岳中数字科技
YUEZHONG DIGITAL TECHNOLOGY

D04 Console instructions

[redacted]

⚠ Before using, please read this instruction, and keep it for future reference

Contents

Profile

Thank you for purchasing our mechanical console. We hope you can enjoy the excellent performance of this product. The design of the console conforms to international and industrial standards, but if it is not operated properly, it may still cause personal injury and property damage. In order to avoid the possible dangers and benefit from your equipment, please follow the relevant instructions in this manual when installing and operating the product.

About Software

It is not allowed to change, decompile, disassemble, decrypt or reverse engineer the software installed on this product, which is illegal.

Features

- Support up to 100 motors simultaneously.
- 60 groups of action programs
- USB disk backup function of parameters and action programs.
- Push rod operation design.
- Real time monitoring of the operation status

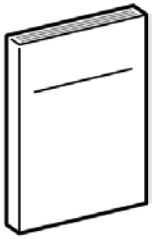
Console specification

Voltage	100～240VAC，50/60Hz
Power	15W
Working temperature	0~45℃
Dimensions	32.5cm x 33.5cm x 11.5cm
Weight	3.9KG

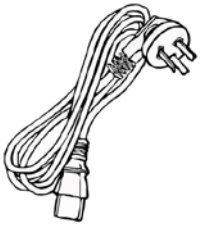
Start using

Accessories included

User manual

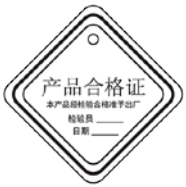


Power cord



USB light

certificate



485 male cable,
EST cable

Safety instructions

- The input voltage is 100~240VAC, 50/60Hz.
- Please unplug the power before connecting or unplugging any signal cables.
- The equipment operation and daily maintenance must be the personnel who have received professional training, with professional knowledge and experience, have good quality, be familiar with the equipment operation and maintenance. Or have received internal training and been approved as maintenance personnel. Other personnel are strictly prohibited from operating.
- Please keep away from fire sources, water sources and flammable and explosive dangerous goods.
- There are high-voltage components in this product. Please do not open the chassis or repair this equipment by yourself.
- In case of abnormal conditions such as smoking and odor, please turn off the power switch immediately and contact our company

Function introduction

Profile

As a centralized control system for stage machinery, D04 Console provides a more stable and flexible control mode for stage machinery.

The console can be used as the centralized control center for various lifting stages, lifting and rotating light truss and other mechanical equipment.

Compared with the traditional touch screen control mode, it has more flexible manipulation, a more secure and stable emergency processing system, and can monitor the running status of various mechanical systems in real time, providing users with a better stage show platform.

Interface introduction

Specification	
Port	**Function**
USB	Extension port
USB Debug	Software debug port
USB Ligtt	USB light port
RS232	Uart port
EtherCat	EtherCat port
Em stop	Emergency stop switch port
DMX512	DMX 512 port
RS485	RS485 port
ON/OFF	Power switch
Power	AC220V Input

Console panel layout

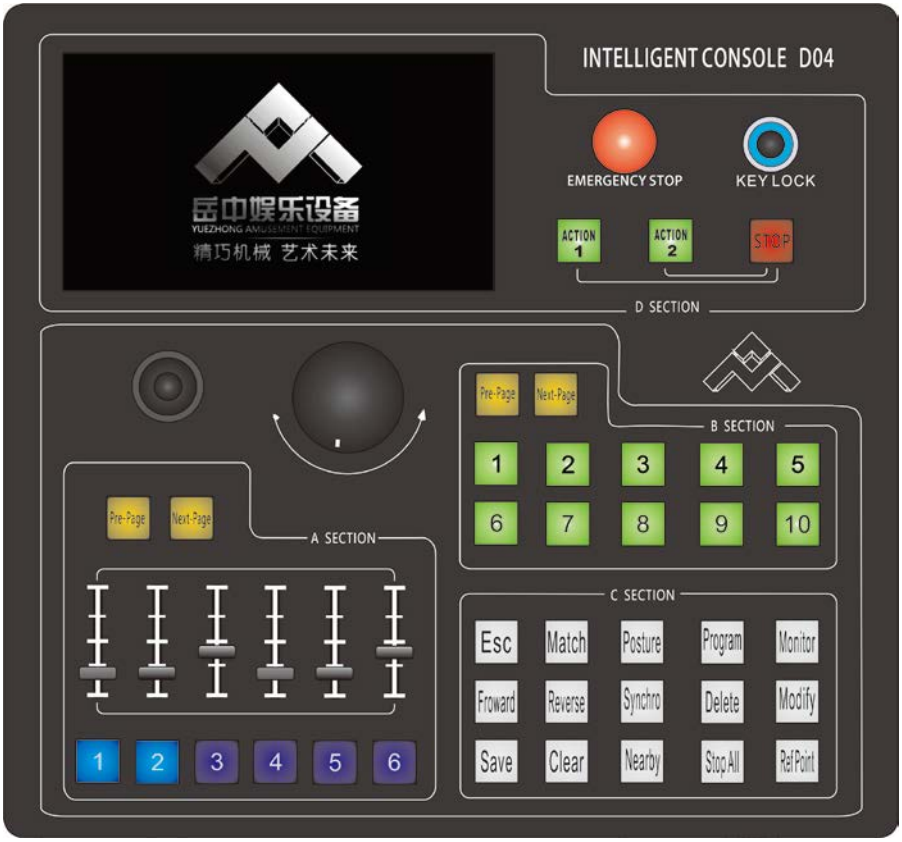


illustration	
Area	**Function**
A section	Porgram operation area
B section	Mechanical points choose, number key
C section	parameter setting and action editing
D section	Touch screen, action button, emergency stop, key lock
Joystick	To control machinery on the action interface
Knob	To switch menu pages and parameter settings

User Guidance

D04 console uses a high contrast LCD touch screen to display the user menu. If you use the buttons on the front panel to set, the LCD screen will display the different menu according to the user's operation to prompt the user to operate better, faster and more intuitively.

The following will introduce the menu system of D04 console in detail in combination with key functions and LCD screen display.

How to use

A section

It contains two page turning buttons, six number buttons and six push rods.

Select the action program to be executed through the page turning key and push rod key.

- Cyclic action operation (multi-step action): push the corresponding push rod, and it must be kept at the top. To stop the cyclic action, pull down the push rod, and press the number button below the push rod.

- Posture action operation (single step action): push the corresponding push rod. After the machine starts, pull down the push rod and press the number key below the push rod.

B section

It contains two page turning keys, 10 number keys from 1-10.

The number keys used to select mechanical points and input numbers.

C section

1) **Esc:** Returns to the previous menu
2) **Match, Program, Monitor:** shortcut keys, enter the menu directly.
3) **Posture:**
4) **Forward / Reverse:** To run clockwise or un-clockwise.
5) **Synchro：**
6) **Delete：** Delete the current program
7) **Modify：** Change the action parameters of a certain step, after the parameters change, click "modify" the parameter is changed successful.
8) **Save：** After the program action is finished editing, press "Save" and press "A number key", the program will save as this number ID.
9) **Clear：** Clears the parameters of the current edit action
10) **Nearby:** .To run to the nearest program points
11) **Stop All：** Stop all the motor running.
12) **Ref point：** All the machine will run back to the origin point.

D section

Emergency stop： It will be connected with the control electric box of the machine to control the power supply of the machine. In case of emergency, the machine can be stopped instantaneously by clicking the emergency stop button.

KEY LOCK： Push this button will lock other buttons to avoid misuse.

Action 1: Reverse, let the machine move to the original point.

Action 2: Forward, let the machine move to the ending point.

Stop： Stop the current operation running

Manual joystick: Control the machine system lifting or rotation manually.

Knob： The knob is used to switch menu pages and parameter settings.

Operation menu

Open the console, after the password, you will see the menu.

There are 6 menu, corresponding to 6 functional areas, specifically: matching, timeline, automatic, manual, setting, monitoring;

Matching menu

By enter the Matching menu, to check the mechanical operation parameters in system 2.0.

Mechanical system parameter:

Number: displays the mechanical point of the current page.

Slave address: refers to the PLC address of the current machine.

Shaft number: refers to the drive number of the current machine.

Reduction ratio: the reduction ratio of the wave box.

Drum diameter: the diameter of the mechanical drum.

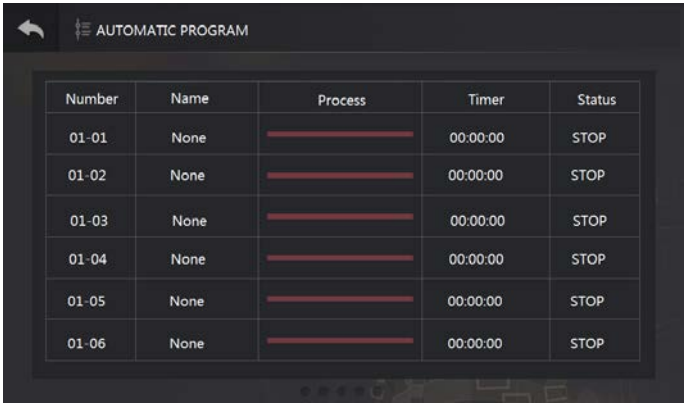
Maximum speed: the maximum speed of the motor.

Maximum stroke: the maximum distance of mechanical operation.

Time line

You can make a program using time line in software in system 2.0

Automatic



In this interface, using the buttons in area A, the previous and the next page, select the action number, pull the push rod to execute the automatic program.

Specific operation:

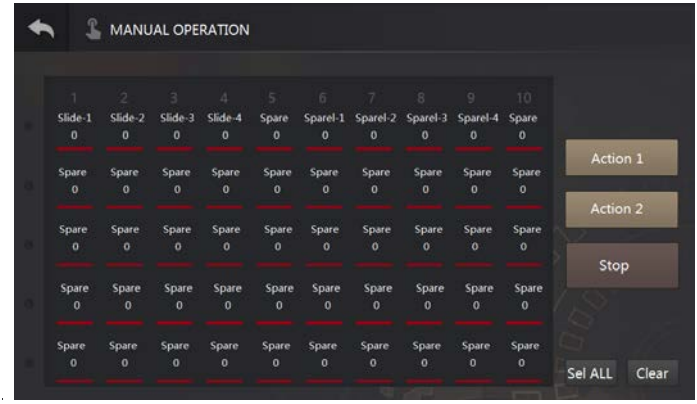
1) In this menu. The key below the push rod lights up, indicating that there is an effective program step for the corresponding push rod. Push the push

rod upward, and the program starts to run. At this time, the running state of the program is "Run".

2) Push the push rod downward to pause the program. At this time, the running state of the program is "Pause".

3) Using Push rod can adjust the action speed, and with buttons can do posture.

Manual



In the manual operation interface, select the machine to be operated, click the action button on the right or the action button on the console to start the machine.

Specific operation:

1) In this menu, the 10 number keys in Area B can select or unselect the mechanical unit. If the unit is selected, it will display orange. The two page turning buttons above the number keys can perform line switch operation.

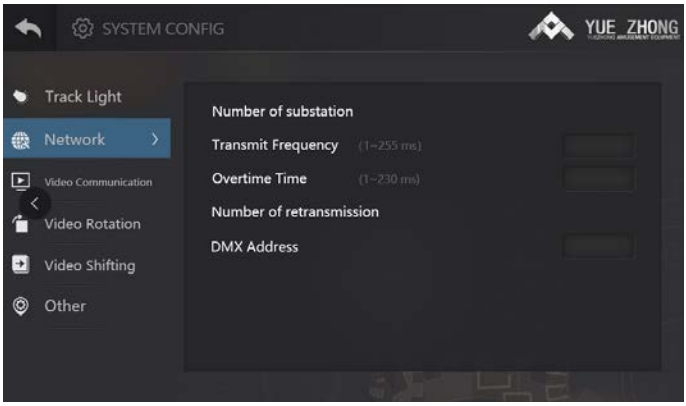
2) Press the "Clear" key to clear the previous selected item.

3) Once the unit is selected, push up or down the joystick to rise or rotate forward, release the joystick to stop, and the touch button on the right of the interface has the same function as the action 1, action 2, and stop buttons in Area D with the joystick.

4) The actual stroke position of the corresponding mechanical unit will be displayed below the selected unit, and the value range is 0 to the maximum.

System config

Entering the setting interface, there will be three corresponding sub interfaces: special settings, network settings and other settings.



Special settings: This interface contains 4 parameter setting options.

- 1U3U baud rate: set the baud rate of 485 ports on the console.
- Serial port baud rate: set the baud rate of the console serial port.
- 1U3U axis number: set the maximum number of loaded drives of a plc.
- Password free login: When opening the console, do not need a password.

Network setting: This interface contains 6 parameter setting options.

- Number of 1U3U sub stations: the number of small PLCs loaded.
- Number of AM600 substations: the number of medium-sized PLCs loaded.
- Issuing frequency: the frequency of commands issued by the console.
- Timeout: the waiting time for the command issued by the console.
- Number of retransmissions: number of retransmissions of commands issued by the console.

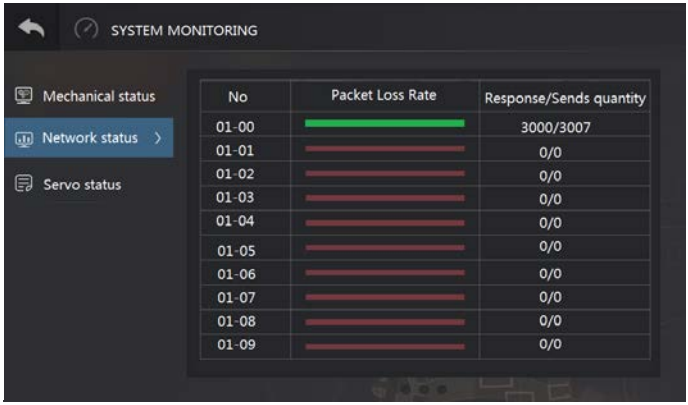
- 512 address code: 512 address corresponding to this console.

Other settings: This interface contains 7 parameter setting options.

- Interface language: Chinese or English can be selected.
- Screen brightness: adjust the brightness and darkness of the screen.
- Touch screen calibration: used to calibrate the accuracy of the touch screen.
- Import console configuration: import the console configuration parameters backed up in the USB disk to the console.
- Export console configuration: export the configuration parameters of the console to the USB disk as a backup.
- Import timeline program: import the mechanical action program backed up in the USB disk to the console.
- Export timeline program: export the current mechanical action program of the console to the USB flash as a backup

System monitoring

Entering the system monitoring interface, there will be three sub interfaces: mechanical state, network state and servo state.



Mechanical status: Shows the current status of all machines.

- Number: corresponding to specific mechanical number.

- Name: mechanical name.
- Position: displays the current position of the machine.
- Status: display the current status of the machine
-

Network status: Shows current status of the communication network.

- Number: corresponding to specific network address number.
- Packet loss rate: reflects the quality of the current network.
- Response/sends quality: reflect the sending and receiving status of the network.

Servo status: Shows the current status of each servo driver.

- Name: the corresponding mechanical name of each servo driver.
- Speed: the speed of the motor loaded by the current servo.
- Torque: the motor torque loaded by the current servo driver.
- Load rate: the load rate of the motor loaded by the current servo driver.
- Phase current: the current output by the current servo driver.
- Bus voltage: the voltage output by the current servo driver.
- Temperature: the working temperature of the current servo driver.

Particular attention

- For the multiple-points lifting mechanical system, during the operation, pay attention to the overall lifting status, and do not allow the multi-point mechanical system to tilt too seriously. In case of similar situations, press the total stop button in time. If you still cannot stop, press the emergency stop switch to cut off the power supply.

- For some special mechanical systems, such as rail cars or specially defined mechanical systems, pressing the action 1, action 2 or stop button on the interface of the automatic operation program can directly control the mechanical system manually. The function debugging personnel will inform the user timely after debugging.

Warranty Instructions

Warranty time

- 12 months from the user's purchase date

Non warranty terms

- Faults or damages caused by water immersion, collision, stains or surface scratches after use and other abnormal use reasons of the machine;
- Disassembly and modification without our consent;
- Failures or damages caused by use in non specified working environment (such as high temperature, low temperature or unstable voltage);
- Failure or damage caused by force majeure (such as fire, earthquake, etc.) or natural disasters (such as lightning strike, etc.);
- The product exceeds the warranty time.