SWIT®

GA-PT20E/GA-PT30E/GA-PT40E/GA-PT50E
Motorized Pantograph
Ver: D

USER MANUAL

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Thank you for choosing SWIT products ,please read the instructions before using and keep it for future reference.

Technical parameters

Product model	GA-PT20E	GA-PT30E	GA-PT40E	GA-PT50E
Operating voltage	AC 220V/50Hz			
Work mode	Local control, DMX control			
Stretching speed	10cm/s			
Stretching length	0.5m~2m	0.6m~3m	0.7m~4m	0.8m~5m
Motor power	Lifting motor 60W			
Motor drive voltage	DC 24V			
service life	10,000 lifting cycles.			
Weight-bearing range	2~35kg			
Constant force hinge self-weight	7.5kg	8.5kg	10kg	12kg
Dimensions (mm)	320 x 150 x 495	320 x 150 x 585	320 x 150 x 675	320 x 150 x 765

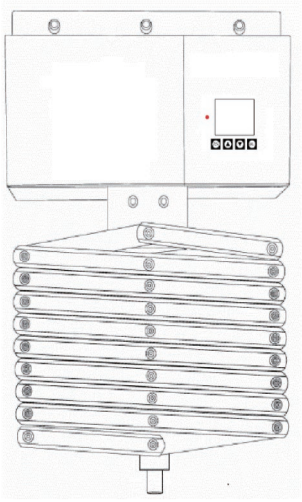


Figure 1 Front view

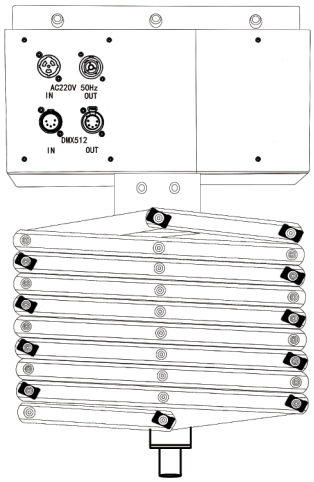
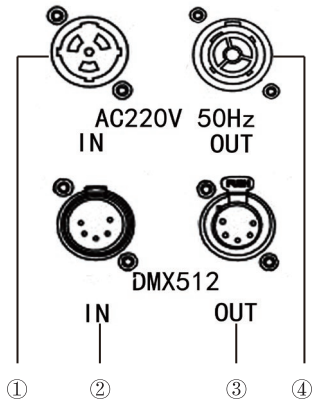


Figure 2 Back view

Precautions

1. Do not disassemble this product without authorization to avoid damage.
2. Do not use this product in outdoor rainy or snowy weather or place it in a humid environment.
3. When installing, ensure that the hinge is fully tightened, and check that all screws or accessories on the hinge are not loose before correctly installing the lamp at the lower end of the hinge.
4. The pantograph cannot be operated without load.
5. Do not hang excessively heavy fixtures, as this may cause damage to the hinge mechanism.

Interface description



① AC input interface

② DMX signal input interface

③ DMX signal output interface

④ AC output interface

Figure 3 Power Supply and DMX Signal Input/Output Interface

Installation Steps

1. Secure the Electric Hinge (Installation Method — Hanging with Lamp Hook)

Connect the thread mouth at the top of the electric hinge with the lamp hook (the top connection can be disassembled to connect the lamp hook). Fix the lamp hook and lamp grille to secure the top of the electric constant force hinge extender outside the track to complete the suspension.

Note: Keep the hinge naturally vertical during installation

Figure 4 Schematic diagram of lamp hook connection

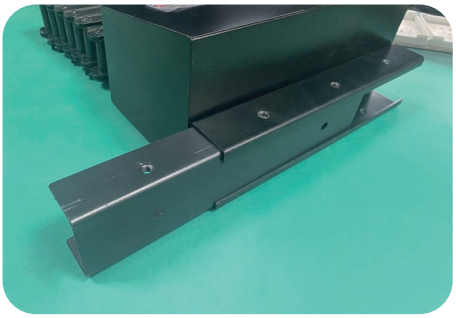


Figure 5 View of the connection

2. Connect the Electric Hinge to the Luminaire

Install the luminaire correctly at the lower end of the hinge, and the lower end of the electric hinge is equipped with a tube-type interface.

1) If the luminaire is mounted with a U-shaped bracket, fix one end of the lamp handle screw with a nut on the luminaire's U-shaped bracket. Use a connecting screw to secure the other end to the tube-type interface;

2) If the luminaire is mounted with a rod-controlled lamp bow, directly use a connecting screw to fix the top to the tube-type interface.

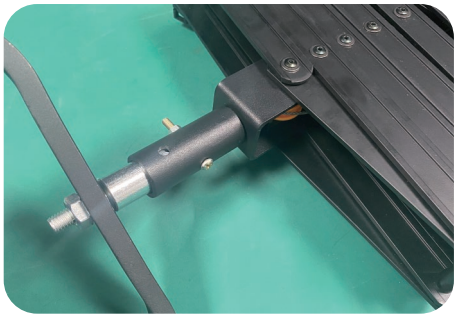


Figure 6 U-shaped Bracket Connection

Figure 7 Rod-controlled Lamp Bow Connection

3.Cable fixing

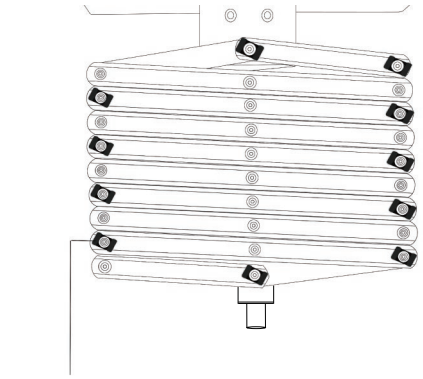


Figure 8 Cable Flxing Slot

Figure 9 Cable Fixing and Arrangement

There is a fix slot on the back of the hinge telescopic frame. Arrange the cables and use cable ties in combination with the slot to fix the cables to each part of the electric hinge telescopic frame, enabling them to stretch together with the electric telescopic frame.

4. Turn on the pantograph power supply, adjust the hinge according to requirements, and adjust the height of the lamp.

Control panel and its usage

Plug in the power cord. If the display lights up, it indicates that the power input is normal. The display interface is shown in Figure 10.

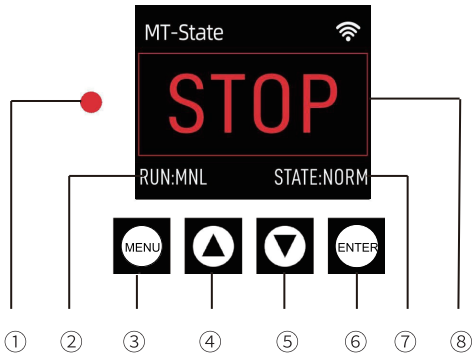


Figure 10 Control Panel

No.	Name	Function description
①	Indicator light	Used with ⑦ and ⑧ to indicate the operating status of the hinge
②	Instructions for operating method	Current working mode indication: Manual control mode or DMX control mode
③	MENU	Press this key to enter the main menu and make more settings.
④	Parameter increase key / Select menu upwards	The parameter increase or make an upward selection
⑤	Parameter down key / Select menu downwards	Parameter decrease or make a downward selection
⑥	ENTER	Parameter confirmation
⑦	Hinge status indication	**[NORM]** The hinge position is between the longest and shortest extreme values. **[LIMI]** If the indicator light (Figure 10 ①) flashes simultaneously, it indicates that the hinge is in the limit position.
⑧	Operating status indication	**[STOP]** The hinge stops running **[UP]** The hinge contracts upward **[DOWN]** The hinge extends downward

Table 1 Names and Function Descriptions of Various Parts of the Control Panel

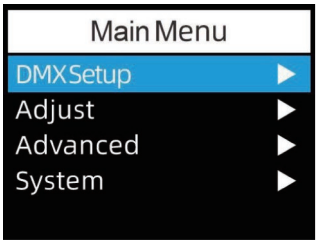


Figure 11 [Main Menu] Display Interface

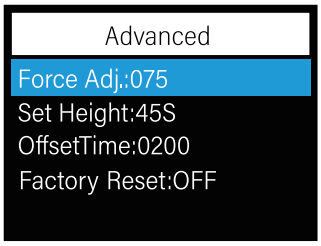


Figure 12 [Advanced Features] Display Interface

Press the “MENU” key on the control panel (③ in Figure 10) to enter the hinge main menu (Figure 11) for more settings.

Note: The value is displayed in red when it is not confirmed and saved.

<table>
<tr><th>No.</th><th>List</th><th>Function description and usage</th></tr>
<tr><td>1</td><td>DMX Setup</td><td>Set the DMX address. The address range is: 001 - 512</td></tr>
<tr><td>2</td><td>Adjust</td><td>Under this menu, press the “ENTER” key (⑥ in Figure 10) to enter the “Manual Adjustment Interface”. By long-pressing the two keys ④/⑤ in Figure 10, you can manually adjust the hinge position.
1. Long press the button shown in Figure 10 ④: contract the hinge upwards;
2. Long press the key shown in Figure 10 ⑤: Stretch the hinge downwards.</td></tr>
<tr><td>3</td><td>Advanced</td><td>
1.To enable this function, a password is required.
Press the “ENTER” key (Figure 10 ⑥) to enter the password input interface. Follow the prompts and use the keys in Figure 10 ④/⑤ to enter the password: 888. Then press the “ENTER” key (Figure 10 ⑥) to enter the “Advanced Functions” interface (Figure 12).
2.Strength adjustment
1) Parameter range: 015–200, adjustment step: 5
2) Meaning: The higher the value, the stronger the load-bearing capacity.
3) Parameter adjustment method:
Use the "▲/▼"keys (Figure 10 ④/⑤) to modify the parameter, and press the "ENTER"key (Figure 10 ⑥) to save the parameter.
4) Experimental reference data are shown in the table on the right.
<table>
<tr><th>No.</th><th>Hinge load capacity</th><th>Strength</th></tr>
<tr><td>1</td><td>10Kg</td><td>75</td></tr>
<tr><td>2</td><td>15Kg</td><td>80(Factory default setting)</td></tr>
<tr><td>3</td><td>20kg</td><td>85</td></tr>
<tr><td>4</td><td>30Kg</td><td>95</td></tr>
<tr><td>5</td><td>35Kg</td><td>110</td></tr>
</table>
3.Set Height
1) Definition: Refers to the time required for the hinge to descend to the lowest height.
Note: Set the "Height Adjustment"value according to the hinge's maximum drop height:
• Increasing the height adjustment parameter will increase the actual telescopic length of the hinge;
• Reduce the height adjustment parameter, and the actual telescopic length of the hinge will be shortened.
2) Parameter range: 05S–95S
3) Parameter adjustment method
Use the"Parameter Up/Down"keys (Figure 10 ④/⑤) to modify the parameter, and press the" ENTER"key (Figure 10 ⑥) to save the parameter.
4) Experimental reference data are shown in the table on the right.
<table>
<tr><th>No.</th><th>Types of hinges</th><th>The time required to adjust to the minimum height</th></tr>
<tr><td>1</td><td>GA-PT20E (Maximum drop height 2m)</td><td>32s</td></tr>
<tr><td>2</td><td>GA-PT30E (Maximum drop height 3m)</td><td>45s</td></tr>
<tr><td>3</td><td>GA-PT40E (Maximum drop height 4m)</td><td>60s</td></tr>
<tr><td>4</td><td>GA-PT50E (Maximum drop height 5m)</td><td>74s</td></tr>
</table>
4.Offset Time
1) Definition: The buffer time when the motor starts and stops.
Note: Setting an appropriate buffer time helps protect the lighting fixture and avoid sudden starts and stops.
2) Parameter range: 0000–9999 (default value: 0200)
3) Parameter adjustment method:
Use the “Parameter Up/Down” keys (Figure 10 ④/⑤) to modify the parameter, and press the “ENTER” key (Figure 10 ⑥) to save the parameter.
5.Factory Reset
Enable this function and press the “ENTER” key (Figure 10 ⑥), and the hinge control module will be fully restored to the factory default settings.
6.DMX Mode
1) Parameter range: 2CH or 3CH
A. The DMX mode parameter is 2CH. If the DMX address is N, then:
<table>
<tr><th>DMX Mode</th><th>Channels</th><th>Channels</th></tr>
<tr><td rowspan="2">2CH</td><td>N</td><td>Upward retractable hinge</td></tr>
<tr><td>N+1</td><td>Downward stretching hinge</td></tr>
</table>
B. The channel mode parameter is 3CH. If the DMX address is N, then:
<table>
<tr><th>DMX Mode</th><th>Channels</th><th>Functions</th></tr>
<tr><td rowspan="3">3CH</td><td>N</td><td>1) CH(N)=100,Unlock the functions of N+1 and N+2 channels;
2) CH(N)= 200, reset</td></tr>
<tr><td>N+1</td><td>Upward contracting hinge</td></tr>
<tr><td>N+2</td><td>Downward stretching hinge</td></tr>
</table>
2) Parameter adjustment method
Modify the parameters through the “Up/Down” keys (④/⑤ in Figure 10), and press the “ENTER” key (⑥ in Figure 10) to save the parameters.
</td></tr>
<tr><td>4</td><td>System</td><td>1. VER: V1.3.3
2. Backlight Time: It can be set to “ALWAY” or a specific value (range: 003S - 100S)
3. Language: Allows users to configure the system language.
4. Display Inverse: Enabling this function will invert the screen display.</td></tr>
</table>

Frequently Asked Questions and Solutions

No.	Problem	Possible reasons	Solution
1	The hinge cannot drop to the expected position.	Low force parameter setting results in the hinge' s load capacity not matching the actual load.	Increase the value of the "Set Moment" parameter and try multiple times until the hinge can lower to the expected position.
2	The hinge cannot drop to the expected position, and the display shows the code "LIMI".	The parameter value of "Set Height" is set inappropriately.	Adjust the parameter value of "Set Height" and try multiple times until the hinge can lower to the expected position.
3	The hinge can drop to the expected position, but it cannot rise further when retracting to a certain position (not reaching the limit position).	Low force parameter causes insufficient hinge load capacity.	Increase the force parameter value and try multiple times until the hinge can retract to the appropriate position.
4	The hinge has not retracted to the limit position, but when the "▲" button is pressed, the hinge cannot continue to retract upward.	The "LIMI" indicator on the display screen remains ON. P.S.: This issue often occurs during the process of solving problem No. 3.	First, press the "▼" button to make the hinge drop slightly. When the display shows "NORM", press the "▲" button to retract the hinge upward.
5	The hinge has not retracted to the limit position, but when the "▲" button is pressed, the hinge cannot continue to retract upward.	If the parameter value of "Set height" is set too large, the hinge will roll backward and get stuck: if the hinge rolls backward and retracts to the "LIMI" indicated on the display screen, the hinge will get stuck. At this time, you cannot press the "▲" button to retract upward or the "▼" button to lower the hinge.	Return to the factory for repair

Packing list

No.	Packing details	Quantity
1	Electric hinge	x 1
2	Three-core aviation power plug (input)	x 1
3	Three-core aviation power plug (output)	x 1
4	5pin XLR(male)	x 1
5	5pin XLR(female)	x 1
6	Connecting screws	x 1
7	lamp handle	x 1
8	Insert a needle	x 1
9	Zip Ties	several