

XT7600 Trouble Shooting Procedure:

I. Error Code E1

a. Error Status 1:

Error Status 1	Problem Analysis	Trouble Shooting
Turn on power, and then press start button. DC motor does not start to rotate, and the treadmill has no movement. The window shows E1 after 6 seconds.	The cable between MCB and PCB is not plugged properly.	Check whether the cable between MCB and PCB is plugged properly.
	MCB is broken down or burned.	Check whether MCB LED light operate normally: Check Step: <ol style="list-style-type: none"> <li>1. Power on the treadmill, 4 green LED should be lighted up (D1, D8, D12, D16).</li> <li>2. Start the treadmill, and check whether D21 and D25 yellow LED are lighted up. If any of LED light does not lighted up. It means the MCB is broken, and needs to replace a new one.</li> </ol>
	DC motor power cord does not plug properly.	Check whether DC motor power cord is plugged properly.
	DC motor is broken.	If MCB operate normally, check whether DC motor is burned.

b. Error Status 2

Error Status 2	Problem Analysis	Trouble Shooting
Turn on power, and then press start button. DC motor does not start to rotate, and the treadmill has no movement. The window shows E1 after 6 seconds.	The speed sensor is not plugged properly.	Make sure speed sensor is plug to MCB socket (J3) properly.
	The magnet on the side of the driving wheel is fallen off.	Check whether the magnet on the side of the driving wheel is fallen off.
	The magnet on the side of the driving wheel with the wrong side cause false polarity.	Make sure the south pole of the magnet should be face outside of the driving wheel, and the north pole side should be embedded in the driving wheel.
	The distance between the speed sensor and magnet is too far away. So the sensor cannot detect speed.	Loose the speed sensor screw, and adjust the distance between the sensor and magnet (The distance should be 5~8mm). The magnet should close to side of the speed sensor, not mid point. Make sure all setup, and tighten up screws.
	Speed sensor breakdown	Please follow HALL SENSOR Inspection procedure.
	The insulation of the cable is worn out.	Check whether the cable insulation which J2 connect to J1 is damage. Follow HALL SENSOR Inspection procedure to check speed sensor.
	Electricity current or torsion of the DC motor is not properly.	Adjust electricity current (13~14 A) and torsion until the operation is smoothly, not vibrating.

## II. Error Code: E6

### a. Error Status 1

Error Status 1	Problem Analysis	Trouble Shooting
Turn on the treadmill power, and the display window show E6	(AC) Elevation motor power cord is not plugged properly.	Make sure the (AC) motor power cord is plugged in J4 socket on the incline drive board.
	The bolt and nut which are on the top of the elevation motor is too tight and impact the movement of changing angle during motor inclining or declining.	Follow the elevation motor replacement procedure to check whether the bolt and nut are too tight.
	The motor screw pipe is locked up, and it cannot move or go back the initial position.	Follow the elevation motor replacement procedure to check whether screw pipe can rotate normally.
	The screw of the front leg support is too tight, so the front leg support cannot move smoothly.	Follow the elevation motor replacement procedure to check whether tightness of screw of the front leg support is too tight.

b. Error Status 2

Error Status 1	Problem Analysis	Trouble Shooting
<p>Power on the treadmill, and the press <b>INCLINE</b> <b>HIGH</b> button. The motor should lift up the treadmill from 0% to (12%) 15%. If elevation movement does not match the setting, and the motor stop work. After 6 seconds, machine stop working and console display show the error code <math>\text{E6}</math>.</p>	<p>When the elevation motor does not lift up enough to the setting, system will check the motor status automatically. However, the incline motor stop moving, machine stop operating and show error code <math>\text{E6}</math>.</p>	<p><b><u>Solution I:</u></b> Follow the incline motor replacement procedure. Check buffer distance between the motor and the pipe screw. The gap should be 5~8 mm between the end of the cline motor and the end of the screw pipe. Make sure the height of the screw pipe is the same as the frame.</p> <p><b><u>Solution II:</u></b> Keypad adjustment: use keypad to reset the incline motor. This solution is applied to (XT-2700/3200/3300/5600 /5700/7000/7600) Please see page 8</p> <p><b><u>Solution III:</u></b> Mechanical adjustment: adjust motor and frame to reset the incline motor. Please see page 10. This solution applied to XT-2600/3200/5600/7000/7600</p>

Drive Board (Lower Board) Display Picture:



(XT-2007/3200/3300) Drive Board

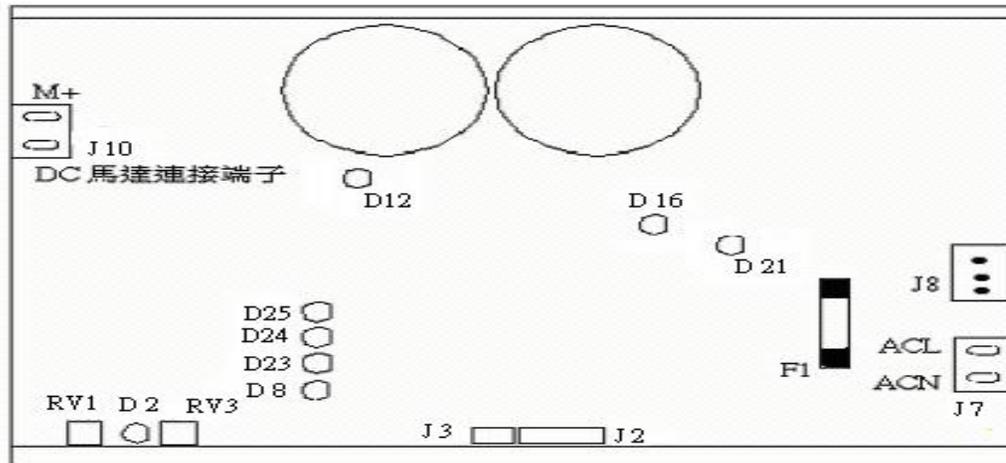


(XT-5600/5700/7000) Drive Board



(XT-5600/5700/7000/XT7600) Drive Board

Drive Board LED Placement Diagram:



## DC Motor Adjustment:

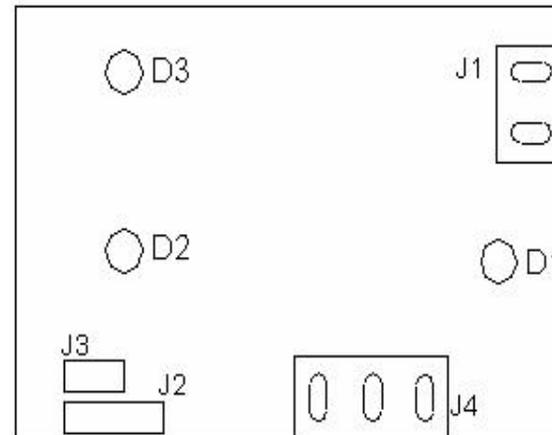
RV1: Torsion adjustment.

RV3: DC motor limited electricity current adjustment.

## Meaning of the LED light:

- D16 : DC 12 Power Light ó It should be lighted up right after power on.
- D12 : DC5V Power Light ó It should be lighted up right after power on.
- D21 : Motor Power Output Light ó The light is on after the start button is pressed.
- D8 : Upper Board Power Light ó It should be lighted up right after power on.
- D25 : Motor Starting Light ó When motor start, the light is on.
- D24 : Deceleration Light ó The light will flesh when the motor in deceleration mode.
- D23 : Acceleration Light ó The light will flesh when the motor in acceleration mode.
- D2 : Drive Board Protection Light ó When drive board is in the protection mode, the red LED light is on.

AC elevation motor control board LED display picture/diagram:



Version II

P.S.

Version I: Two Relay on the board

Version II: No Relay on the board.

LED Light on the Elevation Control Board:

D1 : Elevation Motor Power Light (Green).

D3 : Incline Light (Yellow).

D2 : Decline Light (Yellow).

## Not Foldable Treadmill Elevation Motor (õE6ö, õE7ö) Trouble Shooting (XT-2700/3200/5600/7000/7600):

### I. Keypad adjustment: applied to (XT-27/32/33/56/57/7000/7600)

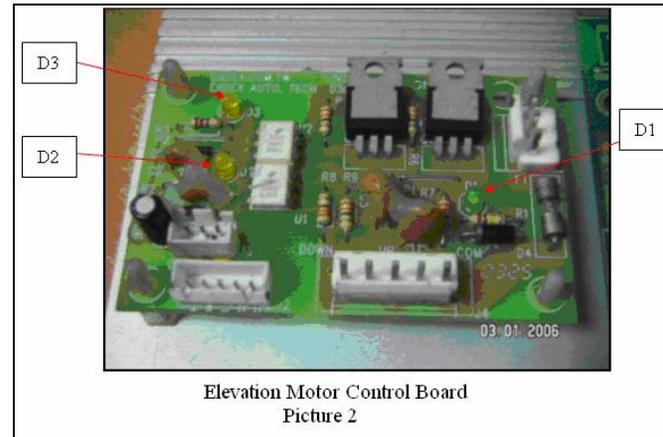
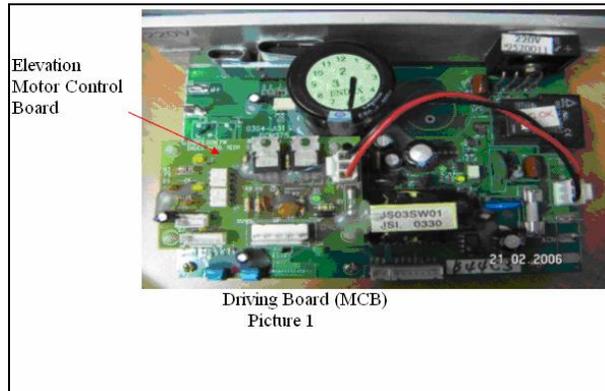
**Condition I:** The treadmill at the lowest degree (The incline motor screw pipe may be locked up)

**Solution:** Press õSTOPö and elevation switch õUPö buttons, make the treadmill incline to below 10% and release buttons. Press õSTARTö button again. The elevation motor will automatically adjust and reset to the initial height.

**Condition II:** The treadmill at the highest degree (The incline motor screw pipe may be locked up)

**Solution:** Press õSTOPö and elevation switch õDOWNö buttons, make the treadmill decline to below 10% and release buttons. Press õSTARTö button again. The elevation motor will automatically adjust and reset to the initial height.

As picture 1 and 2, check whether LED lights are on as chart 1 to identify the elevation motor control board condition.



### LED Light Description of the AC Elevation Motor Control Board

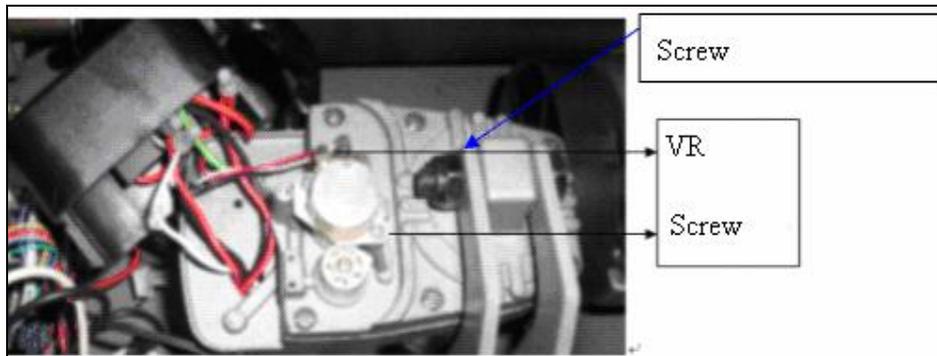
LED	Function	Description	Status
D1	AC Motor Power Light (Green)	Turn on the power and the light is on	OK
D2	Decline Light (Yellow)	Press decline button, the LED light is on.	OK
D3	Incline Light (Yellow)	Press incline button, the LED light is on	OK

(Chart 1)

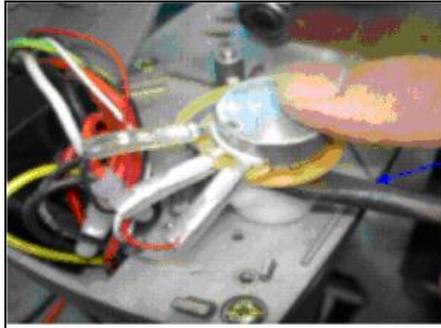
## II. Mechanical Adjustment: applied to (XT-2600/3200/5600/7000/7600).

### a. Step 1:

1. Power off the treadmill.
2. Lift off the motor cover, and removing incline motor plastic cover.
3. Check J4 (incline motor power) is plugged properly.
4. Check motor VR (J3) is plugged properly on the incline motor control board.
5. Remove screws to fix VR (2PCS) picture 3.
6. Press the top of VR slightly, and use slotted screwdriver to unclench VR as picture 4.
7. Remove the VR (adjustable resistor) as picture 5.
8. The VR wire connection picture as picture 6.

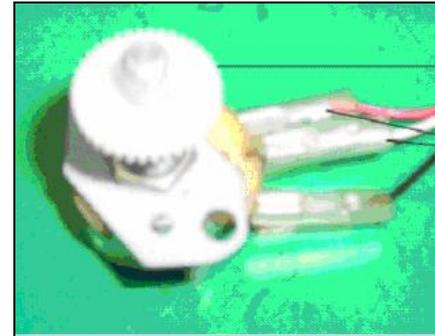


(Picture 3)



Use the slotted screwdriver to unclench VR.

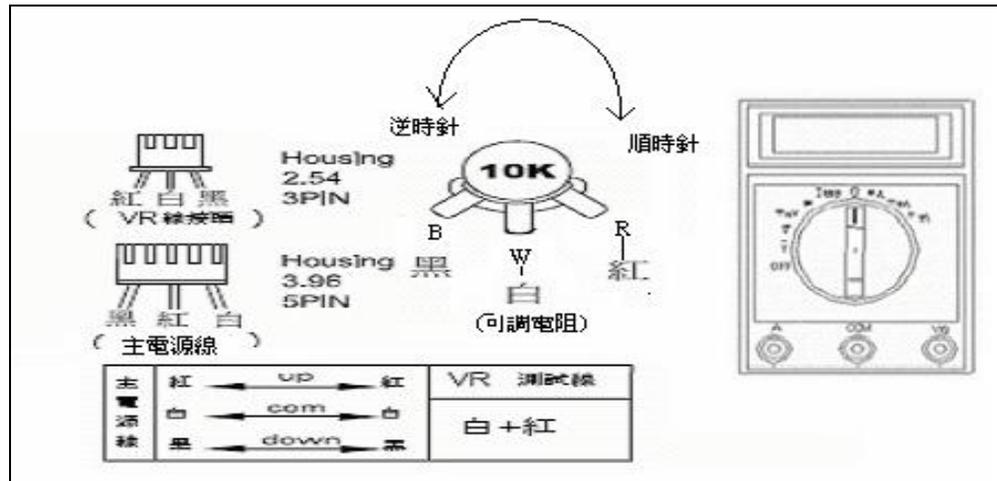
(Picture 4)



Adjustable VR gear wheel

Ohm testing wire (red/white)

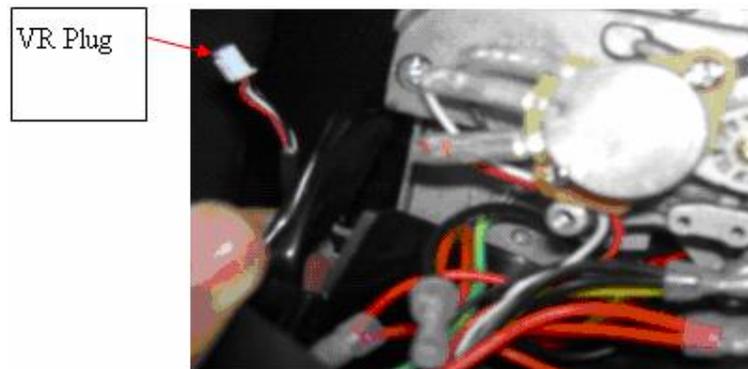
(Picture 5)



(Picture 6) VR (Adjustable Resistor) wire connection diagram

b. Step 2:

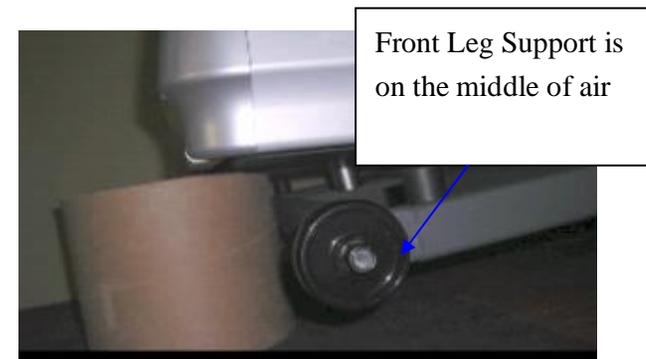
- 1 Set multimeter to Ohm mode, place probes on VRø white and red cable to measure.  
P.S. Before starting to measure VR, take off the VR plug which is plugged in the incline motor control board (J3-3Pins) as picture 7.
- 2 Measurement Steps:
  - 2.1 Turn VR gear wheel, and the reading is between 1.5K ~2.0K as picture 6.
  - 2.2 Turn VR gear wheel clockwise direction to the end, and turn counterclockwise direction half rotation.
- 3 Tighten VR to the incline motor as picture 3.



(Picture 7)

### c. Step 3

- 1 Use a piece of wood to lift up the frame, and make sure the front leg support is suspended in the air and not touch anything as (picture 8), or flip the treadmill 90 degrees. Remove the bolt and the nut to hold the screw pipe as (picture 9).
- 2 Check:
  - 2.1 Check the elevation motor moving direction to see whether the fixed bolt and nut are too tight to cause error codes `0E6` and `0E7` because the motor cannot change angle during moving.
  - 2.2 Check both side of the front leg support screws are too tight to cause error codes `0E6` and `0E7` because the motor cannot change angle during moving.
- 3 Make sure the screw pipe does not touch anything as picture 11
- 4 Power on the treadmill
- 5 Press `START` key. (The arm of elevation motor will move to its initial position.)  
P.S. Be careful the running belt will rotate when starting the treadmill.
- 6 After the arm of the elevation motor is back to the initial position, power off the treadmill.



Picture 8



The screw of the screw pipe (picture 9)

d. Step 4:

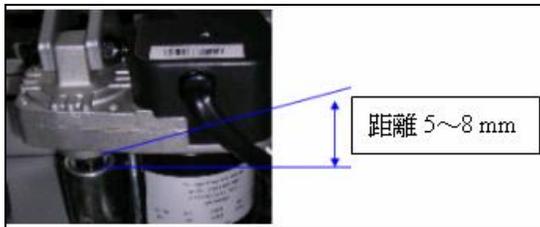
- 1 Turn the screw pipe 5~8mm closed to the top as picture 11/ 12
- 2 Tighten the screw pipe and front leg support to their fixed position.
- 3 Power on the treadmill and test the elevation motor again.



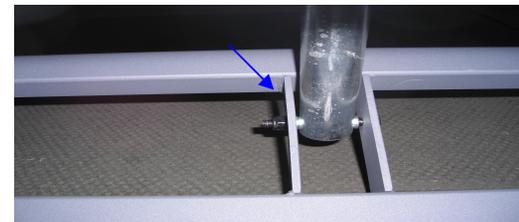
Front Leg Support Screw  
(Picture 10)



Rotating Screw Pipe  
(Picture 11)



Adjust gap between screw pipe and motor.  
(Picture 12)



Bolt and Nut to fix the screw pipe and front leg support  
(Picture 13)

P.S. If the screw pipe's plastic threads are damaged or worn out, replace the screw pipe.

## Examination AC elevation motor:

### Testing Procedures:

- 1 Power off the treadmill.
- 2 Remove the motor cover, and check whether all power cords, cables, and signal cables are plugged properly.
- 3 Power on the treadmill.
- 4 If E6 or E7 error code show on the main display window, please execute E6 and E7 trouble shooting procedure.
- 5 If the elevation motor does still not work after executing E6 and E7 trouble shooting procedure. Please execute following procedures to fix the issue.
  - 5.1 If treadmill is lower than 0% (The screw pipe may be locked).
  - 5.2 If treadmill is higher than 12% or 15% (The screw pipe may be locked).
- 6 Press the START button, and make sure the treadmill runs in the lowest speed (0.8KPH).
- 7 Use the elevation switch to test whether the inclining light (D3) and the declining light (D2) is operated. Descriptions of the lights are shown in chart 1.
  - 7.1 Press Up button of the elevation switch, and the D3 is on. It means the inclining function of the elevation motor control board is worked.
  - 7.2 Press Down button of the elevation switch, and the D2 is on. It means the declining function of the elevation motor control board is worked.

P.S. If inclining and declining functions of the elevation motor control board are worked. It means the AC elevation motor is broken.
  - 7.3 If press Up button of the elevation switch, and the D3 is still off. Replace the new elevation motor control board.

7.4 If press 'Down' button of the elevation switch, and the D2 is still off. Replace the new elevation motor control board.

LED Light Description of the AC Elevation Motor Control Board			
LED	Function	Description	Status
D1	AC Motor Power Light (Green)	Turn on the power and the light is on	OK
D2	Decline Light (Yellow)	Press decline button, the LED light is on.	OK
D3	Incline Light (Yellow)	Press incline button, the LED light is on	OK

(Chart 1)