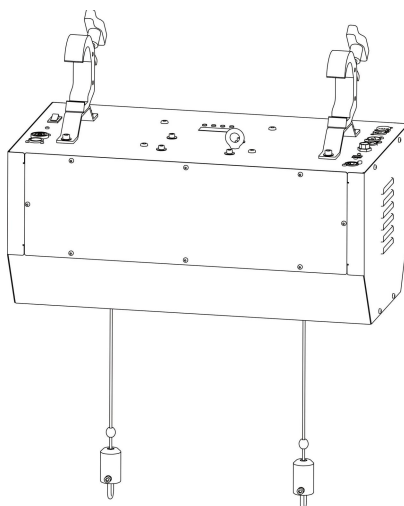


GINYU KINETIC ART WORKSHOP®

User Manual
T20TC Model
(Version: 202504)



GINYU KINETIC ART WORKSHOP®

Factory Buliding 401, 4 Building , Langling Industry Zone, No.15 Dongsheng Road,
Xinya Street, Guangzhou, Guangdong, China.

www.dmx-winch.com

Before installing, operating, or maintaining this product, carefully read this manual and comply with all safety precautions listed below, as well as all warnings printed on the motor.

1. Indoor Use Only

- This device is designed for professional indoor use only.
- Not suitable for household use – may cause injury or equipment damage.

2. Environmental Restrictions

- DO not expose to moisture, corrosive/flammable gases, or ambient temperatures exceeding 50°C (104°F).
- Risk of fire or equipment failure if operated in prohibited conditions.

3. Load Capacity Compliance

- Strictly adhere to rated load limits and approved lifting materials specified in technical parameters.
- Overloading may cause structural failure, injury, or equipment damage.

4. No Unauthorized Modifications

- DO NOT alter load-bearing cable connections or modify the device.
- Tampering may result in mechanical failure or personal injury.

5. Before Each Use

- Before each operation, inspect cables for bends, cracks, or corrosion.
- Immediately discontinue use if defects are detected.

6. High-Voltage Hazard

- This device contains high-voltage servo drives.
- Only certified electromechanical technicians may perform repairs.
- Unauthorized servicing risks electric shock or severe injury.

7. Genuine Parts Requirement

- Use only GINYU OEM components for repairs/replacements.
- Third-party parts may compromise safety and void warranties.

8. Legal Compliance

- Follow all local laws and regulations governing equipment use.

The following symbols are used to identify important safety information on the product and in this manual:



Implies a potential hazard that, if not complied with, could result in serious or fatal injury to a person.



Implies there may be a potential hazard that, if not complied with, could cause moderate injury to personnel, or cause serious damage or malfunction of the product.



Implies actions that are absolutely prohibited and may result in damage to the product, or even malfunction, and may render it unusable.



Implies before powering on, please fix the installation vertically and confirm that the load or counterweight has been connected.

Warning! Do not use the winch if any damage or error is found!

Technical Specifications

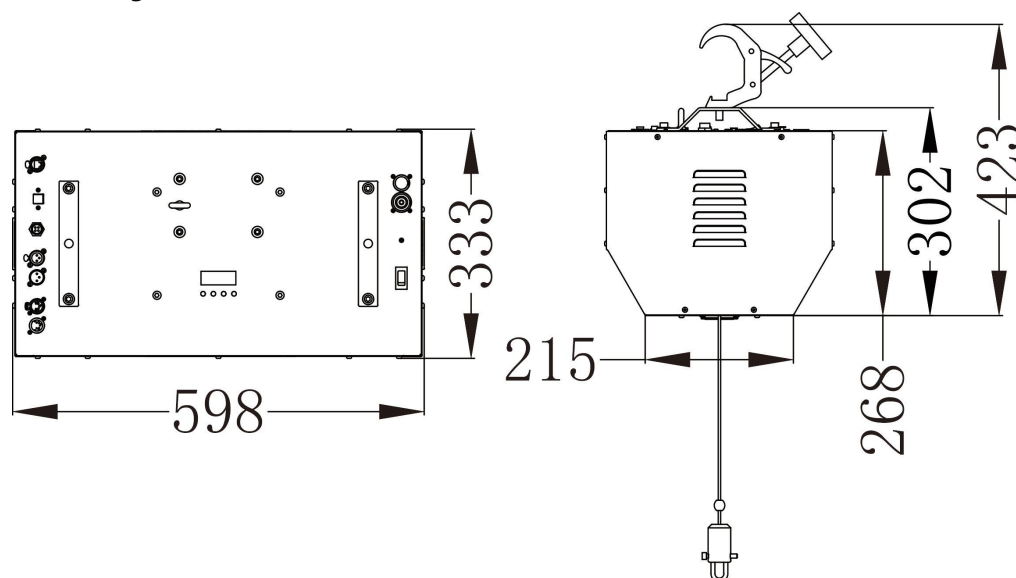
Winch Model	T20TC
Loading Weight	50KG
Lifting Height	900CM
Fast Speed	40CM/S
Control Mode	DMX-512
RDM	Standard
Channel	4CH
Direct Connector	GX-16-4PIN
Direct External Control	Plug manual Switching
DMX Connection	3 PIN/5 PIN XLR In/Out
Screen	4 Digital Tube Display
Lifting Cable Diameter	Diameter 7MM
Synchronization Error	Less 6MM
Rope Loosening Alarm	Standard
Voltage	AC90V-240V/50-60HZ
Output Mode	220V_1300W/RJ45/DMX
Total Power	1200W (Excluding direct output power)
IP Rating	IP20
Environment Temperature	-10°C~50°C
Safety Security	Physical braking, Electronic protection
Emergency Braking	Customized
Weight Detection	Standard
Series Connection	Standard
Installation	Vertical lifting
Winch Size	498*333*423MM (Including hook size)
Winch Weight	26.2KG
Package	Carton/Flight case
DMX Signal Cable	2*0.5 m*1.5*1 pcs
Power Cable	3*1.25 m*1.5*1 pcs
Safety Cable	3MM*430MM*1 pcs
Hook	30MM*110MM*82MM*2 pcs

Product Introduction

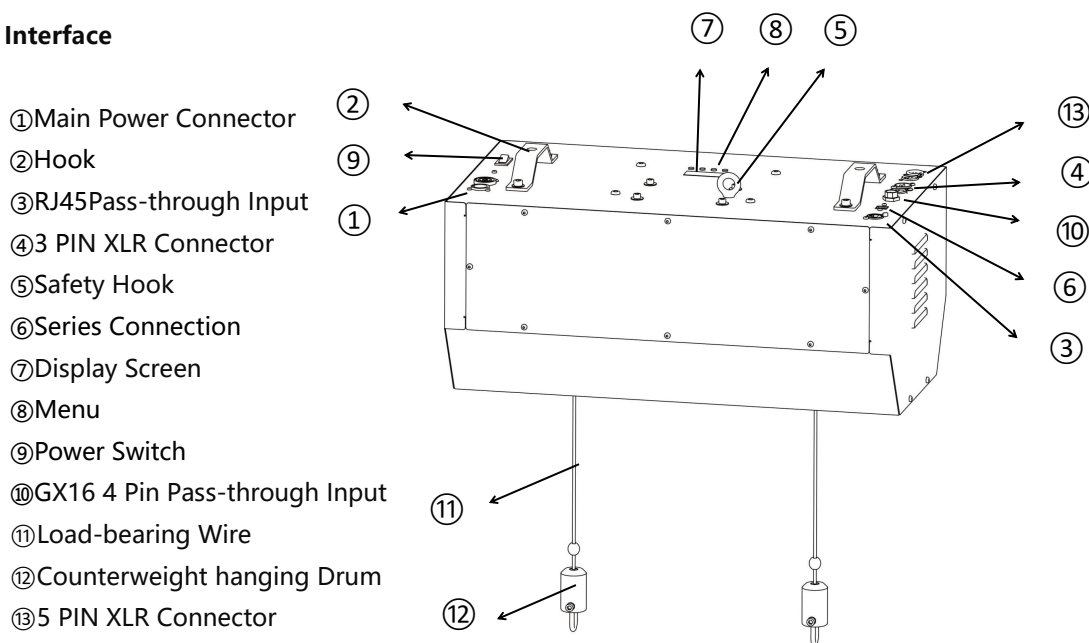
The stage winch is a critical component in the stage lighting systems, which has the high load capacity, smooth lifting, precise control, safety and reliability. As an essential part of modern stage technology, the unique functionality and design of stage lighting winches provide unprecedented flexibility and creative possibilities for performances and dynamic lighting installations.

DMX winches, with their distinctive lighting effects and dynamic performance, are widely use in theatre, show, concerts, and exhibition. "Where engineering precision meets artistic expression" DMX winches redefine stage dynamic, enabling limitless creative possibilities.

● Winch Size Drawing

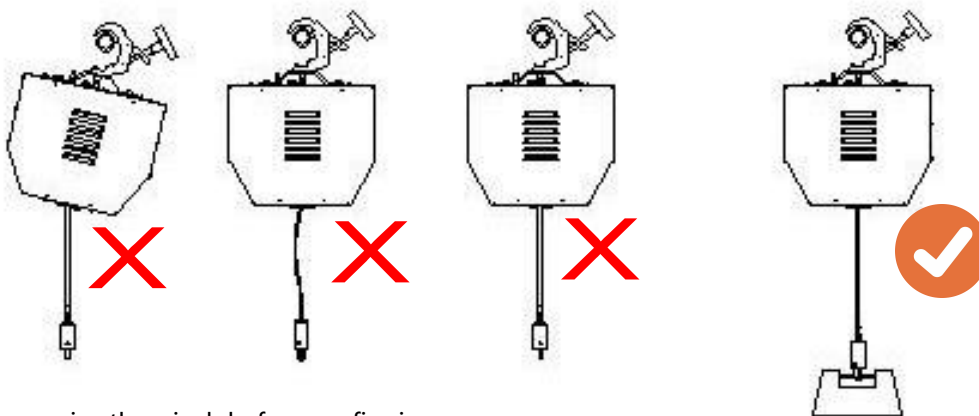


● Winch Interface



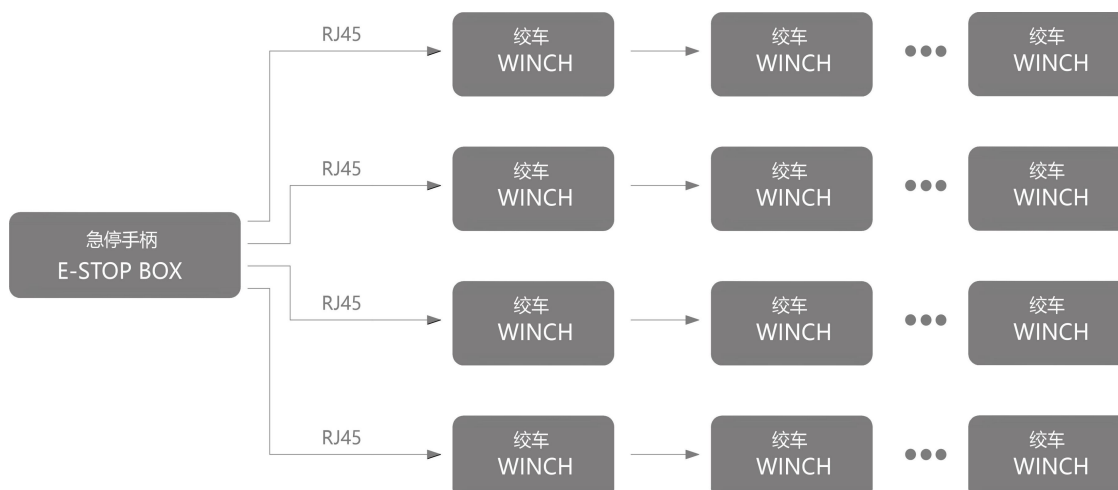
Safety Precautions

1. Check that the rigging clamp is undamaged and that the rigging structure can support at least 10 times the combined weight of all winches and equipment to be installed on it.
2. The motor is equipment is equipped with clack rope detection device. During installation, ensure the cable end is properly weighted(min 1KG), otherwise the winch will not working. Fix the motor on the TRUSS with special stage lamp hook or use bolt-mount to square tubing with the wire exit port vertically downward, as shown in the figure below:

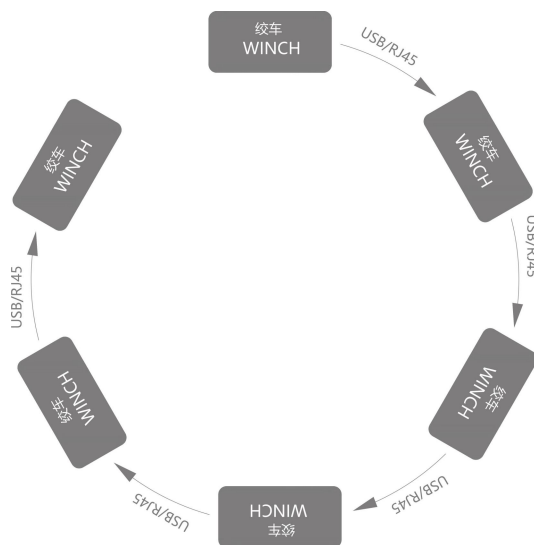


3. When we energize the winch before confirming:
 - All bolts are torque-tightened.
 - Safety locks are engaged.
 - Hanging the Lights or weight already.
 - Locked the lights with motor.

4. Please leave enough space under the winch, and do not use the winch above the head of the personnel, so as not to cause danger to the personnel below.
5. Don't use winch to hanging persons or animals, approved use static loads only.
6. When the processor detects a winch malfunction (e.g., over speed or overload), the system will automatically engage the brake.
7. After a power outage, the machine must detect the load and automatically reset to the initial position before it can operate again.
8. The default speed setting is 0, keeping the winch in brake mode. A value higher than 0 must be set for the winch to operate, meaning Channel 3 has a braking function.
9. In an emergency, all equipment can be stopped using the emergency stop handle.



10: Teamwork safety: When multiple winch are used in combination, they can be connected via USB or RJ45 cable daisy-chain. If one winch faults, all connected units stop to prevent cable strain.



Power Supply Requirements

1. Input Voltage & Protection

--Voltage Range: 90V-240V AC

--Connection: Use only connectors compliant with local electrical codes.

Safety Requirements:

--Must include fault-protected fuses or circuit breakers.

--Must have overload & ground-fault protection to prevent electric shock or winch damage due to overcurrent.

2. Input Cable Specifications

--Conductor Size: at least 1.5 mm² (AWG16) per Chinese National Standard (GB).

--Cable Diameter: 7-15mm.

--Heat Resistance: ≥90°C (194°F).

3. Series Connection Rules

--Connector Type: Locking POWERCON connector for daisy-chaining.

--Max units per circuit: Refer to Table (1) (DO NOT EXCEED LIMITS)

4. Risk of overload series connection of per circuit

Excessive chaining will causes:

--Cable overheating

--Insulation degradation

--Potential fire hazard

5. Multi-functional Model Winch (Special Wiring)

Separation of Power Supplies:

--Lighting power(LED Lighting/Stage Lighting) and winch power is fully isolated.

--Winch only powers travel-length current paths.

--Max Current: 7A (Exceeding this damages winch & Risk fire).

6. Wiring & Installation

--Certified Electricians only can working wiring.

--Proper cable routing (use Tray, conduit or raceway, choose which way suitable environment).

--Secure terminations with insulation tape or heat-shrink tubing.

7. Safety Disconnection

Always power off when:

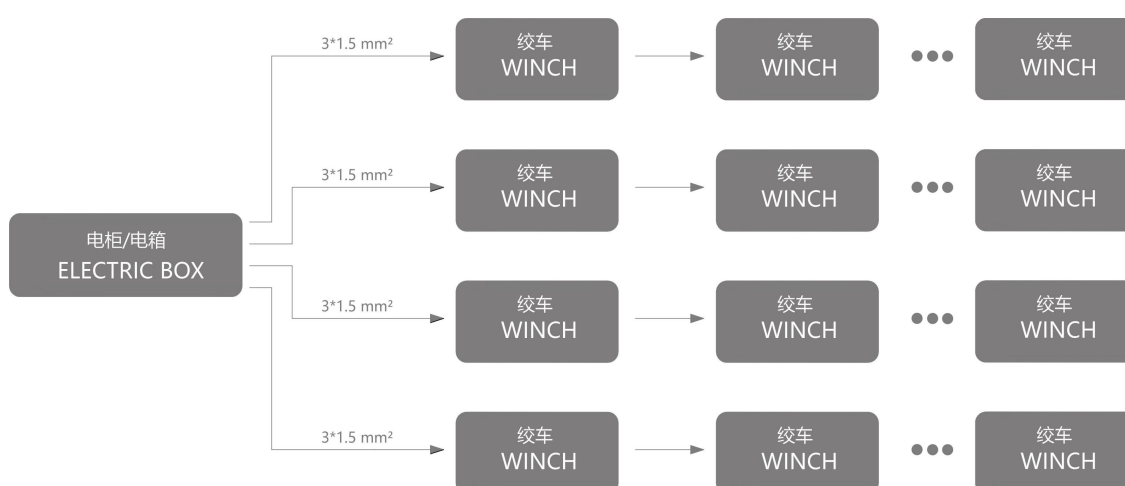
--Under maintenance

--Being cleaned

--Idle

8. External Control Equipment

Follow the same series connection way as above when hanging LED screen/Stage Lighting.



Maximum Chain Length (Table 1)

Model	Fuse	Peak Power	Power Chain Capacity(PCS)	DMX Chain Capacity(PCS)
QL_815F	F2A/250V	75W	15	15
QL_336M	F2A/250V	36W	15	15
T15A	F5A/250V	200W	15	15
T15T	F8A/250V	300W	10	15
T15T pro	F8A/250V	400W	10	15
T20A	F5A/250V	400W	10	15
T20T	F10A/250V	700W	5	15
T20TC	F2A/250V	1200W	4	15
T20T pro	F2A/250V	1200W	4	15

T30A	F8A/250V	700W	5	15
T30T	F8A/250V	1200W	4	15

DMX Connection

1. Control Protocol: DMX 512

--Addressing: Each winch requires 1 unique address, set via digital display (See Table 2 as below).

2. XLR Connector Standards

Item	Description
Types	XLR 3PIN or XLR 5PIN
PIN Definition	1PIN: Ground; 2PIN: DMX-; 3PIN: DMX+; 4PIN/5PIN: Spare
Connector Type	Male Plug: Pins; Female Plug: Jacks
Signal Flow	Input: Female Plug/Socket; Output: Male Plug/Socket

3. Installation Best Practices

--Avoid parallel routing with power cable or other strong power cable, to minimize EMI(Electromagnetic interference).

--Prevent cable damage: No Sharp bends, stretching or crushing.

--Ensure proper XLR alignment, make correct pin-to-socket mating, signal flow direction.

4. XLR Signal Cable Standard

Item	Description
Diameter of per PIN	≥0.5 mm ² (also can use CAT 5 alternative)
Standard XLR	2 PIN (DMX+, DMX-) 、Shield: Ground
CAT 5 alternative	Blue: DMX+; Blue White: DMX-; Brown+Brown White: Ground
Connection Way	Daisy-Chain: Controller Output→Winch 1 Input→Winch 1 Output→Winch 2 Output → ...
Bypass Characteristics	When winch turn off power, signal bypass remains active
Termination Resistor	A 120Ω (1/4W) resistor must be connected between 2 PIN (DMX-) and Pin 3 (DMX+) at the last device' s output.
Length Limit	Single cable length < 100 meters, total length suggest≤300 meters;
Standard Configuration	1.5m (With XLR Female/Male)

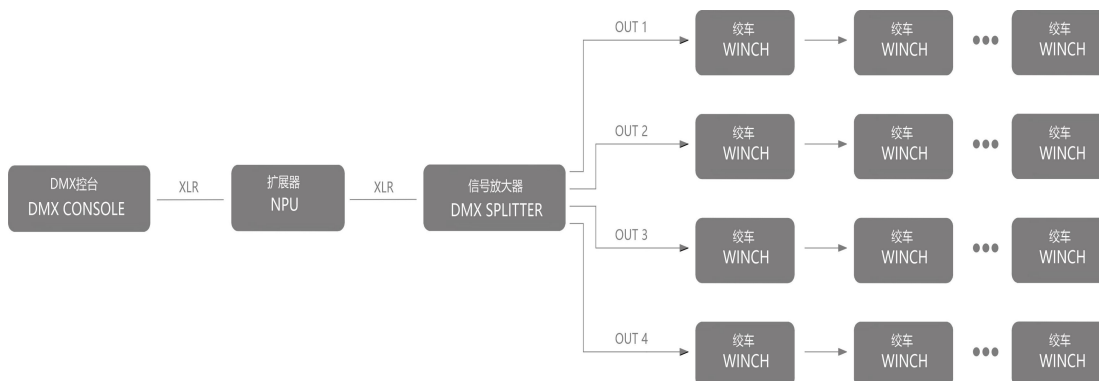
5. Winch Limits Per Chain

- Recommended max: 15 devices per DMX chain (to avoid signal degradation).
- For larger setups: Use opto-isolated DMX splitters/amplifiers.

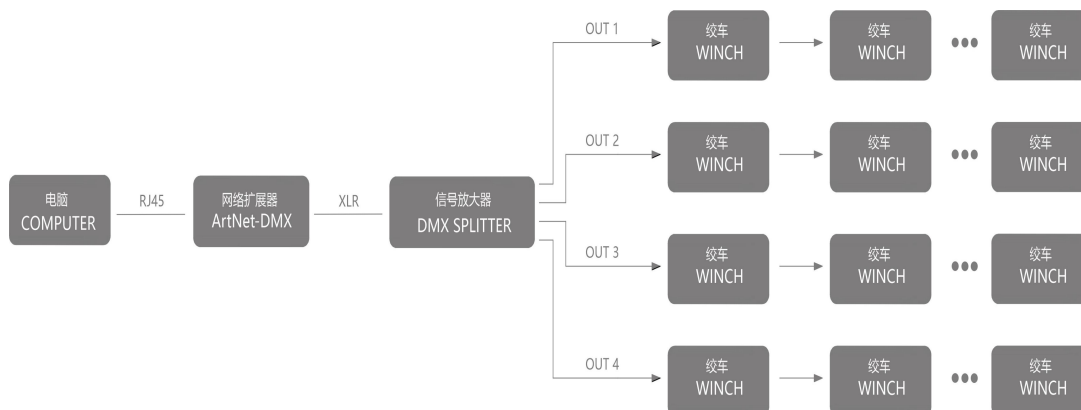
6. External Stage Lights

- Follow the same DMX wiring rules as above.

Performance Mode: Dedicated Lighting Console (MA, Pearl2010, Tiger Touch)



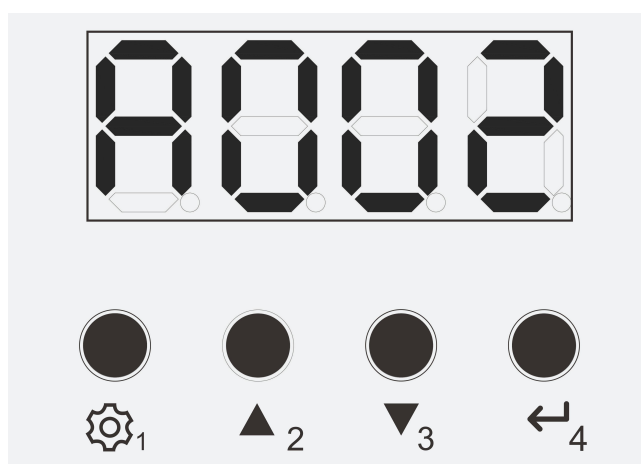
Project Mode: Windows PC+Special Control Software, easy to access the central control



Indicator Light Description

Action	Digital screen	Bottom indicator	
		●	●
Power On	Show "Rest" or firmware version	Steady on	Steady on
No Signal	Show DMX address(slow flash)	Steady on	Steady on
Signal On	Screen off	Steady on	Fast flash
Teamwork	\	Steady on	Alternate fast and slow flash
Error	Error code displayed	Steady on	Off

Control Panel (Table 2)



key①: Main Menu Setting

key ②: Turn Page Up

key③: Scroll Down

key④: Confirm

Basic Setting

NO.	Function	Display Code	Operation Instructions
1	Channel Mode Selection	A001	<ul style="list-style-type: none"> The A prefix indicates 4-channel mode.
2	DMX Address Setting	DMX address: 1-509	<ul style="list-style-type: none"> Press the 『2』 or 『3』 to adjust value, then press 『4』 to save.
3	Lifting Height Setting	L020,L030,L040,L050,L060,L070,L080, L090	<ul style="list-style-type: none"> Long-press 『1』 + 『2』 to enter lifting height menu. Select target code(e.g., L050 for 5m lifting),then press 『4』 to confirm. Press 『1』 to exit, or wait 3s for auto-return.
4	Anti-Slack Rope Protection	P-ON: ON, P-OFF: OFF	<ul style="list-style-type: none"> Press 『2』 + 『3』 to toggle: P-ON: Protection on OFF: Protection off
5	Operation Cycle Count	Numeric value	<ul style="list-style-type: none"> View: Press 『1』 + 『4』 simultaneously; Reset: Long-press 『1』 + 『4』 while powering on.
6	Manual Maintenance Mode	Error code	<ul style="list-style-type: none"> Long-press 『1』for 3s, the lifting cable will rise up 3cm; Long-press 『4』 for 3s, the lifting cable down 3cm.

Channel List

A Mode

Channel	Function	Description
1CH	Lifting	0 ~ 255(0-100%): Down; 255(100%) ~ 0: Up.
2CH	Fine-tune	0 ~ 255(100%):24-bit fine-tuning.
3CH	Brake & speed	0: Brake (Default); 1~255(1-100%): speed from slow to fast.
4CH	Speed & Restart	0~77(0-30%): Slowly speed mode (speed 25 cm/s); 78 (31%) ~ 153 (60%): Medium mode(speed 40 cm/s); 232(91%)~252(99%): Hold for 8 seconds, auto reset (reset)

Fixture Library download: www.dmx-winch.com

Load-adapted Speed

Speed	Safety Loading
Slowly speed with 25 cm/s	Maximum 50KG
Medium speed with 40 cm/s	Maximum 40KG

DMX Lane 1 distance percentage (9 meters as an example)

Channel Value	Distance from the original position
0	0m
25 (10%)	0.9m
51 (20%)	1.8m
76 (30%)	2.7m
102 (40%)	3.6m
127 (50%)	4.5m
153 (60%)	5.4m
178 (70%)	6.3m
204 (80%)	7.2m
230 (90%)	8.1m
255 (100%)	9m

Motor Acceleration/Deceleration Curve Diagram



Note: X-Speed(RPM), Y-Time(S)

Error Code Protoco

Error Code	Description	Solution
Err1	Fall Protection	<ul style="list-style-type: none"> Power off and check if the load(project or fixture) exceeds maximum weight limit at winch cable end.
Err2	Overload Alarm	<ul style="list-style-type: none"> Power off immediately and verify the total suspended load complies with rated capacity specifications.
Err3	Top Strike Warning (on reset)	<ul style="list-style-type: none"> Inspect homing position and limit switches for mechanical obstruction or misalignment.
Err4	Count Alarms	<ul style="list-style-type: none"> Power off and check for cable jamming. Inspect motor assembly. Verify optical encoder signal.
Err5	Teamwork Failure	<ul style="list-style-type: none"> Check all winches in the same DMX chain for individual faults(test winch one by one).
Err6	Top Strike Warning (Runtime)	<ul style="list-style-type: none"> Verify vertical installation. Correct cable exit angle.
Err9	Manual Service Mode	<ul style="list-style-type: none"> /
No Display	Blank Screen	<ul style="list-style-type: none"> Check all the power cable connections. Test fuse continuity. Verify switching PSU output voltage.

Dairy Maintenance Guide

Cycle of detection	Items of Detection
Daily Inspection	<ul style="list-style-type: none"> ■ Visual & Operational Check: Inspect for physical damage and verify no error codes(e.g.,Err1-Err9). ■ Electrical Quick Test: Check power/DMX cables; Monitor voltage stability under load.
Monthly Inspection	<ul style="list-style-type: none"> ■ Electrical System: Test insulation resistance with a megohmmeter. ■ Mechanical Components: Inspect winch lifting cable, motor, roller alignment and reset switches. ■ Tighten winch bolts with torque wrench. ■ Abnormal Noise Detection: During winch working if have noises.
Annual Inspection	<ul style="list-style-type: none"> ■ Motor & Gearbox Maintenance: Motor, and replace key parts. ■ Lifting Cable Full Inspection: Check for internal breaks with magnetic particle tester;

Package Content

Item	Specification	Quantity
Power cable	3*1.25 m ² *1.5m	1PCS
DMX Signal cable	2*0.5 m ² *1.5m	1PCS
Hook	Thickness 30MM*Height 110MM*Width 82MM	2PCS
Safety Cable	3MM*430MM	1PCS
Teamwork Cable	1.5M	1PCS
Balance Bar	4*4*50CM	1PCS
Adapter Cable	RJ45 to DMX 3 PIN	1PCS
User Manual	/	1PCS