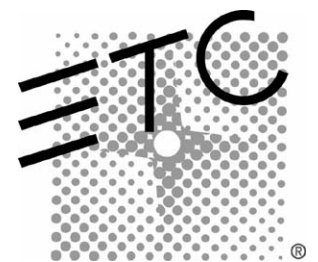


Expression

Expression Off-Line

QuickGuide

Version 3.1



Expression

Expression Off-Line QuickGuide

Version 3.1

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Introduction

Expression Off-Line is a console emulating program that runs on an IBM PC or PC-compatible personal computer. It can create and edit shows for version 3.0 (or later) system software, which is available for all of the following consoles:

- Models 2 and 2x: Expression 2x, Insight 2 and 2x, Concept 2x and Impression 2
- Model 3: Expression 3 and Insight 3
- Express: Express 125, 250, 24/48, 48/96 and 72/144
- Arri: Imagine 3 / 600, Imagine 3 / 1200, Finesse 300 and Focus 108

The same show may not run the same way in each of these consoles because of console limitations, such as channel and dimmer counts. Off-Line, however, can be configured so that the show it produces is matched to the capabilities of the console in which the show will be run.

All Off-Line menus, operator prompts and help screens are identical to those of the console. Even the displays look the same. Virtually nothing is different when you use Off-Line to patch, set channel attributes, record program elements such as cues and groups—in short, everything you might do in the console itself. You can even print lists of show features with your computer's printer, thereby making it less important to attach a printer to your playback system.

When the show is ready to go, simply transfer it via diskette to the console. Use Off-Line's **Export show** command to ensure that it's console-ready. You can also maintain a showfile library on your computer's hard drive and edit them in Off-Line as you wish, then export the edited show to a diskette when you're ready to use it. In this way, you can use Off-Line to upgrade a show from an old file that has most of what you want. If you have a show in USITT ASCII format, the **Read ASCII** command allows you to read a show into Off-Line, either on its own or merged with a showfile already in memory. Any showfile in Off-Line can be written to USITT ASCII format with delimiter, level and case settings that suit your needs.

Off-Line may be ordered in a kit or downloaded from ETC's website (www.etcconnect.com). When delivered in a kit, Off-Line is supplied with the following:

- Installation software, containing both the Expression Off-Line and Expression Personality Editor programs (they are installed together but operated independently).
- Computer-readable User Manuals written for Expression, Insight and Express consoles. The Expression manual is intended for Concept and Impression users too.

If you have problems installing or using Expression Off-Line, please call your dealer or ETC Technical Service at one of the offices listed on the back page of this document.

System requirements

Following are the hardware and software requirements for Expression Off-Line:

- 386 processor (486 or higher recommended)
- Windows 95, Windows 98 or Windows NT
- 8 MB RAM (16 MB recommended)
- 10 MB available hard drive space
- Color monitor (1,024 x 768 x 256 or higher recommended)
- 3.5-inch floppy drive
- Mouse or equivalent

Installing Expression Off-Line

Off-Line is provided in a self-extracting file called `setupeol.exe`. When you install Expression Off-Line, you also install a copy of the QuickGuide you are now reading, the Expression Personality Editor, and the QuickGuide for the Expression Personality Editor. Information about the Personality Editor, a separately-operated application program for creating and editing personalities for Expression-family consoles, is contained in that application's QuickGuide document.

The installation program is designed to install both application programs and their supporting documents into folder `eol31` with path `c:\etc\eo\leol31`. It also inserts startup icons for both application programs and both QuickGuides into program folder `etc\leol3.1`. During the installation procedure, you are prompted to accept these default locations. If you accept the defaults, you will not overwrite any existing files. This QuickGuide assumes the files will be installed at these default locations. If you put them somewhere else, please interpret the instructions accordingly.

Installation procedure

Before beginning the installation, close all Windows programs to avoid conflicts. Follow one of the procedures below depending upon whether you're installing from a diskette or your hard drive.

On diskette

1. Insert diskette #1 of the 2-diskette installation set.
2. Click the **Start** button on your Windows taskbar.
3. Click **Run** and type **a:\setup.exe**. If using a different drive, substitute the letter for that drive in place of "a" in this command.
4. Click **OK**.
5. Follow the on-screen prompts. You will be told when to insert the second diskette and asked whether you want to change the installation defaults.
6. Close the program folder window when finished.

On your hard drive

1. Using Windows Explorer, navigate to `setupeol.exe` on your hard drive and double-click it.
2. Follow the on-screen prompts.
3. Close the program folder left on the desktop by the installation.

Starting Off-Line

If this is your first installation of Expression Off-Line, you may wish to install a shortcut on your desktop as a convenient way to start the program. Refer to your Windows User Manual or Help system for information about creating a desktop shortcut.

If, however, you had Expression Off-Line installed on your computer already and used a desktop shortcut to run it, that shortcut will continue to run the earlier version, not version 3.1 that you just installed. You can either start version 3.1 (or any version) from the Windows **Start** menu, or you can install a desktop shortcut for the new program. To use the **Start** menu, click the **Start** button on the taskbar, then point to **Programs**, then folder **ETC** (or wherever you installed Off-Line) and click Expression Off-Line 3.1.

Running Off-Line

Off-Line starts in the console type that was previously selected for the program, which is Expression 3/1200 if started for the first time. If you want Off-Line to emulate a different console type, follow the procedure below under **Changing console type**.

Off-Line windows

Off-Line starts with several windows in your computer display. One window is the Off-Line window and contains several menus. The other windows contain controls and displays, which may vary depending upon which console type is active in the session.

When you click **Window** in the Off-Line window, you can control all the other windows in the display, including turning them off or on as needed. If you click **Cascade**, the windows are reorganized in a particular order, and each is visible. Move the windows around your desktop as you wish. Click the Windows icon at the top of each Off-Line window to control its size (select a font size). After moving or re-sizing the Off-Line windows, click **Save Window Position** to save that arrangement for future sessions.

Changing console type

Determine or change the console type using the Options menu in the Off-Line window. Change console type if you want your next session to emulate a different console from the currently active console. The change is effective after you leave Expression Off-Line and then start it again.

1. Click **Options** in the Off-Line window, then click **Console Type**. If only determining the active console type, click **OK** to quit this dialog.
2. To change the active console type, click your choice. The Console Type column in the table below identifies the Off-Line console type associated with each console.
3. Click **OK**.

| Console | Channels | Dimmers | Console Type | Manual |
|---------------------|----------|---------|---------------------|--------------|
| Concept 2x | 1200 | 1536 | Expression 3 / 1200 | Expn31.pdf |
| Express 125 | 125 | 1024 | Express 125 | Exps31.pdf |
| Express 250 | 250 | 1024 | Express 250 | Exps31.pdf |
| Express 24/48 | 96 | 1024 | Express 24/48 | Exps2S31.pdf |
| Express 48/96 | 192 | 1024 | Express 48/96 | Exps2S31.pdf |
| Express 72/144 | 240 | 1024 | Express 72/144 | Exps2S31.pdf |
| Expression 2x | 800 | 1536 | Expression 3 / 800 | Expn31.pdf |
| Expression 3 / 400 | 400 | 1536 | Expression 3 / 400 | Expn31.pdf |
| Expression 3 / 800 | 800 | 1536 | Expression 3 / 800 | Expn31.pdf |
| Expression 3 / 1200 | 1200 | 1536 | Expression 3 / 1200 | Expn31.pdf |
| Finesse | 300 | 1024 | Impression 2 | Expn31.pdf |
| Focus | 512 | 1536 | Insight 2x | Inst31.pdf |
| Imagine 3 / 600 | 800 | 1536 | Expression 3 / 800 | Expn31.pdf |
| Imagine 3 / 1200 | 1200 | 1536 | Expression 3 / 1200 | Expn31.pdf |
| Impression 2 | 300 | 1024 | Impression 2 | Expn31.pdf |
| Insight 2 | 108 | 1024 | Insight 2 | Inst31.pdf |
| Insight 2x | 512 | 1536 | Insight 3 | Inst31.pdf |
| Insight 3 | 512 | 1536 | Insight 3 | Inst31.pdf |

Configuring Off-Line

If your venue or space does not contain as many channels or dimmers as your console will allow, you may wish to reduce the channel or dimmer counts in Expression Off-Line. See the System Settings section of your user manual for information about making these changes. Any changes you make to channel or dimmer count are saved with the show and will remain the same the next time you read that showfile back into Expression Off-Line.

Help system

Off-Line comes with a built-in on-line Help system. Use on-line Help for handy reminders about how to use Expression Off-Line's windows and the controls. Use your console's user manual, however, for information about programming a show. Note that you can link to ETC's website directly from on-line Help to obtain additional information and to download manuals. Also, if you download manuals and need the Adobe® Acrobat® Reader™, a hotlink to the Adobe website is in the Help system.

Leaving Off-Line

Off-Line does not save when you attempt to quit the program—you must do that for yourself. But Off-Line warns you when you attempt to quit that any changes you made while in the program are lost if you don't save before quitting. You have the chance to save at that point. To quit Off-Loading a show

Document files

User manuals

When you obtain Expression Off-Line in a kit, you also receive additional diskettes containing console user manual files. All these document files are in portable document format (*.pdf) format and can be read with the readily-available application program called Adobe® Acrobat® Reader™. If you don't already have a copy on your computer, you can link to Adobe from the ETC website at www.etcconnect.com and download the Reader without charge.

The documents with Off-Line are stored in a compressed, self-extracting format. If you need a User Manual for your console type, first identify which one you need from the Resource Table on the previous page and extract it with the following procedure.

1. Find the diskette that contains the manual you need and insert it in the computer's disk drive.
2. On the taskbar, click the **Start** button.
3. Click **Windows Explorer** on the **Programs** menu.
4. Using standard Windows techniques, copy from the diskette to a suitable folder on your hard drive.
5. Double-click on the copy of the file stored on your hard drive. This will extract the pdf copy of the file to the same folder.
6. Open the file from Acrobat Reader.

QuickGuides

Off-Line installs with the *Expression Off-Line QuickGuide* and the *Expression Personality Editor QuickGuide*, both in *.pdf format. Run them in Acrobat Reader by using the Windows **Start** menu and clicking the name in the etc\eol3.1 folder.

Loading a show

There are five possibilities for reading from a showfile into Expression Off-Line. If the showfile is formatted for version 3.03 or later system software, you can read the show components using any of first four procedures detailed below. If you want the system configuration components too, you must read those from the showfile using the procedure given under **Reading the showfile system configuration**. For listings of the show and system configuration components of a showfile, see the **Showfile** appendix in your console user manual.

If, however, the showfile is formatted in system software older than version 3.03, you will read both show and system configuration components together. Therefore, the procedure under **Reading the showfile system configuration** is inapplicable for those showfiles.

Using diskette functions from the console Setup menu

This option works the same way in Off-Line as it does in the console, with one important exception: you can read files not only from a diskette but also from your computer's hard drive. The first time you do a read or write operation with these Diskette Functions, a file dialog window appears asking you to specify the filename and file location. Once you make that selection, every other read or write you perform with the Diskette Functions uses the same filename and location. If you want to change filename or location, use an **Open** or **Save** command from the **File** menu in the Off-Line window.

Reading a file in ASCII format

This option is for shows stored in USITT ASCII format. A conversion to version 3.1 format takes place during the loading procedure. ASCII shows may be read from hard drive or diskette.

1. Click **Convert** in the Off-Line window, then click **Read ASCII**.
2. Navigate in the **Look In:** list to the drive and folder where the file is stored.
3. Click to highlight the filename.
4. Click **Open**.

Opening a file

Use this option when reading a showfile from hard drive or diskette. As a convenience, use the **Import Show** command if the show is named exp2.shw and stored on diskette.

1. Click **File** in the Off-Line window, then click **Open**.
2. Navigate in the **Look In:** list to the drive and folder where the file is stored.
3. Click to highlight the filename.
4. Click **OK**.

Importing a console-ready show

Use this option as a convenient way to read a file that is stored on diskette and named exp2.shw. If you need to specify the filename or the file is stored on your hard drive, use the **Open** command instead.

1. Insert the showfile diskette into your computer's disk drive.
2. Click **File** in the Off-Line window, then click **Import Show**.
3. Click either **a:** or **b:** according to where you inserted the diskette.

Reading the showfile system configuration

The **Read System Configuration** function reads only the configuration components. This command will not function for showfiles formatted in system software prior to version 3.03.

1. Click **File** in the Off-Line window.
2. Click **Read System Configuration**.
3. Navigate to the file you want to read. Click to highlight it.
4. Click **Open**.

Loading fixture personalities

Fixtures are patched in the Expression-family consoles by means of personalities, each of which is designed to match a particular type of fixture. Personalities for some common commercial fixtures are contained as defaults in the Off-Line software. You may find, however, that none of Off-Line's default personalities match the fixture(s) you are using and that you need to load one or more additional personalities into the show.

There are two ways to obtain additional personalities: (1) you can load others that are installed with Off-Line but are not included in the default personality library, and (2) you can develop different personalities with the Expression Off-Line Personality Editor. Information about operating the Personality Editor is contained in the *Expression Personality Editor QuickGuide*.

Personalities that are loaded with Off-Line but are not included in the default personality library are stored in two folders located in the eol31 folder. One of these folders is called Verified because it contains personalities that ETC has tested and verified in performance. The other folder is called Unverified because it contains personalities that ETC believes will work as intended but has not yet carried out sufficient testing to verify their performance. Personality filenames, all ending in .prs, indicate the fixtures for which they are intended.

When you want to make new personalities available to Off-Line, you need to copy those personalities to the Shows folder located in the eol31 folder. Use standard Windows file handling techniques to accomplish this operation. If you have any questions about copying files in Windows, see your Windows User Manual or Help system. Once you have the personality files you need in the Shows folder, load them into Expression Off-Line with the following procedure:

1. Start Off-Line.
2. In Off-Line, press [Setup] on the keypad to go to the setup menu.
3. In the setup menu, select option 15 - **Moving Light Functions**.
4. In the **Moving Light Functions** menu, select 1 - **Personality Setup**.
5. In the **Personality Setup** menu, press softkey [S1], **From Disk**.
6. Press [Enter] to load all personalities in the Shows folder.

NOTES:

- *Personalities load slowly from the Shows folder into Off-Line. To speed that operation, delete any personalities (*.prs files) from the Shows folder that you don't need.*
- *If possible, always load personalities before patching. If any of the personalities you are loading has the same name as one of the personalities already in the show, a warning window will appear. The warning occurs because if you are replacing a personality with one that assigns more channels, the automatic repatching will cause erroneous overlapping. Such overlapping can cause unexpected or inconsistent behavior in groups and cues or other recorded elements of the show. You may need to repatch fixtures. Follow the instructions in the warning window to continue.*

Saving a show

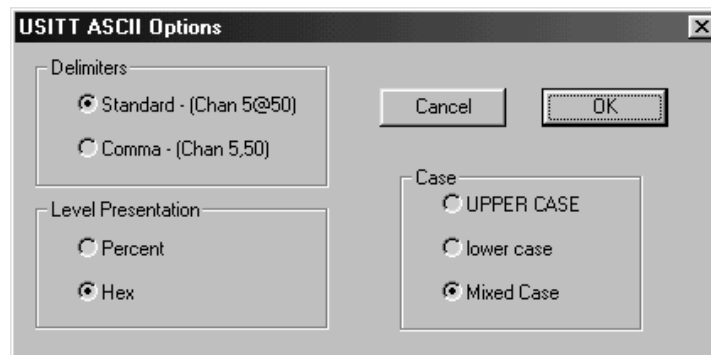
There are four ways to save a show with Expression Off-Line. All but the ASCII procedure copies both the system configuration components and the show components to the showfile. For listings of the show and system configuration components of a showfile, see the **Showfile** appendix in your console user manual.

Using diskette functions on the Setup menu

This option works the same way in Off-Line as it does in the console, with one exception: you can also write files to your computer's hard drive. The first time you do a read or write operation with these Diskette Functions, a dialog window appears asking you to specify the filename and file location. Once you make that selection, every other read or write you perform with the Diskette Functions uses the same filename and location. If you want to change filename or location, use one of the other read or write procedures.

Converting to ASCII format

Before writing out the show, it is converted to USITT ASCII format using settings controlled in the USITT ASCII Options dialog. To change those settings, click **Convert** in the Off-Line window, then click **ASCII Options**. The following dialog box appears.



Click the options in the Delimiters, Level Presentation and Case sections to make your selections. These settings are effective when you click **OK** to leave the USITT ASCII dialog.

Write the show using the following procedure.

1. Click **Convert** in the Off-Line window, then click **Write ASCII**.
2. Navigate in the **Save In:** list to the drive and folder where you want to save the file.
3. Type a name in **File name:** or click an existing filename if you want to overwrite it. The **Save asType:** field should read USITT ASCII Files (*.asc).
4. Click **Save**.

Exporting a show for use in the console

If you plan to transfer the showfile you have in Expression Off-Line to the console, it must be named exp2.shw. A convenient way to do that is to use the Off-Line **Export Show** command. Exporting not only gives the file the correct name but also saves to a diskette. If a file already exists on the diskette with that name, the file will be overwritten.

1. Insert a diskette into your computer's disk drive.
2. Click **File** in the Off-Line window, then click **Export Show**.
3. Click either **a:** or **b:** according to where you inserted the diskette.

Storing a file

Use this option to write a showfile to storage, either on your hard drive or to diskette. When storing as opposed to saving for use in the console, you may name it anything you wish. Use the **Export Show** command as a convenient way to save the showfile for use in the console.

1. Click **File** in the Off-Line window, then click **Save As**.
2. Navigate in the **Save In:** list to the drive and folder where you want to save the file.
3. Type a name in **File name:** or click an existing filename if you want to overwrite it.
4. Click **Save**.

Tricks with Off-Line

This section reviews things you can do in Expression Off-Line that you cannot do with a console.

Labeling for Express

Most consoles have a Label key that you can use to label various recordings, such as cues, groups and real time programs. If the console has the label key, it is also available in Expression Off-Line when that console type is active. Express consoles lack the label key, both on the console and on the keypad available in Off-Line for those consoles.

You can label for Express consoles, however, by using a keyboard equivalent. Every programming command, as well as every console function, is represented by keystrokes you can make on the computer keyboard. A list of these keyboard equivalents is given in an appendix to this document.

Note in **Appendix C** that the keyboard equivalent for the label key is **B**. When you type **B** at times during programming when labeling is allowed, you can enter a label on the computer keyboard and that label is stored in the showfile. Labels stored in the showfile stay with the showfile when it is transferred to the console, even for Express consoles.

Merging files

Off-Line provides a unique opportunity to merge showfiles. Normally when a show is read from disk into either Off-Line or the console, the current show in memory is erased. This prevents you from merging two shows together or reading portions of one show into another one.

This barrier can be overcome by reading USITT ASCII showfiles into Off-Line. ASCII showfiles consist of a series of commands and arguments stored as ordinary text and editable with a standard text editor, such as Windows Notepad. An ASCII showfile looks like the lines listed below, where two cues, a group and submaster are defined.

```
Ident 3:0
Manufacturer ETC
Console EXP3
Clear All
Set Channels 1200
Set Dimmers 1536
Patch 1 1<1@Hff 2<2@Hff 3<3@Hff 4<4@Hff 5<5@Hff 6<6@Hff 7<7@Hff 8<8@Hff
!This is a comment.
!Most of the patch has been removed for clarity.
Patch 1 333<1534@Hff 1535<1535@Hff 1536<1536@Hff
Cue1.0
    Up 5
    Down 5
```

```

Chan 1 @ Hff 2 @ Hff 3 @ Hff 4 @ Hff 5 @ Hff
Followon 5
Link 3.0
Cue 3.0
Up 5
Down 5
Chan 6 @ H80 7 @ H80 8 @ H80 9 @ H80 10 @ H80
Group 1
Chan 12 @ Hff 13@ Hbf 14 @ Hff 15 @ Hbf 16 @ Hbf 17 @ Hff 18 @ Hbf 19 @ Hff
Sub 1 1
Up 0
Down 0
Chan 26 @ Hff 27 @ Hff 28 @ Hff 29 @ Hff 30 @ Hff
Enddata

```

Note that this showfile contains a **Clear All** command near the beginning. If the **Clear All** command is removed and the file read into Off-Line with the **Read ASCII** command, the information in the ASCII program will combine with a showfile that is already in memory. Any duplicate items will be overwritten by the incoming file.

For example, an ASCII file that overwrites the patch of an existing show is shown below.

```

Ident 3:0
Manufacturer ETC
Console EXP3
Clear Patch
Set Channels 1200
Set Dimmers 1536
Patch 1 1<1@Hff 2<2@Hff 3<3@Hff 4<4@Hff 5<5@Hff 6<6@Hff 7<7@Hff 8<8@Hff
!This is a comment.
!Most of the patch has been removed for clarity.
Patch 1 333<1534@Hff 1535<1535@Hff 1536<1536@Hff
Enddata

```

The **Ident**, **Manufacturer** and **Console** commands you see at the beginning of this ASCII showfile must be left there when preparing the file for a merge operation. Also, the **Enddata** command must remain at the end of the file. The **Clear Patch** command was added to this ASCII patch to direct Off-Line to remove the current patch in memory before reading the new one.

A detailed description of the USITT ASCII show format can be found in a document titled “*ASCII Text Representation for Lighting Console Data Version 3.0*” published by USITT.

Appendix A ~ Time and location

When making astronomical settings for the real time clock, use data from these lists for the city nearest you. Clock settings are part of a showfile's system configuration information.

United States cities

| <u>City, State</u> | <u>Time Zone (Standard)</u> | <u>Latitude</u> | <u>Longitude</u> |
|--------------------|-----------------------------|-----------------|------------------|
| Albuquerque, NM | + 7 West | 35° 03' N | 106° 37' W |
| Anchorage, AK | + 10 West | 61° 10' N | 149° 11' W |
| Atlanta, GA | + 5 West | 33° 39' N | 84° 26' W |
| Baltimore, MD | + 5 West | 39° 11' N | 76° 40' W |
| Augusta, ME | + 5 West | 44° 19' N | 69° 48' W |
| Billings, MT | + 7 West | 45° 47' N | 108° 32' W |
| Boise, ID | + 7 West | 43° 36' N | 116° 13' W |
| Boston, MA | + 5 West | 42° 20' N | 71° 01' W |
| Buffalo, NY | + 5 West | 42° 53' N | 78° 51' W |
| Burlington, VT | + 5 West | 44° 29' N | 73° 13' W |
| Charleston, SC | + 5 West | 32° 47' N | 79° 59' W |
| Cheyenne WY | + 6 West | 41° 08' N | 104° 47' W |
| Chicago, IL | + 6 West | 41° 50' N | 87° 41' W |
| Columbus, OH | + 5 West | 40° 00' N | 82° 53' W |
| Dallas, TX | + 6 West | 32° 47' N | 96° 45' W |
| Denver, CO | + 7 West | 39° 46' N | 104° 52' W |
| Des Moines, IA | + 6 West | 41° 34' N | 93° 37' W |
| Detroit, MI | + 5 West | 42° 22' N | 83° 06' W |
| Fargo, ND | + 6 West | 46° 52' N | 96° 49' W |
| Hartford, CT | + 5 West | 41° 45' N | 72° 41' W |
| Honolulu, HI | + 10 West | 21° 79' N | 157° 48' W |
| Kansas City, MO | + 6 West | 39° 07' N | 94° 33' W |
| Las Vegas, NV | + 7 West | 36° 12' N | 115° 13' W |
| Lincoln, NE | + 6 West | 40° 48' N | 96° 41' W |
| Little Rock, AR | + 6 West | 34° 43' N | 92° 21' W |
| Los Angeles, CA | + 8 West | 34° 05' N | 118° 24' W |
| Indianapolis, IN | + 5 West | 39° 44' N | 86° 17' W |
| Madison, WI | + 6 West | 43° 04' N | 89° 23' W |
| Nashville, TN | + 6 West | 36° 07' N | 86° 41' W |
| Miami, FL | + 5 West | 25° 49' N | 80° 13' W |
| Minneapolis, MN | + 6 West | 44° 57' N | 93° 16' W |
| Montgomery, AL | + 6 West | 32° 21' N | 86° 17' W |
| New Orleans, LA | + 6 West | 30° 03' N | 89° 55' W |
| New York, NY | + 5 West | 40° 46' N | 73° 58' W |
| Oklahoma City, OK | + 6 West | 35° 28' N | 97° 30' W |
| Philadelphia, PA | + 5 West | 40° 00' N | 75° 08' W |
| Phoenix, AZ | + 7 West | 33° 32' N | 112° 04' W |
| Portland, OR | + 8 West | 45° 32' N | 122° 39' W |
| Raleigh, NC | + 5 West | 35° 52' N | 78° 47' W |
| Salt Lake City, UT | + 7 West | 40° 46' N | 111° 55' W |
| San Francisco, CA | + 8 West | 37° 47' N | 122° 33' W |
| Seattle, WA | + 8 West | 47° 37' N | 122° 21' W |
| Sioux Falls, SD | + 6 West | 43° 32' N | 96° 43' W |
| Washington D.C. | + 5 West | 38° 54' N | 77° 00' W |

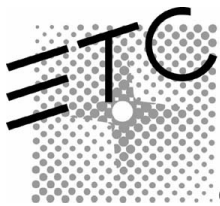
Cities outside the United States

| <u>City, State</u> | <u>Time Zone (Standard)</u> | <u>Latitude</u> | <u>Longitude</u> |
|--------------------------------|-----------------------------|-----------------|------------------|
| Abuja, Nigeria | - 1 East | 9° 12' N | 7° 11' E |
| Algiers, Algeria | - 1 East | 36° 47' N | 3° 3' E |
| Amsterdam, Netherlands | - 1 East | 52° 17' N | 4° 57' E |
| Ankara, Turkey | - 2 East | 39° 56' N | 32° 52' E |
| Athens, Greece | - 2 East | 37° 58' N | 23° 43' E |
| Bangkok, Thailand | - 7 East | 13° 44' N | 100° 31' E |
| Berlin, Germany | - 1 East | 52° 27' N | 13° 22' E |
| Berna, Switzerland | - 1 East | 46° 57' N | 7° 26' E |
| Bombay, India | - 6 East | 18° 54' N | 72° 49' E |
| Brussels, Belgium | - 1 East | 50° 50' N | 4° 20' E |
| Buenos Aires, Argentina | + 3 West | 34° 36' S | 58° 27' W |
| Cairo, Egypt | - 2 East | 30° 03' N | 31° 15' E |
| Cape Town, South Africa | - 2 East | 33° 55' S | 18° 22' E |
| Casablanca, Morocco | 0 | 33° 39' N | 7° 35' W |
| Copenhagen, Denmark | - 1 East | 55° 40' N | 12° 35' E |
| Dublin, Ireland | 0 | 53° 20' N | 6° 15' W |
| Edinburgh, Scotland | 0 | 55° 57' N | 3° 13' W |
| Edmonton, Alberta, Canada ... | - 7 West | 53° 33' N | 113° 28' W |
| Fukuoka, Japan | - 9 East | 33° 35' N | 130° 24' E |
| Helsinki, Finland | - 2 East | 60° 10' N | 24° 58' E |
| Hong Kong | - 8 East | 22° 18' N | 114° 09' E |
| Jakarta, Indonesia | - 7 East | 6° 10' S | 106° 48' E |
| Lima, Peru | + 5 West | 12° 03' S | 77° 03' W |
| Lisbon, Portugal | 0 | 38° 43' N | 9° 8' W |
| London, England | 0 | 51° 30' N | 0° 0' W |
| Madrid, Spain | - 1 East | 40° 24' N | 3° 41' W |
| Marseilles, France | - 1 East | 43° 18' N | 5° 23' E |
| Mexico City, Mexico | + 6 West | 19° 24' N | 99° 09' W |
| Montreal, Quebec, Canada ... | + 5 West | 45° 30' N | 73° 36' W |
| Moscow, Russia | - 3 East | 55° 46' N | 37° 20' E |
| Munich, Germany | - 1 East | 48° 09' N | 11° 34' E |
| Oslo, Norway | - 1 East | 59° 56' N | 10° 44' E |
| Paris, France | - 1 East | 48° 49' N | 2° 29' E |
| Prague, Czechoslovakia | - 1 East | 50° 05' N | 14° 25' E |
| Reykjavik, Iceland | 0 | 64° 08' N | 21° 56' E |
| Riga, Latvia | - 3 East | 56° 40' N | 106° 10' E |
| Rio De Janeiro, Brazil | + 3 West | 22° 55' S | 43° 12' W |
| Rome, Italy | - 1 East | 41° 48' N | 12° 36' E |
| San Juan, Puerto Rico | + 4 West | 18° 29' N | 66° 07' W |
| Santiago, Chile | + 4 West | 33° 27' S | 70° 42' W |
| Sapporo, Japan | - 9 East | 43° 04' N | 141° 21' E |
| Seoul, Korea | - 9 East | 37° 34' N | 126° 58' E |
| Singapore, Malaysia | - 8 East | 1° 14' N | 103° 55' E |
| Stockholm, Sweden | - 1 East | 59° 21' N | 18° 04' E |
| Sydney, Australia | - 10 East | 33° 52' S | 151° 12' E |
| Taipei, Taiwan | - 8 East | 25° 02' N | 121° 31' E |
| Tokyo, Japan | - 9 East | 35° 41' N | 139° 46' E |
| Toronto, Ontario, Canada | + 5 West | 43° 39' N | 79° 23' W |
| Vancouver, B.C., Canada | + 8 West | 49° 15' N | 123° 07' W |
| Vienna, Austria | - 1 East | 48° 15' N | 16° 22' E |
| Warsaw, Poland | - 1 East | 52° 13' N | 21° 02' E |
| Wellington, New Zealand | - 12 East | 41° 71' S | 174° 46' E |

Appendix B ~ Expression Off-Line keyboard shortcuts

Following are the keys you would type in Off-Line to simulate console commands. To display or print these keyboard shortcuts, click a sorted list under **Keyboard Shortcuts** in Off-Line Help.

| | | | |
|----------------------------|-----------|--------------------------------|-------------|
| + | + | Help | H |
| - | - | Label | B |
| | | Learn | F4 |
| 0-9 | 0-9 | Left arrow | ← |
| AB Back | Ctrl-D | Level | V |
| AB Clear | Ctrl-A | Level wheel down | Page Down |
| AB fader slider down | { | Level wheel up | Page Up |
| AB fader slider up | [| Link | K |
| AB Go | Ctrl-G | Load Sub | # |
| AB Hold | Ctrl-F | Macro * | M |
| AB Rate | Ctrl-S | Macro Enter | Ctrl-E |
| About | F3 | Macro Wait | Ctrl-W |
| And | N | Master down | |
| At | A | Master up | \ |
| Blackout | Ctrl-K | Only | O |
| Blind | Shift-F2 | Page | J |
| CD Back | Ctrl-C | Park | Shift-F6 |
| CD Clear | Ctrl-Z | Part | P |
| CD fader slider down | } | Patch | Shift-F5 |
| CD fader slider up |] | Rate wheel down | End |
| CD Go | Ctrl-B | Rate wheel up | Home |
| CD Hold | Ctrl-V | Record | R |
| CD Rate | Ctrl-X | Release | L |
| Channel | C | Right arrow | → |
| Clear | Backspace | Setup | Shift-F7 |
| Clear | Delete | Softkey 1-8 | Ctrl- F1-F8 |
| Cue | Q | Solo Bump (Insight only) | U |
| Dimmer | D | Stage | Shift-F1 |
| Down arrow | ↓ | Sub Mode (Insight only) | E |
| Enter | Enter | Submaster | S |
| Except | X | Swap | F2 |
| Expand | Shift-F8 | Thru | T |
| Fader | Shift-F3 | Time | I |
| Focus point | ! | Track | ^ |
| Follow | Y | Tracksheet | Shift-F4 |
| Full | F | Type | * |
| Group | G | Up arrow | ↑ |
| Help | ? | Wait | W |



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