TIMEZ - A PROGRAM TO TRACK WORLD TIME

1. What is TimeZ?

TimeZ is a program for use by people who NEED to know what time it is elsewhere in the world. By entering the proper data into TimeZ, you can see the current time in any of up to 57 places at once, and an infinite number of places in total.

By entering the correct data about a place, specifically about whether Daylight Savings is observed there, and if so, when, TimeZ will adjust for Daylight Savings in your time zone and those of the other places. Changes in a place's DST status is constantly checked, so updates are immediate.

For people who do not necessarily require that they know the time in many places, TimeZ can still be of interest. During any military operation, like Desert Storm or Restore Hope, did you ever wonder the time in the place where the troops were? To find out, just add Iraq or Somalia to the Master Clock.

Version 1.3 of TimeZ adds data fields for other information about a place: Its currency and exchange rate (US dollars), national languages, and type of government. These additions can aid the world traveller, and can be a useful educational tool.

Included with TimeZ is a data file with its companion index files. In these files are over 250 entries to get you started. Or you can start from scratch, whichever works best for you.

I have tried to make TimeZ simple to use. It does not use any graphics - just text for a straight forward readout of the current time. No three-letter abbreviations or ANSI-character maps of the world. I hope you find TimeZ enjoyable.

Requirements

The requirements of TimeZ are rather simple. An IBM PC compatible with at least 128K RAM, a color monitor (CGA or better), and a disk of some sort (hard or floppy) to store the data on. The size of the data file depends on how many entries you make, but even with hundreds of entries, TimeZ would still run off of a 360K floppy. The DOS/Windows utility SmartDrv or some other disk cache utility is suggested for best performance.

TimeZ uses four files. The TimeZ executable (*TimeZ.EXE*), the data file (*TZ.DAT*), a names index file (*TZ.IDX*), and a sounds-like index (*TZSZ.IDX*).

Setup

Before using TimeZ, you should set the DOS environment variable TZ. If you do not set TZ, DOS will assume that you are in the Pacific Standard Time time zone. Here's what you need to do to set your TZ variable:

Determine your time zone name. For example, the U.S. has six main time zones: Eastern, Central, Mountain, Pacific, Alaska-Hawaii, and Bering. Canada uses these and three others: Newfoundland, Atlantic, and Yukon, with Yukon being the same as Pacific. Next, determine if you observe Daylight Savings Time in your area. Most of the U.S. and Canada does, with Arizona, Hawaii, and parts of Indiana being notable exceptions.

Next, determine how far ahead of Greenwich Mean Time your location is. Greenwich, England, and the Prime Meridian which passes through Greenwich, is the starting point for all world time. Most atlases or almanacs will help you determine this. For example, the Eastern time zone is five hours ahead of Greenwich.

Lastly, make up a string of characters to represent your time zone. The string must be at least four characters long. The first three characters represent the time zone. The next characters determine the time difference in hours from Greenwich. The last three characters are used only if Daylight Savings is observed where you are. Here are examples of the TZ string:

NST3.5NDT	Newfoundland
AST4ADT	Canadian Maritimes
EST5EDT	Eastern Time Zone
EST5	Parts of Indiana
CST6CDT	Central Time Zone
MST7MDT	Mountain Time Zone
MST7	Arizona
PST8PDT	Pacific Time Zone
YST8	Parts of the Yukon
HDT9HST	Alaska-Hawaii Time Zone
HDT9	Hawaii
BDT10BST	The Aleutians

Finally, set the TZ variable equal to your time zone string. Use the DOS Set command to do this. For example:

C:\> set TZ=EST5EDT <ENTER>

For best results, the following line should be set in your *AUTOEXEC.BAT* file:

set TZ=EST5EDT

Consult your DOS manual for details about the *AUTOEXEC.BAT* file.

2. Main Screen

Assuming a data file already exists and is in the same directory as the TimeZ program, when starting TimeZ, your screen will look like this:

```
+-------------------------+ TimeZ Version 1.1 +-------------------------+
¦                                                                       ¦
¦                                                                       ¦
¦                                                                       ¦
¦                        1. Add New Place Entry                         ¦
¦                        2. Scan Place Entries                          ¦
¦                        3. Edit Existing Place Entry                   ¦
¦                        4. List Place Entries                          ¦
¦                        5. Print Place Entries                         ¦
¦                        6. Master Clock                                ¦
¦                        7. Set Local Date/Time                         ¦
¦                        8. Quit                                        ¦
¦                                                                       ¦
¦                        Enter your choice:                             ¦
¦                                                                       ¦
¦                        F2=Toggle 12/24 hour time                      ¦
¦                                                                       ¦
¦                                                                       ¦
¦                                                                       ¦
¦                        Current local time: 00:00:00                   ¦
¦                        Current GMT time..: 00:00:00                   ¦
¦                                                                       ¦
¦                  Copyright (c) 1994, Steve Mount Software             ¦
+-----------------------------------------------------------------------+
```

This screen shows the version number at the top, the main menu, a prompt explaining how to toggle the use of 12-hour time keeping or 24-hour time keeping, and a display of the current local and Greenwich Mean Time (GMT). The time displays are real-time and kept up to date as the program awaits input.

If you started TimeZ and there was no data file in the same directory, you will see a box like this overlaid on the main menu screen:

```
+-------------------------------------------------------------------+
¦ TimeZ Directory:                                                  ¦
+-------------------------------------------------------------------+
```

In this box, you should type the name of the directory that the TimeZ data is in. If the TimeZ data files do not already exist (for example, you are creating a new database), then the name of the directory the files should be created in should be typed here. If no TimeZ data exists in the directory you type in, TimeZ will assume you wish to create a new database. This confirmation box will appear:

```
+------------------------------------+
¦ Data file does not exist.  Create? Y ¦
+------------------------------------+
```

Note that the default answer is (Y)es. If you do not wish to create a new data file (for example, you mistyped the directory name), then type (N)o and press ENTER. You will be returned to the "TimeZ Directory" box.

3. Entering New Time Zones

TimeZ requires a database of locations and their time zones to work most effectively. Without this database, all TimeZ can do is show you is the current local and GMT time. To enter this data, simply press 1 at the main menu. A screen that looks like this will appear:

```
+--------------------+ Enter New Time Zone Record +--------------------+
|                                                                       |
|                                                                       |
|                                                                       |
| Place.....:                                                           |
| Short Name:                                                           |
| GMT Adjust:                                                           |
| Daylight Savings Apply? (Y/N).: Y  Starts:              Ends:         |
| Master Clock Screen (A-Z, 0-9): A                                     |
|                                                                       |
| Currency..........:                         Cur/$US:                  |
| Language(s).......:                                                   |
| Type of Government:                                                   |
|                                                                       |
|                                                                       |
|                                                                       |
|      F9=Save and Return to Main Menu   F10=Save and enter another     |
|               ESC=Abort entry, Return to Main Menu                    |
|                                                                       |
|        Insert DST for:  F1=USA  F2=UK  F3=Europe  F4=Australia        |
|                                                                       |
|                                                                       |
|                                                                       |
|                                                                       |
+-----------------------------------------------------------------------+
```

Each field is explained in turn:

Place: This field is for the full name of a place. This place may be a city or a country or a state, province, or county. It is up to you. Obviously, if the place is a large geographic area, the entire area should be encompassed by the same time zone and Daylight Savings Time (DST) rules. The Place name can be up to 40 characters long.

Short Name: The field should contain the short name of the place. The short name will be used on the Master Clock to conserve space. For example, if the Place is "Los Angeles, California", the Short Name may be "L.A., CA". The Short Name may be up to 10 characters long.

GMT Adjust: Input the number of hours that the Place is from GMT. For example, the East Coast of the U.S. is five hours earlier than GMT. In this field, type -5. For another example, France is one hour later than GMT. You may type either 1 or +1 here. For places with odd GMT offsets, like Newfoundland's 3.5 hours earlier, decimal fractions are OK (-3.5, +4.75, etc). If you input nothing in this field, 0 will be assumed. Be sure to type the offset when the time zone you are entering is not in DST.

Daylight Savings Apply? (Y/N): A Yes or No question, is DST observed in this place?

Starts: If DST does apply, then enter here when it starts. The format of this entry is either: MMMDD or MMMmDDD. In both examples, the first three characters should be the month DST starts in. Choose from: JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, or DEC.

In the first example (MMMDD), the fourth and fifth characters should be a valid date within that month. For example, if DST always starts on April 1st, input APR01.

In the second example, the fourth character is a modifier. It can be one of the following: 1, 2, 3, 4, 5, F, or L.

The fifth through seventh characters should be an abbreviation for a day of the week. Use the following: SUN, MON, TUE, WED, THU, FRI, SAT, or DAY. You may use "DAY" with the F and L modifiers only.

Examples:
APR1SUN: DST starts on the first Sunday in April
SEPLMON: DST starts on the last Monday in September
MAR2TUE: DST starts on the second Tuesday in March
DEC31: DST starts on December 31st. Same as DECLDAY

Ends: If DST does apply, then enter here when it ends. Use the same format as for "Starts".

Master Clock Screen (A-Z, 0-9): Fill in any letter A through Z or number 0 through 9. This indicates the Master Clock screen that this entry will print on. Using Master Clock screens, you can group like entries or places of interest together for monitoring. Note that though you can only have a place assigned to one screen at a time, minor variations in the Place string will allow a seemingly similar entry to be in each of two screen. For example, "New York City 1" and "New York City 2".

Currency: Fill in the name of the currency used by this place. There is space for 20 characters. For example, if the place is Dallas, Texas, you may wish to type Dollars or US Dollars.

Cur/$US: Type in the number of units of this currency needed to equal one US dollar. A decimal point may be used. For example, the rate for US dollars is 1.0000. The rate for Canadian dollars may be 1.3285. Six positions are provided for the rate. The smallest possible value is .00001 and the highest is 999999. This field must be filled in to use the Exchange Rate Calculator later in the program.

Languages: Type in the most common languages for this place. For example, for France, the language would be French. 25 characters are provided for this data.

Type of Government: Type in the type of government for this place. Some examples may be "State of USA", "Communist", and "Monarchy". 20 characters are provided for this data.

The following keys may be pressed on this screen:

F1 will insert the United States DST start/end strings into the record
F2 will insert the United Kingdom DST start/end strings into the record
F3 will insert the European DST start/end strings into the record
F4 will insert the Australian DST start/end strings into the record
F9 saves the entry and return to main menu
F10 saves the entry and gives the user a blank screen to begin a new entry
ESC aborts the addition of the current entry and returns to the main menu
ENTER, TAB, Down Arrow moves to the next field
Shift-TAB, Up Arrow moves to the previous field
Delete, Backspace, Insert, Home, and End for editing

If you enter a Place that already exists (the Place name exactly matches a Place already in the data file), you will be given an error message and a chance to edit the entry.

4. Showing a Time Zone

To display the time zone record for a place already entered, press 2 from the main menu. You will see a screen like this:

```
+---------------------¦ Scan For Time Zone Record +----------------------+
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦ Place.....:                                                            ¦
¦ F2=Sounds-like search                                                  ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
+------------------------------------------------------------------------+
```

Enter the place to search for in the field. Press ENTER when done. If you do not know the exact spelling of a place, then you may press F2 instead of ENTER to begin the search. This will perform a "sounds-like" search instead of a straight string search. The sound seach uses English phonemes to store and search the place name. If using sound search, beware of this.

An example of the difference: Assume there are two entries, Starksboro and Stratton. By typing "str" and pressing ENTER, you would display Stratton, the first match alphabetically. However, press F2 instead of ENTER will display Starksboro, the first phonetic match (vowels do not count).

Once you have pressed either ENTER or F2, you will see a screen like this:

```
+------------------------| Scan Place Entries |-------------------------+
|                                                                       |
|                                                                       |
|                                                                       |
| Place.....: Starksboro, Vermont                                       |
| Short Name: Starksboro                                                |
| GMT Adjust: -5                                                        |
| Daylight Saving Applies? (Y/N): Y  Starts: APR1SUN      Ends: OCTLSUN |
| Master Clock Screen (A-Z, 0-9): D                                     |
|                                                                       |
| Currency..........: US Dollar                   Cur/$US: 1.0000       |
| Language(s).......: English                                           |
| Type of Government: State of USA                                      |
|                                                                       |
|                                                                       |
|                                                                       |
|       F8=View Next  F9=View Previous  F10=View Another  ESC=Exit      |
|                      F5=Exchange Rate Calculator                      |
|                                                                       |
|                                                                       |
|                                                                       |
|                                                                       |
|                                                                       |
+-----------------------------------------------------------------------+
```

You are prompted with six choices. You may press F8 to view the next sequential record, F9 to view the previous record, or F10 to start a new search. F5 will start the Exchange Rate Calculator. You may also press ESC at any time to end the search. Note that in Scan mode you may not change any of the info in the record. It is view only.

5. Editing a Time Zone

To edit a time zone already in the data file, press 3 at the main menu. You will see a screen similar to that shown in Chapter 4. Enter the name of the place you wish to edit in the Place field and press either ENTER or F2. If there is a match, you will see a screen like this:

```
+----------------------+ Edit Old Time Zone Record +----------------------+
|                                                                          |
|                                                                          |
|                                                                          |
| Place.....: Starksboro, Vermont                                          |
| Short Name: Starksboro                                                   |
| GMT Adjust: -5                                                           |
| Daylight Savings Apply? (Y/N).: Y  Starts: APR1SUN     Ends: OCT3SUN     |
| Master Clock Screen (A-Z, 0-9): D                                        |
|                                                                          |
| Currency..........: US Dollar              Cur/$US: 1.0000               |
| Language(s).......: English                                              |
| Type of Government: State of USA                                         |
|                                                                          |
|                                                                          |
|                                                                          |
|                    F8=Save/Edit Next  F9=Save/Return                     |
|                 F10=Save/Edit Another  ESC=Abort/Return                  |
|                                                                          |
|         Insert DST for:  F1=USA  F2=UK  F3=Europe  F4=Australia          |
|                    F5=Exchange Rate Calculator                           |
|                                                                          |
|                                                                          |
|                                                                          |
+--------------------------------------------------------------------------+
```

This screen works in the same way as the Enter New Time Zone Record screen. All field descriptions are the same. The function keys that can be used on this screen are:

F1 will insert the United States DST start/end strings into the record
F2 will insert the United Kingdom DST start/end strings into the record
F3 will insert the European DST start/end strings into the record
F4 will insert the Australian DST start/end strings into the record
F5 will start the Exchange Rate Calculator
F8 to Save the current entry and then edit the next entry
F9 to Save the current entry and then return to the main menu
F10 to Save the current entry and then search for another entry to edit
ESC to Abort the changes to the current entry and return to the main menu
ENTER, TAB, Down Arrow moves to the next field
Shift-TAB, Up Arrow moves to the previous field
Delete, Backspace, Insert, Home, and End for editing

6. Listing all Time Zones

By pressing 4 at the main menu, you will see a screen similar to this one:

```
+-----------------------| List Place Selection |-------------------------+
|                                                                         |
|                                                                         |
|                                                                         |
|                            1. Time Zone List                            |
|                            2. Currency List                             |
|                            3. Language List                             |
|                            4. Government List                           |
|                            5. Main Menu                                 |
|                                                                         |
|                            Enter your choice:                           |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
+-------------------------------------------------------------------------+
```

Press one of the numbers 1 through 5. Pressing 5 will return you to the main menu. The other numbers correspond to the four available screen listings. 1 will show you a list of all places along with Time Zone information - GMT offset, the Daylight Saving flag, and the Master Clock screen. 2 shows all places with currency and exchange rate info. 3 shows the languages for each place, and 4 shows the government types for each place. The following shows the screen produced by a Type 1 report (other reports have similar formats):

```
+-----------------------¦ List Place Entries +--------------------------+
¦                                                                        ¦
¦ City                              GMT Offset  DST  Master Screen       ¦
¦ ------------------------------    ----------  ---  -------------       ¦
¦ Adelaide, Australia                  +9.5      Y         E             ¦
¦ Afghanistan                          4.5       N         A             ¦
¦ Alaska                               -9        Y         A             ¦
¦ Albania                              +1        Y         A             ¦
¦ Aleutian Islands, Alaska             -10       Y         A             ¦
¦ Algeria                              +1        N         A             ¦
¦ Alma-Alta, Kazakstan                 +6        Y         A             ¦
¦ American Samoa                       -11       N         A             ¦
¦ Andorra                              +1        Y         A             ¦
¦ Angola                               +1        N         A             ¦
¦ Archangel, Russia                    +4        Y         A             ¦
¦ Argentina                            -3        N         A             ¦
¦ Arizona                              -7        N         A             ¦
¦ Armenia                              +4        Y         A             ¦
¦ Aruba                                -4        N         A             ¦
¦ Austria                              +1        Y         A             ¦
¦ Azores                               -1        Y         A             ¦
¦ Bahamas                              -5        Y         A             ¦
¦                                                                        ¦
¦           Press ESC to quit, any other key to continue...              ¦
+------------------------------------------------------------------------+
```

To get more detail about a Place, use the Scan Place Entries option (Chapter 2).

As you search through the data file, one screen of data at a time will display. Press any key between data screens to proceed, or ESC at any time to return to the main menu. On the final List screen, any key will return you to the main menu.

7. Printing all Time Zones

Pressing 5 at the main menu will bring you to this screen:

```
+--------------------------+ Print Entries +----------------------------+
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                     About to print TimeZ entries.                      ¦
¦                                                                        ¦
¦              Press F1 for Short List, F2 for Long List                 ¦
¦                     Press ESC to abort printing                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
¦                                                                        ¦
+------------------------------------------------------------------------+
```

Printing your entries is fairly simple. The report will always go to LPT1. DOS's Mode command can be used to change the actual i/o port of the LPT1 printer, if need be.

There are two types of listing. The first, the Short List, is accessed by hitting F1 on this screen. The short list has one line of information for each place. It will show the Place Name, Place Short Name, Place GMT Offset, and Master Clock Screen. Pressing F2 will print the Long List. This list includes all of the above, plus DST Flag, Start and End of DST, and the Sound Meta for each Place. You may press ESC here to abort the print process.

After you press F1 or F2, you will be prompted one last time before the actual printing. The Short/Long list prompt will be replaced with:

```
Press F1 for normal print, F2 to print CR/LF
```

Press F1 for normal printing (for example, Epson-compatible dot matrix printers) or F2 if CR/LF must be sent at the end of each line (for example, LaserJet and DeskJet printers). Experiment if you are not sure which to use. You may again press ESC on this screen if you decide not to print.

While the printing is happening, a short message will flash on the screen:

```
        Printing.  Press ESC to abort...
```

Pressing ESC will stop the print job. However, your printer probably has a print

buffer - if this is the case, then the job will not stop printing until the printer's buffer is empty.

The output of the report will be similar to this:

```
+---------------------------------------------------------------------------+
¦ TimeZ Entries Listing - Page 1                                            ¦
¦                                                                           ¦
¦ Place                                    Short Name  GMT      Scn         ¦
¦ --------------------------------------   ----------  -------  ---         ¦
¦ DST  Start    End      Sound Meta                                         ¦
¦ ---  -------  -------  ----------                                         ¦
¦                                                                           ¦
¦ Adelaide, Australia                      Adelaide    +9.5     E           ¦
¦  Y    OCTLMON  MAR3SUN  ADLDSTRL                                          ¦
¦                                                                           ¦
¦ Afghanistan                              Afghanistn  4.5      A           ¦
¦  N                      AFNSTN                                            ¦
¦                                                                           ¦
¦ .                                                                         ¦
¦ .                                                                         ¦
¦ .                                                                         ¦
¦                                                                           ¦
¦ 266 entries printed                                                       ¦
+---------------------------------------------------------------------------+
```

As mentioned, the Short List will not include the line that begins with "DST". Using the default program data file, the Short List will be about six pages. The Long List will be about 16 pages.

When the job is complete, you will be returned to the main menu. If TimeZ detects an error on your printer while it is printing, you will see an appropriate error message.

8. Master Clock

Pressing 6 at the main menu will bring you to the Master Clock. This is where you see the fruits of your labor, as it were. The Master Clock shows you the first 57 entries in each of up to 36 screen groups (see Chapter 3 for details about Master Clock screens). The Master Clock looks like this:

```
+---------------------------¦ Master Clock +------------------------------+
¦ In Standard Time               08:09:12AM Sat          In Daylight Saving ¦
¦                                                                           ¦
¦ Afghanistn  05:39PM Sat  Baku Azerb  05:09PM Sat  Burma       07:39PM Sat ¦
¦ Alaska      04:09AM Sat  Bangladesh  07:09PM Sat  Burundi     03:09PM Sat ¦
¦ Albania     02:09PM Sat  Barbados    09:09AM Sat  Calgary     06:09AM Sat ¦
¦ Aleutians   03:09AM Sat  Belgium     02:09PM Sat  Cameroon    02:09PM Sat ¦
¦ Algeria     02:09PM Sat  Belize      07:09AM Sat  Canary Is   01:09PM Sat ¦
¦ Alma-Alta   07:09PM Sat  Benin       02:09PM Sat  Cape Verde  12:09PM Sat ¦
¦ Am Samoa    02:09AM Sat  Bermuda     09:09AM Sat  Cayman Is   08:09AM Sat ¦
¦ Andorra     02:09PM Sat  Bhutan      07:09PM Sat  C.A.R.      02:09PM Sat ¦
¦ Angola      02:09PM Sat  Boa Vista   10:09AM Sat  Chad        02:09PM Sat ¦
¦ Archangel   05:09PM Sat  Boise, ID   06:09AM Sat  Chicago     07:09AM Sat ¦
¦ Argentina   10:09AM Sat  Bolivia     09:09AM Sat  Chile       08:09AM Sat ¦
¦ Arizona     06:09AM Sat  Bosnia-Her  02:09PM Sat  Xmas Is     03:09AM Sat ¦
¦ Armenia     05:09PM Sat  Boston      08:09AM Sat  Cocos Is    07:39PM Sat ¦
¦ Aruba       09:09AM Sat  Botswana    03:09PM Sat  Colombia    08:09AM Sat ¦
¦ Austria     02:09PM Sat  Brasilia    11:09AM Sat  Comoros     04:09PM Sat ¦
¦ Azores      12:09PM Sat  B Virgin    09:09AM Sat  Congo       02:09PM Sat ¦
¦ Bahamas     08:09AM Sat  BrokenHill  11:39PM Sat  Cook Is     04:09AM Sat ¦
¦ Bahrain     04:09PM Sat  Bulgaria    03:09PM Sat  Costa Rica  07:09AM Sat ¦
¦ Baja        06:09AM Sat  Burkina Fa  01:09PM Sat  Cote d'Iv   01:09PM Sat ¦
¦                                                                           ¦
¦           Showing screen A.  Press ESC to exit, or Screen key             ¦
+---------------------------------------------------------------------------+
```

The layout is pretty straight forward. There are three columns of 19 places each. Entries are filled in top to bottom, left to right (as you can see from the alphabetical order). Each place has the place's Short Name, current time in hours and minutes, and the current day for this place. The time will be in 12-hour or 24-hour display mode depending upon the toggle done at the main menu. Note that entries may not be in alphabetical order as they are retrieved in Place Name order, and Place Name can differ from Short Name.

Press any key A-Z or 0-9 to see that Master Clock screen. The "A" screen is the default.

Although you cannot see it here, all places are displayed in white, except those that are currently in DST. Those places are shown in grey.

You will see the notation "*OVERFLOW*" if you have assigned more than 57 places to any one Master Clock screen.

The top of the screen shows the current local time. Since seconds are the same across the board, seconds are shown only for the local time. Also at the top of the screen is a key, showing the "In Standard Time" in white, the "In Daylight Savings" in grey.

When you are finished looking at the Master Clock, press the ESC key to return to the main menu.

9. Setting your Clock

Pressing 7 at the Main Menu will bring you to a screen that will allow you to change the current date and time of your system clock. This feature was included in case you notice that hour system clock is wrong while you use the program. The following screen will be displayed:

```
+----------------------------¦ Set Clock +----------------------------+
¦                                                                      ¦
¦ Enter the current date and time.                                     ¦
¦                                                                      ¦
¦ Time: Hour (0-23): 09   Minute: 52   Second: 52                      ¦
¦                                                                      ¦
¦ Date: Month......: 02   Day...: 21   Year..: 1993                    ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
¦ Press ENTER to force change, ESC to cancel                           ¦
¦                                                                      ¦
¦ Note that changing time/date here will change your system time.      ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
¦                                                                      ¦
+----------------------------------------------------------------------+
```

There are six fields on this screen, all of which are pretty self-explanatory. They are: hour, minute, second, month, day, and year. Two special notes: Hour must be input in 24-hour format (0 for 12 o'clock midnight hour, 23 for 11 o'clock PM hour); Year must be between 1980 and 2099.

The fields are loaded when you enter the screen with the current date/time. When you press ENTER on this screen, TimeZ will set your system clock to the date/time entered. To abort any change, press ESC.

10. Exchange Rate Caculator

In various places throughout the program (notably the Scan and Edit screens), the Exchange Rate Calculator will be available. When you press the key corresponding to the Calculator, the following box will appear:

```
+---------| Exchange Rate Calculator |---------+
|    Amount to convert:                        |
|                                              |
|  F1=$ to Foreign  F2=Foreign to $  ESC=Exit  |
+----------------------------------------------+
```

You are prompted for an amount to convert. You are given six spaces to type in an amount. Decimal points may be used. The F1 and F2 keys will convert the amount for you.

If the amount you typed in was in US dollars, and you wish to know how much that amount is in the foreign currency (let's say French Francs). Press F1. The number of francs that much US currency is equal to will be displayed. Conversely, if the number you typed is the number of francs you have, pressing F2 will show you the equivalent number of US dollars. (The following examples are based on an exchange rate of 5.8940):

F1 Example:

```
+---------| Exchange Rate Calculator |---------+
|    Amount to convert: 100                    |
|          $100.00 = 589.40 Franc              |
|  F1=$ to Foreign  F2=Foreign to $  ESC=Exit  |
+----------------------------------------------+
```

F2 Example:

```
+---------| Exchange Rate Calculator |---------+
|    Amount to convert: 100                    |
|           100.00 Franc = $16.97              |
|  F1=$ to Foreign  F2=Foreign to $  ESC=Exit  |
+----------------------------------------------+
```

Note the following: The exchange rates included with TimeZ's sample data set are current as of January 3, 1994. A few of the rates are not filled in (such as for Croatia). The reasons for this may be that the currency's value is in too much of a state of flux at this time, or that the currency is not traded on the open market. Also, even stable currencies fluctuate constantly relative to one another. Frequent updates may be needed.

Note also that the rates given are international trading rates, which will differ slightly from official rates of various countries. Mexico, for example, will not allow you to import pesos - you may only exchange dollars for pesos for use in Mexico in Mexico. The trading rate is about 3.25 pesos per dollar. The Mexican rate is something closer to 2.5 pesos/dollar.

A final note: The rate of, for example, francs to dollars and dollars to francs is assumed to be the same (inversely proportional). This is not usually the case, however. What this means is that a bank will sell you more francs for a dollar than it will sell a dollar for francs (you might get 5 francs for one dollar, but have to pay 6 francs to get a dollar). The Exchange Rate Calculator should be used for rough estimates only.

Press ESC when you are done with the Calculator.

11. The idxreb utility

Should your index files ever be damaged, you can use the idxreb utility included with TimeZ to rebuild them. To do so, type:

C:\> idxreb <ENTER>

If the dat and idx files are not in the same directory as the idxreb program, then you will see:

```
TimeZ Data file not in current path.
Enter path for data file:
```

Alternately, you may provide the pathname on the command line by typing (for example):

C:\> idxreb \tzdata <ENTER>

Enter the path of the directory the files are in (but not the filenames themselves). If the idx files exist in that directory, too, you will be given a chance to change your mind:

```
One or more index files already exist.  Do you wish to
overwrite them? (Y to continue, any other to to abort):
```

If you type Y and ENTER, or if there were no idx files in the directory, idxreb will rebuild the index files. This process should only take a few moments.   Next, you will see the following message:

```
Resequence master screens? (Y to continue, any other to skip):
```

If you type Y and ENTER, the master screen entry for each member of the data set will be set sequentially, overwriting the entry for master screen as currently entered.

12. Registration

TimeZ is shareware, and I retain all copyrights to the program. If you use and like TimeZ, I request that you donate $10 to continue to use it. If you do, and also send a diskette (5¼ or 3½ Double or High density), I will include any new version of TimeZ, and its documentation. Please enclose an extra $1 to cover postage, and be sure to enclose your address.

If you would like to register your copy of TimeZ and would like me to send you a diskette with the latest version of TimeZ on it, please send an extra $2 to cover postage and diskette costs. Please specify diskette size and density.

Also see *PRICE.LST* for an invoice and other ordering info. The latest version of TimeZ can be downloaded from the IBMAPP forum on CompuServe or from America On-Line.

CompuServe users: TimeZ may be registered via CompuServe's Shareware Registration Service (GO SWREG). Request to register program #609.

Steve Mount
RR 1 Box 320
Starksboro, VT 05487-9702

Contact me on CompuServe.....: 73720,3404

Contact me on America On-Line: Mountain

Contact me on the Internet........: 73720.3404@cis.com   OR   mountain@aol.com

Call for ordering/support...........: (802) 453-5273

I have fax capability at the above number for orders, but you must call me to have my fax set up before faxing (it is a card and shares the line with my answering machine).

13. Update Notes

The following is a list of program changes that were a part of each new version:

Version 1.01:

- Fixed minor problem in Master Clock. When switching screens too quickly, portion of bottom of screen border was being erased.

Version 1.1:

- References to "Daylight Savings Time" changed to "Daylight Saving Time"
- Short List added to Print Entries
- Bug that prohibited entry of a MMMDD-type DST indicator (ex: APR01) quashed
- Duplicate "Vancouver, British Columbia" removed from data file
- Replaced seconds display at top of Master Clock screen with display of local time/day
- Added ability to change current date/time (Set Local Date/Time)
- Quashed bug that prevented F8 (Save, Edit Next) from working properly in Edit Entry after using F2 (sound search)
- Numerous internal changes

Version 1.2:

- Changes to internal support functions. Screen functions changed from BIOS to DMA usage for speed.
- Addition of F8, F9, F10, and ESC keys in Scan Entries.

Version 1.21:

- Minor bug caused major problem - DST values where DST started and ended in the same year not calculated properly.

Version 1.3:

- Added Currency, Exchange, Languages, and Government fields.
- Added Echange Rate Calculator