V6 Show Smart Hoist

V6 SHOW Intelligent CNC hoist

V6 show intelligent CNC hoist, designed Mode China, was the first intelligent CNC stage hoist supported by servo system. V6 Show was designed following the industrial standard of electric chain hoist and use the high precise, high speed, stable brake system and bus servo motion control system. Intelligent motion control and compact integrated design, and light high strength aluminum alloy body material can ensure its usage in big events, theatre, studio program and so on fixed installation event. It has the characteristics of easy-operation and the absolute value of accurate positioning. Its speed can up to 16m/min. Smooth and accurate movement can enhance a better overall creativity and stage art presentation.

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V6 SHOW Intelligent CNC Hoist Main Parts

● V6 SHOW Hoist

Hoist Driving Box ●


● Hoist Power Box

V6 SHOW Controller ●

V6 SHOW Hoist

● Double electromagnetic brake system. Double guarantee of braking and parking.

● Built-in load monitor, real-time display of the weight of the hoisted object, the maximum load value of each motor can be set, and overload protection.

● The repeated positioning accuracy is 0.1MM, and the smooth and precise movement can better enhance the overall creativity and stage art presentation.

● Comply with D8+ safety standard, two hard limit protection, load limit protection and other protection, double brake device, built-in load monitoring.

● The chain meets the 10 times safety factor.

● Lifting speed is 0-16M/MIN.

● Built-in resolution 23-bit absolute value encoder, the current position can be saved when the power is off, which is safer to use.

● Aviation aluminum casing.

V6 SHOW Hoist Dimensions
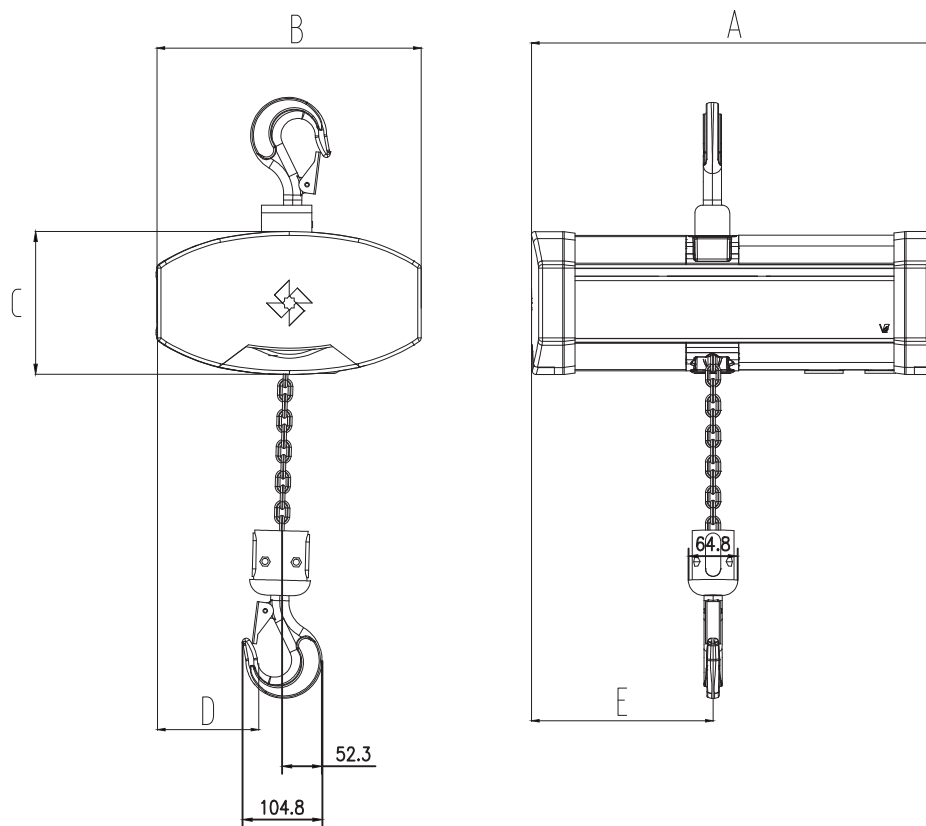
A	B	C	D	E	F
605mm	347mm	188mm	140mm	238mm	488mm

Dimensions shown on drawing: 52.3, 104.8, 64.8

Technical parameters

Rated load (kg)	500	Body weight (kg)	45
Lifting speed (m/min)	0-16	Number of chain rows	1
Chain size (mm)	7*20	Plug specification	24P heavy duty plug
Dimensions (mm)	640*347*188	Power (kw)	2.5
Chain weight (kg/m)	1.1	Limit switch protection	Yes
Load monitor	Yes	Accuracy requirements	0.1mm
D8+Standard	Yes	Chain	10 times safety factor
Shell material	Aviation aluminum shell		

Hoist Driving Box
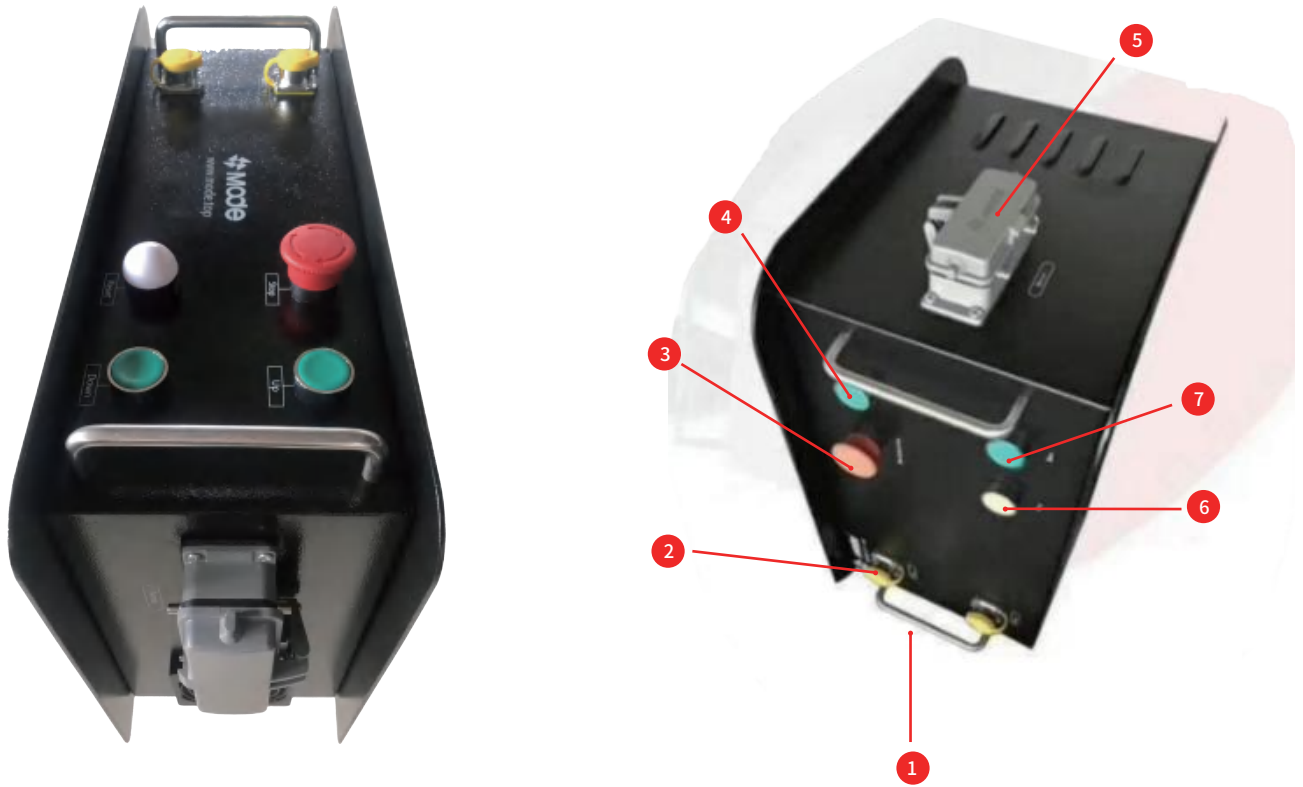
1. Main power industrial plug, at the bottom of the hoist driving box, is a three-phase four-wire system input. The plug going through the hoist power box, makes wiring more simple and convenient.

2. Ether Cat communication interface: Equipment signal input and output. hoist driving boxes was hand-in-hand connected through the OUT output to the next IN input.

3. Emergency stop button：This emergency button will be lifted while running. Driving box and hoist connected will stop immediately when you press the button.

4. Manually operate the intelligent hoist rising or falling: The hoist will rise when put the "UP" button and will stop when release it; hoist will fall when press the "DOWN" button and will stop when release it.   Note that when operating the manual function without fault conditions unplug the network cable, re-power, then you can operate manually.

5. Indicator lights: Power on indicator is red; Enable status indicator is green; Fault indicator is pink.

6. V6SHOW intelligent hoist connection plug. Quick connection between hoist and driving box for quick installation.

7. Carrying pole: it is easy to carry the equipment.

The drive unit adopts Ether CAT mechanism. Each drive unit needs to be connected in series using super category 6 double shielded network cable. The maximum communication distance between two drive units is 100 meters and the fastest communication rate is 4MS, which perfectly solves the problems of short communication distance and data transmission with delay. Add fiber optic module can increase the transmission distance to 1500 meters.

Technical parameters

Product Name	Hoist Driving Box	Model	MD8-1P
Manual Handling	UP / DOWN Button	Emergency Processing	Emergency Button
Fault Reset	Reset Button	Driving Box Status	Three color light display: Red: Power On; Pink: Fault; Green: Enable
Fixed Way	Light Hook 48-51mm	Plug Specification	RJ45/4P Industrial Plug/24P Heavy-duty Plug
Size (mm)	510*360*170	Weight (kg)	18
Power (kw)	2.5		

Hoist Power Box

32A Power Box

- Model: 6 out of MF9-1 32A
- Cutting off the main power: Yes
- Fixed way: lamp hook 48-51MM
- Plug specification: 32A/6AIndustrial plug
- Size: 20-way heavy-duty plug
- Weight: 5Kg

100A Power Box

- Model: 6 out of MF9-1 100A
- Cutting off the main power: No
- Fixed way: lamp hook 48-51MM
- Plug specification: 125A/32AIndustrial plug
- Size: 480*240*170mm
- Weight: 6Kg

● There are two types of power boxes, 100A power box and 32A power box. The 100A power box has an input power of 100A, the cable is 3X16+1X10mm², 6 outputs, each output is 32A, and the 100A power box includes three-phase four-wire system and three-phase five-wire system; the 32A power box is directly connected to the crane The drive box is connected, the input is 32A, and the 6 outputs are 16A.

● The 100A main power box has added safety power-off protection. Through the main power emergency stop button, the power supply of the smart hoist can be cut off on the console, providing multiple safety guarantees.

● Multiple 100A power boxes are connected in series with 2X0.5mm² cables, through the emergency stop button of the main power supply, all power supplies of the smart hoist can be cut off on the console, providing multiple safety guarantees.

● The current and voltage display of the power box can monitor the voltage and current in real time, as well as the display of the power.

Technical parameters

| Product name	32A power cable	100A power cable
Model	6 out of MF9-1 32A	6 out of MF9-1 100A
Cutting off the main power	No	Yes
Circuit breaker protection	Yes	Yes
Current and voltage display	Yes	Yes
Series shunt trip	No	Yes
Fixed way	lamp hook 48-51MM	lamp hook 48-51MM
Plug specification	32A/6AIndustrial plug	125A/32AIndustrial plug
Size (mm)	480*210*150	530*240*200
Weight(kg)	5	6

V6 SHOW Controller

1. The CPU adopts imported brand IPC to ensure more stable system operation.

2. The hard drive uses a solid state drive to ensure faster read speeds.

3. Equipped with 2 Ethercat interfaces and 1 Ethernet interface.

4.2 USB 3.0 ports, 3 USB 2.0 ports.

5. The DC24V indicator clearly confirms whether the weak power is normal.

6. AC220V current and voltage display to clearly confirm whether the power supply   is normal or not.

7.The main power emergency stop button (with protective cover) can quickly cut off the power supply to the hoist to further ensure safe operation. Safer operation of the equipment.

8.Key switch, two functions: Firstly, the power supply DC24V is on; secondly, the controller is turned on and started.

9. Rocker switch, intelligent CNC hoists full up or full down operation.

10. Reset button, fault reset function, a key initialization. Only when the fault and stop, this reset button to start the role.

11.The emergency stop button (without protective cover), tapped in any case, is to immediately stop all hoists in action. Safer operation of the equipment.

12.The controller and the intelligent hoist are connected through Ethercat, the wiring is simple to reduce the wiring tediousness, up to 64 intelligent hoists can be controlled, 6MS scanning period, control and feedback information without delay.

13.Intuitive program editing control with any combination of time speed, time position, speed position and other programming modes.

14.Written scene action, can support U disk import and export, unlimited number of scene programming, customizable programming scene name.

15.Support multinational language switching.

16.The setting of safety parameters and the setting of safety protection effectively ensure the safe operation of the intelligent hoist, operating in a safe area, safe lifting load operation, and more safely prevent improper operation, or improper programming parameters, resulting in safety hazards.

17.Touch 17-inch monitor with a resolution of 1920X1280.

18.The console can be connected to the central control, DMX512 communication, and the central control connection can be 485 or to the state network connection; and DMX512 direct connection. The central control or DMX512 can directly call the edited scene action, you can edit the scene action to the central control or DMX512.
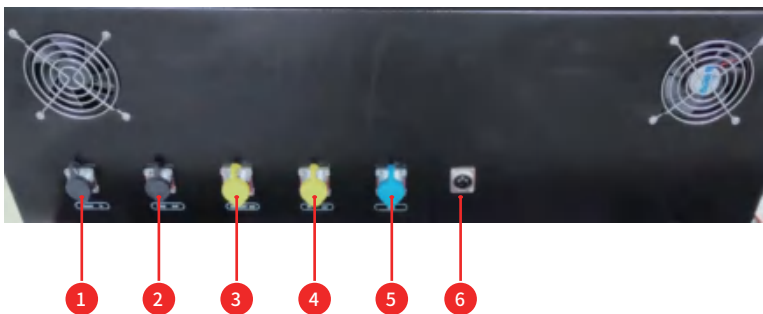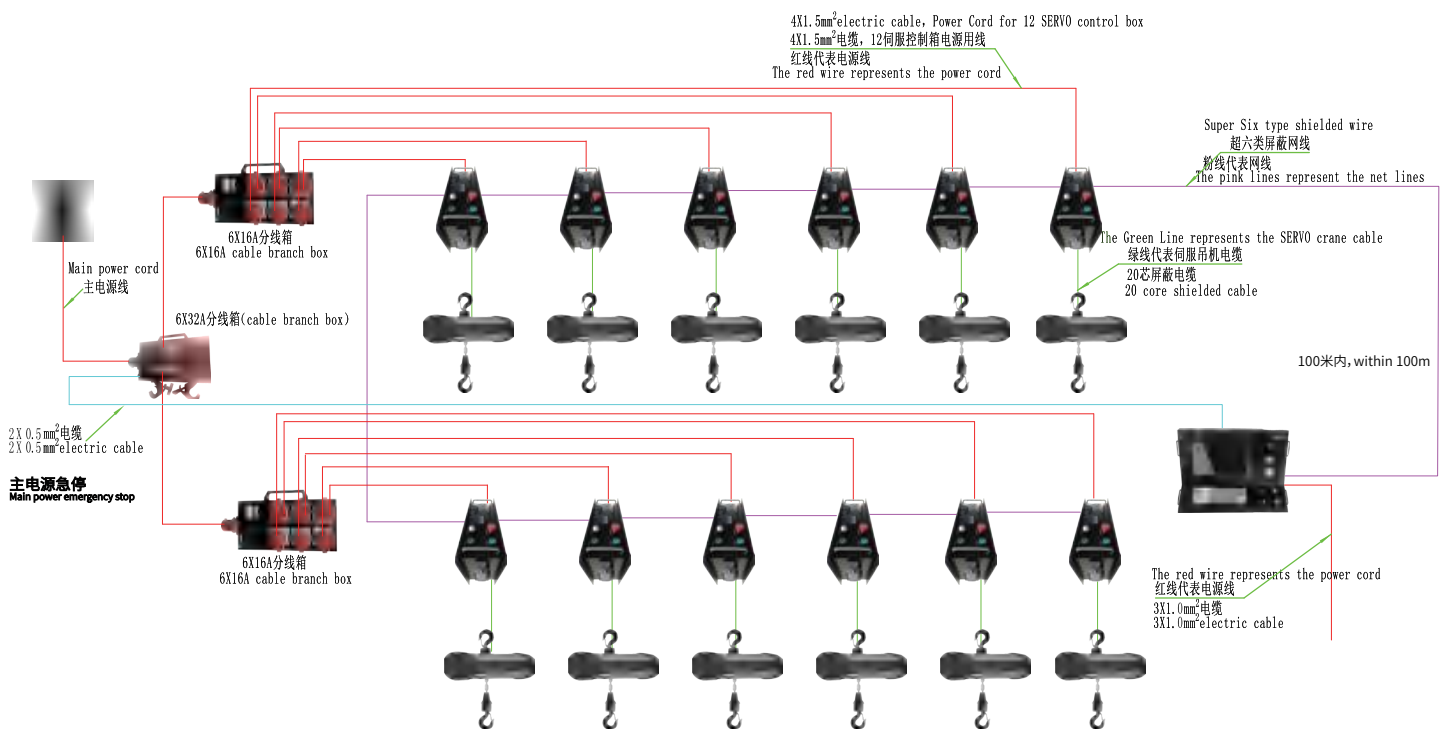

1. Power input:Professional plug, input is wide voltage, AC200-410V.

2. Cut off the intelligent hoist power plug, this plug through the controller emergency stop button (with protective cover), shoot to cut off the hoist power supply.

3. Ethercat communication plug, this plug connects to the intelligent hoist via super category 6 double shielded network cable to control the connected intelligent hoist.

4. Ethernet communication plug, this plug can realize the console Internet access through the network cable.

5. USB3.0 socket, can import and export edited scene actions by U disk.

6. DMX512 socket, can be directly connected with DMX512, realize DMX512 call edited scene action, start the call scene action, emergency treatment can stop the operation of the crane remotely.

According to the needs of customers, the central control function can be added, and Ethernet communication or 485 communication can be customized.

Technical parameters

Product Name	V6SHOW Controller	Product Model	MK7-64P
Input Voltage	AC200-410V	Power Cable(mm^2)	3*1.0
Communication Network Cable	Super Category VI double shielded network cable	Plug Specifications	RJ45/2P/3P/USB/aviation plug/canon plug
Monitor	Touch type 17 inch	Resolution (px)	1920*1280
Industrial Control Machine	Advantech	Console size(mm)	800*600*360MM
Weight(kg)	30	Power(kw)	1.0

V6 SHOW Hoist, Hoist Driving Box, Hoist Power Box, V6 SHOW Controller and DMX512 wiring diagram

4X1.5mm^{2}electric cable，Power Cord for 12 SERVO control box
4X1.5mm^{2}电缆，12伺服控制箱电源用线
红线代表电源线
The red wire represents the power cord

Super Six type shielded wire
超六类屏蔽网线
粉线代表网线
The pink lines represent the net lines

The Green Line represents the SERVO crane cable
绿线代表伺服吊机电缆
20芯屏蔽电缆
20 core shielded cable

6X16A分线箱
6X16A cable branch box

Main power cord
主电源线

6X32A分线箱(cable branch box)

100米内，within 100m

2 X 0.5 mm^{2}电缆
2 X 0.5 mm^{2}electric cable

主电源急停
Main power emergency stop

6X16A分线箱
6X16A cable branch box

The red wire represents the power cord
红线代表电源线
3X1.0mm^{2}电缆
3X1.0mm^{2}electric cable

V6 Show Cases Sharing

Drama "Retrogradation" National Tour

● Say goodbye to long setting time

● Let the designers' thoughts come true on stage

Concerts and conferences, etc.
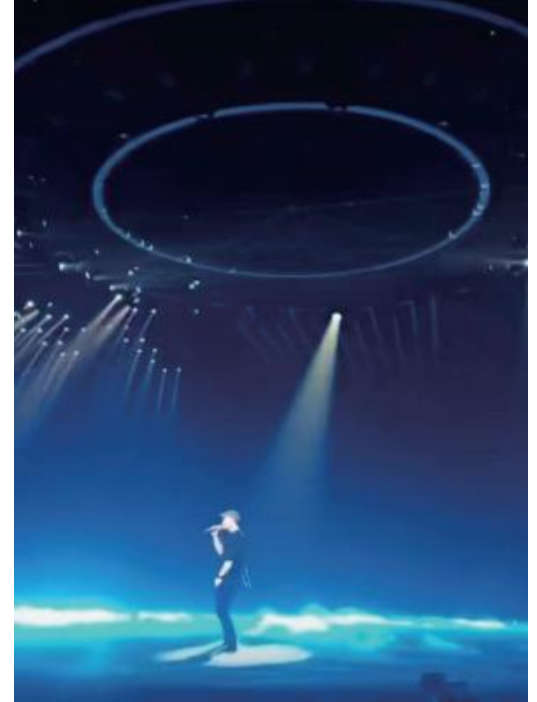
● Helping live concert

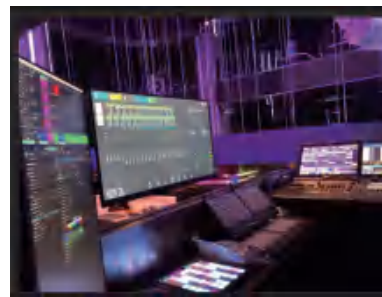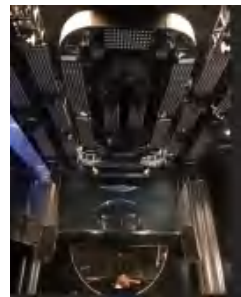## Dance Dramas "You Jade Soul" and "Ke Ke Tuo Hai"
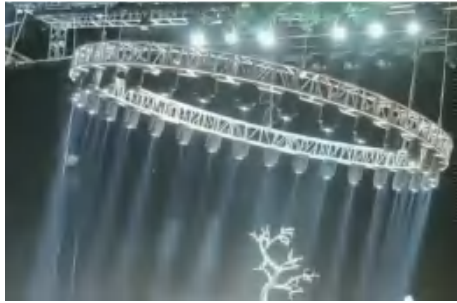
● Application of circular wave effect with a diameter of 10 meters

● The application of special effects of various angle transformations on the arc curtain
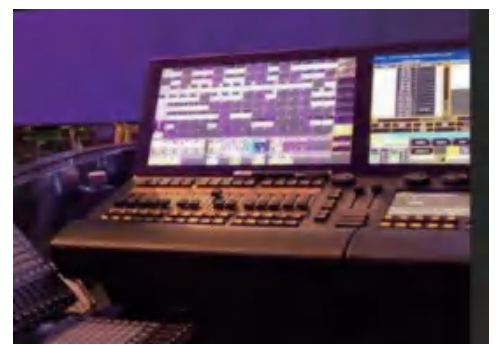
Bars
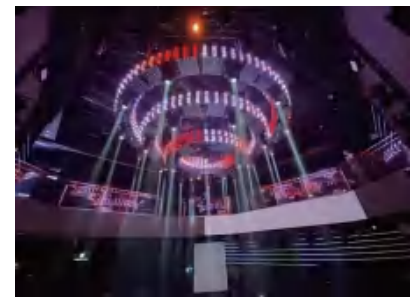
● Edited scene actions continuing

Television station

● TV station effect scene application
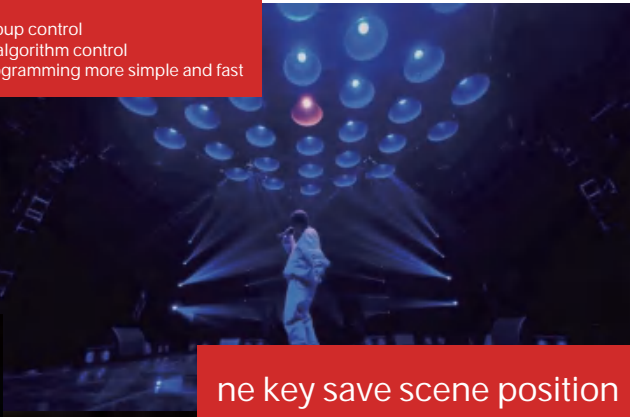
Controlling with lighting station
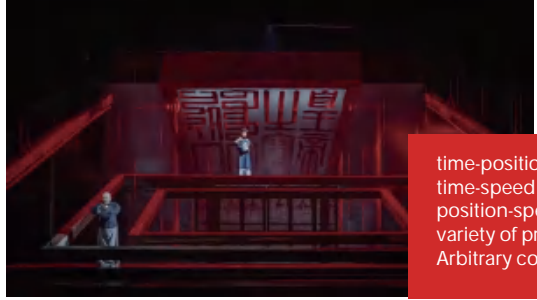
● Edited scene action DMX512 call starting

Why V6 Show programming hoist

Customize group control
Round angle algorithm control
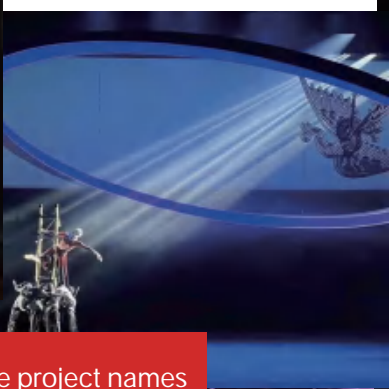Makes the programming more simple and fast

time-position
time-speed
position-speed
variety of programming
Arbitrary combination of patterns

Built in absolute position encoder,save the position even power been cut off, position accuracy 0.1mm
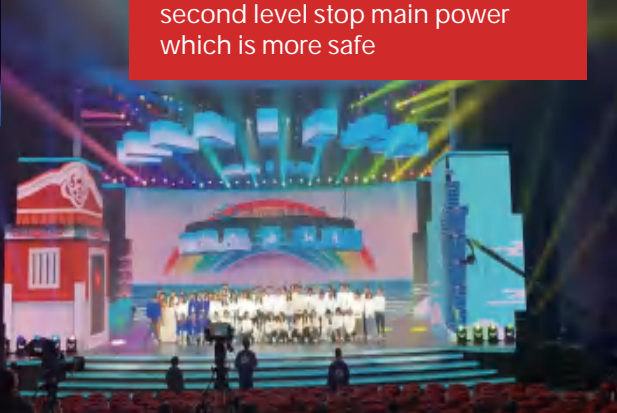
ne key save scene position

Overload/no-load protector
Hardware/software position limiter
Program parameter protect
Significant avoid misoperation and safety hazard in emergency

Dual level emergency stop, first level stop program,
second level stop main power which is more safe

No limits for program quantity, customize scene project names

Vector-based servo motor constant torque, 0 speed hovering

Support Chinese, English, Russian, Spanish, Korean, Japanese Fast switching

Support U disk save program file, import control panel