

# FOS

technologies

## FOS 12R Hybrid



# PRODUCT SPECIFICATIONS

## TECHNICAL SPECIFICATIONS

**Voltage:** 110/240 Volt AC, 50/60 Hz.

**Power Consumption:** 470 Watt.

**Light Source:** 12R, 280 Watt

**Optical System:** Beam, Spot, Wash modes, zoom range from 2,5 to 20 degrees.

**Mechanical Effects:** 13 colors + white, 14 fixed gobos (including beam reducers), 9 rotating gobos, 2 prisms, frost filter, mechanical shutter for dimming / strobe.

**Control:** Sound Active, Master / Slave, Auto, DMX512.

**DMX Channels:** 16, 24

**Protection Class:** IP20 (for indoor use only)

**Width:** 355 mm

**Depth:** 254 mm

**Height:** 593 mm

**Weight:** 15,7 Kg

## SAFETY WARNING

This product must be installed by a qualified professional. All maintenance must be carried out by a qualified electrician. A minimum distance of 0.5 m must be maintained between the equipment and a combustible surface. The product must always be operated in a well-ventilated area. DO NOT stare directly into the light source. Always disconnect the power before carrying out any maintenance. The earth must always be connected to the ground. Ensure that all parts of the equipment are kept clean and free of dust.

# PROTECTION AGAINST SOLIDS AND WATER

## Only for IP-rated fixtures

The protection level of a housing is set by applied standards. For classification there is used the IP-Code. It contains the declaration „IP“and two following numbers. The first number characterizes the protection against harmful effects of solids, the second is rating the water protection. It is important to distinguish whether encapsulation and harmful effect! There can be housing that is not capsuled completely but still avoids harmful effect of solids or water.

### PROTECTION EXAMPLES:

**IP20:** Protection against intruding objects >12,5mm „Finger protected “; No waterproofing. **TYPICAL PROTECTION FOR INDOOR USE FIXTURES**

**IP33:** Protection against intruding objects >2,5mm; Falling water within an angle of 60° has no harmful effect **TYPICAL PROTECTION OF LED-LIGHTS USING RECESSED POWERCON AND DMX SOCKET.** This protection is linked to the mounting position of the fixture and always refers to typical mounting situation like a Floor spot used standing on the ground.

**IP54:** complete protection against solids and low-pressure water from any side **THIS TYPE OF FIXTURES CAN BE USED UNDER NORMAL OUTDOOR CONDITIONS.**

**IP65:** shielded against dust and pressurized water from any side. **TYPICAL PROTECTION FOR OUTDOOR RATED EVENTFIXTURES USING WATERPROOFED POWER AND SIGNAL LINK.**

**IP67:** shielded against dust and protected for accidental briefly submerge. **PROTECTION AGAINST ACCIDENTIAL SUBMERGING ON TEMPORARY FLOODED AREA.**

## TEMPORARY USE

Event equipment is designed for temporary use. This are typical purpose as concerts, festivals, theatre, clubs and disco use and referable venues. Long-term use, specially under outdoor conditions and fixed outdoor installation can bring damage in aging materials and affect the coated surface. Sealings as well as cables are made from rubber material and will age by long-term UV-emission as sunlight and should be checked frequently.

## LIMITATIONS OF IP PROTECTION

IP-Rating doesn't mean unlimited outdoor use and protection against any kind of environmental influence! Especially sunlight and included UV will bring accelerated aging. Some fixtures need special parts or processes to fit the rated IP-Protection, like mounting covers or caps or similar. Sealings and other plastic or rubber materials are aging parts. They must be checked frequently to ensure the protection and safety of the fixtures. Also specified torque of screws can affect protection!

## Installation

**Hanging:** The fixture can be mounted in a hanging position using the supporting bracket. The bracket should be secured to the mounting truss or structure using a standard mounting clamp. Please note that when hanging the unit, a safety cable should also be used.

**UPRIGHT:** The fixture can be mounted in an upright or sitting position using the supporting brackets.



**NOTE!** If the signal cable is over 60 m between the DMX512 controller and fixture or between two fixtures, then a DMX signal amplifier is needed as well.



**Caution! HOT BEAM!** In *beam mode*, the light beam can be very hot, even in distance. The fixture must be installed with a 5m distance from flammable objects. Do not point the beam in to flammable objects.

## Menu Screen

You can easily navigate through menu's options with the four buttons under the screen. Navigating in the menu is simple! With the Up / Down buttons, you are moving through menu's choices, pressing Enter, you are entering the sub menu of the option you have chosen, with the Up / Down buttons you're moving through the sub menu's options, with Enter, you are confirming your choice. Other than that, the fixture has a **touch screen**, making the navigation much more fast and easy. The **FOS 12R Hybrid** offers the following options:



### Features menu

**Run mode:**

- Auto
- Wireless
- DMX

**ChanMode:**

- Stan (24 Channels)
- Smal (16 Channels)

**X Reverse:** On / Off

**Y Reverse:** On / Off

**X Angle:** 540 / 360

**XY OCcheck:** On / Off (Pan / Tilt movement Feedback)

**SignalClear:** On / Off (activates or deactivates the default position when DMX signal is lost)

**Full Color:** On / Off

**Shortcut:** On / Off (activates or deactivates the disks shortest distance between the effects)



## Manual

**Reset**

- All Motor
- Part Motor (effects motor reset)
- XY Motor

*Select one option and press yes*

**Test Run**

- Auto
- Sound

**Simulate DMX**

*Shows the list of 24 total channels, in which you can adjust the DMX value from the fader on the screen, to create a static effect*



## System Info

**DMX Value:** Shows the DMX value of all the DMX channels available on the fixture.

**OTHER Info:** Shows hardware info of the fixture, like the firmware version of each board, temperature and running time.

**ERROR Info:** Shows the errors, if any.



## Display Setting

**Brightness:** Level 1 to 7

**LightDelay:** 10 / 20 / 30 / On

**Manuback:** 10 / 20 / 30 / On

**Flicker:** On / Off (activates or deactivates the flickering of the screen, when it's not used)



## Lamp Setting

**Default:** On / Off

**Manual:** On / Off

**Electronic:** On / Off



Screen reverse



Language Set



Return to main screen

# Channel Modes

## 16 Channels

1. Pan
2. Tilt
3. Pan / Tilt Speed
4. Functions
  - 0 – 19 Off
  - 20 – 24 Half Power
  - 25 – 129 No function
  - **130 – 139 Lamp On**
  - 140 – 149 Pan / Tilt Reset
  - 150 – 159 No function
  - 160 – 169 Mechanical Effects reset
  - 170 – 199 No function
  - 200 – 209 Complete Reset
  - 210 – 229 No function
  - **230 – 239 Lamp Off**
  - 240 – 255 No function
5. Color Wheel
  - 0 – 3 Open / White
  - 4 – 13 Deep Red
  - 14 – 22 CTB
  - 23 – 31 Light Yellow
  - 32 – 40 Yellow
  - 61 – 49 Magenta
  - 50 – 58 Cyan
  - 59 – 67 Pink
  - 68 – 76 Light Green
  - 77 – 85 CTO
  - 86 – 94 Blue
  - 95 – 103 Orange
  - 104 – 113 CTO
  - 114 – 122 Dewberry
  - 122 – 129 White
  - 130 – 134 Deep Red
  - 135 – 138 CTB
  - 139 – 143 Light Yellow
  - 144 – 147 Yellow
  - 148 – 152 Magenta
  - 153 – 157 Cyan
  - 158 – 161 Pink
  - 162 – 166 Light Green

- 167 – 171 CTO
- 172 – 176 Blue
- 177 – 180 Orange
- 181 – 185 CTO
- 186 – 189 Dewberry
- 190 – 215 CW Rainbow from fast to slow
- 216 – 217 Stop
- 218 – 243 CCW Rainbow from slow to fast
- 244 – 255 Random color to sound

**\*\*Proportional color change**

**\*\*Step color change**

**6. Gobo Speed**

**7. Static Gobo Wheel**

- 0 – 3 Open
- 4 – 9 Gobo 1
- 10 – 15 Gobo 2
- 16 – 21 Gobo 3
- 22 – 27 Gobo 4
- 28 – 33 Gobo 5
- 34 – 39 Gobo 6
- 40 – 45 Gobo 7
- 46 – 51 Gobo 8
- 52 – 57 Gobo 9
- 58 – 63 Gobo 10
- 64 – 69 Beam reducer 1
- 70 – 75 Beam reducer 2
- 76 – 81 Beam reducer 3
- 88 – 95 Gobo 1
- 96 – 103 Gobo 2
- 104 – 111 Gobo 3
- 112 – 119 Gobo 4
- 120 – 127 Gobo 5
- 128 – 135 Gobo 6
- 136 – 143 Gobo 7
- 144 – 151 Gobo 8
- 152 – 159 Gobo 9
- 160 – 167 Gobo 10
- 168 – 175 Beam reducer 1
- 176 – 183 Beam reducer 2
- 184 – 191 Beam reducer 3
- 192 – 201 Open



- **202 – 221** CW Gobo rainbow from fast to slow
- **222 – 223** Stop
- **224 – 243** CCW Gobo rainbow from slow to fast
- **224 – 255** Random Gobo to sound

*Gobo Shake function from slow to fast*

## **8. Rotating Gobo Wheel**

- **0 – 4** Open
- **5 – 7** Gobo 1
- **8 – 10** Gobo 2
- **11 – 13** Gobo 3
- **14 – 16** Gobo 4
- **17 – 19** Gobo 5
- **20 – 22** Gobo 6
- **23 – 25** Gobo 7
- **26 – 28** Gobo 8
- **29 – 31** Gobo 9
- **32 – 34** Gobo 1
- **35 – 37** Gobo 2
- **38 – 40** Gobo 3
- **41 – 43** Gobo 4
- **44 – 46** Gobo 5
- **47 – 49** Gobo 6
- **50 – 52** Gobo 7
- **53 – 55** Gobo 8
- **56 – 59** Gobo 9
- **60 – 67** Gobo 1 shake
- **68 – 75** Gobo 2 shake
- **76 – 83** Gobo 3 shake
- **84 – 91** Gobo 4 shake
- **92 – 99** Gobo 5 shake
- **100 – 107** Gobo 6 shake
- **108 – 115** Gobo 7 shake
- **116 – 123** Gobo 8 shake
- **124 – 129** Gobo 9 shake
- **130 – 137** Gobo 1 shake
- **138 – 145** Gobo 2 shake
- **146 – 153** Gobo 3 shake
- **154 – 161** Gobo 4 shake
- **162 – 169** Gobo 5 shake
- **170 – 177** Gobo 6 shake

- **178 – 185** Gobo 7 shake
- **186 – 193** Gobo 8 shake
- **194 – 199** Gobo 9 shake
- **200 – 221** CW Gobo rainbow from fast to slow
- **222 – 223** Stop
- **224 – 243** CCW Gobo rainbow from slow to fast
- **244 – 255** Rando Gobo to sound

*Gobo Indexing with channel 9*

*Gobo rotation with channel 9*

## **9. Gobo Rotation / Index**

### **10. Prisms**

- **0 – 19** No Prism
- **20 – 49** 6 Facet Prism Indexing (with channel 11)
- **50 – 75** 6 Facet Prism Rotation (with channel 11)
- **76 – 104** 8 Facet Prism Indexing (with channel 11)
- **105 – 127** 8 Facet Prism Rotation (with channel 11)
- **128 – 135** Macro 1 (6F prism)
- **136 – 143** Macro 2 (6F prism)
- **144 – 151** Macro 3 (6F prism)
- **152 – 159** Macro 4 (6F prism)
- **160 – 167** Macro 5 (6F prism)
- **168 – 175** Macro 6 (6F prism)
- **176 – 183** Macro 7 (6F prism)
- **184 – 191** Macro 8 (6F prism)
- **192 – 199** Macro 9 (6F prism)
- **200 – 207** Macro 1 (8F prism)
- **208 – 215** Macro 2 (8F prism)
- **216 – 223** Macro 3 (8F prism)
- **224 – 231** Macro 4 (8F prism)
- **232 – 239** Macro 5 (8F prism)
- **240 – 247** Macro 6 (8F prism)
- **248 – 255** Macro 7 (8F prism)

### **11. Prism Rotation & Indexing**

### **12. Frost**

- **0 – 64** Open
- **65 – 255** Frost Insertion

### **13. Zoom**

### **14. Focus**

### **15. Shutter**

- **0 – 31** Shutter Closed (*Lamp reduced to 230 Watt*)

- **32 – 63** Shutter Open (*Full Lamp Power*)
- **64 – 95** Gradual strobe from slow to fast
- **96 – 127** Shutter Open
- **128 – 143** Gradual strobe from fast to slow
- **144 – 159** Gradual strobe from slow to fast
- **160 – 191** Open
- **192 – 223** Random Strobe from slow to fast.
- **224 – 255** Shutter Open (*Full Lamp Power*)

## 16. Dimmer

## 24 Channels

1. **Pan**
2. **Pan Fine**
3. **Tilt**
4. **Tilt Fine**
5. **Pan / Tilt Speed**
6. **Functions**
  - **0 – 19** Off
  - **20 – 24** Half Power
  - **25 – 129** No function
  - **130 – 139** Lamp On
  - **140 – 149** Pan / Tilt Reset
  - **150 – 159** No function
  - **160 – 169** Mechanical Effects reset
  - **170 – 199** No function
  - **200 – 209** Complete Reset
  - **210 – 229** No function
  - **230 – 239** Lamp Off
  - **240 – 255** No function
7. **Color Wheel**
  - **0 – 3** Open / White
  - **4 – 13** Deep Red
  - **14 – 22** CTB
  - **23 – 31** Light Yellow
  - **32 – 40** Yellow
  - **61 – 49** Magenta
  - **50 – 58** Cyan
  - **59 – 67** Pink
  - **68 – 76** Light Green
  - **77 – 85** CTO

- **86 – 94** Blue
- **95 – 103** Orange
- **104 – 113** CTO
- **114 – 122** Dewberry
- **122 – 129** White
- **130 – 134** Deep Red
- **135 – 138** CTB
- **139 – 143** Light Yellow
- **144 – 147** Yellow
- **148 – 152** Magenta
- **153 – 157** Cyan
- **158 – 161** Pink
- **162 – 166** Light Green
- **167 – 171** CTO
- **172 – 176** Blue
- **177 – 180** Orange
- **181 – 185** Dewberry
- **186 – 189** White
- **190 – 215** CW Rainbow from fast to slow
- **216 – 217** Stop
- **218 – 243** CCW Rainbow from slow to fast
- **244 – 255** Random color to sound

*Proportional color change*

*Step color change*

**8. Color Wheel Fine**

**9. Speed of Gobo Selection**

**10. Static Gobo Wheel**

- **0 – 3** Open
- **4 – 9** Gobo 1
- **10 – 15** Gobo 2
- **16 – 21** Gobo 3
- **22 – 27** Gobo 4
- **28 – 33** Gobo 5
- **34 – 39** Gobo 6
- **40 – 45** Gobo 7
- **46 – 51** Gobo 8
- **52 – 57** Gobo 9
- **58 – 63** Gobo 10
- **64 – 69** Beam reducer 1
- **70 – 75** Beam reducer 2
- **76 – 81** Beam reducer 3

- **88 – 95** Gobo 1
- **96 – 103** Gobo 2
- **104 – 111** Gobo 3
- **112 – 119** Gobo 4
- **120 – 127** Gobo 5
- **128 – 135** Gobo 6
- **136 – 143** Gobo 7
- **144 – 151** Gobo 8
- **152 – 159** Gobo 9
- **160 – 167** Gobo 10
- **168 – 175** Beam reducer 1
- **176 – 183** Beam reducer 2
- **184 – 191** Beam reducer 3
- **192 – 201** Open
- **202 – 221** CW Gobo rainbow from fast to slow
- **222 – 223** Stop
- **224 – 243** CCW Gobo rainbow from slow to fast
- **224 – 255** Random Gobo to sound

*Gobo Shake function from slow to fast*

### **11. Rotating Gobo Wheel**

- **0 – 4** Open
- **5 – 7** Gobo 1
- **8 – 10** Gobo 2
- **11 – 13** Gobo 3
- **14 – 16** Gobo 4
- **17 – 19** Gobo 5
- **20 – 22** Gobo 6
- **23 – 25** Gobo 7
- **26 – 28** Gobo 8
- **29 – 31** Gobo 9
- **32 – 34** Gobo 1
- **35 – 37** Gobo 2
- **38 – 40** Gobo 3
- **41 – 43** Gobo 4
- **44 – 46** Gobo 5
- **47 – 49** Gobo 6
- **50 – 52** Gobo 7
- **53 – 55** Gobo 8

- 56 – 59 Gobo 9
- 60 – 67 Gobo 1 shake
- 68 – 75 Gobo 2 shake
- 76 – 83 Gobo 3 shake
- 84 – 91 Gobo 4 shake
- 92 – 99 Gobo 5 shake
- 100 – 107 Gobo 6 shake
- 108 – 115 Gobo 7 shake
- 116 – 123 Gobo 8 shake
- 124 – 129 Gobo 9 shake
- 130 – 137 Gobo 1 shake
- 138 – 145 Gobo 2 shake
- 146 – 153 Gobo 3 shake
- 154 – 161 Gobo 4 shake
- 162 – 169 Gobo 5 shake
- 170 – 177 Gobo 6 shake
- 178 – 185 Gobo 7 shake
- 186 – 193 Gobo 8 shake
- 194 – 199 Gobo 9 shake
- 200 – 221 CW Gobo rainbow from fast to slow
- 222 – 223 Stop
- 224 – 243 CCW Gobo rainbow from slow to fast
- 244 – 255 Rando Gobo to sound

*Gobo Indexing with channel 9*

*Gobo rotation with channel 9*

## **12. Gobo Indexing & Rotation**

### **13. Gobo Indexing Fine**

#### **14. Prisms**

- 0 – 19 No Prism
- 20 – 49 6 Facet Prism Indexing (with channel 11)
- 50 – 75 6 Facet Prism Rotation (with channel 11)
- 76 – 104 8 Facet Prism Indexing (with channel 11)
- 105 – 127 8 Facet Prism Rotation (with channel 11)
- 128 – 135 Macro 1 (6F prism)
- 136 – 143 Macro 2 (6F prism)
- 144 – 151 Macro 3 (6F prism)
- 152 – 159 Macro 4 (6F prism)
- 160 – 167 Macro 5 (6F prism)

- 168 – 175 Macro 6 (6F prism)
- 176 – 183 Macro 7 (6F prism)
- 184 – 191 Macro 8 (6F prism)
- 192 – 199 Macro 9 (6F prism)
- 200 – 207 Macro 1 (8F prism)
- 208 – 215 Macro 2 (8F prism)
- 216 – 223 Macro 3 (8F prism)
- 224 – 231 Macro 4 (8F prism)
- 232 – 239 Macro 5 (8F prism)
- 240 – 247 Macro 6 (8F prism)
- 248 – 255 Macro 7 (8F prism)

**15. Prism Rotation & Indexing**

**16. Frost**

- 0 – 64 Open
- 65 – 255 Frost Insertion

**17. Zoom**

**18. Zoom Fine**

**19. Focus**

**20. Focus Fine**

**21. No function**

**22. Shutter**

- 0 – 31 Shutter Closed (*Lamp reduced to 230 Watt*)
- 32 – 63 Shutter Open (*Full Lamp Power*)
- 64 – 95 Gradual strobe from slow to fast
- 96 – 127 Shutter Open
- 128 – 143 Gradual strobe from fast to slow
- 144 – 159 Gradual strobe from slow to fast
- 160 – 191 Open
- 192 – 223 Random Strobe from slow to fast.
- 224 – 255 Shutter Open (*Full Lamp Power*)

**23. Dimmer**

**24. No Function**

## General Information

### Replacing a fuse:

Always disconnect the fixture from main power before replacing a fuse. Use only the appropriate fuse, with the same type and rating. A fuse with different rating, can damage the fixture in case of failure.

**Risk of electric shock and / or fire:**

The fixture must be earthed, supplied always with its nominal voltage and cleaned periodically from dust. For cleaning use only, a moist cloth. Never use liquids or force water. After cleaning, let the fixture dry before use.

**Lamp:**

Disconnect power supply when changing the lamp. The lamp become extremely hot during operation, so let the fixture cool down before opening the cover. Never touch the lamp with bare hands. If the lamp is deformed or cracked, must be replaced immediately. Only recycle the lamp after replacement, as it contains harmful for the environment materials. Use only the same type of lamp for replacement. Never use the fixture without the covers, when the lamp is on.