EVENT LOGGER

FOR ATEM* PRODUCTION SWITCHERS

OPERATION

(DRAFT ONLY)
The Event Logger is a small palm sized unit that communicates with the ATEM using an industry standard RJ45 network cable. You connect to your network switch that also has the ATEM and controlling devices connected to. These controlling devices can be the standard ‘ATEM software control panel’, the ‘ATEM hardware control panel’ and even wireless control panels as used with the iPad or anything that controls the ATEM over that network.

It uses the UDP data packets that are sent over the network from the ATEM, so that any changes made to the ATEM can be recognized, analysed and saved against the timestamp that’s available. The unit can be used in either ‘on-line’ mode (connected to an ATEM) or ‘off-line’ mode (no ATEM connected). Off-line mode is for use when retrieving logs at a later date via a MAC or PC terminal program.

The Event Logger can be pre-programmed via the USB connection which is also used for its power. Pre-programming is achieved using freeware software; for the MAC use “MacWise” (www.macwise.com) and for PC use “PuTTY” (www.putty.org). These programs are supplied on the ‘utilities disk’ supplied with the unit. The ‘terminal setup’ is discussed later.

An industry standard Edit Decision List (EDL) can be created by the Event Logger from the cuts and dissolves made on any ATEM production switcher. This EDL can be used to edit and ‘fine tune’ a multi-camera live cut production in post-production or used with a colour-grading application to colour match each source camera for final release (post CCU).
These cuts and dissolves, called ‘events’, can then be converted and imported into most popular Linear and Non-Linear edit systems, colour-grading applications or anything that supports the ‘CMX3600’ style text format.

For Non-Linear editing systems, the EDL can be imported into a timeline and the associated recorded media can be ‘laid on top’ of the EDL or re-captured if the sources had been ‘iso’ recorded. ‘Source’ items get imported as ‘clips’ using the ATEM source names and the ‘record’ times get imported as the timeline position for each event.

For colour-grading applications, the EDL can be imported along with the master recorded media, and then shot by shot colour finessing can be accomplished including grading ‘cut-by-cut’ and across dissolves.

The Event Logger uses the internal timecode of the ATEM or in the case of the RS422 Event Logger, uses the timecode being sent via the 9 pin remote port of the deck. The ATEM timecode starts at 00:00:00:00 at power on and counts up basing its frame rate from the system frame rate. The timecode runs continuous so it can also be used as a reference to ‘time of day’ timecode.

Before the EDL is created, the values of each SOURCE can be offset to match their individual timecodes as recorded as ‘iso’s’ and the master record timecode can be set to whatever the desired ‘record start’ needs to be. The RECORD times can be set to either ‘absolute’, ‘relative’, ‘positive offset’ or ‘negative offset’. The SOURCE times can be set to either ‘relative’, ‘positive offset’ or ‘negative offset’. The original log is never altered so ‘trial and error’ can be used to get the frame accuracy correct if the math isn’t working.

In addition to this, the EDL can also be adjusted to allow the first event to extend earlier and the last event to extend later. This allows the final output to reflect the exact record start and record end times, sometimes important with some Colour-grading applications.
Getting Started

The Event Logger comes ready to plug in and go. You just need to set the ip addresses. To power the unit, connect the supplied USB cable to a USB 2 power device and the USB connector of the unit. Normally the USB 2 power device is a Mac or a PC computer but for stand-alone operation this can be a simple USB power plug-pack.

When first powered, the STATUS LED will momentarily flash Pink and Orange then cycle thru the following colours; RED, BLUE, MAGENTA, GREEN, YELLOW, CYAN, PINK and finally ORANGE. This can be used to determine the STATUS LED is working correctly.

OPERATION - No ATEM Connected

If no ATEM is connected the status LED will display a static CYAN or MAGENTA colour. The terminal screen will show;

```
ATEM Event Logger
(C)2013 - Baz Leffler
SDcard OK
Hello ATEM?
[ATEM connecting]
NO ATEM answer
[time out]
NO ATEM answer
local ip address = 192.168.2.77
ATEM ip address = 192.168.2.230
No ATEM detected! enter ip for ATEM? (y/n)
```

This screen indicates some important information including the status of the internal SDcard (4g memory micro), the current communication attempts, and the stored network addresses for both the Event Logger and the last used ATEM address (if any).

```
No ATEM detected! enter ip for ATEM? (y/n)
```

To set the ip address of the ATEM that you need to connect to, press “y”.

From this prompt, enter the 4 digits required with a ‘.’ between each entry. eg enter ‘192.168.2.240’. (refer to the ATEM users manual)

```
192.168.2.240
```

Then press enter and the following appears;

```
New ATEM ip address = 192.168.2.240
RESTARTING for new changes to take effect
```

The Event Logger will restart using the new ip address.
If you did not want to change the ATEM ip address;

```
No ATEM detected! enter ip for ATEM? (y/n)
```

Press “n” to step to setting the local Event Logger ip address.

```
Enter ip for Event Logger? [y]/[n] or [x] to enter OFFLINE mode
```

Pressing ‘y’ will allow entry of an ip address as above for the Event Logger and pressing ‘x’ will allow use without an ATEM connected (off line mode).

```
operating in OFF LINE MODE
```

Off line is used after the production and you need to recover and upload any saved event logs.

After entering off line mode, the help screen is displayed as per normal operation (see ‘ATEM connected’ section)

If ‘n’ is pressed with after this -

```
Enter ip for Event Logger? [y]/[n] or [x] to enter OFFLINE mode
```

The terminal displays;

```
NO CHANGES MADE
check connection! - RESTARTING
```

This assumes that there must be something wrong with your setup if you do not wish to enter off line mode and not change either current ip address.

**OPERATION - ATEM Connected**

If there is an ATEM connected, the STATUS LED will momentarily flash BLUE and then show a Light Orange. The BLUE indicates communications is occurring between the Event Logger and the ATEM.

```
ATEM Event Logger
(C)2013 - Baz Leffler
SDcard OK
Hello ATEM?
[ATEM connecting]
ATEM is connected
communicating
```

After communications has been successfully established (or off line mode was selected) the main HELP MENU is displayed.
This shows the command of each keyboard function (followed by ENTER).

The detailed commands are as follows;

--- operational tools ---
[L] = START/STOP Logging
[s] = query logger status
[f= xxxxxxxxx] = manually enter a file name to use

--- management tools ---
[u] = UPLOAD file as EDL
[c] = CHANGE file name in memory
[e] = ERASE files in memory

--- system tools ---
[d] = display ALL files in memory
[i] = display LOG files '1st cut'
[n] = Display source names from ATEM
[x] = Display current ATEM time
[o] = Display ALL offsets
[t] = timecode calculator

--- setup tools ---
[o] = Set Source/Record offsets
[+] = LED brightness up
[-] = LED brightness down
[r] = REBOOT the logger
[ipL=192.168.2.77] = local ip address
[ipS=192.168.2.230] = ATEM ip address

--- other tools ---
[?] = display help
These are the menu items used in the basic operation of the Event Logger.

[L] = START/STOP Logging

(not available in off line mode)

Pressing 'L' will start or stop logging. On starting, it immediately creates an event (00001) using the ATEM internal clock (timecode). The 'Prev Trans' indicator on the ATEM control panel will momentary flash. A file is created using the ATEM timecode as the file name, or a name preset by the user (see [ f= ]).

As any program buss switch or dissolve is performed, an event is automatically created and displayed.

Here is a cut –

```
start logging to 00025909.LOG
00001 cut Camera 1 00:02:59:09
00002 cut Camera 2 00:03:10:23
```

Here is a dissolve –

```
start logging to 00025909.LOG
00001 cut Camera 1 00:02:59:09
00002 cut Camera 2 00:03:10:23
00003 cut Camera 2 00:03:32:05
00004 diss Media A 00:03:41:04
```

Two events are automatically created indicating the start of the dissolve and the end of the dissolve.

Then another cut –

```
start logging to 00025909.LOG
00001 cut Camera 1 00:02:59:09
00002 cut Camera 2 00:03:10:23
00003 cut Camera 2 00:03:32:05
00004 diss Media A 00:03:41:04
00005 cut Camera 1 00:11:24:09
```

When logging is STOPPED (using 'L') an end event is created and the 'Prev Trans' momentarily flashes again, then a brief summary follows –
The file is read back to confirm a successful log –

Logging can also be started or stopped by pressing "BARS -> BLACK -> BARS" on the PREVIEW ROW within a THREE second period.

Setting the logging start/stop function on the preview buss allows an uninterrupted program feed if you are sending program to broadcast, Internet, Venue screens etc..

While logging the Status LED on the unit flashes RED.
This displays the following:

System Status in off-line mode -

System Status

Software version 1.5.2
local ip address = 192.168.2.77
ATEM ip address = 192.168.2.230
mac address = 90:A2:DA:0:E9:E9
software license 100112
ATEM not connected
timebase = 25
input names = 17
current clipboard = 00:01:30:00

System Status in on-line mode -

System Status

Software version 1.5.2
local ip address = 192.168.2.77
ATEM ip address = 192.168.2.230
mac address = 90:A2:DA:0:E9:E9
software license 100112
ATEM Firmware 0.10
Connected to an ATEM Television Studio
ATEM Video format 1080 50i
Currently NOT logging
timebase = 25
input names = 17
current clipboard = 00:01:30:00

- The software version is the currently running version on the Event Logger.

- The software can be user updated using a free uploader program as discussed later.

- The Local and ATEM ip addresses can be programmed under 'setup tools'.

- The 'format' (not available in off line mode) is used to determine the frame rate calculations needed for setting the timebase and adjusting the logged timecodes when outputting.

- The ‘timebase’ is either the framerate the ATEM is currently running at, or the last timebase used if no ATEM is connected.
This is used to preset a name as a logged file prior to logging for easy locating at a later time. This allows a unique file name for each log created.

The default file naming convention is to use the first events timecode as the name. The names usually look like ‘00361301’ which is equivalent to 00:36:13:01 (the ‘.LOG’ is hidden to allow ease of reading).

If you leave ‘ATEM time’ log files on the unit over different days, then the ‘time stamping’ will get intermixed and could cause confusion at a later date. ATEM timecode is not presetable (at this time of writing). It is recommended to erase files after they have been successfully uploaded or rename them. The Erase and Rename functions are described later under ‘management tools’.

Name setting example...

```
f= myevent
Next logging file will be called myevent.LOG
```

After the log has been made, the file naming convention reverts back to using the default ATEM timecode name, unless a new file name is entered.

To manually set the file naming back to ATEM time, just enter nothing.

```
f=
'Logging name' will use ATEM time (default)
```
This starts the process of converting saved logs and uploading a text screen for insertion into a NLE, grading program etc.

Prior to using this function, the RECORD and SOURCE offsets are usually calculated and saved. This is discussed later under ‘setup tools’.

Each dot moving across the screen represents a file being gathered and then a file being sorted.

On the initial entry into ‘upload’ mode, all the log file names are gathered and sorted into a database for ease of display. After the initial use of the upload command, this database is used which speeds up the process. If a new file is created then a new database needs to be created the next time upload is used.

Using the [+] and [-] keys will display the LOG files individually one at a time in alphabetical order. [+] steps down and [-] steps up the list.

Pressing ENTER selects the currently displayed file. Any other key aborts the upload.

For ABORT -
For ENTER -

Getting file names for UPLOAD
......................
Select file to DISPLAY ([+] down, [-] up, [ENTER] to select
Preparing to upload MAINCUT.LOG
extend opening event? (y/n)

(at any time you can abort the upload by pressing the [ESC] key)

‘Extend opening event’ allows an earlier EDL start time. It does not affect and preset offsets between Record times and source times, but just sets the first events record and source timecodes earlier. This is used where the RECORD deck is started prior to the logging start and you want the EDL to be the exact same as the recorded media. The same can be adjusted for the ending event to allow the EDL to end at the same time as the recorded media.

Here is a graphical example...

![Graphical Example]

As can be seen above the yellow portion represents added sections to allow the EDL to be the same length as the recorded media without losing any sync reference of the sources within the master events.

Selecting [n] will bypass the ‘opening extension’ and selecting [y] will allow an absolute timecode value to be entered, determined from the recorded media’s timecode start.

Getting file names for UPLOAD
......................
Select file to DISPLAY ([+] down, [-] up, [ENTER] to select
Preparing to upload MAINCUT.LOG
extend opening event to start at (absolute timecode)
00:00:00:00

Timecodes are entered and displayed moving left as each number is entered. Pressing [p] during timecode entry mode will paste the timecode from the Logger clipboard.

Getting file names for UPLOAD
......................
Select file to DISPLAY ([+] down, [-] up, [ENTER] to select
Preparing to upload MAINCUT.LOG
extend opening event to start at (absolute timecode)
00:01:05:16
extend ending event? (y/n)

Again, a timecode value can be entered to match the end of the recorded media, or left as is by pressing [n]. The upload can be aborted by pressing escape.
The Event Logger waits for the user to prepare for the EDL output while flashing the LED PINK.

There are two different ways to extract a compatible EDL depending on the ‘terminal program’ you are using to control the Event Logger.

If you are using a PC and ‘PuTTY’ as your terminal program you can simply press enter and the EDL will be created and displayed on the screen. The screen will then pause flashing the LED GREEN while you copy and paste the required portion into a text file and labeled with the extension ‘.edl’. (see ‘setting up PuTTY’ for configuration of the terminal for PC)

If you are using a MAC and ‘MacWise’ you will need to start the text capture prior to pressing any key. This first involves selecting ‘Make a New Capture File’ and entering the name you want to call your EDL followed by ‘.edl’. After entering the name, select ‘Capture On’.

Getting file names for UPLOAD
......................
Select file to DISPLAY ([+] down, [-] up, [ENTER] to select
Preparing to upload MAINCUT.LOG
extend opening event to start at (absolute timecode) 00:01:05:16
extend ending event to end at (absolute timecode) 00:01:50:02
ready to upload MAINCUT.LOG
press any key to start output (for MacWise start 'capture' first)

The Event Logger waits for the user to prepare for the EDL output while flashing the LED PINK.

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Getting file names for UPLOAD
......................
Select file to DISPLAY ([+] down, [-] up, [ENTER] to select
Preparing to upload MAINCUT.LOG
extend opening event to start at (absolute timecode) 00:01:05:16
extend ending event to end at (absolute timecode) 00:01:50:02
ready to upload MAINCUT.LOG
press any key to start output (for MacWise start 'capture' first)

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Getting file names for UPLOAD
......................
Select file to DISPLAY ([+] down, [-] up, [ENTER] to select
Preparing to upload MAINCUT.LOG
extend opening event to start at (absolute timecode) 00:01:05:16
extend ending event to end at (absolute timecode) 00:01:50:02
ready to upload MAINCUT.LOG
press any key to start output (for MacWise start 'capture' first)
... and stop text capture after the EDL is output by de-selecting ‘Capture On’.

The file is created and can be viewed using finder or loading it into your required application.

Pressing any key will un-pause the screen and the LED will stop flashing.

The Event Logger returns back to normal operation.
Change ANY previously logged data files name. This can be used to 'post name' a logged file previously created. This is useful for giving a log you just made a unique name that is easily identifiable when looking for a specific file.

When pressed, all the LOG files are gathered and individually displayed in alphabetical order.

Pressing the [+ ] key steps down the list and pressing the [- ] steps up the list. Pressing ENTER selects the currently displayed file.

Once ENTER is pressed -

Enter a file name of between 1 to 8 characters long followed by ENTER.

If the filename already exists, the overwrite prompt appears -
If ‘n’ is pressed then the rename is aborted. If ‘y’ is pressed -

Getting file names for RENAME
................................
Select file to RENAME [+] down, [-] up, [ENTER] to select
00025909
Enter new name - newname
File already exists. Overwrite? (y/n)
Overwrite newname.LOG with TEST.LOG (y/n)?

The original file name and new file name are displayed and the file extension is automatically added on.

Selecting ‘n’ will abort the rename and no changes are made.

Getting file names for RENAME
................................
Select file to RENAME [+] down, [-] up, [ENTER] to select
00025909
Enter new name - newname
Rename 00025909.LOG to newname.LOG (y/n)?
rename aborted!

Selecting ‘y’ will permanently rename the file.

Getting file names for RENAME
................................
Select file to RENAME [+] down, [-] up, [ENTER] to select
00025909
Enter new name - newname
Rename 00025909.LOG to newname.LOG (y/n)?
file renamed

Large log files can take a little while to rename so a progress indicator is displayed while the data is processed.
Erase (delete) any previously logged data files. This is used to clean up the unwanted logs. This will permanently delete the selected file or files from memory so ensure you upload any required EDL’s before deletion.

There is no real need to be always erasing the logs as there is enough storage for thousands of logs in the Event Logger. But what IS recommended is to rename your important logs to a name that is easily identifiable.

When [ e ] is pressed -

Getting file names for ERASE
.................................

All the LOG files are gathered from the database and individually displayed in alphabetical order.

Getting file names for ERASE
.................................
Select file to ERASE ([+] down, [-] up, [ENTER] to select or [A] to delete ALL
00025909

Pressing the [ + ] key steps down the list and pressing the [ - ] steps up the list. Pressing ENTER selects the currently displayed file.

Getting file names for ERASE
.................................
Select file to ERASE ([+] down, [-] up, [ENTER] to select or [A] to delete ALL
00025909
are you sure you want to erase 00025909.LOG?

Selecting [ n ] will abort the erase function and [ y ] will PERMANENTLY delete the file.

Getting file names for ERASE
.................................
Select file to ERASE ([+] down, [-] up, [ENTER] to select or [A] to delete ALL
00025909
are you sure you want to erase 00025909.LOG?
00025909.LOG erased

Pressing [ A ] deletes ALL the logged. (use this feature with caution)
Selecting [ n ] will abort erase.

Getting file names for ERASE
................................
Select file to ERASE ([+] down, [-] up, [ENTER] to select or [A] to delete ALL
erase ALL (y/n)?
erase ALL aborted

Selecting [ y ] will display each log file as it PERMANENTLY deletes them.

Getting file names for ERASE
................................
Select file to ERASE ([+] down, [-] up, [ENTER] to select or [A] to delete ALL
erase ALL (y/n)?
00365814.LOG erased
00375419.LOG erased
00442809.LOG erased
00460818.LOG erased
00491320.LOG erased
00512807.LOG erased
2DISS.LOG erased
DEMOLOG.LOG erased
MAINCUT.LOG erased
NEWNAME.LOG erased
TESTLOG.LOG erased
Displays ALL the files that are stored on the Event Logger including the system files.

<table>
<thead>
<tr>
<th>name</th>
<th>size</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMPFILE</td>
<td>0</td>
</tr>
<tr>
<td>SORT.003</td>
<td>133</td>
</tr>
<tr>
<td>INNAMES.NAM</td>
<td>600</td>
</tr>
<tr>
<td>TEST.LOG</td>
<td>270</td>
</tr>
<tr>
<td>2DISS.LOG</td>
<td>54</td>
</tr>
<tr>
<td>DEMOLOG.LOG</td>
<td>477</td>
</tr>
<tr>
<td>OFFSETS.OFF</td>
<td>85</td>
</tr>
<tr>
<td>00265718</td>
<td>45</td>
</tr>
<tr>
<td>00304812</td>
<td>45</td>
</tr>
<tr>
<td>00442809.LOG</td>
<td>72</td>
</tr>
<tr>
<td>00365814.LOG</td>
<td>27</td>
</tr>
<tr>
<td>NEWNAME.LOG</td>
<td>18</td>
</tr>
<tr>
<td>00375419.LOG</td>
<td>45</td>
</tr>
<tr>
<td>00460818.LOG</td>
<td>99</td>
</tr>
<tr>
<td>00491320.LOG</td>
<td>90</td>
</tr>
<tr>
<td>00512807.LOG</td>
<td>99</td>
</tr>
<tr>
<td>MAINCUT.LOG</td>
<td>36</td>
</tr>
<tr>
<td>00484821</td>
<td>117</td>
</tr>
</tbody>
</table>

This list can end up being very long if there are many files stored. Also note this list is NOT alphabetically sorted. Use the [i] command to display alphabetically sorted LOG files.
Each log is started immediately the [L] is pressed (or ‘BARS-BLACK-BARS’ pressed on the ATEM control panels), and can have no sync relationship with the recording that is taking place (unless using the RS422 logger).

Generally you would have to find a cut point in the master that can be related back to the EDL. The Event logger can show all the log ‘1st cut’ points that are the first cut AFTER logging has started. This is equivalent to the start of the 2nd event.

All the LOG files are gathered from the database and displayed in alphabetical order with the absolute 1st cut timecode for each file.

If you need to output an EDL of a particular log file, you would use the offsets command to set all your known timecode offsets. This display can be used to determine the EDL’s RECORD offset in ‘relative’ mode; see - setup tools [o] command.
Display the source names last sent by the ATEM. The number of names depends on the currently connected ATEM.

In off-line mode the names are what were last sent when connected. If these names are altered on the connected ATEM they will automatically be updated on the Event Logger.

InputNames:
Black
MEDIA A
Media B
Camera 1
Camera 2
Camera 3
Camera 4
Color Bars
Color 1
Color 2
Media Player 1
Media Player 1 Key
Media Player 2
Media Player 2 Key
Program3
Preview4
Clean Feed 1
Clean Feed 2

If for some reason the ‘names file’ had been deleted, the following would be displayed –

InputNames:
*** NO SOURCE NAMES DATA ***

Just connect the Event Logger to the ATEM and the ‘names file’ will get updated.

This ‘names file’ is used to insert the source names into any EDL that is to be uploaded. If the names file is missing the source names are left blank and the input numbers are used instead. Also note that if the names have been changed since the original log was made the source names in the EDL could be wrong, although the source numbers are always correct.
(not available in off line mode)
This is used to confirm there is ATEM timecode being received.

ATEM timecode is only sent from the ATEM when it sends status updates. Subsequently, to receive the current ATEM timecode a command is sent to the ATEM to prompt a reply. So when this command is entered the ‘prev trans’ will momentarily flash.
Displays the time offset parameters for the RECORD and SOURCE entries for creating an EDL. (... mnOpqrv...)

The RECORD time is the ‘record column’ for the EDL and the SOURCE time is the individual ATEM sources in the ‘playback column’ for the EDL.

These values are set using the [ o ] key. (... mnOpqrv...)

<table>
<thead>
<tr>
<th>offsets:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RECORD</td>
<td>10:00:00:00</td>
</tr>
<tr>
<td>MEDIA A</td>
<td>+00:00:00:00</td>
</tr>
<tr>
<td>Media B</td>
<td>+00:00:00:00</td>
</tr>
<tr>
<td>Camera 1</td>
<td>+07:20:49:03</td>
</tr>
<tr>
<td>Camera 2</td>
<td>+00:00:00:00</td>
</tr>
<tr>
<td>Camera 3</td>
<td>+00:00:00:00</td>
</tr>
<tr>
<td>Camera 4</td>
<td>-00:18:22:16</td>
</tr>
</tbody>
</table>

The input names that were received from the ATEM are used to identify each source.

Each timecode value is preceded by the following;

[ A ] – this represents an absolute time. This is only available for the RECORD times. It shows the ABSOLUTE time for which the EDL’s ‘record’ time will start, and all subsequent ‘record’ times are offset from this value.

[ + ] – this represents a positive time. It is what is ADDED to the current source time.

[ - ] – this represents a negative time. It is what is SUBTRACTED from the current source time.
A useful on screen timecode calculator for working out the offset times that may need adjusting. Once a calculation is made, its result is placed into the Logger clipboard.

Timecodes are entered and displayed moving left as each number is entered. Pressing [ p ] during timecode entry mode will paste the timecode from the Logger clipboard.

After the required timecode number is entered, you can directly enter [ + ] (addition), [ - ] (subtraction), [ * ] (multiplication) or [ / ] (division).

ENTER is not necessary after the initial timecode entry.

All entered timecodes are tested for validity and if there is an error in the entry, the timecode is cleared and entry restarts again.
For entry of RECORD and SOURCE offsets for use in the EDL output. The offsets are adjusted to their respective RECORD and SOURCE times in the EDL output. They do NOT alter the original log file.

The RECORD time is the ‘record column’ for the EDL and the SOURCE time is the individual ATEM sources in the ‘playback column’ for the EDL. For an ATEM TVS there are 6 source offsets, for an ATEM 1 there are 8 source offsets and for an ATEM 2 there are 16 source offsets.

The entry type and current offset are displayed starting with the RECORD time and then scrolling through the available sources.

Using the [+ ] and [- ] keys will display each SOURCE individually, one at a time, starting with RECORD and then Sources from 1 upward. [+] steps down and [-] steps up the sources.

Pressing ENTER selects what is currently displayed.

The 'RECORD' time is the start of what will be the timeline start of the NLE system. The 'SOURCE' time is the clip IN time for each individual source.

If ENTER is pressed for the RECORD –
A prompt appears to enter [ a ] for absolute [ r ] for reference or [ + ] / [ - ] for offset

There are 4 types of entry values for the RECORD time.

1. [ a ] (absolute)

The first RECORD time in the EDL will be an ABSOLUTE value and all further RECORD times will be offset from this time.

As an example, if an absolute value of 10:00:00:00 was entered -

<table>
<thead>
<tr>
<th>OLD RECORD VALUES</th>
<th>NEW RECORD VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>001 00:01:00:00</td>
<td>001 10:00:00:00</td>
</tr>
<tr>
<td>002 00:01:10:00</td>
<td>002 10:00:10:00</td>
</tr>
<tr>
<td>003 00:01:20:00</td>
<td>003 10:00:20:00</td>
</tr>
<tr>
<td>004 00:01:30:00</td>
<td>004 10:00:30:00</td>
</tr>
</tbody>
</table>

Note that the first events RECORD timecode now starts at the ABSOLUTE value of 10:00:00:00 and all following RECORD events are offset from that amount by their original offset.

Timecodes are entered and displayed moving left as each number is entered. Pressing [ p ] during timecode entry mode will paste the timecode from the Logger clipboard.

2/ [ + ] (positive offset)

All RECORD times will have this entry ADDED to it

As an example, if a positive value of 10:00:00:00 was entered -

<table>
<thead>
<tr>
<th>OLD RECORD VALUES</th>
<th>NEW RECORD VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>001 00:01:00:00</td>
<td>001 10:01:00:00</td>
</tr>
<tr>
<td>002 00:01:10:00</td>
<td>002 10:01:10:00</td>
</tr>
<tr>
<td>003 00:01:20:00</td>
<td>003 10:01:20:00</td>
</tr>
<tr>
<td>004 00:01:30:00</td>
<td>004 10:01:30:00</td>
</tr>
</tbody>
</table>

Note that ALL RECORD events timecodes now start 10:00:00:00 later.
3/ [ - ] (negative offset)

All RECORD times will have this entry SUBTRACTED from it

As an example, if a negative value of 00:01:00:00 was entered -

<table>
<thead>
<tr>
<th>OLD RECORD VALUES</th>
<th>NEW RECORD VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>001  00:01:00:00</td>
<td>001  00:00:00:00</td>
</tr>
<tr>
<td>002  00:01:10:00</td>
<td>002  00:00:10:00</td>
</tr>
<tr>
<td>003  00:01:20:00</td>
<td>003  00:00:20:00</td>
</tr>
<tr>
<td>004  00:01:30:00</td>
<td>004  00:00:30:00</td>
</tr>
</tbody>
</table>

Note that ALL RECORD events timecodes now start 00:01:00:00 earlier.

4/ [ r ] (relative)

A known RECORD time will be set to an absolute NEW RECORD time and all following RECORD events are offset from that amount by their original offset.

As an example, if the ‘1st cut’ timecode is 01:00:00:00 and that same ‘1st cut’ occurred in the MASTER RECORDING media at 00:01:00:00 -

<table>
<thead>
<tr>
<th>OLD RECORD VALUES</th>
<th>NEW RECORD VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>001  01:00:00:00</td>
<td>001  00:01:00:00</td>
</tr>
<tr>
<td>002  01:00:10:00</td>
<td>002  00:01:10:00</td>
</tr>
<tr>
<td>003  01:00:20:00</td>
<td>003  00:01:20:00</td>
</tr>
<tr>
<td>004  01:00:30:00</td>
<td>004  00:01:30:00</td>
</tr>
</tbody>
</table>

Note that the ALL RECORD events timecodes now start 00:01:00:00.

First you are asked to enter the reference timecode of the log file (usually a timecode that can have an obvious reference to the recorded master eg ‘1st cut’).
Timecodes are entered and displayed moving left as each number is entered. Pressing [ p ] during timecode entry mode will paste the timecode from the Logger clipboard.

After the required ‘reference’ number is entered, press ENTER –

After the required ‘NEW reference’ number is entered, press ENTER –

This value gets saved in the ‘offsets’ file as a relative number.

The same technique is used for entering SOURCE offsets except there is NO ABSOLUTE selection.

Source offsets are different for each individual SOURCE. Each time a SOURCE is found while uploading an EDL its own particular offset is used for the adjustment.
--- setup tools

[+] = LED brightness up

... and

[-] = LED brightness down

Increases and Decreases the STATUS LED brightness.

This is useful if you set the Event Logger a distance away from your production area and still need to monitor its operation. The Event Logger uses a SUPER BRIGHT TRI-COLOURED LED so it can be set very bright and very dim. The value is stored in permanent memory so it does not have to be set up each time the Event Logger is used.

When [+] is pressed followed by ENTER -

Increase LED brightness 11

When [-] is pressed followed by ENTER -

Reduce LED brightness 10

... and the current brightness value is displayed.

If this value is changed, it is stored after a predetermined time in non-volatile memory and 'autosave' will appear.

WARNING: Do not stare directly into the LED at maximum brightness.
This is used to restart the Event Logger.

If selected during a logging session all data in that (incomplete) log will be saved, and all other logs are also retained.

This function is mainly used to restart if an ATEM is connected AFTER the unit was started (eg. Event Logger started in 'off line' mode.)

Just unplugging the power and reconnecting may lose data if in a logging session.
[ipL=192.168.2.77] = local ip address

[ipL] sets the ip address of the unit so as not to conflict with other items on the network.

[ipS=192.168.2.230] = ATEM ip address

[ipS] sets the ip address of the ATEM that the logging is required from.

These values must be typed in exactly as the screen suggests.

Eg.

ipS=xxx.xxx.xxx.xxx ENTER your values where the ‘x’ are.

After a value has changed the Event Logger will reboot to allow the changes to take effect.

If you inadvertently enter the wrong ATEM ip address the Event Logger will not be able to connect to the ATEM after reboot and will restart with the option of setting another ip address.

If you enter a local ip address (ipL) for the Event Logger that is in use by another device on the network, it will cause a conflict and not be able to communicate with the ATEM. Also, the device it is conflicting with may display a ‘network conflict’ warning.
Displays the help screen as detailed above.

The actual Event Logger's ip addresses are always shown in this menu.
Addendum

Installing drivers for the Event Logger - Windows


2. Click on the Start Menu, and open up the Control Panel.

3. Open the Device Manager.

4. Go to ‘Other devices’
   Look for 'Arduino Mega 2560'

   ![Network adapters]
   - Other devices
     - Arduino Mega 2560
     - PCI Serial Port
     - PCI Simple Communications Controller
   - Portable Devices

   If it does not appear in ‘other devices then -

4b. Go to ‘Ports (COM & LPT)’

   ![Portable Devices]
   - Ports (COM & LPT)
     - Arduino Mega 2560 (COM5)
     - Blackmagic RS422 Serial Port (COM3)
     - Communications Port (COM1)
     - Communications Port (COM2)
     - Printer Port (LPT1)

   ![Processors]

5. Right click on the ‘Arduino Mega 2560’ port and choose "Update Driver Software"

6. Select the "Browse my computer for Driver software"

7. Insert the Event Logger Utility Disk and use Browse to navigate to the ‘driver’ folder

8. press OK and press ‘Next’
9. If the 'Windows Security' warning appears

select 'Install this driver software anyway'

10. The driver will install and then display Success

11. Press Close

After correct installation, the Event Logger will show up in ‘Ports (COM & LPT)’ as Arduino Mega 2560 (COM[port]) in the Device manager.

Note the COM PORT number; you will need this when setting up the Terminal Program.

(If the Event Logger is later connected to a different USB connector Windows may allocate a different COM port.)
Addendum

Installing drivers for the Event Logger – MAC OSX

No drivers are needed to be loaded for MAC OSX. To confirm the Event Logger is recognized by the MAC –

1. Select ‘System Preferences …’

![System Preferences window]

2. Select ‘Network’

![System Preferences - Network window]
3. The ‘Arduino Mega 2560’ has been identified as a ‘Modem’

When using ‘Macwise’ later, we will be selecting this device which will be titled ‘usbmodem’.
Addendum

Determining the COM port allocated to the Event Logger in Windows.

1. Go to Windows ‘Control Panel’
2. Select ‘Device Manager’
3. Select ‘Ports (COM & LPT)’
4. Note the COM port allocated to the ‘Arduino Mega 2560’

In this example it shows (COM5)
Addendum

Setting up the ‘Serial Terminal’ using ‘PuTTY’ – PC

1. Insert the Event Logger Utility Disk and run ‘PuTTY.exe’ (freeware program)

2. After ‘PuTTY’ starts -

   ![PuTTY Configuration](image)

   **3. Select ‘serial’**

<table>
<thead>
<tr>
<th>Serial line</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM1</td>
<td>9600</td>
</tr>
</tbody>
</table>

   **Connection type:**
   - Raw
   - Telnet
   - Rlogin
   - SSH
   - Serial

   ![Serial port settings](image)

   **4. Enter the required ‘serial port’**

<table>
<thead>
<tr>
<th>Serial line</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM5</td>
<td>9600</td>
</tr>
</tbody>
</table>

   **Connection type:**
   - Raw
   - Telnet
   - Rlogin
   - SSH
   - Serial
5. Enter the speed of 115200

6. Enter the name you wish to call the connection

7. Press ‘Save’
8. Press ‘Open’

This will open the terminal window and restart the Event Logger. After a few seconds the opening window will display...

If no ATEM is connected -

ATEM Event Logger
(C)2013 - Baz Leffler
SDcard OK
Hello ATEM?
[ATEM connecting]
NO ATEM answer
[time out]
NO ATEM answer

local ip address = 192.168.2.77
ATEM ip address = 192.168.2.230
No ATEM detected! enter ip for ATEM? (y/n)

And if an ATEM is connected –

ATEM Event Logger
(C)2013 - Baz Leffler
SDcard OK
Hello ATEM?
[ATEM connecting]
ATEM is connected
communicating

*NOTE – Each time you START or STOP the terminal program it reboots the logger. This will STOP any logging sessions. Current logging data may be lost.*
Addendum

Setting up the ‘Serial Terminal’ using ‘MacWise’ – MAC

1. Insert the Event Logger Utility Disk and run ‘MacWise_Installer.dmg’ (freeware program)

2. Follow the instructions and drag ‘MacWise’ into the applications folder.

3. Run MacWise

This will open a blank Terminal window with menu items across the top of the screen.
4. Select ‘Settings’ - 

5. Set baud rate to 115200 and select ‘serial port’ 

6. Set ‘serial port’ to ‘usbmodem’

This will open the terminal window and restart the Event Logger. After a few seconds the opening window will display.
Addendum

Updating software - PC

The Event Logger comes with a Utilities Disk that contains the user manual in PDF format, a readme.txt file and a folder called ‘XLoader’.

XLoader is an application that can upload any software updates that are available for the Event Logger. It is only available for PC as freeware (thanks to Geir Lunde from russemotto.com/xloader).

We will advise when we have found a MAC equivalent.

When there is a firmware update it will be available on our website.


and called ‘event_loggerxxxxxx.cpp.hex’ where ‘xxxxxx’ is the version number.

WARNING: THIS HEX FILE WILL ONLY WORK WITH PRE-ENCRIPTED EVENT LOGGERS.

To perform a firmware update on a PC -

1. View the readme.txt file on the Event Logger Download page
2. Download the Event Logger firmware .HEX file onto your Desktop (about 160 KB)
3. Plug in the Event Logger into a USB port on the PC
4. Insert the Event Logger Utility Disk and open the XLoader folder
5. Double click on XLoader.exe

The following window will open

![XLoader window](image.png)
6. Select the Desktop where the Event Logger firmware HEX file was downloaded using the 'Hex File' browse button.

7. Select the ‘device’ which should be Mega(ATMEGA2560)

8. Select the appropriate ‘COM port’

9. Set the Baud rate to 115200

The Xloader window should appear like this -
10. press ‘Upload’

Wait a little time then it will display –

After the ‘Upload’ is complete the Event Logger will reboot and start normally.

(* Specifications subject to change without notice. © 2013 Baz Leffler)