Cue-Patch
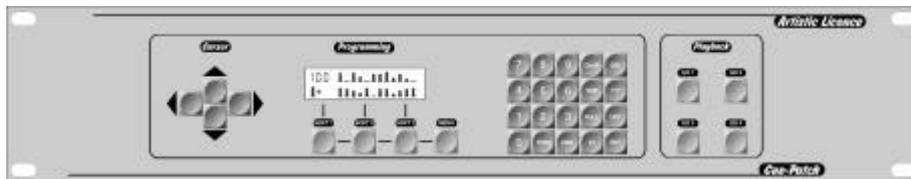

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Software Version V1.0   Manual Revision V1.3

Artistic Licence Product Registration Form

Product: **Cue-Patch**	Version No.
Serial No.	Date Purchased:

Supplier:

Name:
Company Name:
Address:

Post/Zip Code:		Phone No.

Comments:

Please return to: Artistic Licence (UK) Ltd.
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C O N T E N T S

C O N T E N T S

I N T R O D U C T I O N

Quick Start

Welcome to the Cue-Patch manual. Cue-Patch is a state of the art soft patch and lighting controller built into a 2RU 19 inch rack.
The product can be used to fulfil a wide range of lighting applications in theatre, Audio-Visual and touring applications.

The entire system is driven by an easy to use menu system. We suggest that new users read the next section fully, for a basic overview of operation. The detailed function description sections of the manual can then be used for reference as required.

In normal operation the Cue-Patch displays either a view of received DMX512 data or the main status screen. The different views of the Status screen are selected by repeatedly pressing any of the soft keys or the enter key. The Menu key is used to select between the status screens and the Main Menu.

Please remember to return your product registration card, so that we can keep you informed of new developments.
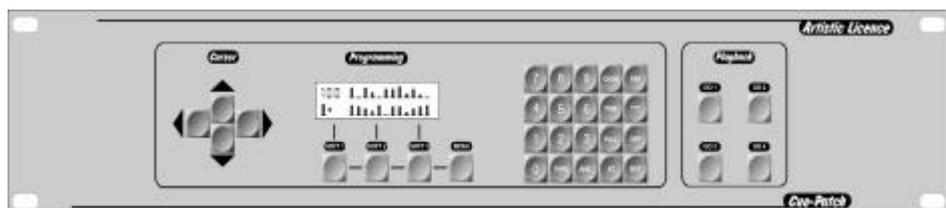
Features

Cue-Patch provides the following features:

- Soft patch any combination of output channels to individual input channels.
- Record and playback cues and sequences either as a show backup or a stand-alone controller.
- Analyse and display received DMX512.
- Provide independent buffered DMX512 outputs.
- Communicate with a PC for off-line programming and show backup.
- Accept remote control triggering for integration into a larger control system.

The following diagram shows a selection of possible applications:

APPLICATION CONFIGURATIONS OF THE CUE-PATCH

SOFT PATCH

DMX512 Input → Digital Soft Patch → DMX512 Output

AUTOMATIC SHOW BACKUP

DMX512 Input, Cue or Sequence Playback → DMX512 Signal Failure → Digital Soft Patch → DMX512 Output

RIG TEST FACILITY

Rigger's Test → Digital Soft Patch → DMX512 Output

SHOW CONTROL WITH REMOTE TRIGGER

Cue Playback, Sequence Playback, Remote Control → Remote Playback Control → Digital Soft Patch → DMX512 Output

System Options

Two versions of the Cue-Patch are available: Single and dual DMX512 universe. Specific attributes are as follows:

Feature	Cue-Patch 512	Cue-Patch 1024
Input Channels	512	1024
Output Dimmers	512	1024
Cues	800	400
Sequences	20	20
Seq Steps	250	250
Patches	10	10
RS232 link	Yes	Yes
Remote Triggers	None	8

Terminology

Channel: Refers to the DMX512 inputs. Channels number from 1 to 1024.

Dimmer: Refers to the DMX512 outputs. Multiple Dimmers are controlled by a single Channel as defined by the patch.

Patch: Defines the relationship between Channels and Dimmers. A total of 10 Patches can be programmed. One of the Patches is always active. It is important to remember this as selecting an empty patch can stop any DMX512 output.

Cue: A Cue contains the levels of all channels and a fade time. A total of 400 (800) cues can be programmed or recorded from the DMX512 input. It is possible to playback a Cue either manually, as a result of the DMX input failing or triggered by the remote control input. Multiple cues are layered onto the output by using the Add Fade.

Sequence: A Sequence is a list of up to 250 Cues. The Sequence defines the Link State between each step, such that a Sequence can run continuously or hold at predetermined points. It is possible to playback a Sequence either manually, as a result of the DMX input failing or triggered by the remote control input.

MAIN MENU FLOW

```
        ┌──────────────────┐      ┌──────────────────┐
        │    main menu     │─────▶│    main menu     │
        │ patch play prog  │      │  test   util  ... │
        └──────────────────┘      └──────────────────┘

    ┌──────────────────┐
    │ Active patch: 01 │
    │  esc        ok   │
    └──────────────────┘

                        ┌──────────────────┐
                        │    test menu     │
                        │  esc   rx   rig  │
                        └──────────────────┘

                ┌──────────────────┐        ┌──────────────────┐
                │ 0001 _____  │        │              ch_ │
                │  _>> _____  │        │  esc   all   ok  │
                └──────────────────┘        └──────────────────┘

                ┌──────────────────┐
                │ 0001 000 128 000 │
                │ d>> 255 000 255  │
                └──────────────────┘

                ┌──────────────────┐
                │ 0001 000 050 000 │
                │ %>> 100 000 100  │
                └──────────────────┘

                ┌──────────────────┐
                │ op: dmx   A> B>  │
                │ patch:01  F:100% │
                └──────────────────┘

    ┌──────────────────┐
    │    utils menu    │
    │ macro a/back ser │
    └──────────────────┘

┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
│   macro: go 1    │  │    disabled      │  │  comms idle ...  │
│  esc        ok   │  │ esc  option  ok  │  │  esc           . │
└──────────────────┘  └──────────────────┘  └──────────────────┘

┌──────────────────┐  ┌──────────────────┐
│    disabled      │  │  go dmx if good  │
│ esc  option  ok  │  │  no        yes   │
└──────────────────┘  └──────────────────┘

              ┌──────────────────┐  ┌──────────────────┐
              │ fade time: 001s  │  │    play menu     │
              │  esc        ok   │  │  dmx   cue  seq  │
              └──────────────────┘  └──────────────────┘

┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
│ play dmx 00001s  │  │ playback cue:002 │  │ playback seq: 03 │
│ esc  snap  fade  │  │ esc  add  xfade  │  │  esc        ok   │
└──────────────────┘  └──────────────────┘  └──────────────────┘

                      ┌──────────────────┐  ┌──────────────────┐
                      │ op: cue 002 100% │  │ seq01 st001  wfg │
                      │      play        │  │ esc  step   run  │
                      └──────────────────┘  └──────────────────┘

┌──────────────────┐
│    prog menu     │
│ patch  cue  seq  │
└──────────────────┘

        ┌──────────────────┐
        │    cue menu      │
        │ esc  edit  snap  │
        └──────────────────┘

┌──────────────────┐  ┌──────────────────┐
│  edit cue: 002   │  │  snap cue: 002   │
│  esc        ok   │  │ esc     record   │
└──────────────────┘  └──────────────────┘

┌──────────────────┐
│             ch_  │
│  esc        ok   │
└──────────────────┘

┌──────────────────┐              ┌──────────────────┐
│   patch menu     │              │    seq menu      │
│ esc edit  clear  │              │ esc  edit  clr   │
└──────────────────┘              └──────────────────┘

┌──────────────────┐ ┌──────────────────┐  ┌──────────────────┐ ┌──────────────────┐
│  edit patch: 01  │ │ clear patch: 01  │  │  edit seq: 01    │ │ clear seq: 01    │
│  esc        ok   │ │ esc  1 to 1  clr │  │  esc        ok   │ │  esc        ok   │
└──────────────────┘ └──────────────────┘  └──────────────────┘ └──────────────────┘

┌──────────────────┐              ┌──────────────────┐
│        chan/dim  │              │              st_ │
│  esc        ok   │              │ esc  link  store │
└──────────────────┘              └──────────────────┘

                                  ┌──────────────────┐
                                  │   link steps     │
                                  │ esc unlink  link │
                                  └──────────────────┘
```

T H E   C O N T R O L   S U R F A C E

Over-view

Cue-Patch operation is primarily controlled by the three soft keys and the MENU button.

The following section provides an overview of the front panel controls. Detailed menu operation description is provided in the next section.

Cursor

LEFT: The Left cursor key is used to back space through text when programming the Cue-Patch.

In the Main Menu this key selects the second page of the Main Menu.

RIGHT: The Right cursor key is used to forward space through text when programming the Cue-Patch.

In the Main Menu this key selects the second page of the Main Menu.

UP: The Up cursor key is used to increment the number displayed at the cursor position.

DOWN: The Down cursor key is used to decrement the number displayed at the cursor position.

Programming

MENU: In any mode of operation the Menu key is used to display the Main Menu.

SOFT KEYS: The operation of the soft keys changes dependent upon the menu currently displayed. The function which will occur when the key is pressed is displayed in the LCD screen above each key.

Soft Key 1 is used as an escape key in most menus. This allows the user to return to the previous menu.

Soft Key 3 is used as a confirm operation key in most menus.

NUMERIC: The numeric keys 0 to 9 are used to enter data when programming. They may be freely mixed with the UP and DOWN keys.

CHAN: Used when programming a patch to show that the next number is a Channel or DMX input number. This is displayed as 'Ch' in the LCD screen.

DIM: Used when programming a patch to show that the next number is a Dimmer or DMX output number. This is displayed as 'Dm' in the LCD screen.

TIME: Used when programming a cue in order to enter the fade time.

???: This key is used to display the current setting of a parameter when programming the Cue-Patch. The value can then be edited as required.

FULL: Used as a shortcut meaning set this parameter to the maximum allowed value. In a cue this means maximum intensity.

OFF: Used as a shortcut meaning set this parameter to the minimum allowed value. In a cue this means zero intensity.

THRU: Used to indicate that a range of values is being entered. Eg: *Ch 1 Thru 9.*

AND: Used to add another parameter or range of parameters to the current group. Eg: *Ch 1 Thru 9 And 57.*

@: Used during Cue entry to indicate that the next number is the percentage level. Eg: *Ch 1 Thru 9 And 57 @ 57%.*

ENT: The Enter key is used in all programming operations as a confirmation to record the current editing. It is interchangeable with Soft Key 3 when the 'OK' legend is displayed.

When the LCD is not displaying a menu, the Enter key is used to alternate between the different status display modes.

PLAYBACK

The playback keys provide access to the first four macro functions, (the remaining eight macro's are triggered by the remote control input).
The macro functions include:

1. No Action
2. Fade to DMX512 input
3. Run Sequence XX
4. Cross-fade to Cue XXX
5. Add-fade to Cue XXX
6. Select Patch XX
7. Pause current fade
8. Continue fade
9. Fade to next step
10. Snap to the end of current fade

T H E   M A I N   M E N U

MENU

The Main Menu can be accessed at any time by pressing the MENU key. The Main menu is split in to two screens which are viewed using the Left and Right Cursor keys.

```
MAIN MENU      >
PATCH  PLAY  pROG
```
```
<      MAIN MENU
TEST      UTIL      ...
```

The Main menu provides access to five sub-menu's which operate as follows:

PATCH

The Patch menu is used to display and change the current active soft patch. The active soft patch defines the relationship between input channels and output dimmers. The soft patch operates whether the input is from DMX, Cue or Sequence.

```
Main Menu
   |
 Patch
```
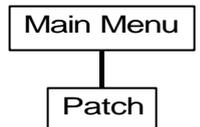
```
active patch: 02
esc           ok
```

Use the numeric keys or the UP and DOWN keys to change the active patch. The output will not be affected until the OK soft key is pressed.

PLAY

The Play menu is used to fade between the three possible inputs to the soft patch. The input sources are:
1. DMX512 inputs
2. Cue
3. Sequence

The menu display is dependent upon the current input:

```
Main Menu
   |
 Play
```

```
play menu
...    cue    seq
```
Displayed if the current input is DMX512.

```
play menu
dmx    cue    seq
```
Displayed if the current input is Cue or Sequence.

Use the numeric keys or the UP and DOWN keys to change the active patch. The output will not be affected until the OK soft key is pressed.
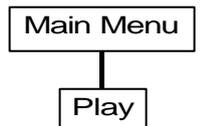
PLAY DMX

The Play - DMX option is used to initiate a cross fade between the current output state and the DMX512 input.

This option is only available if the Cue-Patch is currently outputting Cues or a Sequence.

The Snap key is used to instantly change from the current state to the DMX input.

The Fade key is used to initiate a fade to DMX input using the fade time. The fade time is set using the numeric and cursor keys. The initial fade time is set to the last value used.

When the fade is started, Cue-Patch reverts to displaying the status screen which shows the percentage fade progress.

```
play dmx 00001s
esc   snap   fade
```
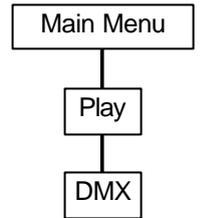
PLAY CUE

The Play - Cue option is used to initiate a fade between the current output state and a Cue.

The fade executes with the time programmed for the selected Cue.

Two types of fade are possible:

1. Add Fade: The selected Cue is added to the current output on a 'Highest takes precedence' Htp basis. This feature allows multiple Cues to be merged together. When the input is currently DMX, the DMX input levels will freeze when the fade is initiated. To return to the DMX input use Play - DMX.

2. Cross-Fade: The selected Cue replaces the current output by executing a dipless cross-fade.

The Cue Number is set using the numeric and cursor keys. The initial fade time is set to the last value used.

```
playback cue:001
esc    add    xfade
```

When the fade is started, Cue-Patch reverts to displaying the status screen which shows the percentage fade progress.

The status screen contains a shortcut key which returns to the Play - Cue menu and automatically selects the next Cue.
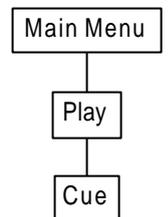
Status Screen
```
op:  cue 001  57%
...      PLAY      ...
```

PLAY SEQUENCE

The Play - Sequence option is used to initiate Sequence playback. A sequence is simply a list of Cues which are played back in a specific order.

The cross-fade time between steps of the sequence is set by the Cue fade time.

Each step of the sequence can be set to either fade directly to the next or to wait for a key or a remote trigger.

The Sequence Number is set using the numeric and cursor keys.
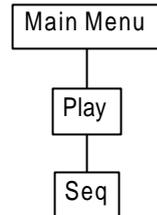
```
playback seq: 01
 esc        ok
```

When the OK key is pressed, the following menu is displayed. The Sequence may be initiated in two ways:

1. **Step:** This starts a cross-fade from the current output to the first step of the sequence. Playback will pause at the end of step one.
2. **Run:** This starts the sequence running exactly as programmed. If all steps have been programmed as 'Linked' the sequence will loop continuously.

Once the sequence has started, Cue-Patch reverts to displaying the status screen which shows the Sequence progress.

```
 seq 01 St 001   ...
 esc   step   run
```

When the fade is started, Cue-Patch reverts to displaying the status screen which shows the Sequence progress.

Status Screen

```
 seq 01 St 001 57%
 pause  step   run
```

The Status screen allows control of the Sequence. Three options are available:

1. **Pause:** This pauses the current cross-fade. The display changes to show that 'Continue' must be pressed to continue the sequence.
2. **Step:** This forces the Sequence to pause at the end of the current step independent of whether the step was programmed as 'Linked'.
3. **Run:** This forces the Sequence to revert to using the programmed status of 'Linked'. It effectively cancels step by step operation of the Sequence.

Main Menu

Play

Seq

PROGRAM

The Program menu is used to edit or program Patches, Cues or Sequences:

1. **Patch:** 10 soft patches may be programmed of which one is active at any one time.
2. **Cue:** The 512 channel product has 800 cues and the 1024 channel product has 400 cues. Each Cue records the level values of all channels along with a fade time.
3. **Sequence:** 20 sequences of 250 steps each may be programmed. Each step is a Cue. Sequences can be programmed to run automatically or wait for manual or remote triggers.

```
prog menu
patch   cue   seq
```

The soft keys are used to select an option.

Main Menu — Prog
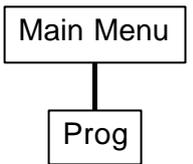
PROGRAM PATCH

The Prog - Patch menu is used to either program or clear a Patch. A Patch can be cleared to either all off or such that channel inputs map directly to dimmer outputs.

A patch can be edited in a number of ways which allow ranges of channels or dimmers to be patched in a single operation.

```
pATCH MENU
esc     EDIT   CLEar
```

Main Menu — Prog — Patch
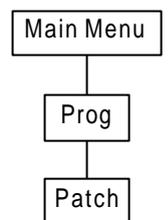
EDIT PATCH

In order to start editing a Patch, the Patch number must first be entered and then the OK key pressed.

Cue-Patch then displays 'Chan/Dim' to indicate that the user must decide how they wish to enter the patch information. Three generic styles of data entry are possible:

1. A single Channel then a group of Dimmers.

Example: Chan 1 Dim 5 Through 9 And 70

This example sets the patch such that Channel 1 controls Dimmers 5,6,7,8,9,70.

2. A group of Dimmers then a single Channel. This is simply the reverse of the option above.

Example: Dim 5 Through 9 And 70 Chan 1

This example sets the patch such that Channel 1 controls Dimmers 5,6,7,8,9,70.

Main Menu — Prog — Patch — Edit
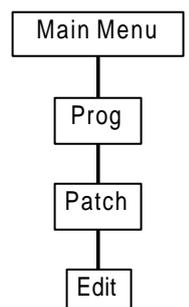
3. A group of Channels then a start Dimmer.

Example 3a: Chan 1 Through 3 And 70 Dim 5

Cue-Patch understands that it is not possible for a single dimmer to be controlled by multiple channels. The Dimmer number is used as a start number which is incremented for each channel entered. The patching operates in the order in which channels are entered.

The above example results in:

Chan 1 .... Dim 5
Chan 2 .... Dim 6
Chan 3 .... Dim 7
Chan 70................................. Dim 8

Example 3b: Chan 70 And 3 Through 1 Dim 5
Results in:

Chan 1 .... Dim 8
Chan 2 .... Dim 7
Chan 3 .... Dim 6
Chan 70................................. Dim 5

The OK key must be pressed to store each patch string.

KEY FUNCTIONS IN PATCH MODE

CHAN: Used when programming a patch to show that the next is a Channel or DMX input number. This is displayed as 'Ch' in the LCD screen.

DIM: Used when programming a patch to show that the next number is a Dimmer or DMX output number. This is displayed as 'Dm' in the LCD screen.

???: This key is used to display the current setting of a parameter when programming the Cue-Patch. The value can then be edited as required.

THRU: Used to indicate that a range of values is being entered. Eg: *Ch 1 Thru 9.*

AND: Used to add another parameter or range of parameters to the current group. Eg: *Ch 1 Thru 9 And 57.*

@: Used instead of Chan or Dim to start entering the second half of the Patch string.

ENT: Interchangeable with Soft Key 3 when the 'OK' legend is displayed.

Patch Entry Screen

```
    ch 1-5&70 dm 1 .
  esc              OK
```
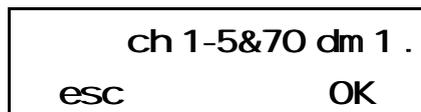
CLEAR PATCH

A Patch can be cleared in two ways:

1. One to One: This operation sets all input channels patched to their respective output dimmers. It is a quick way to effectively disable the Cue-Patch such that the DMX input and output are identical.

2. Clr: This operation actually clears the patch such that no DMX values will be output. It is normally only used prior to programming the patch.
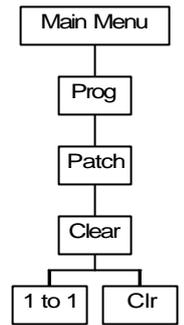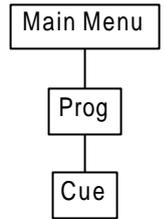
Clear Patch
Screen

```
clear patch: 01
esc   1 to 1   clr
```

Main Menu

Prog

Patch

Clear

1 to 1   Clr

PROGRAM CUE

The Prog - Cue menu is used to either program a Cue or 'snapshot' DMX data into a Cue.

Each Cue contains full level information for each channel and an associated fade time which ranges from 0.1s to 10 hours.

Cue editing is performed by entering ranges of channels at levels.

```
┌─────────────────────────────┐
│         CUE MENU            │
│                             │
│  esc      EDIT    SNAP      │
└─────────────────────────────┘
```

```
┌─────────────┐
│  Main Menu  │
└──────┬──────┘
       │
   ┌───┴───┐
   │ Prog  │
   └───┬───┘
       │
    ┌──┴──┐
    │ Cue │
    └─────┘
```

EDIT CUE

In order to start editing a Cue, the Cue number must first be entered and then the OK key pressed.

Cue-Patch then displays 'Ch' to indicate that the user must enter either a single channel number or a group of channels.

Example: Chan 2 Through 9 And 70 Through 78 And 91 At 75%

The OK key must be pressed to store each patch string.

```
┌─────────────┐
│  Main Menu  │
└──────┬──────┘
       │
   ┌───┴───┐
   │ Prog  │
   └───┬───┘
       │
    ┌──┴──┐
    │ Cue │
    └──┬──┘
       │
    ┌──┴──┐
    │ Edit│
    └─────┘
```
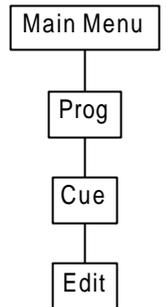
KEY FUNCTIONS IN CUE EDIT

???: This key is used to display the programmed level of a channel. It will only operate if a single channel number has been entered.

THRU: Used to indicate that a range of values is being entered. Eg: *Ch 1 Thru 9.*

AND: Used to add another parameter or range of parameters to the current group. Eg: *Ch 1 Thru 9 And 57.*

@: Used to indicate that the next number is a percentage level.

FULL: Shortcut key to set channels to 100%

Off: Shortcut key to set channels to 0%

ENT: Interchangeable with Soft Key 3 when the 'Store' legend is displayed.

TIME: Used to display and edit the fade time associated with the Cue.

Cue Entry Screen

```
┌─────────────────────────────┐
│     ch 1-5&70 AT 100%       │
│                             │
│  esc             STORE      │
└─────────────────────────────┘
```
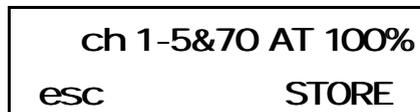
EDIT

CUE

FADE TIME

At any point during Cue editing, the Time key can be pressed in order to edit the fade time.

The fade time associated with a cue can be entered as either tenths of seconds or seconds.

Allowed values range from 0.1S to 3200.0S (Approx. 53 minutes) or 1S to 32000S (Approx. 9 hours).

The soft key marked '1/.1S' is used to change between the two time modes.

The Store key should be pressed to confirm the fade time.

```
Main Menu
   │
  Prog
   │
  Cue
   │
  Edit
   │
  Time
```
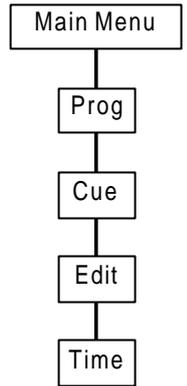
Fade Time
Screen

```
┌────────────────────────┐
│  C001 Fade: 3200.1     │
│  Esc   1/.1s   STORE   │
└────────────────────────┘
```

SNAPSHOT

CUE

In order to record received DMX512 to a Cue, the Cue number must first be entered.

Recording is initiated by pressing the Record key.

If Cue-Patch is receiving valid DMX512 a message confirming the operation is displayed. The Record key changes function to Next which allows automatically incrementing Cues to be stored by two consecutive key presses.

If no data input is detected, Cue-Patch will display a message with the option to retry the operation.

```
Main Menu
   │
  Prog
   │
  Cue
   │
  Snap
```
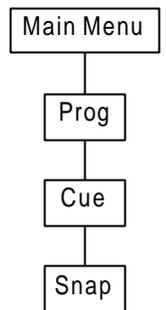
Cue Snap
Screen

```
┌────────────────────────┐
│     snap cue: 001      │
│  esc          record   │
└────────────────────────┘
```

Confirm
Screen

```
┌────────────────────────┐
│  cue: 001  recorded    │
│     esc       next     │
└────────────────────────┘
```

Retry
Screen

```
┌────────────────────────┐
│  no data received      │
│     esc     retry      │
└────────────────────────┘
```

PROGRAM SEQUENCE

The Prog - Seq menu is used to either program or clear a Sequence. Each Sequence is a list of up to 250 steps which each contain a Cue number. When replayed, the Cues cross-fade in the order defined by the Sequence using the fade times associated with each Cue.
Each Sequence step can be set to either automatically fade to the next step or to pause at the end of the fade.
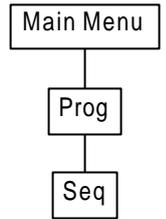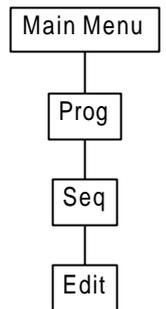
```
        seq MENU
  esc      EDIT    CLEar
```

EDIT SEQUENCE

In order to start editing a Sequence, the Sequence number must first be entered and then the OK key pressed.
Cue-Patch then displays 'St' to indicate that the user must enter either a single step or a group of steps.
Pressing the '@' key then allows a start Cue number to be entered. The Cue number is used as a start number which is incremented for each step entered. The editing operates in the order in which steps are entered.
Example: Step 1 And 4 Through 2 Cue 2

The above example results in:

Step 1 .... Cue 2
Step 2 .... Cue 5
Step 3 .... Cue 4
Step 4 .... Cue 3

The Store key must be pressed to store each Sequence string.

KEY FUNCTIONS IN SEQUENCE MODE

@: Used to enter the starting Cue number to be allocated to the group of sequence steps.

???: This key is used to display the Cue allocated to the current step. This mode only operates if a single step number is entered.

THRU: Used to indicate that a range of values is being entered. Eg: St *1 Thru 9.*

AND: Used to add another parameter or range of parameters to the current group. Eg: St *1 Thru 9 And 57.*

ENT: Interchangeable with Soft Key 3 when the 'Store' legend is displayed.

Seq Entry Screen

```
      st 1-5&70 cue 1 .
  esc    LINK    store
```

EDIT SEQUENCE LINKS

Each step of a Sequence can be programmed to either pause at the end of the step or continue with the next step.

When a step pauses, the user can continue the Sequence with the 'Run' key or alternatively program a Macro key for this function.

Links are edited by pressing the 'Link' key at any point during Sequence editing.

The current group of selected steps can then be set to either 'Link' (do not pause) or 'Un-Link' (Pause).

The OK key should be pressed to confirm the edit.

```
Main Menu
   |
  Prog
   |
  Seq
   |
  Edit
   |
  Link
```

Seq Link Screen

```
    link steps ?
Esc   unlink   link
```
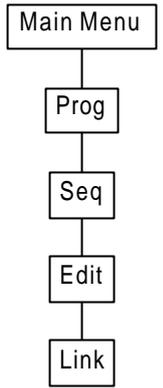
CLEAR SEQUENCE

The Prog - Seq - Clear menu is used to clear the entire sequence.
Clearing a Sequence sets the following:

1. Clear the Cue settings from each step
2. Set all steps to 'Link'

Clearing the Sequence does not erase the Cues used by the Sequence.

```
Main Menu
   |
  Prog
   |
  Seq
   |
  Clear
```

Clear Patch Screen

```
   clear SEQ: 01
esc           OK
```
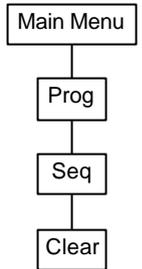
TEST

The Test menu is used to access the DMX512 receive and transmit functions. Two options are available:

1. **Rx:** Display received DMX data in either bargraph, decimal or percentage mode. This is the default display of the Cue-Patch when a menu is not active.
2. **Rig:** Transmit DMX512 data for 'Rig Checking'. The output can be set to vary selected levels continuously.

```
    test menu

esc     rx      rig
```
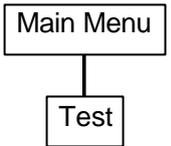
RX

The Rx menu returns the display to it's default view of monitoring received DMX512. The Enter key or any of the soft keys toggle through the available display modes:

1. **Bar graph:** Twenty consecutive channels are displayed as low resolution bargraphs.
2. **Decimal:** Six consecutive channels are displayed as decimal (0-255) levels
3. **Percentage:** Six consecutive channels are displayed as percentage (0-100) levels
4. **Status:** Displays the current settings for active Patch, Cues and Sequence

The diagram below shows the Bargraph display window:

DMX512 Base Address 1-1024

Data Levels

Display Mode

Good Data on Universe A

Error detected on Universe A

Good Data on Universe B
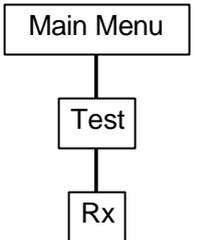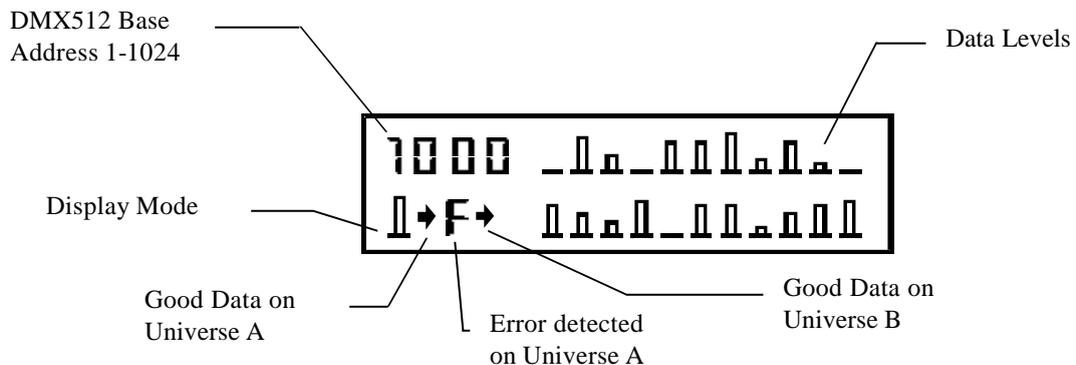
DISPLAY MODE

This character shows the currently selected display mode:

Ⅱ Bar-graph mode displays twenty four channels as a bar-graph with a resolution of 12.5%. Whilst the resolution of this mode is limited, it is often the most useful when the DMX line is running show information. It is easy to pick out chases, which in other display modes could be mistaken for flickering data.

D Decimal mode displays six channels as numbers in the range 0 to 255. This mode shows the entire resolution of each channel. It is most useful when dealing with moving lights and colour changers.

% Percent mode displays six channels as numbers in the range 0 to 100. This mode provides the most familiar numbering system.

DATA RECEIVED

These two character cells display a tilde to show that data is being received. The data is not necessarily valid DMX512.

DATA ERROR

This character cell is clear when good data is being received on DMX512 universe A. If an error occurs, one of the following is displayed:

H DMX512 is being received with a non zero <u>H</u>eader or start code.

F Data is being received with <u>F</u>raming errors. This can be caused by noise pick-up and also occurs when the phase pins of the connector are reversed.

O Data is being received with <u>O</u>verrun errors. This can be caused by noise pick-up and also occurs when a phase pin is disconnected.

RIG CHECK

Rig Check mode operates in a similar manner to Cue Editing. It is a local control for the DMX output intended for testing the Patch and the lighting rig.

Cue-Patch then displays 'Ch' to indicate that the user must enter either a single channel number or a group of channels.

Example: Chan 2 Through 9 And 70 Through 78 And 91 At 75%

The OK key must be pressed to set the DMX512 output to the values entered.
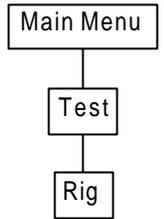
KEY FUNCTIONS IN RIG CHECK

???: This key is used to display the current level of a channel. It will only operate if a single channel number has been entered.

THRU: Used to indicate that a range of values is being entered. Eg: *Ch 1 Thru 9.*

AND: Used to add another parameter or range of parameters to the current group. Eg: *Ch 1 Thru 9 And 57.*

@: Used to indicate that the next number is a percentage level.

FULL: Shortcut key to set channels to 100%

Off: Shortcut key to set channels to 0%

TIME: Sets all selected channels to ramp slowly from 0 to 100%. In this mode a sigma character is shown in the top left of the screen.

ALL: Select all channels
.

Rig Check Screen

```
ch 1-5&70 AT 100%
esc    ALL   STORE
```

UTILS

The Utility menu is used to access the following options:

1. **Macro:** Define the operation of the 12 Macro functions.
2. **Auto-Backup:** Select the operations to be executed should Cue-Patch detect a DMX512 input failure. Options include:
   - No action
   - Fade to a specific Cue
   - Start a Sequence
3. **Serial:** Set Cue-Patch to be controlled from the RS232 link via CP-Edit.

```
         utils menu
  macro  a/back  ser
```
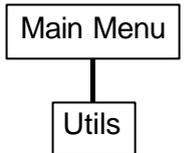
EDIT MACRO

There are a total of twelve Macros which are referred to as Go 1 to Go 4 and Aux 1 to Aux 8.

Macro's programmed in the first four positions are triggered using the four front panel Go keys. The Aux Macro's are triggered from the remote control connector.

In order to start editing a Macro, use the Up and Down cursors to select, and then press the OK key.

The following is displayed:

Macro Edit Screen

```
  disabled
  esc   option   ok
```

The option key is used to toggle through the available options. These are:

1. Disabled
2. Fade to DMX512 input
3. Run Sequence XX
4. Cross-fade to Cue XXX
5. Add-fade to Cue XXX
6. Select Patch XX
7. Pause current fade
8. Continue fade
9. Fade to next step
10. Snap to the end of current fade

When a Macro option is selected which requires a Patch, Cue or Sequence number, an edit field opens at the top right of the display.
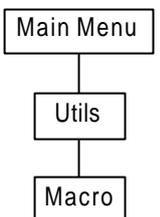
AUTO BACKUP

Auto-Backup mode allows Cue-Patch to respond to the loss of DMX input by either running a Cue or a Sequence.

Additionally it is possible to define what should occur when DMX is re-instated after a failure. The options for this are to either ignore the event or to cross-fade back to the DMX input.
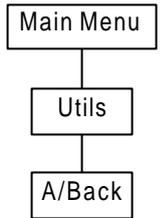
A/Back
Edit Screen

```
disabled
esc   option  ok
```

The option key is used to toggle through the available events following detection of a DMX input failure. These are:

1. Disabled
2. Run Sequence XX
3. Cross-fade to Cue XX

When an option is selected which requires a Cue or Sequence number, an edit field opens at the top right of the display.

The next screen is used to define whether to react to DMX being re-instated after a failure.

A/Back
Edit Screen

```
go dmx if good
no          yes
```

If Yes is selected the next screen prompts for a fade time. The fade time is the time taken to cross-fade from the current output state to the now live DMX512.

SERIAL COMMS

The Serial Comms mode is used to initiate communications with CP-Edit via the RS232 link.

CP-Edit can be used to backup the Cue-Patch data or edit the data in a spreadsheet format.
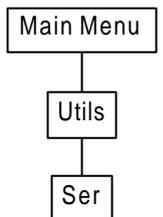
Comms
Edit Screen

```
comMs idle . .
esc
```

C P - E D I T

OVERVIEW

CP-Edit is a Windows 95 application which serves two purposes:

1. Allows all Cue-Patch settings to be saved to or loaded from disc for show backup purposes.
2. Provides an off-line editor allowing all Cue-Patch data to be programmed in a spreadsheet style format.

INSTALL

CP-Edit is installed as follows:

1. Insert the disc in the floppy disc drive.
2. Select the Start Menu and then the Run Command.
3. Press the Browse button
4. Locate the program SETUP.EXE on the floppy drive (normally A:).
5. Execute the program.
6. The Install Shield program will start and guide you through the remaining steps of the installation procedure.

HARDWARE

CP-Edit requires the following minimum specification to run:

1. 486 at 33mhz or higher PC Compatible.
2. Windows 95 operating system.
3. Mouse.
4. VGA 640 x 480 or better.
5. 1 Mbyte Hard disc space.
6. 4 Mbyte ram

COMMS

CP-Edit communicates with the Cue-Patch via the RS232 interface of the PC. CP-Edit can access either COM1 or COM2.
A 9 pin to 9 pin DB cable is available from Artistic Licence order code: ASM-CPEDIT. The cable is wired pin for pin and so most serial printer cables will work. Please not that 'LapLink' style cables will not work.

MAIN SCREEN

CP-Edit displays the following screen when started.

The left panel of the screen displays the possible categories of information that can be edited. Simply right click the mouse on the required entry to show the list of options. Each menu offers the options to add a single new entity (Patch, Cue etc.) or to add all the available entities.

The right panel is used to display the spreadsheet style information.
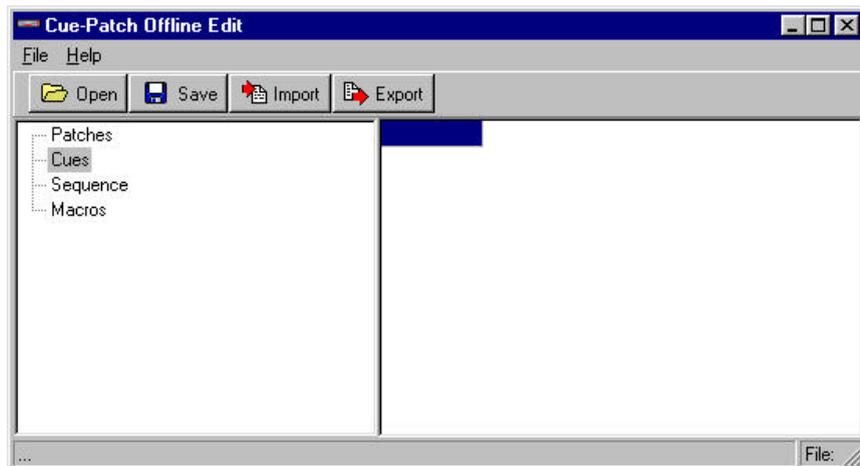
The display below shows the program following the editing of a number of entities.

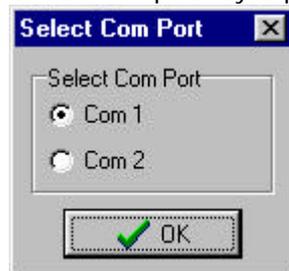The spreadsheet window shows a Patch.
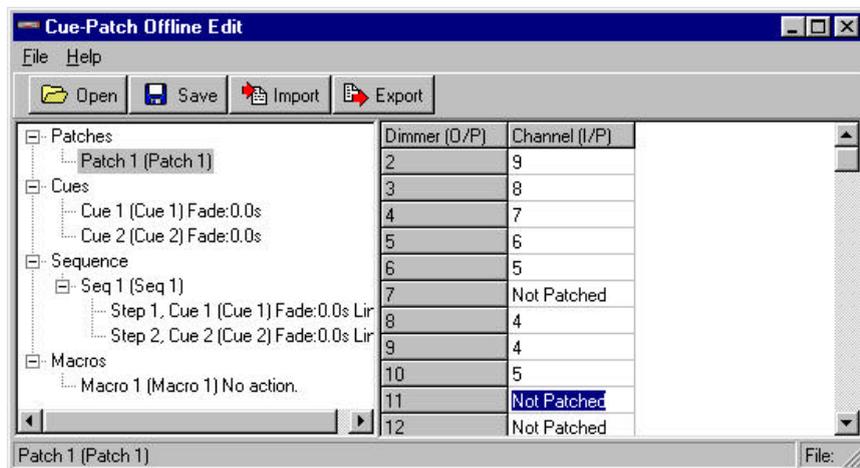
MENU

The main menu functions can also be accesses from the button panel at the top of the screen. The main functions are:

1. Open: Used to load a file from disc into CP-Edit.
2. Save: Used to save a show from CP-Edit to disc.
3. Import: Used to load data from Cue-Patch into CP-Edit.
4. Export: Used to send data from CP-Edit to the Cue-Patch.

IMPORT

Import retrieves data from the Cue-Patch and merges it into the show currently loaded in CP-Edit. This allows the legends to be retained. For example if a show is originally programmed on the PC and then edited on Cue-Patch: Simply load the show from disc and then import it from Cue-Patch. In this way you retain all the legends and also save the most up to date version of the data.

Once the Import key is pressed, the following is displayed:

Select the Com port into which you have connected the serial cable.

Next check that the cable is also plugged into the Cue-Patch.

Select the Cue-Patch menu for serial comms. This is in *Main Menu - Utils - Ser.*

Cue-Patch will display *Comms Idle.*

Press the OK key. If all is well, the Import dialogue shown below will be displayed.

If the Cue-Patch was not detected an error is displayed after approximately 15 seconds. If this occurs, check the cables and confirm that you have selected the correct Com port.
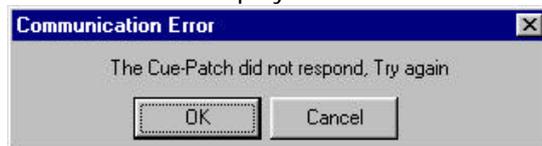
The import Dialogue allows the user to select which of the four types of entity should be imported.

Select the relevant entity types and then click the OK key.

CP-Edit will then import the selected data. If a large amount of data is programmed into the Cue-Patch, this may take several minutes.

When the Import process finishes, all data is displayed in the left panel. Before editing the data you are advised to save it to disc.

EXPORT

Export sends data from CP-Edit to the Cue-Patch. Legend data is not sent to the Cue-Patch, so you should save your show to disc as well as exporting.

Once the Export key is pressed, the following is displayed:

Select the Com port into which you have connected the serial cable.

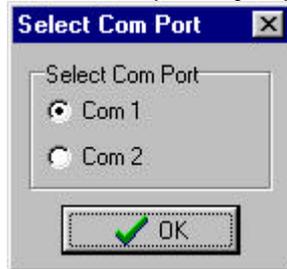Next check that the cable is also plugged into the Cue-Patch.

Select the Cue-Patch menu for serial comms. This is in *Main Menu - Utils - Ser.* Cue-Patch will display *Comms Idle.*

Press the OK key. If all is well, the Export dialogue shown below will be displayed.

If the Cue-Patch was not detected an error is displayed after approximately 15 seconds. If this occurs, check the cables and confirm that you have selected the correct Com port.

The Export Dialogue allows the user to select which of the four types of entity should be exported.

Select the relevant entity types and then click the OK key.

CP-Edit will then export the selected data. If a large amount of data is programmed in CP-Edit, this may take several minutes.
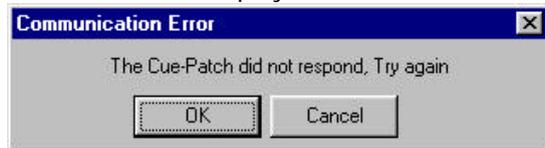
When the Export process finishes, press the ESC soft key to return the Cue-Patch to normal operation.

H A R D W A R E

DMX512 INPUT

The DMX512 input of each universe is optically isolated from the Cue-Patch. There is no connection between control ground and chassis or mains earth. The input is unterminated. The loop connector is directly connected to each input and can be used for termination or loop through as required.

Wiring for the Input and Loop connector is as follows:

Pin 1	Isolated ground
Pin 2	Data minus
Pin 3	Data Plus
Pin 4	No Connection
Pin 5	No Connection

DMX512 OUTPUT

Three DMX512 outputs are provided for each universe. Each output is independently buffered but not isolated from Cue-Patch. There is no connection between control ground and chassis or mains earth.

The first two outputs use 5 pin XLR as specified by the DMX512 protocol. The third output uses a 3 pin XLR as is favoured by many intelligent light manufacturer's. (NB Martin Professional lamps prior to 1998 use a different wiring scheme which is not compatible with our wiring. Pins 2 & 3 must be swapped in the cable).

Wiring for outputs 1 & 2 is as follows:

Pin 1	Ground
Pin 2	Data minus
Pin 3	Data Plus
Pin 4	No Connection
Pin 5	No Connection

Wiring for output 3 is as follows:

Pin 1	Ground
Pin 2	Data minus
Pin 3	Data Plus

REMOTE INPUT

The Remote interface provides 8 contact closure inputs for Macro triggering.

A Macro is triggered by shorting together the ground and input pin.

A Maximum cable length of 5m is advised and the cable should be screened. Do not make any connections to voltage sources or Mains Earth.

Wiring is as follows:

Pin 1	Aux 1
Pin 2	Aux 2
Pin 3	Aux 3
Pin 4	Aux 4
Pin 5	Aux 5
Pin 6	Aux 6
Pin 7	Aux 7
Pin 8	Aux8
Pin 15	Ground

POWER INPUT

The Cue-Patch requires a 230VAC 50/60Hz supply. An internal selector for 110VAC operation is available.

Replacement fuse is 500mA Slow Blow 20mm.

Disconnect power before removing any panels.

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