# EDL Manual

# CB ELECTRONICS

Loddonside, Lands End House, Beggars Hill Road, Charvil, Berks RG10 0UD, UK
Tel: +44 (0)118 9320345, Fax: +44 (0)118 9320346

## ED-1, ED-2 EDL LISTERS WITH READER/GENERATOR

### * EDL LIST GENERATION TO AUTO-CONFORM ON HARD DISC EDITORS

### * TWO TIMECODE READERS

### * SUPPLIED WITH USER FRIENDLY PC SOFTWARE

### * EDITS WITHOUT TIMECODE LOGGED

### * REEL NUMBER DERIVED FROM USER BITS OR TIMECODE HOURS

### * VITC OR LTC CODE

### * FULL FUNCTION STAND ALONE TIMECODE READER/GENERATOR

### * TIMECODE REGENERATION WITH NEW USER DATA (REEL NUMBER)

The EDL list is generated in the form of ASCII data which may be viewed, saved, and edited on any personal computer. The two formats currently available are 'CMX' or Hand logging. The CMX format is a standard format compatible with most editors. The hand logging format is arranged to make it user friendly with space for hand written or typed comments.

A special feature of the EDL lister is the use of the generator to provide absolute time information. This allows the use of input material which has inserts without timecode, as running time is always recorded.

The supplied PC Capture software is designed for user friendly function key operation and to keep the edl files in separate job & episode subdirectories.

When generating a cmx format edl list from a source of discontinuous timecode the fields are built as follows:-

| | |
|---|---|
| Event number | sequential incrementing number |
| Reel number | selectable from user bits or timecode hours, when no code is present the time is logged to reel number BBB |
| Edit tracks | Audio 1, Audio 2, and Video |
| Edit type | Cut |
| Source In/Out | Reader 1 timecode |
| Record In/Out | Generator timecode |

The generator may be free running or jammed to reader 2 input. When operating with film our FC1 FilmCoder may be used as a source of timecode for reader 2 allowing the record In/Out time to be set to a standard value at the start mark.

Software filters are built into the system to eliminate unwanted timecode dropouts and to allow for wow generated by edits.

# CB ELECTRONICS

Loddonside, Lands End House, Beggars Hill Road, Charvil, Berks RG10 0UD, UK
Tel: +44 (0)118 9320345, Fax: +44 (0)118 9320346

## READER / GENERATOR / INSERTER

## CONTENTS

### 4.3 VIDEO CONFIGURATION
4.31 VIDEO STANDARD
4.32 INSERTER OFFSET
4.33 VITC GENERATOR LINE

## 4.** USER CONFIGURATION TABLE

## 5.00 INSERTER
5.01 ENABLE/DISABLE
5.02 STYLE
5.03 SIZE
5.04 POSITION

## 6.00 RESET
6.01 POWER-UP RESET
6.02 CPU CARD RESET
6.03 SOFT RESET
6.04 HARD RESET
6.05 MANUAL HARD RESET

# 7.00 SERIAL COMMUNICATIONS
7.01 HARDWARE
7.11 RS232 Interface cable
7.12 RS232 Interface cable
7.21 SERIAL CONFIGURATION
7.22 BAUD RATE:
7.23 PARITY
7.24 STOP BITS
7.25 EDL LIST OUTPUT FORMAT
7.26 REEL NUMBER SOURCE
7.27 MINIMUM OFFSET CHANGE: Edl Er
7.30 EDL LIST SOFTWARE
7.40 EDL FORMAT
7.50 IBM EDL CAPTURE SOFTWARE
7.60 SERIAL A CONFIGURATION CHART

## 8.00 REAR PANEL CONNECTIONS
8.01 POWER INPUT
8.02 Input XLR
8.03 OUTPUT XLR
8.04 EXT. REF. BNC
8.05 VIDEO REF. BNC's
8.06 INSERT I/P BNC
8.07 INSERT O/P BNC's
8.08 SERIAL 'D'

# Appendices: hardware set-up

## A. Video card
A.11 Input termination
A.12 Video Gain
A.13 Video Frequency Response
A.14 Inserter White Level
A.15 Inserter Stability

## B. Timecode card
B.1 Timecode Input
B.2 Timecode Output

## C. PSU card
C.1 Colour Frame Detection

# DRAWINGS

**TCRMFP**
Front panel drawing showing KEY and Display functions.

**TCRCON**
Rear panel drawing showing input/output connectors and typical video interconnection.

**TCR**
Timecode input Analog and digital clock separation.

**TCR-1**
Timcode reader microprocessor interface.

**GEN**
Timecode generator, Analog and digital circuits.

**PSU-1**
Video reference decoder, reference selection, reference monostable.

**PSU-2**
Power fail detect, +12 volt, +6 volt, +5 volt, -12 volt regulator circuit, battery backup.

**VITVIDEO**
Video inserter and microprocessor interface

**VITC**
VITC reader analog and digital.

**MICRO**
CPU, Front panel driver, Asynchronous data communications.

**RDRFRAME**
Frame drawing showing all cabling.

# 1.0 DISPLAY

In normal operation the eight digit display will show any of the following:-

Generator timecode
Generator user bits

Reader timecode
Reader user bits

## 1.01 Generator timecode
To display Generator timecode depress **SELECT** until the **GEN** LED is illuminated.

## 1.02 Reader timecode
To display Reader timecode depress **SELECT** until the **READ** LED is illuminated.

## 1.03 Generator USER bits

To display Generator user bits depress **SELECT** until the **G.USER** LED is illuminated.

## 1.04 Reader USER bits
To display Reader user bits depress **SELECT** until the **R.USER** LED is illuminated.

## 1.05 FREEZE
This key has two possible functions dependent on the setting in CONFIGURATION as follows:-

**Fr2 disP:** Freeze the display only, when the display is frozen the **FREEZE** LED is illuminated.

**Fr2 Gen:** Freeze the generator, when the generator is frozen the **Freeze** LED is illuminated.

## 1.06 FRM.D
This key is used to enable or disable the display of frames. The **FRM.D.** LED is illuminated when the frame display is disabled.

This key also enable's and disable's the frame display in the inserted video if this option is fitted.

## 1.07 STD
### READER STANDARD
These LED's will illuminate to indicate the standard of the incoming code when either **READ** or **R.USER** LED's are illuminated.

### GENERATOR STANDARD
These LED's will illuminate to indicate the selected standard of the timecode generator when either **GEN** or **G.USER** LED's are illuminated.

**Note.** See the CONFIGURATION section for the method of selecting the film frame rate and generator standard.

The standards recognised are as follows:-

**24** 24 Frame per second FILM timecode
**25** 25 frame per second EBU timecode
**29** 29.97 frame per second SMPTE drop frame timecode
**30** 30 frame per second SMPTE timecode

---

## 1.08 COL

This LED will illuminate to indicate that the colour bit is set in the incoming code when either **READ** or **R.USER** LED's are illuminated.

This LED will illuminate to indicate that the timecode generator is colour locked to an external video signal when either **GEN** or **G.USER** are illuminated.

**Note:** See the CONFIGURATION section for the method of selecting the generator colour     lock status.

Not currently available.

## 1.09 REF

These LED's illuminate to indicate the selected frame rate reference for the timecode generator when set to FREE RUN. The following external references may be selected:-

**XTAL**  Internal crystal reference
**VIDEO**    External composite video input
**EXT**   External frame or 2*frame rate input
**MAINS**    Internally derived mains line
**READER**        Internally derived reader frame rate

When a reference other than XTAL is selected the LED will flash if the reference is not present. When the generator is locked to the external reference the LED will cease flashing.

**Note:** See the **CONFIGURATION** section for method of selecting  generator reference.

## 1.10 VITC

This key is used to enable the VITC reader if fitted, depending on the configuration there are two modes of operation for the VITC reader:-

**VItC-LtC**  Auto mode the LTC reader has priority over the VITC reader. When there is no LTC the VITC reader is enabled, if LTC is found the VITC reader is disabled.
**VIt ONLY**  The LTC reader is disabled and only the VITC reader is operational.

Note 1.    The decimal point to the right of the frames continues to indicate the LTC status even in VIt ONLY mode.
Note 2.    When the configuration is changed it is necessary to re enable the VITC reader to change its mode of operation.

---

# 2.00 GENERATOR

## 2.10 G.RST

This key is used to stop, reset and start the generator to the preset start time. When the **G.RST** LED is illuminated the generator is stopped and reset to the preset start time. To start the generator depress the **G.RST** key, the generator will start and the **G.RST** LED will be extinguished.

**Note:** See the SETUP section for method of setting the  preset start time.

## 2.20 JAM

When the **JAM** LED is illuminated the generator is numerically locked to the reader. There are five different jam modes available, the various **JAM** modes are selected in the configuration section. The generator is always locked to the selected reference XTAL-VIDEO-EXT-LINE-READER, if it is required to lock the generator to an external code source then JAM should be enabled in the selected mode and the generator reference should be selected to READER.

## 2.21 JAM CONFIGURATION

Further details of the various jam options may be found in the following sections of this manual:-

| | |
|---|---|
| 4.08 JAM SOURCE | Determines the jam source: RDR-1, RDR-2, SERIAL |
| 4.09 JAM TYPE | Determines the jam modes. |
| 4.10 JAM OFFSET | Enable/disable jam with offset. |
| 4.11 DROPOUT FILTER | Specifies the number frames without code before it is assumed that the code has stopped. |
| 4.12 BURST LENGTH | Specifies length on incremental timecode burst to be used when jamming to high speed code in JAM CODE. |
| 4.13 STATIONARY CODE | Enable/disable the output of stationary code when the generator is stopped. |
| 4.17 GEN USER SOURCE | Enable/disable the transfer of USER bits in jam. |

## 2.22 JAM WITH OFFSET

When it is required to jam the generator to the reader with an offset two operations must be preformed as follows:-

1) Enable the jam with offset function in Configuration.

2) Set the offset required. Two values are used to set the offset, generator reset time and Reader reset time. These are used to avoid any offset calculation. The unit will calculate the offset by subtracting the two values.

EG. If the start of picture on a tape is at 9:55:23:13 and a time of 1:00:00:00 is required for the start of picture.:-

Depress the SET key so that the SET LED is illuminated.
Depress the SELECT key repeatedly until the GEN. LED is illuminated. Use the <-, ->, INC, DEC keys until the  display shows 1:00:00:00.
Depress the SELECT key twice  so that the READER LED is illuminated. Set the display to 9:55:23:13.
Depress both <- and -> simultaneously to enter Configuration. Set for JAM FrEE and OFFSEt.
Depress SET to leave configuration. Enable JAM if and run the  tape, G.RST may be used to stop the generator, the generator should be enabled as soon as good code is read.

If the required offset is known then for a positive offset zero the reader reset time and set the generator reset time as the offset, for a negative offset zero the generator reset time and set the reader reset time as the offset.

---

## 2.23 JAM EXAMPLES

The generated timecode is frame locked to the selected reference (1.09 REF). When regenerating timecode from an audio tape recorder the reference should be set to **READER**. When re-generating timecode from a video tape recorder the reference should be set to **VIDEO** provided that:-

1) The original timecode was referenced to video.
2) Both the video tape machine and the generator are connected to the same reference.

# 3.0 GENERATOR SETUP

The GENERATOR SETUP mode is entered by depressing the **SET** key,  when the setup mode is active the **SET** LED is illuminated.

When the **SET** LED is illuminated the function of the **SELECT**  key is modified so that only the generator timecode, user bits, or reader timecode may be selected.

The user may then specify the generator reset timecode value, the generator user bits and the reader timecode which is equivalent to the generator timecode when jamming with an offset. The value is modified as follows, the decimal point is used as a cursor to indicate the digit which will be modified by the numeric or **INC** and **DEC** keys.  The cursor keys **<** and **>** move the cursor clockwise and anti-clockwise.

**CLEAR:** If both **INC** and **DEC** keys are depressed simultaneously  the current displayed data will be cleared to all zero's.

To leave the setup mode depress the **SET** key.

# 4. UNIT / VIDEO / SERIAL CONFIGURATION

### CONFIGURATION SELECTION

The configuration of the unit is selected by first depressing the **SET** key so that the **SET** LED is illuminated then depress both **<-** and **->** simultaneously to enable configuration selection. The first display allows you to select which configuration you wish to adjust **UNlt / VIdEO / SErIAL**. Make your selection and then depress **<-** and **->** simultaneously to select.

## 4.00 UNIT CONFIGURATION

The first display in the unit configuration indicates witch of the four selectable setup's the unit is set to. The four choices **CONFIG 1** .. **CONFIG 4** may be selected simply by using the **INC, DEC, <-** or **->** keys, once you have chosen and modified the configuration use the **SET** key to exit.

### CONFIGURATION MODIFICATION

To modify a parameter within a selected configuration then simultaneously depress both **<-** and **->** keys a second time to enter the configuration menu (note. a third simultaneous depression of these keys will enter the **SERIAL CONFIGURATION MENU**). Once in the CONFIGURATION MENU the display indicates either the parameter to be modified or the various selections of a particular parameter as follows:-

**GEn Std**
**GEn rEF**
**Not Col / 4 Field / 8 Field**
**VltC-LtC / Vlt ONLY**
**FrZ dISP / FrZ GEN**
**USErGrSt / USEr SEt**
**JAN rdr1 / JAN rdr2 / J SErIAL**
**JAN FrEE / JAN CODE / rESHAPE / JAN ONCE / JAN PHAS**
**No OFFSt / JAN OFFS**
**droPO 10**
**bUrSt 06**
**SCOdE OF / SCOdE ON**
**SCOdE  0 / SCOdE -1**
**tout  50**
**GEnU-PSt / GU-rdr1t / GU-rdr1U / GU-SEr t / GU-SEr U**

The **<** and **>** keys are used to select the parameter displayed. The **INC** and **DEC** keys are used to change the selection of the displayed parameter.

When the **SET** key is depressed both the CONFIGURATION and SETUP modes are exited. The parameters are then set as selected whilst in setup or CONFIGURATION.

## 4.01 GENERATOR STANDARD: GEN STD

The generator standard may be set to any of the following:-

**24**     24 frame per second FILM timecode
**25**  25 frame per second EBU timecode
**29**     SMPTE drop frame timecode
**30**  SMPTE timecode

When generating SMPTE time code either DROP or non drop, the frame rate will be determined by the selected reference. When XTAL is selected as the reference drop frame code will be generated at 29.97 frames per second.

## 4.02 GENERATOR REFERENCE:GEN REF
The generator frame rate reference may be set to any of the following:-

    **XTAL**  Internal crystal reference.
    **VIDEO**    External video reference.
    **EXT**    External frame or twice frame rate square wave.
    **MAINS**    Internal reference derived from the power input.
    **READER**  Internal reference from the time code reader.

**NOTE:** When the generator is not locked to film the generator frame rate is assumed to be the same or one half of the reference frame rate.

## 4.03 GENERATOR COLOUR LOCK
The generator colour lock may be set as any of the following when the generator is locked to VIDEO.

    **Not Col**  No colour frame lock, locked to frame rate only, Also known as 2 Field lock.
    **4 FIELd**  Colour locked to 4 field sequence only.
    **8 FIELd**  Full PAL colour lock, 8 field sequence.

The colour lock information is derived from the external video reference input. This should be setup as described in appendix C before attempting to use colour lock.

## 4.04 VITC ENABLE: VItC-LtC / VIt ONLY
When the VITC reader is enabled using the VITC key two modes of operation are available:-
    **VItC-LtC**  If LTC is present then the reader will read the LTC in preference to VITC, the VITC will only be read if there is no LTC.
    **VIt ONLY**  The LTC reader is turned OFF and only VITC is read.

## 4.05 FREEZE DISPLAY or GENERATOR: FrZ dISP / FrZ GEN
The **FREEZE** key may be used to freeze the generator or to freeze the display only:-
    **FrZ dISP**  When the LED is illuminated the display is frozen.
    **FrZ GEN**  When the LED is illuminated the generator is frozen, if stationary code is not enabled the generator will output stationary code for **BURST** frames and then mute. If the key is depressed a second time the generator will start from its current value.

## 4.06 GENERATOR USER BIT SET: USErGrSt / USEr SEt
The generator user bits may be set either when leaving setup, or when depressing the **G.RST** key.
    **USErGrSt**    Update the generator user bits when depressing the **G.RST** key.
    **USEr SEt**  Update the generator user bits when leaving setup.

## 4.07 GENERATOR JAM SOURCE: JAN rdr1 / JAN rdr2 /J SErIAL
When the **JAM** LED is illuminated the generator is numerically jammed to one of the following sources:-
    **JAN rdr1**  Jam from the main timecode input.
    **JAN rdr2**  Jam from the Auxiliary timecode reader **[OPTION]**.
    **J SErIAL**  Jam from the SERIAL port **[OPTION]**.

## 4.08 GENERATOR JAM TYPE:  JAN FrEE / JAN CodE / rESHAPE / JAN ONCE / JAN PHAS

When the "JAM" LED is illuminated the generator is numerically jammed to selected timecode source. The jam type is determined by this flag as follows:-

**JAN FrEE:**    The reader data is transferred when the JAM key is depressed to enable JAM and when new timecode is read by the reader. The generator is free running and will continue when the reader stops reading timecode.

Used when copying a tape to avoid dropouts or when extending timecode on a tape.

**JAM CodE:**    The reader data is transferred when the JAM key is depressed to enable jam and when new timecode is read by the reader. If the reader code stops for more than a preset number of frames (4.10) the generator will generate stationary code at the last good timecode number.

Used when regenerating timecode used in a system which is susceptible to dropouts, but where the system should stop if the master timecode stops.

**rESHAPE:**    The reader input data is connected directly to the output shaping circuit. The timecode output is a buffered and reshaped input. *NOTE: This option is only available with CB8601-4 High Speed reader/Time Code Generator PCB's. U24 (CD4052) should be fitted.*

**JAM ONCE**    When Jam is enabled the generator output is stopped, when good code is read the generator output is enabled and the code is jammed for the first 120 frames. After **TOUT** frames of good code jam is disabled.

**JAN PHAS**    The Generator will start in **JAM** in the normal way however after **TOUT** frames of good code it will free run until it discovers **DROPO** frames without code. At this point the generator will stop at the last good timecode value and wait for new code.

**JAN triG**    The Generator will stop on its preset value, the first timecode sync word discovered by the reader will turn off **JAM** and start the generator.

The speed of the generator will be determined by the generator reference and may be selected as described in section 4.05.

## 4.09 GENERATOR OFFSET: No OFFSt / JAN OFFS

When JAM is selected the generator may be jammed to the reader with an offset. No OFFSt disables this function, JAN OFFS enables jam with offset

## 4.10 JAM DROPOUT FILTER: droPO 10

When JAM is enabled this parameter sets the minimum length of dropout accepted before it is assumed that the input code has stopped. This parameter may be set between 1 and 50 frames.

If JAM FREE is selected if there is no code then the generator will continue free running until new code arrives. If new code arrives in less than 'dropout' frames then there will be no change in the generator output even if the code has changed. If new code arrives after 'dropout' frames have passed then the generator will re-jam to the new code.

If JAM CODE is selected, a dropout longer than specified will result in the generator stopping with the numbers jammed to the last known good reader timecode. When new code arrives the generator starts up and re-jams to the new code.

This parameter is also used by the Edit Decision List software to decide when to update the EDL list when no timecode is present

## 4.11 BURST LENGTH: bUrSt 06

When **JAM CODE** is enabled and the generator is jammed to high speed code it is not possible to follow frame by frame because the generator runs at play speed only. The output of the generator jumps in value to follow the input code. Most readers require several sequential frames of code before they will read. **BURST** sets the number of sequential frames output. **BURST** may be set between 1 and 30.

## 4.12 STATIONARY CODE ENABLE: SCOdE OF / SCOdE ON

If JAM CODE is enabled the generator will stop incrementing if the input timecode stops. In this case there are two options available:-
- **SCOdE OF** Stationary code is output for BURST frames after which the generator output is muted.
- **SCOdE ON** Stationary code is output.

## 4.13 STATIONARY CODE OFFSET: SCODE 0 / SCODE -1

When jamming to VITC or stationary LTC timecode this flag enables the generated code to be offset by -1 frame when generating stationary code. This is for use with some synchronisers which add one when reading stationary code (Adams Smith). To enable a one frame negative offset when stationary code is generated set to **SCODE -1**. *Note. for this to operate the following options must be set 1) SCODE ON, 2) JAM CODE.*

## 4.14 TIMEOUT: tout 50

## 4.15 GENERATOR USER BIT SOURCE: GEnU-PSt / GU-rdr1t / GU-rdr1U / GU-SEr t/ GU-SEr U / GU-rdr2t / GU-rdr2U

The source for the generator user bits may be selected to the following:-
- **GEnU-PSt** As preset by the user in **SETUP**.
- **GU-rdr1t** Timcode reader 1 time
- **GU-rdr1U** Timecode reader 1 User bits
- **GU-Ser t** Serial timecode **[OPTION]**.
- **GU-Ser U** Serial USER data **[OPTION]**.
- **GU-rdr2t** Timcode reader 1 time **[OPTION]**.
- **GU-rdr2U** Timecode reader 1 User bits **[OPTION]**.

## 4.20 SERIAL CONFIGURATION

In SERIAL CONFIGURATION the display indicates either the parameter to be modified or the various selections of a particular parameter in the same way as in CONFIGURATION. The first three selections are as follows:-

**9600bAud / 300 bAud / 1200bAud / 2400bAud / 19200 bd**
**NO   PAr / EVEN PAr /Odd  PAr**
**1 StOP / 2 StOP**

The **<** and **>** keys are used to select the parameter displayed. The **INC** and **DEC** keys are used to change the selection of the displayed parameter.

When the **SET** key is depressed the SERIAL CONFIGURATION, CONFIGURATION and SETUP modes are exited. The parameters are then set as selected whilst in setup, CONFIGURATION or SERIAL CONFIGURATION.

Further information on serial configuration can be found in the application specific manuals eg. EDL, Sony P2 and Evertz emulation.

## 4.21 BAUD RATE:
**9600bAud / 300 bAud / 1200bAud / 2400bAud / 19200 bd**

The BAUD rate is user selectable to any one of the above standard baud rates. After a hard reset the unit will select 9600 BAUD.

## 4.22 PARITY
**NO   PAr / EVEN PAr / Odd PAr**
The type of data parity bit is user selectable. After a hard reset the unit will select **NO   Par** as its default mode.

## 4.23 STOP BITS
**1 StOP / 2 StOP**
The number off stop bits is user selectable, the default setting is 1 stop bit.

## 4.3 VIDEO CONFIGURATION

In VIDEO CONFIGURATION the display indicates either the parameter to be modified or the various selections of a particular parameter in the same way as in CONFIGURATION. The first three selections are as follows:-

**PAL / NtSC**
**INSErt -1 / INSErt 0 / INSErt 1**
**GUtLn ??**

The **<** and **>** keys are used to select the parameter displayed. The **INC** and **DEC** keys are used to change the selection of the displayed parameter.

When the **SET** key is depressed the VIDEO CONFIGURATION, SERIAL CONFIGURATION, CONFIGURATION and SETUP modes are exited. The parameters are then set as selected whilst in setup, CONFIGURATION, VIDEO CONFIGURATION or SERIAL CONFIGURATION.

## 4.31 INSERTER STANDARD: PAL / NtSC

This flag sets the expected video standard for the inserter. If set to PAL the unit will operate correctly on NTSC but any insertion at the bottom of the screen will not be displayed since there are less lines per field.

## 4.32 INSERTER OFFSET: INSErt -1 / INSErt 0 / INSErt 1

The timecode inserter is set to insert correctly assuming that the reference video is in phase with the inserter video. When the film is stationary the current valued are not adjusted before insertion. When the unit is in play one frame is added before insertion since two insertion buffers are used one of which is updated whilst the other is displayed. This option allows a +/1 one frame offset to be added to the inserted video.

## 4.33 VITC GENERATOR LINE: GUtLn 19

When the VITC generator is fitted this parameter defines the line numbers onto which the VITC is inserted. The VITC is inserted to two lines separated by one empty line, thus if line 19 is selected then VITC will be inserted on lines 19 & 21.

## 4.** USER CONFIGURATION TABLE

When installing new software or after a **HARD RESET** it is important that the configuration of the unit remains the same. This sheet is provided for that purpose, please write down the current configuration so as to be able to reset the unit correctly. Remember that the next engineer to use the unit may not be a fully understand why it has been set up in this way!

## GENERATOR SETUP

The user may then specify the generator reset timecode value, the generator user bits and the reader timecode which is equivalent to the generator timecode when jamming with an offset. The value is modified as follows, the decimal point is used as a cursor to indicate the digit which will be modified by the numeric or **INC** and **DEC** keys.  The cursor keys **<** and **>** move the cursor clockwise and anti-clockwise.

**CLEAR:** If both **INC** and **DEC** keys are depressed simultaneously  the current displayed data will be cleared to all zero's.

To leave the setup mode depress the **SET** key.

| Setting | Nominal | SELECT | |
|---|---|---|---|
| _____ | 10:00:00:00 | GEN T. | Generator Reset Time |
| _____ | 00:00:00:00 | GEN U. | Generator Reset USER |
| _____ | 00:00:00:00 | READ T. | Generator Reset OFFSET |

## CONFIGURATION

| Setting | Nominal | Options | |
|---|---|---|---|
| _____ | | CONFIG 1 | CONFIG 1 / CONFIG 2 / CONFIG 3 / CONFIG 4 |
| _____ | | 25 | GEn Std 24, 25, 29, 30 |
| _____ | | Video | GEn rEF XTAL, Video, Line, External, Reader |
| _____ | | Not Col | Not Col / 4 Field / 8 Field |
| _____ | | VItC-LtC | VItC-LtC / VIt ONLY |
| _____ | | FrZ dISP | FrZ dISP / FrZ GEN |
| _____ | | USErGrSt | USErGrSt / USEr SEt |
| _____ | | JAN rdr1 | JAN rdr1 / JAN rdr2 / J SErIAL |
| _____ | | JAN FrEE | JAN FrEE / JAN CODE / rESHAPE / JAN ONCE / JAN PHASE / JAN triG |
| _____ | | No OFFSt | No OFFSt / JAN OFFS |
| _____ | | droPO 10 | droPO 1-30 |
| _____ | | bUrSt 06 | bUrSt 06 |
| _____ | | SCOdE OF | SCOdE OF / SCOdE ON |
| _____ | | SCOdE  0 | SCOdE  0 / SCOdE -1 |
| _____ | | TOUT  50 | TOUT 1-100 |
| _____ | | GEnU-PSt | GEnU-PSt / GU-RDR1t / GU-RDR1U / GU-SEr U / GU-rdr2t / GU-rdr2U |
| _____ | | PAL | PAL / NtSC |
| _____ | | INSERT 0 | INSERT -1 / INSERT 0 / INSERT 1 |
| _____ | | GVtLn 19 | GVtLn 6-25 |

# 5.00 INSERTER
## GENERATOR-TIMECODE, GENERATOR-USER,FILM-TIME, FILM-FEET

This unit can simultaneously display the generator timecode, generator USER bits, film time, and film footage. To adjust any of these first use the SELECT key to select one of **GEN, GENU, READ, R.USER**. All the following parameters may then be adjusted:-

## 5.01 ENABLE/DISABLE

To enable/disable the insertion first select the required data with the **SELECT** key, then depress the **INSERT** key, to enable/disable the insertion. The **INSERT** LED is illuminated when the selected data insertion is enabled.

## 5.02 STYLE

There are four different styles of timecode insertion available for each insertion as follows-

1) White numerals on a dark grey background.

2) Black numerals on a light grey background.

3) White numerals with no background.

4) Black numerals with no background.

To change the style, select the required data, hold the **INSERT** key depressed and depress the **STYLE** key. Each time the **STYLE** key is depressed the style will increment once.

## 5.03 SIZE

There are seven different sizes of numerals available from 10 lines by 8 pixels to 40 lines by 32 pixels.

To change the size, select the required data, hold the **INSERT** key depressed and depress width by 8 pixels, when at maximum size the next depression of the **SIZE** key will cause the size to revert to 10 lines by 8 pixels.

## 5.04 POSITION

Both the horizontal and the vertical position on the screen may be changed in increments of 8 pixels and 10 lines respectively.

To change the vertical position, select the required data, hold the **INSERT** key depressed and depress the **INC** key to move up the screen and the **DEC** key to move down the screen.

To change the horizontal position, hold the **INSERT** key depressed and depress the **<** key or **>** key as required.

**Note:** the screen "wraps round" in both directions, eg. to move from top of screen to bottom it is often quicker to use the **INC** key.

# 6.00 RESET

## 6.01 POWER UP RESET

When switched on the unit will reset, On reset the memory is not completely cleared since the current film position, timecode offset, and configuration are battery backed. If a memory backup failure is detected the unit will reset the whole memory. During the power up sequence the LED Display will show the following:-

**LEd Good** This indicates that the CPU, ROM, LED display, and driver are working correctly.

**Ran Good** This indicates that the RAM has been checked and is good.

**RAn BAd** This indicates that the RAM has been found to be bad.

**bC12** This is the revision code of the software

**HArd rSt** This indicated that an error was found in the configuration ram and that the memory backed ram has been reset.

## 6.02 CPU CARD RESET

When servicing the unit it may be required to reset the unit without switching off the power. To do this short the two pins on the front of the PROCESSOR BD labels SW1.This will reset the unit in the same way as a power up reset.

## 6.03 SOFT RESET

A power up reset may be initiated from the front panel by a simultaneous depression of the **SELECT** and **SET** keys.

## 6.04 HARD RESET

If it is required to reset the battery backed memory manually a hard reset may be initiated from the front panel by simultaneous depression of the **SELECT** and **FREEZE** keys. This may be necessary when new software is fitted. CAUTION this will wipe the Configuration memory! If the front panel software is not working correctly the unit will only reset if the **SELECT** and **FREEZE** keys are depressed during the power up sequence.

## 6.05 MANUAL HARD RESET

The front panel hard reset is only possible if the front panel software is running correctly. If all else fails switch off the power, open the unit, and unplug the PROCESSOR BD. This will disconnect the memory from the backup battery. Replace the PROCESSOR BD, and power up the unit.

# 7.00 SERIAL COMMUNICATIONS

## 7.01 HARDWARE

Connector:     9 pin MALE 'D', screwlock. On rear panel.

Data Format:     1 Start bit, 8 Data bits, 1 Stop bit, No parity

Baud Rate:     9600, user selectable see section 4.08

Standard:     Dual Reader RS422 / RS232
Single Reader RS232

## 7.11 RS232 Interface cable:-
For NEW DUAL reader EDL listers

| CB | | IBM AT | IBM PC |
|---|---|---|---|
| 9 pin 'D' FEMALE | CB FUNCTION | 9 pin 'D' FEMALE | 25 pin 'D' FEMALE |
| 1 | CTS | | |
| 2 | Tx Data- | 2 | 3 |
| 3 | Rx Data- | 3 | 2 |
| 4 | Gnd. | 5 | 7 |
| 5 | +5v | | |
| 6 | Gnd. | | |
| 7 | Internal | | |
| 8 | Internal | | |
| 9 | RTS | | |

RS232 operation     Serial-A:- **PB4** link pins 2 & 3 (towards rear of unit).
Serial-B:- **PB5** link pins 2 & 3 (towards rear of unit).

## 7.12 RS232 Interface cable:-

For SINGLE reader EDL listers

RS232 Interface cable:-

| CB 9 pin 'D' FEMALE | CB FUNCTION | IBM AT 9 pin 'D' FEMALE | IBM PC 25 pin 'D' FEMALE | Z88 9 pin 'D' MALE |
|---|---|---|---|---|
| 1 | | | | |
| 2 | Tx Data | 2 | 3 | 3 |
| 3 | Rx Data | 3 | 2 | 2 |
| 4 | RTS | | | |
| 5 | CTS | | | |
| 6 | | | | |
| 7 | Gnd. | 5 | 7 | 7 |
| 8 | Rx Clk | | | |
| 9 | +5v | | | |

## 7.21 SERIAL CONFIGURATION

To enter the configuration mode first enable **SET** then when the **SET** LED is illuminated depress both **<** and **>** simultaneously to enter **CONFIGURATION**, The first display allows you to select which menu you wish to edit, use the **INC** and **DEC** keys to select. **SErIAL(Single Reader EDL) or SErIAL A (Dual Reader EDL)** Then depress **<** and **>** simultaneously a second time to enter **SERIAL CONFIGURATION**. In SERIAL CONFIGURATION the display indicates either the parameter to be modified or the various selections of a particular parameter in the same way as in CONFIGURATION.

> **9600bAud / 300 bAud / 1200bAud / 2400bAud / 19200 bd**
> **NO   PAr / EVEN PAr /Odd  PAr**
> **1 StOP / 2 StOP**
> **EdL OFF / EdL C 1 / EdL C 2 / EdL H 3 / EdL H 4**
> **LEFt 2 / LEFt 3 / rIGHt2 / rIGHT3 / rd HOUrS**
> **Edl Er ??**

The **<** and **>** keys are used to select the parameter displayed. The **INC** and **DEC** keys are used to change the selection of the displayed parameter.

When the **SET** key is depressed the SERIAL CONFIGURATION, CONFIGURATION and SETUP modes are exited. The parameters are then set as selected whilst in setup, CONFIGURATION or SERIAL CONFIGURATION.

## 7.22 BAUD RATE:
**9600bAud / 300 bAud / 1200bAud / 2400bAud / 19200 bd**

The BAUD rate is user selectable to any one of the above standard baud rates. After a hard reset the unit will select 9600 BAUD.

## 7.23 PARITY
**NO   PAr / EVEN PAr / Odd PAr**

The type of data parity bit is user selectable. After a hard reset the unit will select **NO   Par** as its default mode.

## 7.24 STOP BITS
**1 StOP / 2 StOP**

The number off stop bits is user selectable, the default setting is 1 stop bit.

## 7.25 EDL LIST OUTPUT FORMAT
**Edl OFF**   No List output.
**EdL C 1**   List output in CMX format.
**EdL C 2**   List output in CMX format, with 1/10th frame information
**EdL H 3**   List output in note taking format, excluding generator.
**EdL H 4**   List output in note taking format, including generator.

---

## 7.26 REEL NUMBER SOURCE

The reel number information on the EDL list is user selectable to any of the following USER bit data:-

| | | |
|---|---|---|
| **LEFt  2** | The two left-most numbers in the R.USER display. |
| **LEFt  3** | The three left-most numbers in the R.USER display. |
| **rIGHt 2** | The two right-most numbers in the R.USER display. |
| **rIGHt 3** | The three right-most numbers in the R.USER display. |
| **rd HOUrS** | The time code reader HOURS. |

## 7.27 MINIMUM OFFSET CHANGE: Edl Er

The EDL list is generated by looking at the change in offset between the reader and the generator. The offset is measured in 1/10 of a frame, it is therefor possible to generate EDL list's to +/- 1/10 of a frame.

This parameter allows the user to set the amount of offset change in one frame before a edit is logged. On sources where there is a lot of jitter this should be set to a high value. The default setting for this parameter is 15, or 1.5 frames

## 7.30 EDL LIST SOFTWARE

The EDL software is started by using the GEN.RST key. When the generator is stopped the unit will output a TITLE request. If connected to a computer the user may then type in the title.

When the generator is started the unit will build the EDL list.

## 7.40 EDL FORMAT

There are four user selectable formats EDL C 1, Edl C 2, Edl H 3, and EDL H 4. These are setup in the configuration section 4.07.

### EDL C 1

CMX format with the Generator timecode as the Recorder timecode. The reel number source can be setup in the configuration (section 4.09).

### EDL C 2

CMX format as per EDL C 1 but with 1/10 frame offsets shown.

### EDL H 3

Hand written format for listing original tapes. The display format is written at the head of each page.

### EDL H 4

Hand written format for listing original tapes. The display format is written at the head of each page. This mode is also intended for use when transferring tapes with discontinuous timecode to continuous. The Generator time and difference allow the user to cross-reference original timecode and continuous timecode.

## 7.50 IBM EDL CAPTURE SOFTWARE

New capture software is now provided which allows computer control of the generator.

## 7.60 SERIAL A CONFIGURATION CHART

| | | |
|---|---|---|
| _____ | 9600bAud | 9600bAud / 300 bAud / 1200bAud / 2400bAud / 19200 bd |
| _____ | NO PAr | NO PAr / EVEN PAr / Odd PAr |
| _____ | 1 StOP | 1 StOP / 2 StOP |
| _____ | 8 DAtA | 8 DAtA / 7 DAtA |
| _____ | EdL 1 | EdL 1 / Edl 2 |
| _____ | LEFt  2 | LEFt 2 / LEFt 3 / rIGHt2 / rIGHT3 / rdr HOUrS |
| _____ | Edl Er 15 | |

# 8.00 REAR PANEL CONNECTIONS

## 8.01 POWER INPUT

The unit is supplied for either 220-250v A.C. or 110v-125v A.C. operation. The mains IEC input socket contains an integral power line filter and mains switch. The mains lead supplied should be connected as follows:-

    Brown  Live
    Blue   Neutral
    Green/Yellow    Earth

Later units are supplied with a voltage selector switch.

## 8.02 INPUT XLR

The 3 pin XLR INPUT socket is a balanced input to the timecode reader. The input is connected as follows:-

    Pin 1   Chassis
    Pin 2   Positive Input
    Pin 3   Negative input

When connected to an unbalanced source of timecode the connection should be made as follows:-

    **INPUT     SOURCE**
    Pin 1   Chassis
    Pin 2   Signal
    Pin 3   Signal Ground

## 8.03 OUTPUT XLR

The 3 pin XLR OUTPUT plug is a balanced output from the Time Code Generator. The output is connected as follows:-

    Pin 1   Analog Ground
    Pin 2   Positive output
    Pin 3   Negative output

When connected to an unbalanced load the connections should be made as follows:-

    **OUTPUT  LOAD**

    Pin 1   Ground
    Pin 2   Signal
    Pin 3   Leave open

## 8.04 EXT. REF. BNC

The EXT REF BNC is connected to the reference input of the time code generator. This input when selected should be fed with either frame rate or twice frame rate signal. The preferred input is a 5 volt square wave, but a 5v sine wave is also acceptable.

## 8.05 VIDEO REF. BNC's

The two VIDEO REF BNC's are connected in parallel and routed to the reference input of the time code generator. This input when selected should be fed with a nominal 1 volt composite or black and burst video signal. The input has an impedance of approximately 100K.

The video input will normally be fed from station sync's in parallel with the video recorder's. In an audio studio there is normally a Sony F1 or equivalent which may be used as a source of station

## 8.06 INSERT I/P BNC

The INSERT I/P BNC is connected to the video inserter input. The inserter input has an input impedance of 75 ohms, see section A.11 for further information on input termination.

This input will normally be connected to the output of the telecine.

## 8.07 INSERT O/P BNC's

The INSERT O/P BNC's are connected to the video inserter output. Each output has a source impedance of 75 ohms, and is resistively isolated.

The output's will normally be connected to a video monitor and the input of the video work-copy recorder.

## 8.08 SERIAL 'D'

The SERIAL 'D' plug if fitted is connected to a RS232 port on the CPU board. A male 9 pin 'D' connector is mounted on the rear panel with screw lock. The pin connections are as follows:-

    1   Remote Clock
    2   Tx data
    3   Rx data
    4   RTS
    5   CTS
    6   Remote Data
    7   0 volt
    8   Rx Clk
    9   5 volt

The SERIAL port is normally connected to the REMOTE CONTROL unit or the PRINTER. The printer connection should be made to the following pins:-

**9 way  Function          Printer**

    2   Tx data
    5   CTS
    7   Ground

## 8.09 AUX INPUT XLR (OPTION)

The 3 pin XLR INPUT socket is a balanced audio trigger input. This is used to start the generator and EDL software. The input is connected as follows:-

    Pin 1   Chassis
    Pin 2   Positive Input
    Pin 3   Negative input

When connected to an unbalanced source of timecode the connection should be made as follows:-

    **INPUT     SOURCE**
    Pin 1   Chassis
    Pin 2   Signal
    Pin 3   Signal Ground

# APPENDIX: HARDWARE SETUP

## A.00 VIDEO CARD

## A.10 Inserter

## A.11 Input termination

The input of the inserter is terminated by R29(75ohm), This resistor is mounted on saddle pins to facilitate user modification if required.

## A.12 Video Gain

The video Gain may be adjusted from 0dB to +8dB by adjusting VR2.

## A.13 Video Frequency Response

The video frequency response may be adjusted via VC1.

## A.14 Inserter White Level

After the video gain has been set the peak inserter white level may be set by enabling the timecode insert, and then adjusting VR1.

## A.15 Inserter Stability

U17, R10, R11, C16 and VR3 (VR3 is labled X2 on older designs) form the Oscillator for the video character generator. VR3 adjusts the frequency of the oscillator. The frequency of this oscillator determines the stability and horizontal character size of the inserter.

Note 1. This preset should only be set after the unit has been allowed to reach its operating temperature.

Note 2. If U17 is replaced it may be necessary to change the value of R11.

# B.00 TIMECODE CARD

## B.01 TIMECODE INPUT

There are two timecode input paths selected by L5:-

    1) L5 Fitted: Via a limiter for low level inputs.

    2) L5 Omitted: By-passing the limiter for high speed code.

In most cases input path 2) should be selected and L5 omitted.

## B.02 TIMECODE OUTPUT

The timecode output clock is generated by a phase lock loop U22, the reference for the PLL is generated from the crystal reference by U23. The crystal frame rate signal is locked by software to the selected external reference. The stability of the PLL may be adjusted by VR#(STB).

The shape of the timecode output may be adjusted by VR2(SHP), this preset adjusts both the rise time of the signal and the 'sharpness of the corners'. Slow rise times and rounded corners reduce any crosstalk between timecode and audio.

The time code output level is adjusted by VR1(LEV). The timecode output is balanced with a source impedance of 330 ohms on each leg (R24 and R26).

To adjust the generator presets remove the base cover, this facilitates access to the 3 presets. The presets are labled on the track side of the board! To access the presets from the top, switch of power, remove video board, and switch on power. The unit will function as a reader/generator without the video board.

# C.00 PSU Board

## C.01 Colour Frame detection

VR1 is used to setup the colour frame detection circuit in PAL mode. VR2 is used to set up the colour frame detection circuit in NTSC mode.

To set the colour frame detection, connect a SPG with a colour frame reference output to the video reference input. set the unit for video reference, 8 field colour lock, and PAL or NTSC. Connect one channel of an oscilloscope to the colour field flag output on the SPG, connect pin of U23 on the TCR pcb to the second channel of the oscilloscope. Then adjust VR1(PAL) or VR2(NTSC) so that the two signals are in phase.

# CB ELECTRONICS

Loddonside, Lands End House, Beggars Hill Road, Charvil, Berks RG10 0UD, UK
Tel: Reading +44(0)1189 320345, Fax: Reading +44(0)1189 320346

## CAPTURE
## CONTENTS

**7.00 [F7] USER**

**8.00 [F8] COPY**

**9.00 [F9] DOS**

# 0.00 HOW TO AUTO CONFORM

In the description following it will assumed that a DAT will be used for the final auto-conform, however any machine capable of 9 pin control with a timecode track may be used U-Matic, Beta, Nagra-T, or DAT.

0.1     TRANSFER
         This is the first part of the chain, any mistakes made here cannot be corrected later great care must be taken at this stage to ensure that the transfer operator knows what is required.

0.11 REEL NUMBER LOCATION
         The first decision to take, where will the reel number information reside, The reel number has to correspond to the DAT tape numbers, it is possible to fit more than film reel on a DAT. One idea is to use one DAT tape for each day.

         The normal position for the reel number is the last three USER numbers, the CB system allows for five positions as follows:- First two USER, First three USER, Last three USER, Last two USER or Timecode Hours.

0.12     Transfer from DAT with Continuous Timecode
         Although it is possible to use the master DAT only it is recommended that a clone copy is made for safety reasons, If you wish to use the original timecode then it may be used during the transfer. Where the USER reel number data is not present use the ED1 in JAM mode with JAM U OFF and add the reel number information to the USER data.

0.13     Transfer from DAT with Discontinuous Timecode
         Although it is possible to transfer using discontinuous timecode in the same way as continuous timecode, unless there is a reason for using discontinuous timecode (For example the picture and audio have the same timecode) why make life more difficult.

0.14     Transfer from DAT with No Timecode
         Make a clone DAT during transfer with appropriate timecode and user data.

0.15     Transfer from Nagra With No Timecode
         Make a clone DAT during transfer with appropriate timecode and user data.

0.16     Transfer from Nagra With Timecode

0.2      EDIT

0.3      MAKING THE EDL

0.4      AUTO-CONFORM

---

# 1.00 HELP!

Track-Sheet runs on any PC compatible computer, this section answers some common questions on the operation of the computer and or DOS.

## 1.01 Log Onto the A: B:, or C: Drive

To do this, insert the Disk into the A: or B: drive, then type **A:** or **B:** followed by <**Enter>**. your screen should then display an A: or B: prompt.

## 1.02 <Enter>

When you see <**Enter**> written in this document it refers to the large key either labled enter or with a symbol which looks similar to :- **<-'**

## 1.03 Directory & Sub-Directory

In the same way as you arrange your paperwork in separate files, shelves and drawers your information should be stored on the computer in separate directories and sub-directories. This allows you to find information quickly and easily.

EG.

This manual is filed on my hard disc in a Sub-Directory called "**MANUALS**" which is in the "**TEXT**" directory. Under DOS all directory  names must be terminated by a "\" thus to edit this manual I type "**EDIT \TEXT\MANUAL\TSHEET**" where TSHEET is the name of the manual. The first "**\**" tells DOS to look in the main or **ROOT** directory on the current disk.

If you are the type of person that puts all books, papers etc in a large box then you will not need directories or sub directories. I once came across someone with over 600 entries in the root directory, this meant that if he forgot the name of a file then he had to look through all 600 files to find the file he required.

The Track-Sheet programs assumes that you wish to file your EDL lists in individual sub-directories according to the program name. The program also supports multiple episodes of the same program. The main directory is assumed to be called "**EDL**"

To change the between directories use the "**CD"** command, for instance all the files used on this program are stored in "**\CBUTIL**", to change to this directory type "**CD \CBUTIL <enter>**".

## 1.04 Windows v DOS

This program are written for DOS and not for windows, the reason for this is that every IBM compatible is capable of running DOS but not every IBM will run windows. We have customers using our EDL capture program on original PC running 8088's (The slowest processor).

If you wish to run the program under Windows then you will have to open a DOS window and run the program in that window.

## 1.05 Hardware Requirements

This program will run on any PC compatible or on any computer running PC emulation. The speed of operation will vary with the speed of the computer but nothing else. The main setup allows you to specify a colour or B/W screen.

The program is supplied on one 720K 3.5" disc, if you need a 5.25" please contact us directly.

## 1.09 [F9] CONTINUE / [F10] EXIT

On most menu's within this program **[F9] CONTINUE** is used to continue with the selected process, **[F10] EXIT** is used to abort the process.

# 1.10 INSTALLATION

Insert the disk in the A: or B: drive, log onto the A:/B: drive (type **A:<Enter>**), and then type
**INSTALL C: <Enter>** assuming installation onto the C drive.

## 1.11    BACKUP.
Once installed on the hard drive the  files on the floppy disk may be used to back up the files on
the hard disk.


# 1.20 STARTUP

When the program is installed a batch file called **EDL.BAT** should be copied to the root directory of the
drive onto which the program is installed. This may be modified as required or run as is by typing
EDL<Enter> from the root directory.

## 1.21 STARTUP SCREEN
The startup screen shows the revision number. If you ring in for assistance please make sure
that you have this information at hand. Hit any key other than **<F10>** or **<Esc>** to continue.

## 1.22 EDL FILE BASE DIRECTORY
As supplied the program will assume that **"\EDL"** is the base directory for all edl's, if it finds a
"\EDL" directory then it will enter it. If not then the program will ask if it can make this directory.
At this point either agree or specify the directory you would like to use. See the System Menu
Section 14.19 for another way of changing the base directory.

In our paper analogy this the drawer with which the lists are kept.

## 1.23 JOB SUB-DIRECTORY
The program will then look for the current JOB directory, this is supplied as **\EDL\JOBNAME**
please enter an appropriate name. Please note spaces are NOT allowed and a maximum of 8
characters may be used!

In our paper analogy this the customer/job file.

## 1.24 EPISODE SUB-DIRECTORY
If enabled a further sub-directory will be searched for and that is the **EPISODE** sub directory.
See section 14.16 for further details. If episodes are enabled then an EDL called EDL123 could
be stored in the following location:-
> C:\EDL\JOBNAME\EPISODE\EDL123

## 1.25 WHY SO MANY DIRECTORIES
Filenames are restricted to 8 characters + 3 extension characters, if the job, episode and reel
number are all to be encoded into the file name then the name will not be very descriptive.

At any one time you may be working on more than one job or episode, this helps you
differentiate between them.

Another point is how the setup's are stored. Wherever possible user setup's such as printer type
and track types are stored in the main \CBUTIL directory, however setup's such as the timecode
standard, and position display format are stored in the job directory.

# 2.00 [F2] EDL

## 2.01 THE CAPTURE PROGRAM

The original EDL lister did not include a capture and was operated from the **ED-1/ED-2** unit using the **GRST** key. The object of this program is to make the operation easier for the operator. Once **[F2] EDL** has been depressed you will be asked for a file name, make this as descriptive as possible within the limits of DOS. Note spaces are not allowed however underscore _ may be used.

## 2.02 [F2] RESET

This key is equivalent to the **G.RST** key on the **ED-1/ED-2** unit and should be used to reset the system in order to redo the EDL list.

## 2.03 [F3] PAUSE

This key pauses the generator in the **ED-1/ED-2** unit.

## 2.04 [F4] START

This key starts the generator in the **ED-1/ED-2** unit and should be used after pause.

## 2.05 [F5] JAM

This key places the **ED-1/ED-2** lister into the selected jam mode.

## 2.06 [F6] MANUAL

This key disables the **JAM** mode and enables manual operation.

## 2.09 [F9] DOS

This key provides access to the **DOS** menu.

## 2.10 [F10] CLOSE

When the EDL file has been captured hit **[F10] CLOSE** to close the disk file and finish the operation. The system will then return to the main menu.

# 3.00 [F3] VIEW

## 3.01 WHY VIEW?

This allows you to look at the EDL file that you have captured. The view program does not modify the EDL file in any way.

# 4.00 [F4] EDIT

When [F4] is depressed the batch file **\CBUTIL\ED.BAT** is used to edit the specified EDL file. This batch file currently specifies a simple text editor **\PCWRITE\ED.EXE** however it may be edited to use whatever is your favourite text editor. Standard word processors should not be used since they add extra control characters to the text file.

The editor may be used to modify EDL lists, eg delete lines, change titles. However it should be used with care!

PCWRITE is a shareware program which if you wish to use you should register and pay for.

# 5.00 [F5] LEDIT

When [F5] is depressed the batch file **\CBUTIL\LEDIT.BAT** is called to process the specified EDL file. The batch file may be used to call any useful EDL editing file.

# 6.00 [F6] SETUP

The setup menu is used to configure the system the current setup is held on the hard disk. The cursor keys are used to select and modify the setup parameters.

## 6.01 SERIAL COMMUNICATIONS PORT

The serial port may be changed between COM1, COM2, COM3, and COM4.

## 6.02 CAPTURE FILE EXTENSION

The capture file extension also changes the type of EDL list generated. The normal format is .EDL which is a standard CMX format.

## 6.03 RUN UNIT SETUP EVERY TIME

Every time the program starts up the EDL Lister setup program is run. This sets the configuration the same as the last time the system was run. Each job directory holds it's own configuration data file, Thus different jobs with different configurations (eg. TimeCode Standard) the appropriate configuration is set on setup.

If this option is enabled then the setup program is run every time an EDL list is made (F2 is depressed)

## 6.04 COLOUR or BLACK AND WHITE

Selects between colour (Blue & White) or Black & White.

## 6.05 BASE DIRECTORY FOR EDL FILES

The normal directory for EDL files is **\EDL** if you have another program that uses this directory (eg IDOL) then you may select any suitable name.

## 6.06 EPISODE SUB-DIRECTORIES

When a program with many episodes is being listed then it may be useful to place the lists for each episode in its on directory.

## 6.07 FLOPPY DRIVE

The user may select floppy drive **A;** or **B:** this is used when **[F8] COPY** is selected.

# 7.00 [F7] USER

When **[F7]** is depressed the batch file **\CBUTIL\USER** is called to process the specified EDL file. The USER.BAT file may be edited to provide any function that the user requires for example print out an EDL list.

## 7.01 EDITING USER.BAT

**SHIFT-[F7]** will edit the USER.BAT file using **\CBUTIL\ED.BAT**. when writing the batch file %1 is the file name passed to the batch file and %2 is the file extension.

# 8.00 [F8] COPY

When **[F8] COPY** is selected the specified EDL file is copied to a floppy disk. To copy all the EDL files in a directory use **\*** as the name. It is not necessary to type the extension (eg .EDL).

# 9.00 [F9] DOS

This key accesses a simple DOS utility menu as follows:-

## 9.2 [F2] CH DIR
This uses the DOS command <u>'CD'</u> to change directories, enter the path to the required directory, eg. to access the EDL directory type **'\EDL'<enter>**.

## 9.3 [F3] LIST
This uses the DOS command <u>'list'</u> to view a ASCII file. This command will not modify the file.

## 9.4 [F4] EDIT
This uses the batch file <u>\cbutil\edit.bat</u> and passes the supplied filename and extension.

## 9.5 [F5] FORMAT

## 9.6 [F6] MK DIR

## 9.7 [F7] RENAME FILE

## 9.8 [F8] COPY TO A:

## 9.9 [F9] SHELL

## 9.10 [F10} MAIN