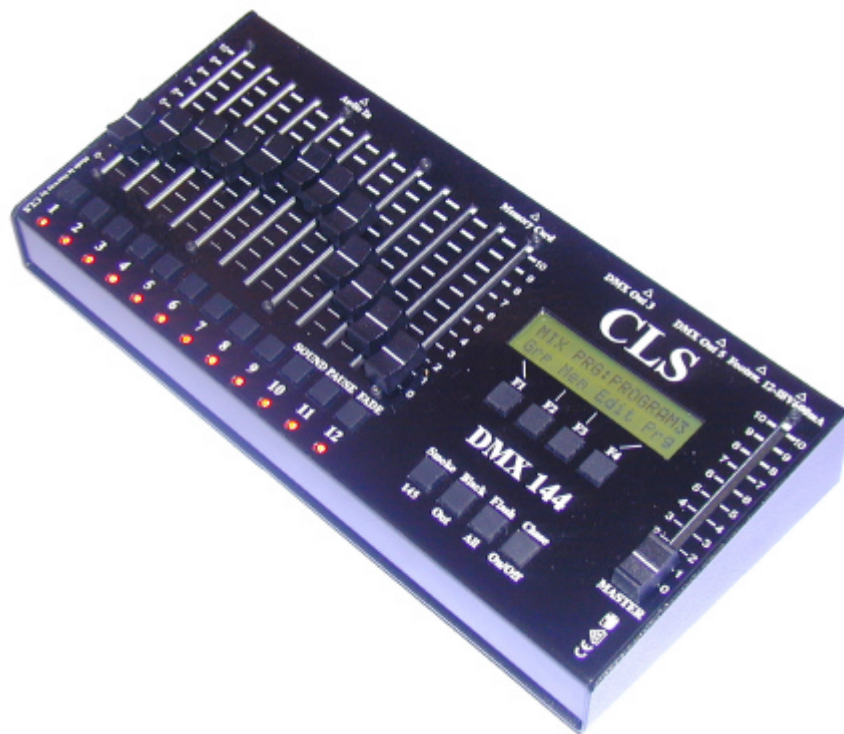# CLS

DMX144

144 Channels DMX Light Mixer

User-Manual

2001 V1.0

Made in Norway by
Compact Light System AS
www.cls.no- office@cls.no

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Specification:

Compact DMX Light Mixing Console

DMX Channels : 144 + Smoke channel 145.
Outputs : 2 (3-pin and 5-pin Neutriks XLR)
Protocol : DMX 512 (1990)
Memory : 144 Scenes - 12 programs - 12 scene each
Faders: Alps
Processor : 16MHz
Software : User Upgradeable
Backup : Smart Card
Displays : Backlighted LCD - 2 lines x16 characters
Editable Personalities : Yes
Chaser : 144 Scenes
Crossfades : Yes
Inputs: Audio RCA, Footswitch Mini-Jack
Patch: Ch.1-128
Weight : 1,1 kg Size : 250 x 110 x 55 mm
Version 1.00 Software

Designed for the control of:

1. Small Theatre Lighting
2. Band Lighting
3. Discotheque Lighting
4. Intelligent Spotlights and dimmers together
5. Environmental Lighting
6. School theatre lighting
7. PA rent out lighting companies
8. Smoke/Haze machines

OVERVIEW:

POWER INPUT: 12-18V AC or DC, polarity unessential.

DMX512 DIGITAL OUTPUT 3 PIN and 5 PIN XLR SOCKETS
All 145 channels levels are transmitted in the DMX512 (1990)
serial digital format to any device capable of receiving it. Use twin core screened cable.
Pin connections: Pin 1 = Screen Earth, Pin 2 = Signal-, Pin 3 = Signal+.
NOTE: The end of the DMX line must always be terminated with a 100 ohm resistor connected between
Signal+ and Signal-. This resistor can conveniently be mounted in a 5 pin XLR plug which should be inserted in
the last device on the DMX line.

INPUT Mini-Jack: Footswitch connection for stepping up Scenes and Blackout.
INPUT RCA: 1 V RMS Audio in for Sound-to-Light
SOUND-TO-LIGHT: Changes scenes in Chaser in synk with the music.
SMARTCARD SLOT: Stores scenes and setup. Backup.
12 LEDs: Indicate Group selections in Mix and Program Mode and Program selections in Chase Mode.
THE LCD DISPLAY: is used to display a wealth of information: For the most functions you need to do, the LCD
display tells you how to do it when pressing a button. See display texts later in this manual.
12 FLASH BUTTONS: Normal flash buttons in Mix Mode, and selection of Groups, Scenes and Programs.
12 FADERS: Normal faders in Mix Mode. Fader 10 is controlling the sensitivity in Sound Chase, and fader
11 is controlling the Pause length in Auto Chase Mode. The Fade time in Program and Chase Mode is controlled
by fader 12..
MASTER FADER: Controls the master value of all the Channel Faders and is used for changing parameters
in the Setup Menu.
4 MASTER F-KEYS: Different functions. The displays second line tells the functions of the buttons.
SMOKE BUTTON: Sending out DMX Channel 145 when it is pressed down. It is not programable, but
available all the time, designed for operating On and Off Smoke Machines or other DMX controlled units.
BLACK OUT BUTTON: Sets all DMX Channels to value zero when pressed down.
FLASH ALL BUTTON: Sets all DMX Channels to value 256 when pressed down.
CHASE ON/OFF BUTTON: Switch On or Off the Chaser. Hold for selecting Auto, Sound to light, Foot Chase.

Specifications are subject to change without notice.

Explanations:

MASTER FADER = Controls the masterlevels to the channel faders. It is active when the channelfaders is active. Mixmode, Sound, Pause, Fade, in Setupmenu and Naming of programs.

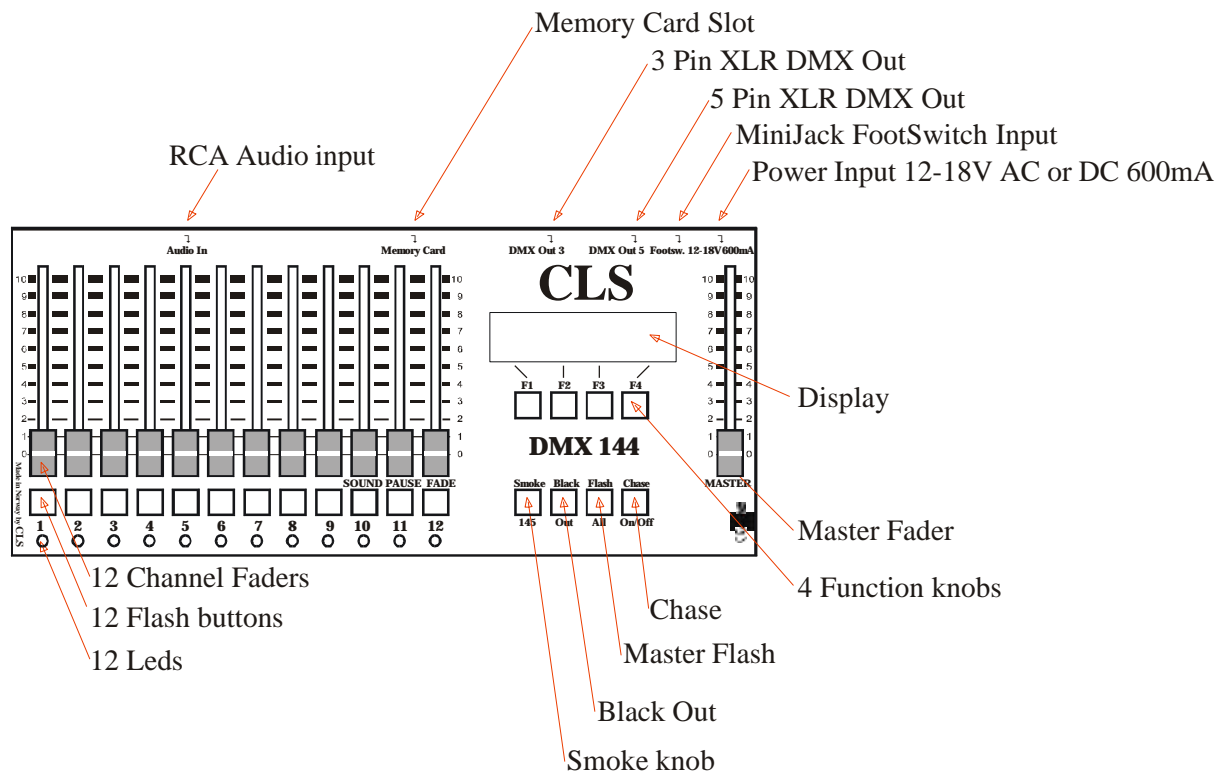FLASH BUTTONS = 12 Buttons under the channel faders.

ONE PROGRAM = 12 Scenes.

SCENE = A complete mix of the 144 channels stored in one scene.

GROUP = 1 page of the mixers faders.

Group 1 = DMX Channels   1- 12
Group 2 = DMX Channels   13- 24
Group 3 = DMX Channels   25- 36
Group 4 = DMX Channels   37- 48
Group 5 = DMX Channels   49- 60
Group 6 = DMX Channels   61- 72
Group 7 = DMX Channels   73- 84
Group 8 = DMX Channels   85- 96
Group 9 = DMX Channels   97-108
Group 10 = DMX Channels 109-120
Group 11 = DMX Channels 121-132
Group 12 = DMX Channels 133-144

PATCH = Changing the DMX channels on each faders.

CHASER = Programable running light at: adjustable speed, in sync with
the music or by footswitch.

Memory Card Slot
3 Pin XLR DMX Out
5 Pin XLR DMX Out
MiniJack FootSwitch Input
Power Input 12-18V AC or DC 600mA
RCA Audio input
Display
Master Fader
4 Function knobs
Chase
Master Flash
Black Out
Smoke knob
12 Channel Faders
12 Flash buttons
12 Leds

Getting Started

Connect all the DMX units together with the DMX Cables.
Set the respectively DMX addresses on each unit connected to the
CLS DMX144. (See the instruction manual for each units.) Plug in a terminator
at the last unit of the DMX line. (XLR contact with a 120 Ohms resistor connected
between pin 2 and 3.)
Connect the power for every unit and the CLS DMX144 Mixing Console.
You are now ready to make your first show with CLS DMX144.

Programming the CLS DMX144.

1. The first you see in the display when you
connect the power is the display telling you
the software version. Press one of the F-keys
to remove the startup text.

2. The Display will show you the Mix Mode
screen with No Prg!.

3. Choose a program that you want to start
with by pressing and holding the Prg while
pressing a Flash button. The Display will tell
you what to do. Ex. Flashbutton 1 for prg. 1.

4. The Display will show you that you get a
program and the name of it. You can rename
it later.

5. When you release the buttons, the Display
shows you the Mix Mode screen with a program
name.

6. Choose a group that you want to mix
by pressing and holding the Grp while
pressing a Flash button. The Display will tell
you what to do. Ex. Flashbutton 1 for Grp. 1.
The Leds on selected groups will light up. It is
possible to select more than 1 group, up to 12,
at the same time.

DISPLAY TEXT

DMX 144
Software Ver.1.0

www.CLS.no
Made in NORWAY

MIX PRG:No Prg!
Grp Mem Edit Prg

MIX PRG:No Prg!
Grp Mem Edit <u>Prg</u>

Choose PROG wi-
th flash buttons

Get Prg!PrgName

MIX PRG:PrgName
Grp Mem Edit Prg

MIX PRG:PrgName
<u>Grp</u> Mem Edit Prg

Choose GROUP wi-
th flash buttons

Programming the CLS DMX144 continue...

NB! 7. **Set the Master Fader to its Maximum level.**
Mix the lightnings the way you want it by
moving faders, select new Groups, moving
faders and so on, untill your scene is like you
want it.

MIX PRG:PrgName
Grp <u>Mem</u> Edit Prg

8. It is now time to save the scene.
While holding down the Mem button, press
a Flash button where you want to save the scene.
The Display will tell you to choose a SCENE
and show you that the scene is saved.
If you want to copy a SCENE you just choose
a SCENE(See point 9) and repeat the above.

Choose SCENE wi-
th flash buttons

Scene XX is now
saved...

9. It is possible to edit a scene that is already
stored. While holding down the EDIT button,
press a Flash button for the Scene that you
want to edit. The Display will tell you to choose
a SCENE and show you that the selected scene
is loaded. Do the Editing and save it.

MIX PRG:PrgName
Grp Mem <u>Edit</u> Prg

Scene XX is now
loaded...

10. PROGRAM MODE.
Pressing and releasing Prg button takes you to
the PROGRAM MODE. This is the menu for
Running, Naming and Copying Programs.
Choose Programs with Prg and Flash buttons and
Scenes afterwards directly on Flash buttons.

MIX PRG:PrgName
Grp Mem Edit <u>Prg</u>

11. Press and release Nam button. The Display
shows the Rename Menu. Change letter with
Master fader, and move the cursor with the
arrow buttons <- ->. Press Save to store the Name.

PROGRAM MODE
Prg <u>Nam</u> Copy Xit

Rename:........
<- -> Save Xit

12. Press and release Copy button. The Display
shows the Copy Menu. While pressing the FROM
button, select the source Program with a Flash
button. Then while pressing the To button choose
the destination Program with a Flash button.
Press OK to confirm. The Display tells you that
the Scenes in the Program is copying and the
Program is copied when it is finished.

PROGRAM MODE
Prg Nam <u>Copy</u> Xit

PROGXX PROGXX
FROM OK To Exit

ADVANCED SETUP MENU.

13. In Mix mode press and release EDIT to go to the SETUP Menu.

14. The SETUP menu has some functions intended for experienced users.
- RESET
- FADE ON or OFF
- PATCHING

15. RESET. Press and release the Rst button. This takes you to the RESET PATCH MENU and a WARNING in the display will ask if you are sure. Confirming by YES will set all the Patching to the factory default. The display shows you that it is done.

16. FADE. Press and release the Fad button. This takes you to the FADE menu. With this function it is possible to select if a DMX channel should has the possibility to fade or not.
Choose the Channel with the Master Fader.
Select On or Off by the respectively buttons.
This is possible to do on the first 128 Channels.
Channel 129-144 will always have Fade set to On.
If you want to set all channels to Fade On, press and hold the On knob while moving the Master fader slowly from the bottom to the top. This way you can Reset the Fade On/Off

17. Why Fade On or Off menu ?
Ex: Let's say that you have a movinghead and it has the color wheel on channel 1, the gobo wheel on channel 2 and the pan and tilt on ch. 3 and 4. If the fader is on (default) on every channel and you want the movinghead to move slowly from one direction to another. At the same time you want to change color and gobo. What will happened ? Yes, the movinghead will move slowly as you programmed, but the color- and gobo wheel will also move slowly till it reach the right color and gobo, resulting that it is changing colors and gobos in the hole movement. When you have the possibility to turn off the fading on channel 1 and 2, the movinghead will changes the color- and gobo instantly, but the pan and tilt will move slowly as it should.

DISPLAY TEXT

SETUP
Rst Fad Ptch Xit

SETUP
Rst Fad Ptch Xit

RESET PATCH???
WARNING YES

SETUP
Rst Fad Ptch Xit

Fade Ch: XXX OFF
On or Off Exit

ADVANCED SETUP MENU continue...

18. PATCH. Press and release the Ptch button. This takes you to the PATCH menu. With this function it is possible to change the DMX channel on each Fader. It is possible to Patch the first 128 Channels on the DMX144. To do this you have to delete the DMX channels that you want to move first, from the MIX ch.

```
      SETUP
Rst Fad Ptch Xit
```

Press and release the DMX Ch button. Move the Master Fader until you find the DMX ch you want to change. Press Del and the channel is ready to Patch to another location. If you hold down the Del button and move the Master Fader slowly from the bottom and up you will delete up to all of the 128 first DMX channels.

```
 DMX:XX MIX:XX
Ch. DEL Ch.   Exit
```

```
 DMX:XX MIX:XX
Ch. DEL Ch.   Exit
```

Press and release the MIX Ch. button to choose the Mix Channels that you want to change. Move the Master Fader to find the Mix ch. that you want to dedicate to the DMX ch. You will see that it is only deleted Mix channels that is available. Press OK to confirm.

```
 DMX:XX MIX:XX
Ch.  OK Ch.   Exit
```

```
 DMX:XX MIX:XX
Ch.  OK Ch.   Exit
```

If you don't know which DMX number your lights are using, just look at the lamps when you move the master fader. You will see that the light is changing from one lamp to another as you changes the DMX ch.

```
 DMX:XX MIX:XX
Ch. DEL Ch.   Exit
```

CHASER

19. CHASE menu is for connecting programs together in a chain and run them: automatically, in sync with music, or by foot controller.
From Mix or Program menu: Press and hold the CHASE knob to choose the type of Chase you want to use. Auto, Sound, or Foot.

Choose CHASE mod
Auto Sound   Foot

20. AUTO CHASE.
While holding the CHASE knob, choose AUTO CHASE. The display tells you to Choose Programs, and you do it by pushing Flash knobs. It is possible to use up to 12 Programs with 12 Scenes each. Adjust the pause by Fader 11.(How long it should stay on each scene.) The Fading Time is adjustable by Fader 12. (How long time to crossfade between the scenes.)

AUTO CHASE
Choose Programs

21. SOUND CHASE.
While holding the CHASE knob, choose SOUND CHASE. The display tells you to Choose Programs, and you do it by pushing Flash knobs. It is possible to use up to 12 Programs with 12 Scenes each. Connect an audio signal from a soundmixer to the audio RCA input on the back of the DMX144. Adjust the signal from the mixers output (Ex. AUX OUT) to 1V. RMS. Fine adjust the signal by DMX144's Fader 10. The mixer will then start changing Scenes and Programs in sync with the music. NB! It is not possible to select more than one program if the DMX144 is not connected to a musicsource, and running in sync with the music.

SOUND CHASE
Choose Programs

NB!
If you press and release the CHASE knob, The DMX144 will remember the last used Chaser-settings.

22. FOOT CHASE / FOOT CONTROLLER.*
While holding the CHASE knob, choose FOOT CHASE. The display tells you to Choose Programs, and you do it by pushing Flash knobs. It is possible to use up to 12 Programs with 12 Scenes each. Connect the CLS Foot controller * to the stereo Minijack input on the back of the DMX144. The right knob on the Foot Controller steps up the Scenes when you release it. If the program is fading it will discontinue to its end of the fade instead of changing scene. The left knob is blackout when it is held down.

FOOT CHASE
Choose Programs

* Optional
CLS Foot Controller

MEMORY CARD LOAD MENU

(Only available with CLS memorycard inserted.)
Press and release the Mem knob in Mix mode.

23. CARD MENU.
Press and release the Load button.
The display shows you the Load from Card Menu.

```
CARD MENU
Load Save       Exit
```

24. Load PATCH from Card.
Press and release the Ptch knob. Use this knob to
Load the Patch settings that is Stored on the Card.
This will overwrite your Patch settings in the
DMX144. The display shows you that the
Patching is LOADED from Card...

```
Load  from  card..
Ptch  Prg  Fad  Xit
```

```
Patching LOADED
from  Card . . .
```

25. Load PROGRAMS from Card.
Press and release the Prg knob. Use this knob to
Load the Programs that is Stored on the Card.
This will overwrite your Programs in the
DMX144. The display shows you that the
Programs is COPYING and a progress indicator
goes up to 100%. (12 second.)

```
Load  from  card..
Ptch  Prg  Fad  Xit
```

```
Copying programs
xxxxx_____100%
```

26. Load FADE from Card.
Press and release the Fad knob. Use this knob to
Load the Fade settings that is Stored on the Card.
This will overwrite your Fade On/Off settings
in the DMX144. The display shows you that the
Fade settings is LOADED from Card...

```
Load  from  card..
Ptch  Prg  Fad  Xit
```

```
Fade settings
LOADED from card.
```

MEMORY CARD SAVE MENU

(Only available with CLS memorycard inserted.)
Press and release the Mem knob in Mix mode.
27. CARD MENU.
Press and release the Save button.
The display shows you the Save to Card Menu.

```
CARD MENU
Load Save      Exit
```

28. Save PATCH to Card.
Press and release the Ptch knob. Use this knob to
Save the Patch settings that is Stored in the
DMX144. This will overwrite your Patch settings
on the Card. The display shows you that the
Patching is SAVED to Card...

```
Save  to  card . . .
Ptch  Prg  Fad  Xit
```

```
Patching SAVED
to  Card . . .
```

29. Save PROGRAMS to Card.
Press and release the Prg knob. Use this knob to
Save the Programs that is Stored in the DMX144.
This will overwrite your Programs on the
Card. The display shows you that the
Programs is COPYING and a progress indicator
goes up to 100%. (12 second.)

```
Save to  card..
Ptch  Prg  Fad  Xit
```

```
Copying programs
xxxxx_____100%
```

30. Save FADE to Card.
Press and release the Fad knob. Use this knob to
Save the Fade settings that is Stored in the
DMX144. This will overwrite your Fade On/Off
settings on the Card. The display shows you that
the Fade settings is SAVED to Card...

```
Save  to  card..
Ptch  Prg  Fad  Xit
```

```
Fade settings
SAVED to Card..
```

More functions :

31. SMOKE BUTTON 145

This is a button dedicated for controlling a smoke machine or other DMX device that is making use of an On/Off button. There is no way that it can be programmed. It is available all the time and it sends the DMX channel 145 - value 256, when it is pressed down.

32. BLACK OUT.

This button sends the DMX value 0 (zero) to all channel when it is pressed down. All channels goes back to its last position when it is released. It is possible to change scene when it is pressed down and the new scene will become active when the BLACK OUT button is released.

33. FLASH ALL.

This is a Master Flash button. This button sends the DMX value 256 (full) to all channel when it is pressed down. All channels goes back to its last position when it is released.

34. CHASE BUTTON.

This button turn On or Off the Chaser functions. See page 10 in this manual.

35. F1-F2-F3-F4 buttons.

These Function buttons has varying functions. The display's second line will indicate the function of each button.
Sometimes you should hold one of them down when pressing another button, and sometimes press and release it will take you to another menu. See the instruction in the display or this manual.

Trouble shooting diagram:

Fault Indication:

Nothing in the display of the DMX144.

What to do:
Check if the power plug connected to the mains ?
Try to take out the power input plug, wait 20 second, and connect it again.
Any power in the connection ?
Connect a lamp to the power outlet. If it light up, change power supply.
If it doesn't light up. Check fuse for the power outlet circuit.

When turning on all the Groups, the light in the diodes and display is dimmed down.

To small power supply.
Recommended input minimum is:
600mA 12V AC or DC. Polarity unessential.

The lamps that is connected to the DMX chain is flashing and seems unstable.

Always use good quality DMX cable with a terminator at the last unit.
(120 Ohms resistor connected between Pin 2 and 3 in a XLR plug.)

There is no response on the DMX unit(s) connected to the DMX144.

Check the DMX channel selection on the unit(s). Is it the same channel on the DMX unit(s) than the one you are working on ?

Some Channels doesn't fade.

Go to the Setup menu and turn on the fading of the channels that doesn't fade.

When connecting the sound RCA input on the DMX144 to a Sound Mixer system you can hear hum in the PA System.

Disconnect the DMX Cable from the DMX144. If the hum disappear some of your light units has a ground failure or connection. Connect the DMX cable again and try to disconnect the DMX units one by one when listen to the hum. With a ground lift on the failure unit the hum should disappear.

The lights doesn't reach full power or there is little or nothing respons of the sound, pause and fade controller.

Set the Master fader to its maximum position before starting mixing.

The Master fader doesn't work in Program or Chase Mode.

This is correct. The Master fader is only working on active faders in Mix Mode.

NOTES :

Compact Light System AS

2953 Beitostølen - NORWAY

Supportphone: +47 61341438
Fax: +47 61341499
web: www.cls.no
Email: office@cls.no