

SWIT®

GA-PT20E/GA-PT30E/GA-PT40E/GA-PT50E

Motorized Pantograph

Ver:B

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 | 2~30kg | | | |
| 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 |

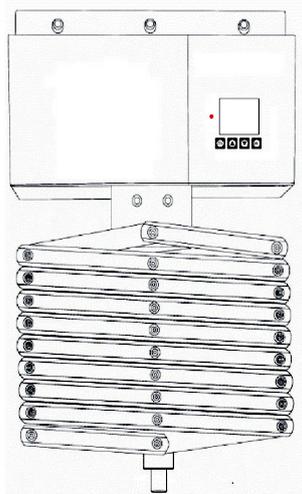


Figure 1 Front view

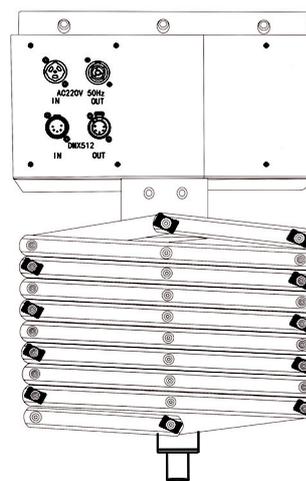
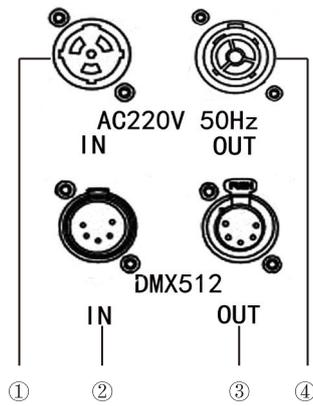


Figure 2 Back view

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.

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

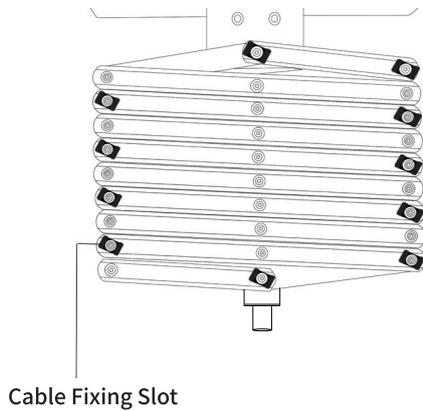


Figure 8 Cable Fixing Slot



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.

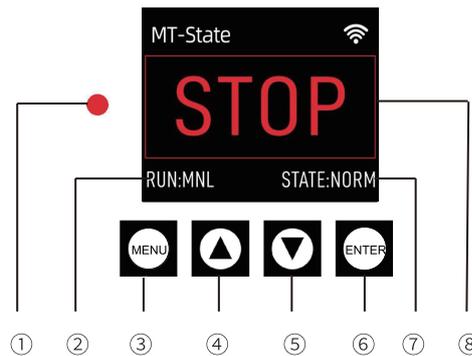


Figure 10 Control Panel

| 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 has retracted to the limit value and cannot continue to retract upwards. |
| 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

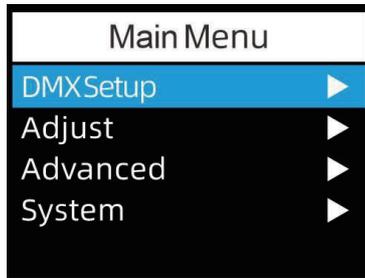


Figure 11 [Main Menu] Display Interface



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.

| No. | List | Function description and usage | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|------------------------|---|-----|------------|--|---|------------------------|-----|---|------------------------|-----|----------|----------|----------|-----|---|--------------------------|-----|---------------------------|----------|----------|-----------|-----|---|--|-----|--------------------------|-----|---------------------------|
| 1 | DMX Setup | Set the DMX address. The address range is: 001 - 512 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Adjust | 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Advanced | <p>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).</p> <p>2.Set Moment 1) Parameter range: 015–200, adjustment step: 5 2) 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. 3) Test reference data: To hang a lighting fixture of approximately 15kg, the required force parameter is 80 (factory default value is 80).</p> <p>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. 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) Test reference data</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Hinge Type</th> <th>Time required to reach the lowest height</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Maximum drop height 2m</td> <td>30S</td> </tr> <tr> <td>2</td> <td>Maximum drop height 3m</td> <td>45S</td> </tr> </tbody> </table> <p>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.</p> <p>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.</p> <p>6.DMX Mode 1) Parameter range: 2CH or 3CH A. The DMX mode parameter is 2CH. If the DMX address is N, then:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DMX Mode</th> <th>Channels</th> <th>Channels</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>B. The channel mode parameter is 3CH. If the DMX address is N, then:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DMX Mode</th> <th>Channels</th> <th>Functions</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>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.</p> | No. | Hinge Type | Time required to reach the lowest height | 1 | Maximum drop height 2m | 30S | 2 | Maximum drop height 3m | 45S | DMX Mode | Channels | Channels | 2CH | N | Upward retractable hinge | N+1 | Downward stretching hinge | DMX Mode | Channels | Functions | 3CH | N | 1) CH(N)=100,Unlock the functions of N+1 and N+2 channels; 2) CH(N)= 200, reset | N+1 | Upward contracting hinge | N+2 | Downward stretching hinge |
| No. | Hinge Type | Time required to reach the lowest height | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Maximum drop height 2m | 30S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Maximum drop height 3m | 45S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DMX Mode | Channels | Channels | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2CH | N | Upward retractable hinge | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | N+1 | Downward stretching hinge | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DMX Mode | Channels | Functions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3CH | N | 1) CH(N)=100,Unlock the functions of N+1 and N+2 channels; 2) CH(N)= 200, reset | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | N+1 | Upward contracting hinge | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | N+2 | Downward stretching hinge | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | System | 1. VER: V1.3.2 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 |
