: Both are in Degrees : minutes : seconds.
            Seconds are rounded to the nearest 20 seconds, about 630 meters.

ELEVATION: Enter elevation of OBSERVER above Sea Level in METERS.

RELATIVE Altitude: Height of UFO above/below observer in METERS.

SUMMARY: A 78-character text field, describes LOCATION and EVENT.
        Always start with the LOCATION spelled out e.g. MENLO PARK,CA:
        Use commas as shown. Avoid extra spaces. Press [F5] for a list of
        space-saving abbreviations and acronyms.   ALWAYS squeeze "CF"
        in, if Longitude/Latitude is unknown or imprecise. Use COLONS (:)
        NOT COMMAS to separate different features of the sighting.

DURATION: (0-32000 min.) Approximate time elapsed during sighting.

TERRAIN: (somewhat ambiguous) Use METROPOLIS for events within the
        largest cities, TOWN for smaller cities/towns, Residential for
        Suburbs and housing districts/compounds. Barracks are MILITARY.
        Farms are FARMLANDS. Ranches, sheep stations etc. are PASTURE.
        Generally these are indicate population density and/or predominant
        land usage. OIL & COAL are petrochemical recovery or refining.

  TUNDRA   is any treeless, sparsely populated polar region.
  DESERT   is just that, unless its a CITY in the desert.
  MOUNTAINS   Any mountainous area, except as noted above.
  WETLANDS   Swamp, estuary, marsh .. except as noted above.
  FOREST   Thickly wooded areas except as above.
  RAINFOREST   Tropical jungles and forests with high precipitation.
  COASTLANDS   Within a few miles of the shore, except as above.
  OFFSHORE   Coastal waters ... within a few miles of shore.
  HIGH SEAS   Away from land. Ships at sea.
  ISLANDS   Smaller islands. NOT Britain, Australia, Taiwan..
  IN-FLIGHT   Observer in aircraft, especially if buzzed or paced.
  SPACE   Any UFO event beyond earth's atmosphere.
  MILITARY   Any military Base, Field, installation, camp..
  UNKNOWN   Environment cannot be determined from source data.
  ROADS/RAILS   Highways (NOT streets) railways, generally between towns, where
                  none of the above clearly apply.

ATTRIBUTES: Use the [F5/6/7] LOOKUP option and see APPENDIX II for
            tips on these important fields. Activate all attributes than
            apply. Reserve ODD for truly UNUSUAL features. Strong indications
            of Dimensional or Paranormal Anomalies rate an ODD attribute.
            Reserve TCH for technical clues to alien technology in general.

            Use Arrow keys or mouse to maneuver around the Attributes Matrix.
            Press INSERT/DELETE key, or click LEFT/RIGHT Mouse button to
            Activate/Deactivate any attribute.   Active (valid) attributes are
            lit up with a blue background.

STRANGENESS: (0-F hexadecimal) Highly subjective "weirdness" rating.
            A structureless night-lite usually gets a rating of 5 or less.
            Points are added for landings, occupants, missing time etc.

                 Deduct points for likely misidentified planets, aircraft etc.

CREDIBILITY: (0-F hex) Also highly subjective. For Strangeness
            and Credibility, Start with a rating of 5 or 6. Add or subtract
            points according to the events.   Credibility increases with added
            witnesses, especially well trained and 'reliable' observers.
            Cult gurus fall directly to the opposite extreme.

REFERENCE: Press the [R] key to find the source reference. If YOUR
            source is not listed, use reference # 96,97,98 or 99 as applicable.
            Only our diligent programming staff can change the Reference List.

PAGE NUMBER: (0-999) The actual page within the reference above.
            Use the page number in YOUR copy.   For UFO Journals, enter ISSUE
            number, or Volume and Issue as applicable. Specific page numbers
            are NOT entered for Journals, magazines, newsletters etc.

DELETING RECORDS:
The [Delete] key does only one thing:
It 'marks' a record as 'OK TO OVERWRITE', by changing the YEAR field to the absurd
year 3000 AD.

a) You can UNDELETE by simply putting back the correct year. Do this RIGHT AWAY, or
   the record may be over-written and lost.
b) IF you SORT the database (using the Utilities SORT routine). This record will be
   shifted to the bottom (end) of the file, based on Date. It may be difficult to
   determine the original year..
c) IF you [Insert] a NEW record, it will overwrite the first Deleted record it
   finds; the old record is gone!

APPENDIX I: SETTING SEARCH LIMITS. for all maps and functions.

There are TWO ways to set Search Limits: INCLUSIVE and EXCLUSIVE. INCLUSIVE limits
will Map, Display, List or otherwise crunch data for records that MEET ALL SEARCH
LIMIT requirements. (Default = INCLUSIVE)

Press [Esc] right away to set NO limits, i.e. the Entire Database.

EXCLUSIVE limits will REJECT records that meet ALL Search Limit Requirements, and
PASS ALL OTHER RECORDS!

To invoke EXCLUSIVE search limits, press the [X] key when you are asked if you want
to impose some particular limit. Press [I] to revert to the usual (default)
Inclusive limits.

Example: You would use an EXCLUSIVE search limit to retrieve all sightings OUTSIDE
of some given country.

Note: IF you set TWO Search Limits: for the USA and all of 1965:
  INCLUSIVE limits will only retrieve records meeting BOTH criteria.
  EXCLUSIVE limits will retrieve ALL records outside of the USA,
   .. PLUS all records IN the USA but NOT during 1965.
   .. PLUS all records from 1965 that were OUTSIDE the USA!

For the default Inclusive Limits, each Limit EXCLUDES some records. Too many
restrictions will leave little if any data to process. ONLY records that pass ALL
LIMITS will be retrieved or counted.

From MAP DISPLAYS, type SL to call the Search Limits routine.

Statistics and Data searches automatically invoke search limits.

Press [ESC] as soon as you have imposed all your Search Limits. The function or map
will then execute immediately. This saves time.

Limit #1)   SEARCH/DISPLAY BY DATE?   [Y/N/X/I]
  [Y] = Yes. [N] = No.   Use arrow key and press [ENTER] -or-
  press [Y] or [N] key -or- click Mouse on [Y] or [N]
  Press [ESC] for NO SEARCH LIMITS AT ALL (the entire database).
  Press [X] for EXCLUSIVE Limits. Default is [I] = Inclusive.

  If you select [Y] you will enter the Beginning and ending Years
  and Months. The ending date must be later. ALL RECORDS dated
  before or after your Year/Month time frame will be REJECTED.

Limit #2)   SEARCH by ATTRIBUTES?   [Y/N/X/I] Select a key as above.
  [ESC] terminates Limits settings and starts actual data search.
  If YES, you press [P] PASS or [R] to REJECT records by Attributes.

  NEXT you enter Attributes by Highlighting them on the Attributes
  Matrix on screen upper-left.   Select any number as required.
  Use the mouse to click on desired attributes, or use arrow keys
  to step to the desired attribute, and press INSERT to SELECT an
  attribute, or press DELETE key to DE-select it.

  ==> Press [F1] for help on keystrokes here. <==

  IF you select the [P] (pass) mode: All records having ONE or MORE
  MATCHING attributes pass.   Records with NO matching attributes
  are REJECTED.

  IF you selected [R] (REJECT) the Matrix Cursor shows in RED. In
  this mode, ALL records having ANY selected Attribute are REJECTED.
  > Only those with NO matching attributes pass. <

Limit #3)   LIMIT SEARCH by PHRASE? [Y/N/X/I]
  [N] Omits this restriction, goes to Limit #4.
  [Y] You then enter a search-phrase, up to alphanumeric characters
       including spaces .. then press [Enter].
       Records containing the search-phrase PASS, others FAIL.

NOTE: Text Search is CASE-INSENSITIVE by default. "Omaha" will match for "OMAHA",
and the record passes. For a CASE-SENSITIVE search, hold down the [Alt] key and
press [C]. ALT-C toggles back and forth between CASE-SENSITIVE and CASE-
INSENSITIVE.

The search routine examines TWO fields for a matching "phrase":
a) The 78 character TEXT field, and
b) the 3 chr STATE/PROVINCE field.

If you look for the word fragment "UTA", you will get every record in UTAh, plus
typical words like oUTAge, mUTAte, etc. Search phrases with 4 or more characters
will scan the 78-character text synopsis field only.

To LIMIT the search to the Text field ONLY, ADD the % character at the end. For
example, UTA%. You will find words like bUTAne, without calling up a lot of UTAH
records. Similarly, to look for

STATE/PROVINCE names only, add a carat symbol ^ (shifted 6-key) as the final
character. Example: A search for ORE^ will limit the search to Oregon State.

Limit #4a) LIMIT by CONTINENT? [Y/N].   [N] Omits this restriction.
  [ESC] Terminates search-limits. Data crunching start immediately.
  [F1] = The HELP screen which gives a list of "Hotkeys."

  Some typical Hotkeys are U = USA; C = Canada; G = Great Britain;
  D = Australia (Down under); E = Western Europe; F = France;
  B = Brazil; A = All North America; J = Japan; S = Spain;
  X = Mexico; R = Argentina; I = Italy ... etc.

  => Pressing a Hotkey will limit the search to a SINGLE continent
     or country, and BEGIN data crunching IMMEDIATELY. <=
 [Y] You will select ONE "Continent" by number, 00 through 12.

Limit #4b) IF you Limit by Continent: you may now LIMIT by COUNTRY.
  [ESC] Will limit by Continent only, and begin mapping or data
  search immediately.
  [Y] You are given a list of Countries to choose from.
  ONLY records for   selected Continent and Country pass this test.

Limit #5) TAGGED RECORDS. IF you select this, you may press [T] to
  limit data to TAGGED records ONLY, or [U] to pass UN-TAGGED records
  only. All OTHER search limits selected will STILL apply.

Limit #6) LIMIT by ENVIRONMENT? [Y/N/X/I]
  [N]   Skips this restriction, it is not used very often.
  [ESC] Terminates search-limits. Search starts immediately.
  [Y]   You select ONE "environment" (Land, Sea, Air..) by number.
        Records with any different "environment" are rejected.

Limit #7) LIMIT by STRANGENESS   [Y/N/X/I]   -and-
Limit #8) LIMIT by CREDIBILITY   [Y/N/X/I] are very similar.

  [Y] You are asked for lower and upper limits for Strangeness and/or
  Credibility. Range for both is 0-F (hexadecimal) same as a scale of
  zero to fifteen. Records WITHIN ranges are selected, others rejected.

Limit #9) LIMIT by COORDINATES?   [Y/N/X/I]
  IF selected, you are asked for WESTERN and EASTERN LONGITUDE limits,
  then NORTHERN and SOUTHERN Latitude limits. Press [I] to select only
  events INSIDE these lines (the default) or [O] for those OUTSIDE.
  This is not often used.

Limit #10) LIMIT by REFERENCE NUMBER?   [Y/N/X/I]
  Press [R] to call up the Reference Lookup Window if necessary.
  Enter 3-digit reference number from 000 to 255.

Limit #11) LIMIT by DATE-TIME ACCURACY? [Y/N/X/I]
  [Y] You enter a LOWER limit on ACCURACY for Year, Month, Day and
  time fields: (3=known, 2=approx. 1=unknown, 0=irrelevant)
  ONLY records that meet or exceed ALL FOUR lower limits will pass.

Limit #12) LIMIT by HOURS of the DAY?   [Y/N/X/I]
  [Y] You enter STARTING and ENDING Hour & Minutes. Minutes are
  rounded to 10-minute increments.
  => If your Ending time is BEFORE your starting time (e.g. from 2230

        to 0240) the program will ACCEPT this, and assume you want night
        sightings EXTENDING BEYOND MIDNITE into the following mornings. <=

Limit #13) SELECT SPECIFIC MONTHS? [Y/N]
[N] NO. Data Search, Map or other display begins immediately.
[Y] YES. You may select one month, or ANY SET of months.
          Use left/right arrow keys to shift between months.
          Press [Insert] to include a month, or [Delete] to disallow it.
          If you select NO months, then ALL months pass the test.
          Press the [Esc] key or DOWN-Arrow when you are done.
          The Data search begins immediately.

Setting proper Search Limits is the heart of any data retrieval. Feel free to email
Larry Hatch < larryhat@jps.net > anytime for help on this.

APPENDIX II: ATTRIBUTES MATRIX. (MNEMONIC CODES)

ATTRIBUTES are 3-letter codes for common sightings features. An attribute is TRUE
(blue background) if it applies to the Active Record; and FALSE (black or invisible
background) if not.

The Attributes Matrix: From Left to Right for each row...

  Row #1 (top row) Location of the OBSERVER.
   MAP: Coordinates are known. OK to place event on screen maps.
   GND: At least ONE observer (or radar) was on land.
   CST: Sighting in coastal area, possibly just offshore.
   SEA: Sighting was at sea, typically from some marine craft.
   AIR: Airborne observer. Observer aboard aircraft.
   MIL: At least ONE observer was military.
   CIV: At least ONE observer was civilian.
   HQO: High Quality Observer(s) Scientists, Engineers, well trained
        individuals. 3 or more people with consistent descriptions.

  Row #2: Miscellaneous details and features.
   SCI: A scientist was involved, as an observer or investigator.
        Also, Scientific testing of traces or effects of sighting.
   TLP: "Telepathy": Silent or voiceless communication.
   NWS: Report from the news media, or else "sighting made the news".
   MID: Likely Mis-IDentification of mundane object: (Venus, rocket..)
   HOX: Suspicion or indications of a HOAX, journalistic prank etc.
   CNT: Contactee: Reports from would-be cult leaders -or- repeat
        "witnesses" with trite and predictable "messages for mankind".
   ODD: Oddity: 1) A very strange event, even if not UFO related.
        2) An atypical oddity that occurred during a UFO event.
        3) Forteana or paranormal features.
   WAV: Wave or Cluster of UFO sightings. Sighting is part of a wave.

  Row #3: Type of UFO / Craft.
   SCR: Classic Saucer, Disk, Ovoid or Sphere. Not just some light.
   CIG: Torpedo, cigar, fuselage or cylinder shaped vehicle.
        (Use SCR for a classic "saucer" seen edge-on.)
   DLT: Delta, Vee, boomerang, rectangular UFO. Sharp corners and edges.
   NLT: Nightlights: Points of light with no discernable shape.
   PRB: Probe: Small weird object maneuvers. Remote controlled craft?
   FBL: Fireball: Blazing undistinguished form. Possible meteors etc.
   SUB: Submersible: UFO rises from, or submerges into a body of water.
   NFO: No UFO Craft actually SEEN. (Not necessarily absent...)

```
Row #4:  Aliens! Monsters! ( sorry, no religious figures. )
  OID: Humanoid: Smallish alien figure, often "grey".
  RBT: Possible Robot:  May resemble "Grey".  Mechanical motions.
  PSH: 1) Pseudo-Human: Possible clone, robot or worse.
       2) "Human" seen working with or for alien figures.
  MIB: Man-in-Black: 1) PSH impersonating humans.
       2) Mysterious man who tries to suppress UFO reports.
  MON: Monster: Apparent life form fits no standard category.
  GNT: Giant: Apparent alien larger than most humans.
  FIG: Undefined or poorly seen "figure" or entity.  A shadow.
  NOC: No entity / occupant seen by observer(s).


Row #5:  Apparent UFO/Occupant activities.
  OBS: Observation: Surveillance. Chasing/pacing vehicles.
  RAY: Odd light RAY, searchlight or visible beam. Anything laserlike.
  SMP: Sampling: Plant, animal, soil, rock, tissue or other specimens.
  MST: Missing Time: Unexplained time-lapse or other time anomaly.
  ABD: Known/suspected human abduction.  Animals also if taken whole.
  OPR: Operations on humans. Animal Mutilation. Any invasive surgery.
  SIG: ANY indication of possible signals to, from, between UFOs or
       their occupants; -or- responses to human signals.
  CVS: Conversation: ANY communication between "us" and "them",


Row #6:  Places visited and things affected.
  NUC: Any nuclear facility: Power plant.  Military.  Research facility.
  DRT: Dirt affected: Traces in soil: landing marks, footprints etc.
  VEG: Plants affected or sampled.  Broken tree limbs.  Crop circles.
  ANI: Animals affected: Panic. Change of behavior. Injuries. Marks.
  HUM: Human affected: Injury. burns. marks. psychology. abduction. death.
  VEH: Vehicle affected: Marks, burns, electro-magnetic (EME) effects.
  BLD: Building or ANY MANMADE STRUCTURE: Roads, Bridges, Power lines..
  LND: Apparent Landing.  UFO (or any part thereof) sets down.


Row #7  Evidence and special effects:
  PHT: Photos, movies or videos taken of UFO and related phenomena.
  RDR: Anomalous Radar traces/blips corresponding to UFO sightings.
  RDA: Radiation or high energy fields detected during or after sighting.
  EME: Electro-Magnetic Effect: Car, radio, lights, instruments..
  TRC: Physical traces discovered ( most any variety. )
  TCH: NEW Technical details.  Clues to alien technology.
  HST: Historical account OR sighting makes history.
  INJ: Wounds, scars, burns etc. as apparent result of close encounter.
       Resulting illness or death. Mutilations.


Row #8  Miscellaneous details:
  MIL: Military investigation: Covert or open, foreign or domestic.
  BBK: US Air Force BLUEBOOK case, regardless of finding.
  GSA: Government Security Agency involvement: FBI, CIA, NSA, NRO,
       covert security arms of other agencies, foreign & domestic.
  OGA: Other Government Agencies: Police, FAA, NASA, non-covert agency
       involvement in any way.
  SND: UFO sounds heard or recorded.
  ODR: ODORS associated with UFOs, or given off by them.
  COV: Any indication of official Coverup.  Not simple incompetence.
  CMF: Camouflage:  Apparent attempt of UFO or alien to hide or disguise
       itself or its operations in any way:  Cloud cigars, flying buses
       or haystacks,  false scenery or settings...
                                  This concludes the Attributes Matrix.
```

APPENDIX III: CONTINENT and COUNTRY MNEMONIC CODES.

"CONTINENTS" are actually global regions. Earth (and space) divided
 into convenient pseudo-continents and countries.

"COUNTRIES" are actual nations, or small groups of nations lumped
 together; e.g. BNL (Benelux) = Belgium, Netherlands & Luxembourg.
 SCN = Scandanavia: Norway, Finland, Sweden and Denmark.
 GBI is Great Britain and Ireland. Individual nations like Belgium
 and Ireland are specified in the STATE/PROVINCE field, whenever
 countries get lumped together. Its goofy, impolitic, but efficient.

"Continents" and "Countries" have by 3-letter Codes as follows:

    ==> These are NOT the same codes that call MAP displays. These
        are used only in the CONTINENT and COUNTRY fields. <==

NAM: NORTH AMERICA: Actual Continent including Central America.
  CAN= Canada.   USA= U.S.A.   MEX= Mexico.   GUA= Guatemala.
  BLZ= Belize.   HON= Honduras.   ESL= El Salvador. NIC= Nicaragua.
  CRC= Costa Rica. PNM= Panama.

SAM: SOUTH AMERICA: Actual Continent.
  BRZ= Brazil.   PRG= Paraguay.   URG= Uruguay.   ARG= Argentina.
  CHL= Chile.   BLV= Bolivia.   PRU= Peru.   ECD= Ecuador.
  COL= Colombia.   VNZ= Venezuela. GUY= Guyanas (all 3 of them).

OCN: OCEANIA: AUSTRALIA / NEW ZEALAND and the great Oceans.
  AUS= Australia. NZL= New Zealand   ATL= Atlantic Ocean + islands
  PAC= Pacific Ocean and non-Asian islands. CRB = Caribbean area.
  IND= Indian Ocean + islands.   ARC= Arctic above 70 degrees North.
  ANT= Antarctic below 70 degrees S. ICL= Iceland. GRN= Greenland.

WEU: WESTERN EUROPE:
  GBI= Great Britain and Ireland.   SCN= Scandanavian and Finland.
  GER= Germany.   BNL= Belgium, Netherlands and Luxembourg.
  FRN= France.   SPN= Spain.   PRT= Portugal   AUS= Austria.
  ITL= Italy.   SWZ= Switzerland MED= Greece and Island nations.

EEU: EASTERN EUROPE: Includes some former Soviet Republics.
  ALB= Albania.   ELL= Estonia, Latvia & Lithuania. BLR= Belorus.
  CZK= Czech and Slovak Republics   HNG= Hungary.   POL= Poland.
  RUM= Romania.   UKR= Ukraine.   BLG= Bulgaria.
  YUG= Former Yugoslavia (Province field indicates present republics).

ASM: ASIA MAINLAND: (except Vietnam, Cambodia and Laos.)
  CHI= Red China. MNG= Mongolia.   IND= India.   PAK= Pakistan.
  AFG= Afghanistan HML= Himalayan states: Nepal, Bhutan, Shangri-la etc.
  BNG= Bangladesh BUR= Burma.   KOR= Korea (both sides)

ASP: ASIA PACIFIC: Island nations & parts of Southeast Asia.
  JPN= Japan.   PHL= Philippines TWN= Taiwan China VTN= Vietnam.
  LAO= Laos.   CMB= Cambodia.   TAI= Thailand.   MLY= Malaysia.
  INS= Indonesia. Small remote islands are under OCN (Oceania)

 NAF: NORTHERN and NW AFRICA: North of the Equator.
   EGY= Egypt.   SUD= Sudan.   ETH= Ethiopia.   LBY= Libya.
   TUN= Tunisia.   ALG= Algeria.   MRC= Morocco..   SAH= Sahara.
   [Sahara includes Chad, Niger, Mali, Mauritania and Upper Volta.]
   IVC= Ivory Coast, Ghana, Togo, Benin, Liberia.. NGA= Nigeria.

```
 SAF:    SOUTHERN AFRICA:  Generally on or South of the Equator.
    RSA= Rep of S.A. ZMB= Zimbabwe & Zambia (Rhodesia)  ANG= Angola.
    KHD= Kalahari Dsrt: Botswana etc. MZB= Mozambique.  TNZ= Tanzania.
    UGN= Uganda.     KNY= Kenya.      SML= Somalia.     CNG= Congo states.
    IVC= Ivory Coast,Ghana,Togo,Benin,Liberia etc.      NGA= Nigeria
    ( CNG includes Congo, Zaire, Central Afr Rep, Rwanda, Burundi.. )

 CIS:  RUSSIA and former soviet,  except Baltics, Ukraine & Belorus.
    RUS= Russia.     GEO= Georgia     ARM= Armenia.     AZR= Azerbaijan.
    KZK= Kazakh Rep. TKM= Turkmen Rep UZB= Uzbek Rep.   TDZ= Tadzhik Rep.
    [Russia includes various ethnic Okrugs, all within the former RSFSR]

 MDE:    MIDDLE EAST:  Turkey, Israel, Iran and Arabic speaking lands.
    TRK= Turkey.     SYR= Syria.      IRQ= Iraq.        IRN= Iran.
    JRD= Jordan.     ISR= Israel.     ARB= Arabian Peninsula (not Kuwait)
    KWT= Kuwait.     CYP= Cyprus.     LEB= Lebanon.

 SPC:    SPACE:  Anywhere outside of Earth's Atmosphere.
    ORB= Earth Orbit.  Space stations, capsules. Astronauts & Cosmonauts.
    LUN= The Moon  VEN= Venus   MRS= Mars     AST= Asteroids   JUP= Jupiter
    SAT= Saturn    URA= Uranus  NEP=Neptune  DPS= Deep Space  PLU= Pluto
```

APPENDIX IV: The STATE/PROVINCE Field.   Some Notes.

In cases where "Countries" are Lumped together (Britain & Ireland, African Sahara or Congo, Baltic states etc.) the STATE/PROVINCE field is used for the actual Country. This field is limited to 3 Alfa characters: e.g. EST = Estonia, IVC = Ivory Coast, BLG = Belgium.

For USA, Canada and Mexico enter code for STATE, PROVINCE or TERRITORY. Use States, Provinces, Cantons, Departments etc. in other countries.

States/Provinces in N. America have very NON-INTUITIVE codes. If you add records, be sure to use the same codes! This is needed for TIME ZONE DISCRIMINATION, and file search purposes. Some examples are:

```
  ALS = Alaska.  CLR = Colorado  CNN = Conn.       HWI = Hawaii.
  IOW = IOWA.    MNT = Montana   MSC = Mass.       MSO = Missouri.
  MSP = Miss.    NBR = Nebraska  NCR = N.Carolina. NDK = N.Dakota.
  OHI = Ohio     ORG = Oregon    SCR = S.Carolina. SDK = S.Dakota.
  UTA = Utah.    VRG = Virginia  WVA = W.Virginia  WSH = Washington
```

Mexican States are similarly coded. SNL=Sinaloa. CHH= Chihuahua...

Canadian Provinces and Territories likewise:
```
  ALB = Alberta         BCO = British Columbia   MBA = Manitoba
  NBR = New Brunswick  NFL = Newfoundland.       NSC = Nova Scotia
  NWT = NW Territories ONT = Ontario             QBC = Quebec
  SSK = Sasketchewan   YUK = Yukon               PEI = Prince Edward Island
```

In France abbreviate the Department (one out of 90).

```
Australia, Brazil, Germany:         Enter State Code.
Benelux, Scandanavia:               Enter the country.
Spain, Portugal, Italy:             Enter the Province.
Britain/Ireland enter the "Country": IRL, NI, SCT, WAL, ENG
```

For countries with obscure subdivisions, use nearest major city.

APPENDIX V: TEXT SYNOPSIS FIELD.   Abbreviations and Acronyms.

The Synopsis Field is 78 alpha characters. Space limitations require many acronyms
and abbreviations.   The following conventions are used:

```
   /     : ANY preposition: of, for, from, in, according to...
   ><    : Between (2 places)
   >> or>: Between (2 places) going toward 2nd
   >E >W >NW >SSE   Going East, West etc.  Double arrow >> denotes speed
   __++  : __ and more.  __ to the max
   100s/ : Hundreds of ___      1000s/  Thousands of __
   2x,3x : Twice, three times...
   nn K' : nn Thousand Feet (Altitude).
   @     : At                 ( plus many more )
```

==> Press the [F5] key from the MAIN MENU, EXAMINE/Edit screens and when
     entering Sighting synopses, to look up unfamiliar abbreviations and
     acronyms. Poussez le [F7] pour la francaise brouille! <==

APPENDIX VI: REFERENCES.

==> Press [R] from the MAIN MENU, EXAMINE/EDIT and Reference entry screen to call
the References pop-up window. From the EXAMINE/EDIT screen, first Reference shown
will match the Active Record. Use the UP/DOWN Arrow keys to step UP/DOWN by one
reference number. Use the [Page-up]/[Page-Dn] keys to jump ten references. Press
[Ctrl] [arrow-key] to jump ten references. <==

References are numbered (000-255 in no particular order), subject to change as
sources are added or reclassified.   Book references provide a page number from 0-
999. Journals give Volume/Issue number, but not page numbers.

For References #93 (footnotes/newspapers), #97 (miscellaneous journals) and #98
(misc. books), press Ctrl-R for the actual source or footnote.

These are sources which provide few *U* listings. For other reference numbers
Ctrl-R gives full publishing data instead.

Ctrl-R data comes from the text-file USOURCES.DOC which is unpacked when you
install *U*. From the Examine/Edit screen, you can browse through USOURCES.DOC.
Press the [L] key, and enter a search-word.

For example, type in VALLEE. Press the space-bar to step through several listings.

USOURCES.DOC is quite a bibliography in itself. Feel free to use it. A reference
back to this database would be kindly appreciated of course.

APPENDIX VII   * PLANETARY POSITIONS *****

Planetary positions are shown 2 ways:

1) From the EXAMINE/EDIT (text) display, press the [P] key. Horizon Coordinates
(Azimuth/Altitude) plus distance show the apparent position of 6 visible planets at
the date/time of the Active Record. Press [P] again to toggle between displays.

2) By choosing Option [A] (ASTRONOMICAL CLOCK) from Statistics Menu. YOUR date and
time show at the upper right. Press [D] to adjust your date; press [T] to set your
Local time.   UTC is the same as Greenwich GMT, and does NOT change for Daylight-

Savings. "Julian Day" is the number of days since January 1, 4713 B.C. GST is
Greenwich SIDEREAL (not Standard) time. LST is YOUR local Sidereal (astronomical)
time. Accuracy for Horizon coordinates depends upon accurate Time Zone, Daylight
Savings, and your geographical coordinates (Long/Lat.). Press [Z] to set your Time
Zone and Daylight or Standard time flag.   Press [L] to enter or change your local
Coordinates.

Earth's Solar Longitude is with respect to the Vernal Equinox. "Ecliptic" is
Earth's obliquity or tilt with respect to the ecliptic plane, and changes slowly as
the Earth "wobbles". Moon Phase is the percent of the Moon's face illuminated by
the Sun, as seen from Earth.

Solar and Geocentric Longitudes are on the Ecliptic, with the Vernal Equinox in
Pisces as zero-degree reference.   All planets and moon orbit CCW through 360
degrees, as seen from the North Star.

Right Ascension (RA) and Declination are EQUATORIAL coordinates, to locate planets
with respect to fixed stars per astronomical convention.

Horizon Coordinates (Azimuth & Altitude) DEPEND ENTIRELY on accurate Local Date,
Time, DST and Coordinates. 0 degrees Azimuth is due North. "Altitude" is the angle
of elevation up from the horizon in degrees.

==> Planets with a NEGATIVE altitude are below the horizon i.e. invisible!

Your Time Zone may include a 1 hour offset for DST. Thus Pacific STANDARD time is
8 hours behind UTC, while PDT is only 7 hours behind. The display updates once per
second with an audible "tick". Press [S] for a silent clock. Press [Esc] to exit.

Press [H] to enter any HYPOTHETICAL set of Coordinates, date, time, DST etc. The
Hypothetical coordinates default to the LAST ACTIVE RECORD displayed in the
EXAMINE/EDIT screen. You can check if Venus was actually in the sky during any
recorded sighting, for example.

Press [R] to return to the ticking Realtime display for YOUR area.

ACCURACY: Double-Precision variables are used throughout. Routines account for
Earths Obliquity, Planetary eccentricity and inclination. Mean anomalies are
recursively zeroed for true ecliptic longitudes. Several Epochs were "averaged"
for "mean longitudes at epoch" and ascending nodes.

Perturbations, precession, refraction, relativistic effects and parallax errors
(generally small) are NOT factored in or corrected here.

The Moon is corrected for Sun-Earth Variation, evection and other factors.

Maximum error is about 2 degrees, usually much less. Figures have up to 4 decimals
to show RELATIVE changes BUT should only be considered accurate to about a 10th of
a degree at best!

APPENDIX VIII: PROBLEM SOLVING.

1] THE PROGRAM WORKS EXCEPT FOR THE MAPS. THEY ARE DISTORTED,
    OVERWRITTEN, and/or MY SYSTEM CRASHES WHEN I DISPLAY MAPS.
    >> Standard VGA 640x480 16-color video is a system requirement.
        Old EGA or CGA video is obsolete and simply don't work.

2] I GET an ERROR MESSAGE: FAILED opening U.RND (or other file)
    >> ALL *U* FILES MUST be in the SAME SUBDIRECTORY, usually C:\UFO.
        This occurs automatically at installation.

3] "INSUFFICIENT CORE MEMORY" -or- "MEMORY ALLOCATION FAILURE"...
    >> You have run out of memory. *U* requires 1MB (megabyte) of user
      memory. CLOSE all programs, and execute *U* by itself.
      See README.DOC for other possible tips.

5] I get a red message like "INTERNAL MATH ERROR" and *U* just stops.
    >> Please report problems like this to Larry Hatch via email:
        < larry@larryhatch.net >. These may indicate programming errors.

6] My printer won't print *U* data, or just locks up!
    >> *U* presumes your PARALLEL printer is connected via a standard
      DB-25 cable to the LPT1 PARALLEL PRINTER PORT at the rear of your
      computer, sometimes with a Buffer Device in between. IF you have
      any OTHER arrangement, *U* cannot possibly anticipate it. One
      solution is a printer switch with an extra cable. This switches
      the LPT1 output between devices.

      Remember: Only the CANON BJ-200e or exact equivalent can print
      out GRAPHICS screens directly from within *U*. Use [Shift]
      [Print Scrn] in Windows to print these screens on other printers.

      All printers will print text or numbers data directly.

7] How do I capture images I can send over the Internet?
    >> Press [Alt][Print Scrn]. Then call Microsoft Paint. Click on
    Edit. Click on PASTE in the little pop-up window. Click on File
    and then SAVE to name and save the image. These are typically large
    bitmapped (.bmp) files. Try using Paintshop Pro to convert the image
    to a .GIF file. This will reduce the file to a fraction of its
    former size, with no loss of fidelity.

8] My installation diskette seems to have self-destructed.
    >> 1) You left it on the heater, or too close to a magnet.
       2) The dog tried to eat it.
       3) You tried to install *U* on too many different computers.

      Email <larry@larryhatch.net> and ask for assistance.

The UTILITIES MENU: File Maintenance Routines.

Press the [U] key from main menu to access this Utilities Menu.

EXIT to Main Menu ... press [Esc] or [0] key

ABOUT the *U* Database ... press [1]

Contact information for Larry Hatch Software.

TAG BAD COORDINATES ... press [2]

This is a rough scan of all listings looking for places in the wrong hemisphere
etc. Records with obviously flawed longitude/latitude are TAGGED (shown in green)
to facilitate locating and fixing errors.

There is a special "search limit" that zeroes in on tagged records. Make sure you
untag other records before you use Utility #2, to avoid confusion.

TAG UNFOUND LOCATIONS ... press [3]

Sightings marked CF or QF were never found on a map or gazetteer.
This routine TAGS these records for easy retrieval. By 2001 most
of these were found or delisted. A few might have been ficticious!

ASTRONOMICAL CLOCK (again). press [A] ...

Be sure and check that the local coordinate shown are your own where
you execute *U*, and that the proper time zone is entered! Press Z
to adjust time zone. Press L to set coordinates. Your local time is
taken from your system clock and cannot be adjusted here. Note the
positions of the planets, and check them outdoors. Its fun!

DUPLICATE COORDINATES ... press [D] ...

Often, there are numerous records for the same city. To show this on
the maps, each sighting is offset by fractions of degrees long/lat.
This option tags records with identical coordinates, so one or the other
may be pushed aside a bit!

EXPORT ASCII FILE ...   press [E] ...

For the sake of statistical studies using other applications, this
option allows the user to create and name an ASCII text file, and send
to any drive A-D. Exportable fields are year, month, day of month, day
of year (1-366), long/lat coordinates, time of day, and strangeness and
credibility codes. Other fields are not exportable to avoid software piracy.

Each field ends with a TAB (Ascii 9) for nice even columns. Each line ends with
a Carriage Return/Line-feed (0D0A hex). The file produced ends with an EOF (FF
hex) terminator byte.

SORT RECORDS INTO ORDER . press [S] ...

This routine puts all records back into strict chronological order by
LOCAL date and time-of-day.   DELETED records [which are marked by
the unlikely year 3000 ad] will sort down to the end of the data file.

Some final notes ...

U draws from the hard work of thousands in UFO investigation and research over
five decades.   Nobody can promise complete accuracy. Every reasonable effort is
made to cross-check sources for data, date time and so on.
=> Please email < larry@larryhatch.net > if you find factual errors. <=

IF you cannot find a well-known sighting, it may have been delisted. Some well
known but discredited sightings are listed in USOURCES.DOC. Use the [L] lookup
routine to see if it went to the dog-house. Night-Lights and similar low-
information sightings are no longer listed.

The precise Longitude/Latitude of sightings has been painstakingly determined for
thousands of cases, often requiring expensive foreign maps etc. Some places are yet
to be found, a few may not even exist! These are marked CF or QF for "Can't Find"
and "Ready to delist" in the Text field. Some QF events are left in the data to

avoid duplicated efforts.   A long sad series of lost place-names appears in
USOURCES.DOC.

Select Option #3 from the UTILITIES Menu to display or print a list of still
sought-after "phantom" locations (CF and QF sightings)

_____

NO NONSENSE AGREEMENT:

Over 18 years of diligent research and expense has gone into this project.

The price is artificially low to make *U* available to the greater UFO community.
Copies are sold for the sole use of the paid subscriber. If you upgrade to a newer
computer, simply re-INSTALL from your original diskette, on your new system. *U*
is compatible with Pentium (R) technology where maps execute with blazing speed!

U DATABASE is NOT SHAREWARE. All files and this Manual Copyright (C) 1994-2003
by Larry Hatch Software. DO NOT DISTRIBUTE COPIES.

Each copy of *U* is recompiled with the user's Name and a serial number.

Researchers are encouraged to use this data freely in books, papers and public
presentations provided PROPER CREDIT is given clearly indicating LARRY HATCH
SOFTWARE with the address 142 Jeter Street, Redwood City, CA 96062.
email < larry@larryhatch.net >

Film and Video presentations may use screens from this software PROVIDED PROPER
CREDITS with NAME and ADDRESS are clearly shown so that viewers may obtain their
own legal copies.

There are no "Terminate and Stay Resident" (TSR) programs, oddball device drivers
or other troublesome gimmicks in the *U* Database once properly installed. *U*
lives in your C:\UFO subdirectory, and does not alter files in this or other
directories.

/LH September, 2003