RM2-T installation instructions

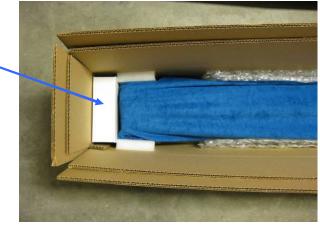*Note 1): These screens are assembled in USA. All screws and nuts are in imperial standards.*

Note2): Two persons are required to install the screen. Do not try to do it without the help of a second person

Contents

1) Pull the inner box out of the outer box using the white plastic pull straps that are mounted to the inner box. Make sure you use both handles per side so they will adequately lift the approximately 50 to 70 pound load. Open the inner box (the straps will have to be peeled off) and you'll see the bubble wrap top lining and a white box that contains the screen accessories. Remove the bubble wrap top layer, the accessories box, and the screen with its velvet bag still on. Then carry these two items to the installation location.

2) Slide off the screen case protective velvet bag and set aside.

> ➢ Leave the internal, foam wrap on the screen. We taped it so that you can install the screen with this wrap on and avoid scratching up the case.
> ➢ PLEASE, save your box and packaging supplies. It's quite costly to ship out replacement packaging supplies, because while we can fold the boxes up fairly compactly, they are dimensionally expansive to ship and complicated with regard to placing the packaging components correctly.

3) The contents of the white accessories box will of course vary depending on what control peripherals you bought. As standard there is provided a rocker switch.

All screens come with a bag of 5, 18-8 stainless steel #12-2" screws to mount the DIN bar to the wall or ceiling. These screws require a 3/16" pilot screw drill and a #3 drive bit.

Electric Screen Installation Instructions

Wall Mount

1) Look on the back side (since it's a wall mount) and you'll see the metal DIN rail that will mount to the wall. There are two screws fixing this into the case for shipment. Loosen these two screws to get the rail out and note how the French cleat design works. You'll be doing the opposite on the wall.

2) Locate the bag in the white remote box that has the five stainless steel truss head screws. Use a spirit level and mount the DIN rail to your wall using these 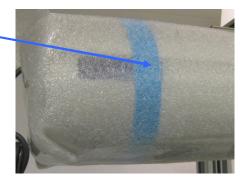screws. If you have a very curvy wall, you can space out a screw or two with washers or shims. You don't want the DIN rail to be curvy, or else the case won't engage all the way. Make sure at least three screws are securely mounted into a stud.

3) After the DIN rail is up and level, you can pick up the screen. Put your finger on the closest screw to your end so you can approximate the ~1.5" from the end of the DIN rail that the screw will engage.

4) Approach the DIN rail with the screen case tilted up at a 30-40 degree angle. Your goal is to hook the extruded bevel into the top of the DIN rail fully. Once you have got that, you can then rotate the screen down to its resting spot and the DIN rail should then nest inside that slot, just like it was when it was shipped to you.

5) You can slide the case on the wall to make sure it's where you want.

9) When it's where you want, there are six screws along the bottom of the case. Tighten these so that the screen will be securely affixed to the DIN rail.

6) Remove the foam wrap off the case.

7) Note there are several pieces of tape and things that keep the materials where they should be. First, undo the blue Velcro straps you see on each end. These keep the weight bar happy during shipment, but **must** be taken off prior to operating the screen.

8) We tie small black strings in each corner that attach the black backing layer to the weight bar. This ensures that it will retract properly from the case.
Then reach up and pull down the black backing material in the middle and make sure it's down and will drop freely. You really

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want to make sure it's free to drop before you let the screen surface go down. <u>Getting that layer backwards-wound in the case is a disaster.</u>

9) Connect the Mains supply ground and neutral to the green & yellow wire and to the blue wire of the motor, respectively. Then connect the live of the Mains to the central contact of the rocker switch, the brow motor wire to the UP position of the rocker switch and the black motor wire to the down position.

10) Don't worry about the tape on the weight bar. You can get that off after you drop the screen. After you are sure the black backing is free to drop and all other blue bits are off the screen, plug it in and hit the down button.

11) Check that the lower limit is ok, then remove any remaining blue bits.

12) Check the vertical turnbuckles at the weight bar. Make sure they're not bound up, either with the cables twisted at the top of the eyelet, or the threads on the bar. If they are, the bar will be artificially lifted, resulting in waves. Straighten any twisted cable and wiggle the bar to get it off the threads.

13) Check how the vertical cable and turnbuckles retract up into the screen case. You want them to easily retract up into the case, without getting caught or hung up on either the front side of the case near the foam strip, or the back side. If you hear any "clunk" sound, or see the motor bog down before the screen is all the way up, check that these turnbuckles aren't getting hung up. The fix is to just grab the metal portion of the weight bar and rotate a few degrees to better align the turnbuckles into the slot.

14) If there is provided a remote control system, disconnect completely the rocker switch and connect the motor wires to the control system. See the corresponding chapter below.

Ceiling Mount

1) Look on the top side (since it's a ceiling mount) and you'll see the metal DIN rail that will mount to the wall. The front side of the rail is painted to match your case color. There are two screws fixing this into the case for shipment. Loosen these two screws to get the rail out and note how the French cleat design works. You'll be doing the opposite on the ceiling.

2) Locate the bag in the white remote box that has the five stainless steel truss-head screws. These screws are intended for most standard ceilings and wood joists. If you have a nonstandard ceiling type, just make sure that you use appropriate load-bearing screws mounted into load-bearing members. The DIN bar can accommodate up to #12 screws. The screen weighs approximately 50-70 pounds, but you must make sure the mounting technique you're using is rated for at least 4 times that weight.

Mark where your DIN rail bar is to be mounted to the ceiling joists. Install using the included SS screws (or your substitute). At least three screws, securely mounted into your joists, are required. If you have a very curvy ceiling, you can space out a screw or two with washers. You don't want the DIN rail to be curvy, or else the case won't engage all the way.
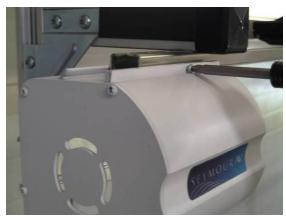
 Giving the DIN rail a little squeeze with pliers will narrow the distance the case needs to engage onto, making it an easier mount.

3) After the DIN rail is up and level, you can pick up the screen. Put your finger on the closest screw to your end so you can approximate the ~1.5" from the end of the DIN rail that the screw will engage.
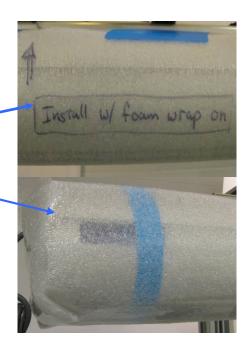
4) Approach the DIN rail with the screen case tilted down at a 30-40 degree angle. Your goal is to hook the extruded bevel into the back of the DIN rail fully. Once you have got that, you can then rotate the screen up to its resting spot and the DIN rail will nest inside that slot, just like it was when it was shipped to you. You must tighten at least one screw on each end so the case holds onto the rail.

NOTE: There have been installations where the ceiling was curvy enough and the DIN bar was mounted flush enough so that it also had too much curve in it to mate to the case easily. If you encounter this issue and have the space, you can alternatively engage the case onto the bar on one or two screws on the end, and simply slide the case along, extending but not tightening the case screws as you slide it along.

 If you find the case won't engage over the DIN rail on one side, there must be some mounting forces that are spreading it wider (curve, etc.) Take the end that isn't engaging and give it a squeeze with pliers, narrowing it enough to engage fully into the case.

5) If you loosen the screws just enough so they don't bite into the rail, but are protruding enough to hold the case on the rail, you can slide the case along the ceiling to make sure it's where you want. Feel free to bump the case into "exactitude".

6) When it's where you want, there are six screws along the top of the case. Tighten these so that the screen will be securely affixed to the DIN rail. There are arrow marks on the foam wrap showing you where they are.

7) Remove the foam wrap off the case.

8) Note there are several pieces of tape and things that keep the materials where they should be. First, undo the blue Velcro straps you see on each end. These keep the weight bar happy during shipment, but **must** be taken off prior to operating the screen.

9) We tie small black strings in each corner that attach the black backing layer to the weight bar. This ensures that it will retract properly from the case.
Then reach up and pull down the black backing material in the middle and make sure it's down and will drop freely. You really want to make sure it's free to drop before you hit the remote. Getting that layer backwards-wound in the case is a disaster.

10) Leave the tape on the weight bar. You can get that off when first dropping the screen. After you are sure the black backing is free to drop and all other blue bits are off the screen, plug it in and hit the down button.

11) Connect the Mains supply ground and neutral to the green & yellow wire and to the blue wire of the motor, respectively. Then connect the live of the Mains to the central contact of the rocker switch, the brow motor wire to the UP position of the rocker switch and the black motor wire to the down position. When the power is applied to the up or down power wire (see the chart below), the motor will continue travelling until it reaches its mechanically-set limits. Typical screen motoring times are about 15-20 seconds depending on size and aspect ratio.

	Ground	Neutral	Screen Up	Screen Down
230v	Yellow/Green	Blue	Brown	Black

12) Check that the lower limit is ok, remove any remaining blue bits.

13) Check the vertical turnbuckles at the weight bar. Make sure they're not bound up, either with the cables twisted at the top of the eyelet, or the threads on the bar. If they are, the bar will be artificially lifted, resulting in waves. Straighten any twisted cable and wiggle the bar to get it off the threads.

14) Check how the vertical cable and turnbuckles retract up into the screen case. You want them to easily retract up into the case, without getting caught or hung up on either the front side of the case near the foam strip, or the back side. If you hear any "clunk" sound, or see the motor bog down before the screen is all the way up, check that these turnbuckles aren't getting hung up. The fix is to just grab the metal portion of the weight bar and rotate a few degrees to better align the turnbuckles into the slot.
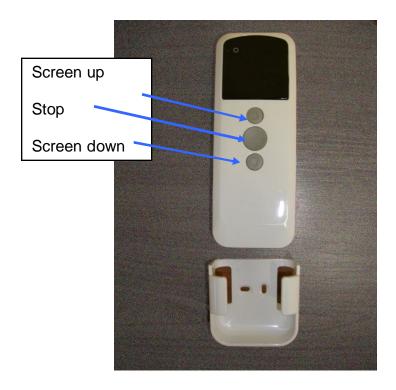
15) If there is provided a remote control system, disconnect completely the rocker switch and connect the motor wires to the control system. See the corresponding chapter below.
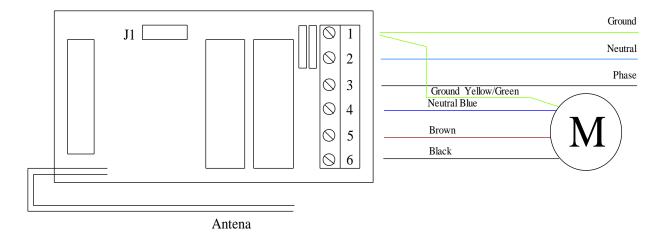
REMOTE CONTROLS

Various types of remote controls can be supplied as an option:

1) RF remote control (Receiver + Transmitter) if this is the control option you have selected

Screen up

Stop
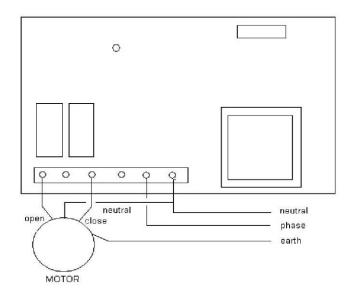
Screen down

Receiver connections

J1

1
2
3
4
5
6

Antena

Ground
Neutral
Phase
Ground Yellow/Green
Neutral Blue
Brown
Black

M

2) Basic IR control

IR Transmitter. Note: Use the left buttons.

IR Receiver. See wiring diagram below.

CONNECTION OF MAINS SUPPLY AND MOTOR

open
close
neutral

neutral
phase
earth

MOTOR

3) Advanced IR remote control (Receiver+ Control box+ EYE sensor) if this is the control option you have selected

RP60 Control box
Transmitter

Flexible EYE sensor

Alternatively, you can have the wall-mount EYE sensor on request

3) 12V trigger if this is the option you have selected

RP 60 Control box

LVT Bus

This device takes an optically isolated DC low voltage input commonly from a projector and turns it into a RP Bus command.

4) RF control via RP box (suitable for upgrade or additional controls) if this is the option you have selected

RP 60 Control box   RF 433 receiver   T5 transmitter

5) RS 232 or RS 422 control via RQ control card and RQ bi-directional bridge (Compatible with automation systems like Crestron, AMX, Vantage, Control 4, HAI, etc.) if this is the option you have selected

RQ 60 AUMGH control card   RQ bridge   RS232 adaptor   USB-serial adaptor

Connections:
All RJ connections between the elements are made with JUMPER type cables (RJ6 connectors).

Mains connection to the RP 60 control box is made with a standard IEC connector.

Warning: For safety reasons, the RQ 60 AUMGH control card is to be installed in an isolated box provided with an IEC socket. This option is reserved to certified installers.

MECHANICAL ADJUSMENTS IF NEEDED

NOTE: THIS SCREEN IS TENSIONED, AND THE STOP LIMITS SHOULD NOT BE USER ADJUSTABLE. MODIFYING THE LIMITS SETTING WOULD NECESSITATE A WHOLE RECALIBRATION OF THE TENSIONING.
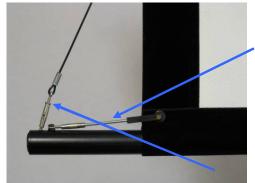
Troubleshooting

It is unlikely that this happens, but in case we explain you how to cure potential problems. Here are some possible issues and fixes. If we didn't cover your issue, you'll need to contact us for assistance. _Never consider the following indications as normal setup adjustments_.

Waves

The RM2-T screen uses the Enlightor 4K woven material, which for acoustical transparency and fineness of video resolution is an advantage. The disadvantage is that the material doesn't naturally stretch like a piece of plastic wrap, so balancing the tension forces across the screen is critical to not having stresses build up and cause waves.

The Enlightor 4K has features built into the weave to eliminate waves in almost every case. However, in the unlikely occurrence that your projection surface is not perfectly flat, please read below.
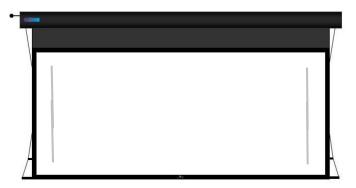

To adjust the tension, there are two turnbuckles on each side of the screen. The horizontal ones (hereafter called "horizontal") feature a standard thread on the rod joining the black plastic piece attached to the screen. Just focus your eyes on this half of the turnbuckle, so when we say "tighten," you think "righty-tighty, lefty-loosey." The other half with the screw is reverse thread and will mess with your mind.

The similar, vertical turnbuckle features its standard thread on the eyelet joining the cable, with the little nut. We put a dollop of thread adhesive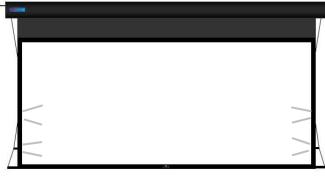 on this one to keep it from drifting. If you need to adjust this one, it is best with three hands and sets of needlenose pliers. First, pop out the little plastic endcap on the weight bar so you can grab the in-bar eyelet. Then, grab the eyelet at the cable loop so it doesn't twist. Then, with your third hand and pliers, break the nut out of the way. Finally, the turnbuckle barrel can be grabbed and adjusted as necessary.
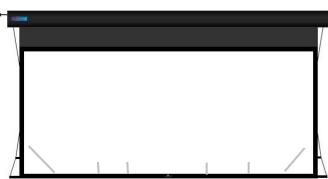
How to identify waves and how to cure them:

If you have vertical wave patterns along the sides, then your vertical turnbuckles have too little tension and need to be tightened. Another clue is the bottom black tabs won't be grabbed much at all and will be hanging too loosely.
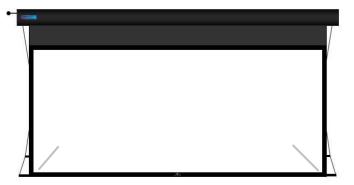
If you have horizontal wave patterns along the sides, then your vertical turnbuckles are too tight and they are lifting the bar. Loosen them up, and you'll find the ideal tension is where the bottom black tabs are snug to the cable but still easily slid up or down with your finger.

If you have "V" shaped wave patterns in the lower corners and/or fingering along the bottom, then your horizontal turnbuckles are too loose and need to be tightened. A couple signs that you've tightened them too much will be the opposite wave patterns (see below), or a slight separation of the screen material from the border velvet. This joint is very strong, but don't torque it to where you see visible strain or distortion of the screen shape.

If you have the opposite pattern in the lower corners, then your horizontal turnbuckles are too tight and need to be loosened a bit. Generally, you want these tight to provide nice corner tension, but if you overdo it, not only will these patterns develop, but a visible gap will open between the screen and border material at the bottom corners. While the joint is strong, don't distort the screen geometry too much.

After you make the desired adjustments, you could put a little drop of cyanoacrilate glue on the threads to keep it from drifting over time, although drift is relatively minor depending on your environmental changes in temperature and humidity.

"Ca-chunck" clanking sound when bar goes into case
The vertical turnbuckles are likely catching on the front or back of the case. Simply rotate the weight bar until they cleanly enter the slot.

Motor bogs down in the upper position before stopping
Your upper limits are set too high. The bar can't be retracted too far into the case before it will burden the motor. You want your upper limits to engage before this happens. Find that upper limit setting where the bar visibly retracts into the case as much as possible, but still can be moved a little with your fingers. It needs to "float" up there, not being packed tight and bogging down the motor.

RF or IR remote doesn't work
The battery lasts about three years. Simply unscrew the case and replace the battery if necessary