

Makita

アメリカ

Automatic Drapery Opener

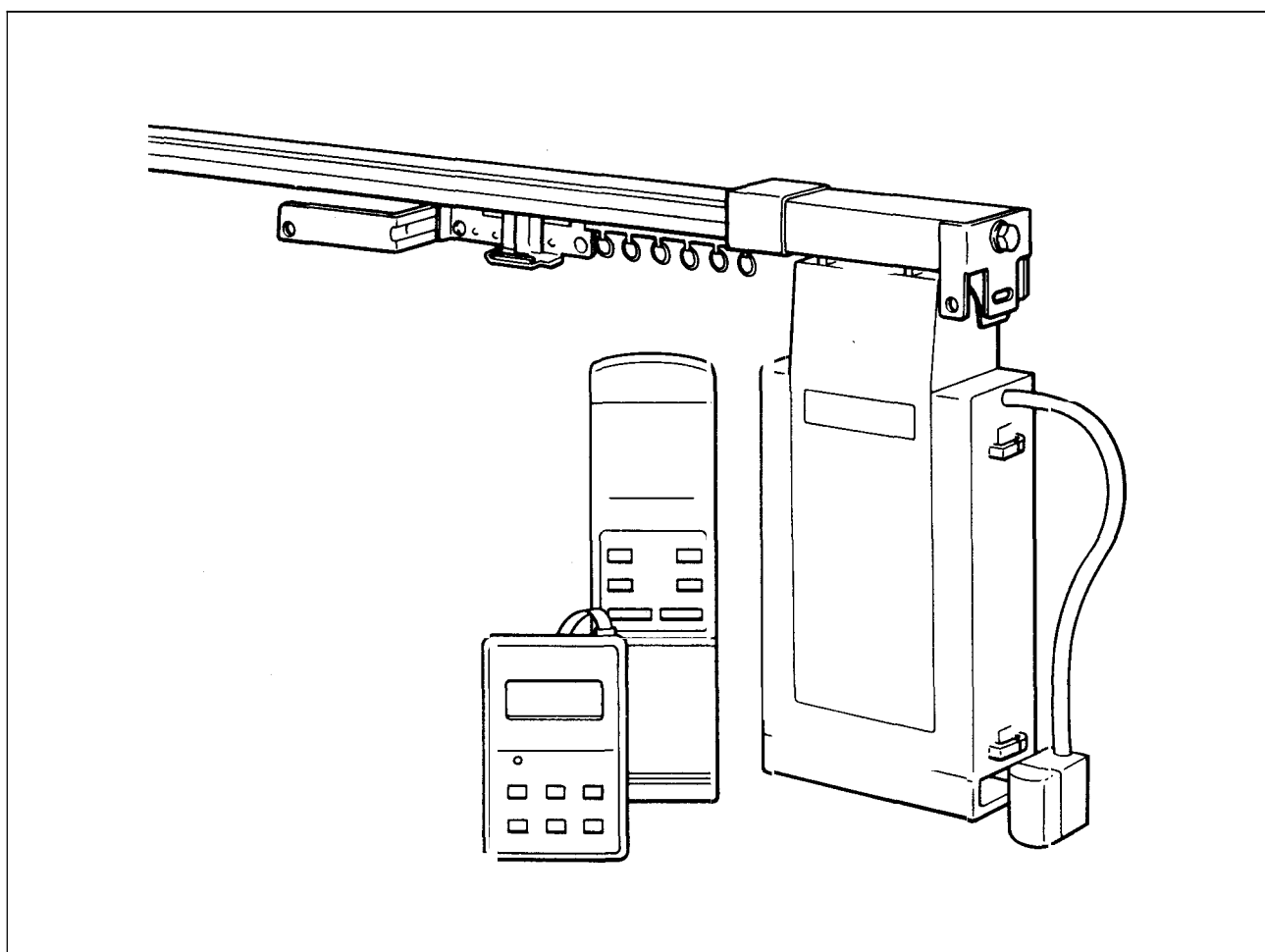
MODEL ZZCM101 (CM101)

With receiving unit

MODEL ZZCM301 (CM301)

Without receiving unit

INSTRUCTION MANUAL

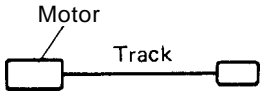


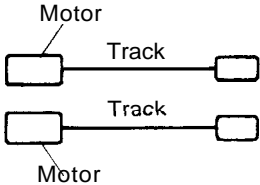
SPECIFICATIONS

Maximum rod length	Maximum weight of drapery	Track speed	Minimum width of valance		Operating range of remote control unit
			Single	Double	
20 ft.	60 lbs. per motor	50 ft. per minute	5"	8"	32.8 ft.

WARNING: Polarized Plugs

To reduce the risk of electric shock, the motor has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

Rod & Motor	Rod length	Assembly chart	Components	
1 Rod 1 Motor	9 FT		<ul style="list-style-type: none"> ● Motor model : ZZCM101 (CM101) ● Remote controller: ZZRC10 (RC10) ● Timer: ZZCT10 (CT10) ZZEC101 (EC101) contains items listed above.	<ul style="list-style-type: none"> ● 9 ft track ZZ09TK (-WH) ○ Rod assy. ZZAR9 (with 32 carriers) ● Universal mounting brackets ZZ3SWCB (-WH) (5 per pack) ● White end caps ZZ411001-A (For use with white track and components.)
	18 FT			<ul style="list-style-type: none"> ○ 9 ft track ZZ09TK (-WH) x 2 ○ Splice ZZ6SJ (-WH) ○ Rod assy. ZZAR20 (with 64 carriers) ○ Universal mounting brackets ZZ3SWCB (-WH) (5 per pack) x 2 ○ White end caps ZZ411001-A (For use with white track and components.)

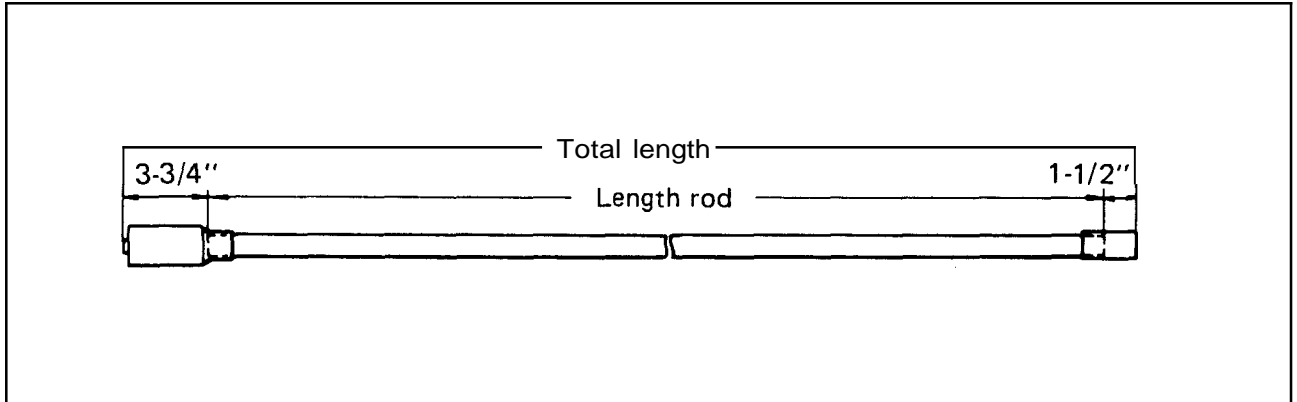
2 Rods 2 Motors	9 FT		<ul style="list-style-type: none"> ● Motor model : ZZCM101 (CM101) + ZZCM301 (CM301) ○ Remote controller: ZZRC20 (RC20) ● Timer: ZZCT10 (CT10) ZZEC201 (EC201) contains items listed above.	<ul style="list-style-type: none"> ● 9 ft track ZZ09TK (-WH) x 2 ● Rod assy. ZZAR9 (with 32 carriers) x 2 ● Universal mounting brackets ZZ6DWCB (-WH) (5 per pack) ○ White end caps ZZ411001-A (For use with white track and components.) x 2
	18 FT			<ul style="list-style-type: none"> ● 9 ft track ZZ09TK (-WH) x 4 ● Splice ZZ6SJ (-WH) x 2 ● Rod assy. ZZAR20 (with 64 carriers) x 2 ○ Universal mounting brackets ZZ6DWCB (-WH) (5 per pack) x 2 ● White end caps ZZ411001-A (For use with white track and components.) x 2

To the following product labels, the letters "ZZ" may not be affixed: AR9, AR20, EC101, EC201, EC301, CM101, CM301, RC10, RC20, RC30, RC60, CT10, WS10, WS20, WS30.

Cutting Track to Size

The desired overall length of the rod should be determined and the aluminum track cut according to the following equation prior to attaching the end and motor pulley housings.

$$\text{Length of aluminum track} = \text{overall length less } 5\text{-}1/4''$$



The purpose of the equation is to offset for the length that the end and motor pulley housings add to the overall length. A hack saw can be used to cut the track. Use care to make 90 degree cuts and remove any burrs that may affect smooth operation; this is most important for one-way applications.

Splicing Tracks

Center opening

For applications larger than 9', two tracks must be spliced together using the supplied splice. Tracks should be cut equal in length to ensure the splice will be centered in the rod.

One-way

For one-way operations, cut only one track to adjust length. Place splice furthest away from motor end.

NOTE :

Insert tracks equally into slice butting them together. (Fig. 1)

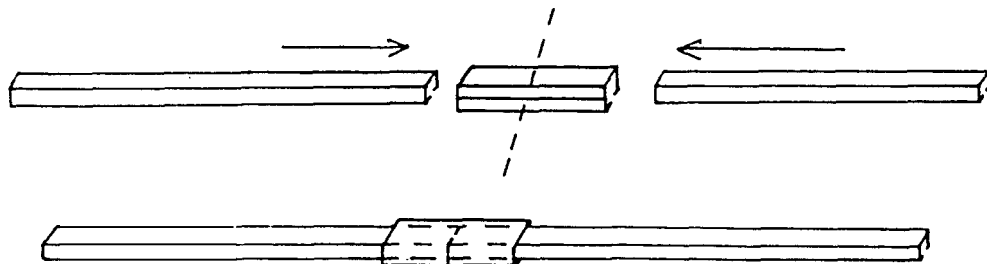


Fig. 1

Rod Assembly for Center Opening Applications

Allow yourself ample working area. Depending on the model of rod assembly and the provided cable length, the end and motor pulley covers can be as far as 20' apart during assembly.

1. Remove twist ties from cable and carefully uncoil to prevent tangles.
2. Loosen screws and remove securing plates from each end of the temporary track. (Fig. 2)
3. Detach end and motor pulley housings from temporary track.
4. Remove closing plates from temporary track. Discard temporary track.
5. Stretch end and motor pulley housings out to the fullest distance the cable will allow. Make sure the cable is not tangled. Position each closing plate near its respective pulley housing.
6. Starting at the motor pulley housing end, lay the cable into the aluminum track about 4" making sure it is not twisted. While gently applying tension (pulling) on the cable, insert the closing plate into the track. (Fig. 3) Be sure to keep the cable on the outside of the wheels. (Fig. 4) Attach the motor pulley housing to the track. Make sure the track is butted up to the stop inside the cover. Repeat operation at other end, again making sure wire is not twisted or crossed. Reinstall securing plates to motor pulley and end pulley housings.

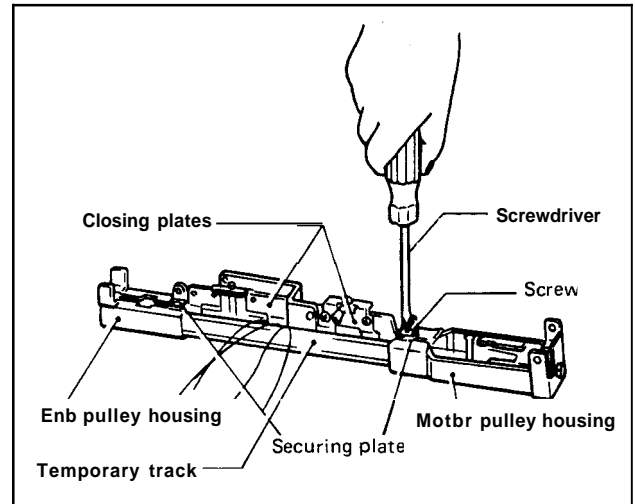


Fig. 2

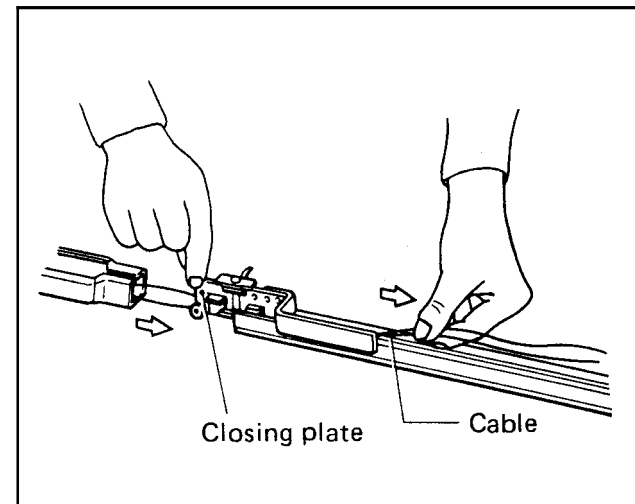


Fig. 3

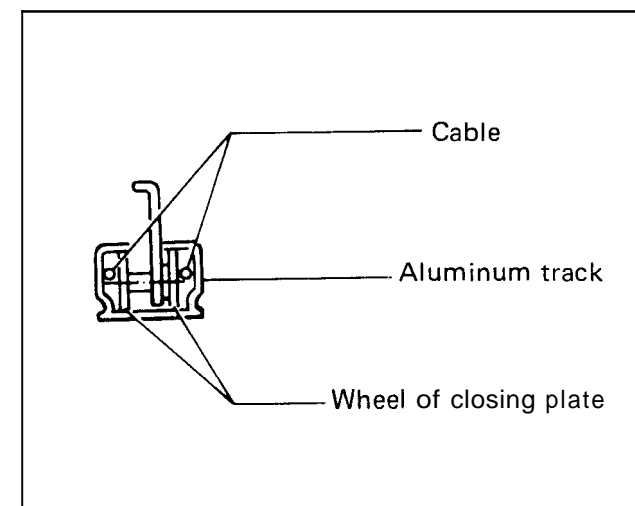


Fig. 4

NOTE:

When inserting the closing plates into the aluminum track, make sure the cable stays on the outside of the wheels. (Fig. 4) Also check that the cable rides in the groove of the pulley in both housings. (Fig. 5)

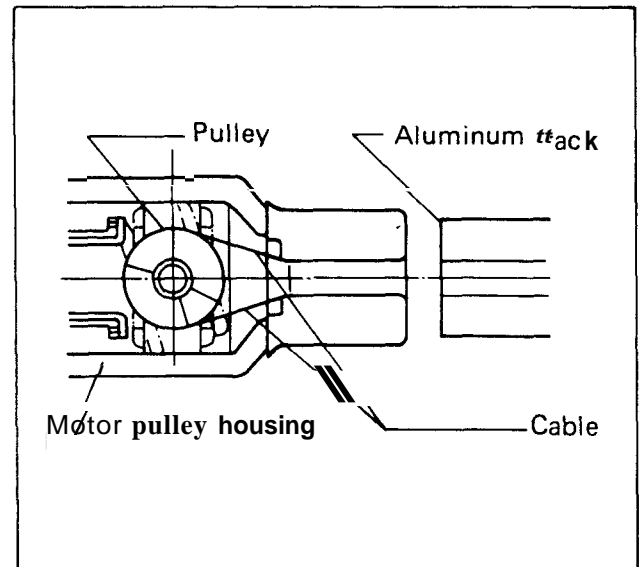


Fig. 5

7. Loosen the cable retaining screw on the top of the closing plate that has the overlap arm. The screw need only be loosened; be careful not to remove it completely. (Fig. 6)

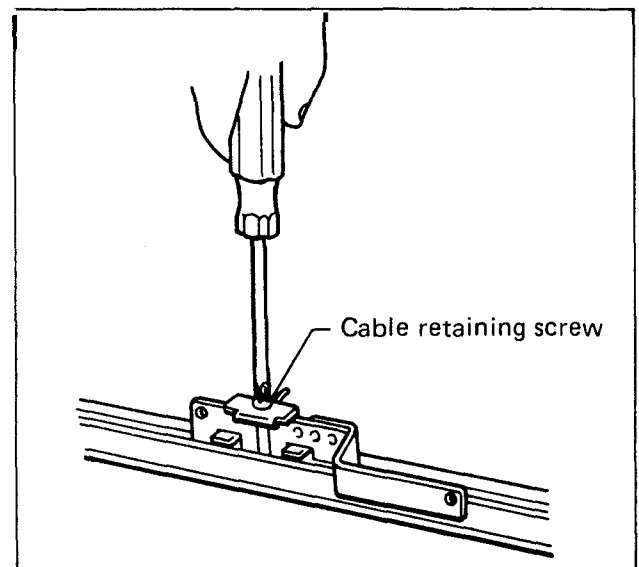


Fig. 6

8. With pliers grab sleeve (A) and gently pull all excess cable. (Fig. 7) While keeping tension on the cable, re-tighten the screw. Check that the cable rides in the groove of the pulley in both housings. If not, realign and repeat steps 7 and 8. Move the closing plate by hand to make sure that the movement is smooth. If it is not, it can be caused by: (1) The cable is twisted, (2) The cable is not properly routed around the pulley wheel, or (3) The cable is not riding correctly in the groove of the pulley. If any of these are the case, make appropriate corrections.

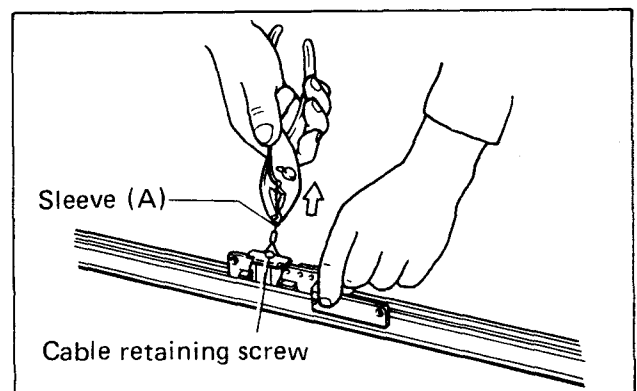
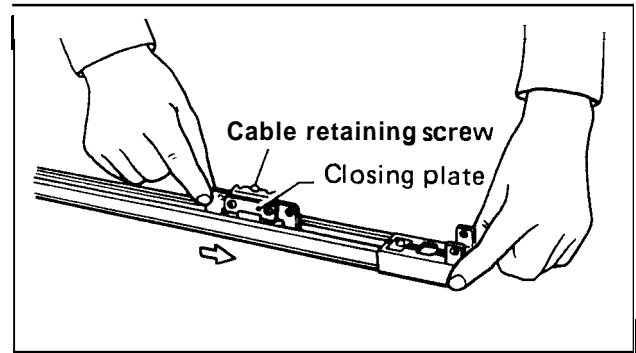


Fig. 7

9. Adjust center-position of draperies by loosening the cable retaining screw on the closing plate without the overlap arm. (Fig. 8) The screw need only be loosened; be careful not to remove it completely. This will let the closing plate slide on the cable allowing adjustment to achieve center (or desired position). Some resistance will be felt as



10. Using a screwdriver or the handle end of the provided wrench, lift out and remove the temporary steel spacer from the motor pulley housing and discard. (Fig. 9)

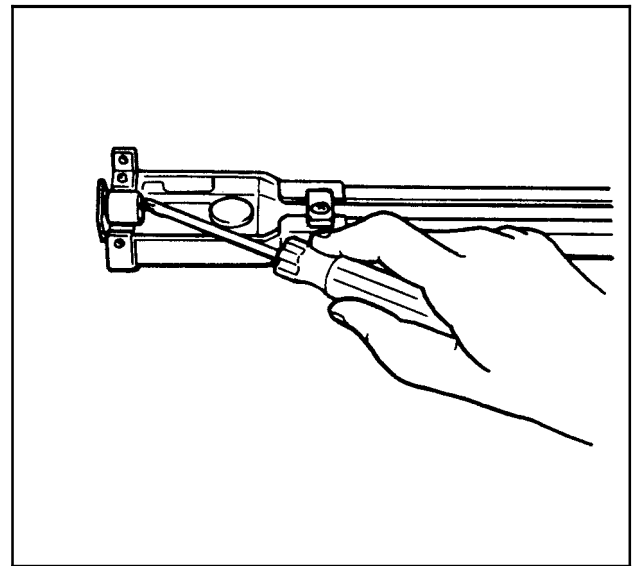


Fig. 9

11. With the provided wrench turn the tension-adjusting bolt clockwise leaving a gap between tension plates of approximately $1/16''$, or the thickness of a nickel. (Fig. 10)

NOTE :

Rod lengths in excess of 10' may require more tension to prevent slipping of the cable on the pulley wheels.

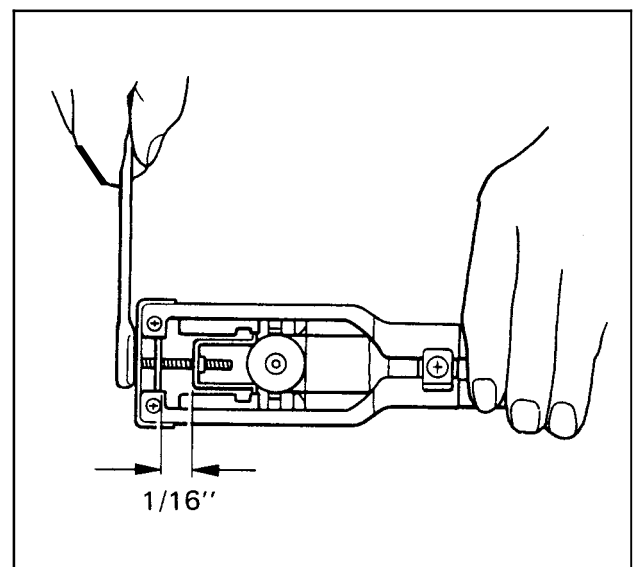


Fig. 10

12. After again making sure the movement of the closing plates is smooth, move sleeve (B) up to the closing plate. With pliers, crimp the sleeve and cut off the excess cable. (Fig. 11)

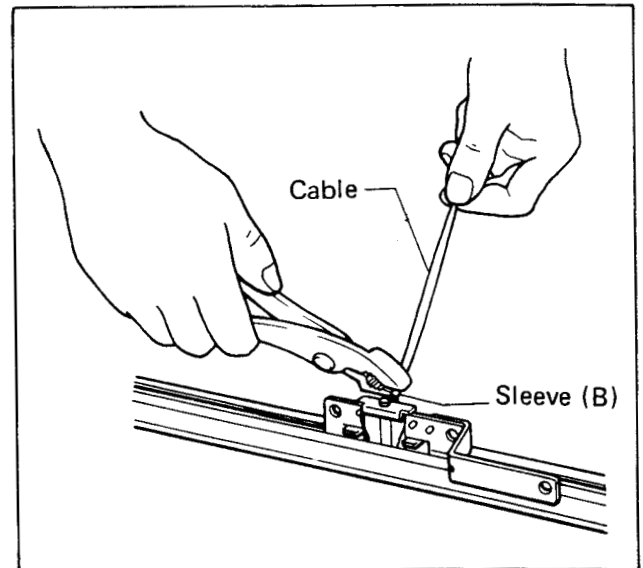


Fig. 11

13. The rod assembly comes set up to have the motor mounted on the right side of the rod. However, it can just as easily be placed at the left side by removing the two screws that fasten the arm to the closing plate (Fig. 12), reversing the arm and reattaching to the same side, (on the same closing plate). (Fig. 13) The overlap arm should be attached so as to project toward the interior of the room once the rod has been mounted.

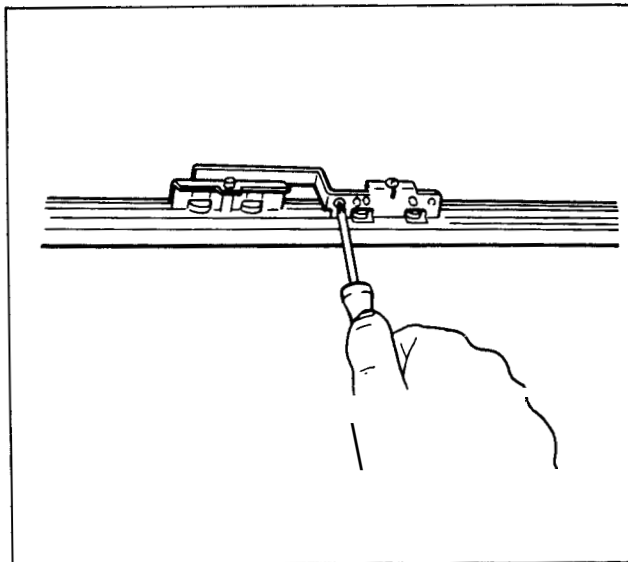


Fig. 12

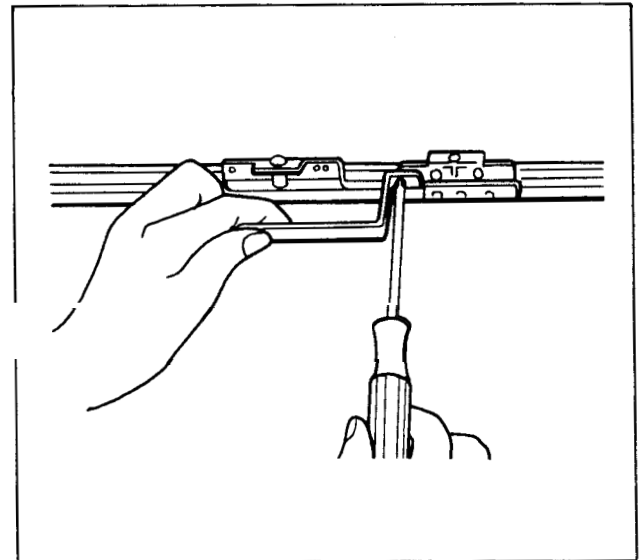


Fig. 13

Rod Assembly for One-way Operations

Allow yourself ample working area. Depending on the model of rod assembly and the provided cable length, the end and motor pulley covers can be as far as 20' apart during assembly.

1. Follow steps 1 – 5 of **ROD ASSEMBLY FOR CENTER OPENING APPLICATIONS**.
2. Loosen and remove the screw from the closing plate that does not have the overlap arm. This will release the closing plate from the cable. Discard closing plate. (Fig. 14)

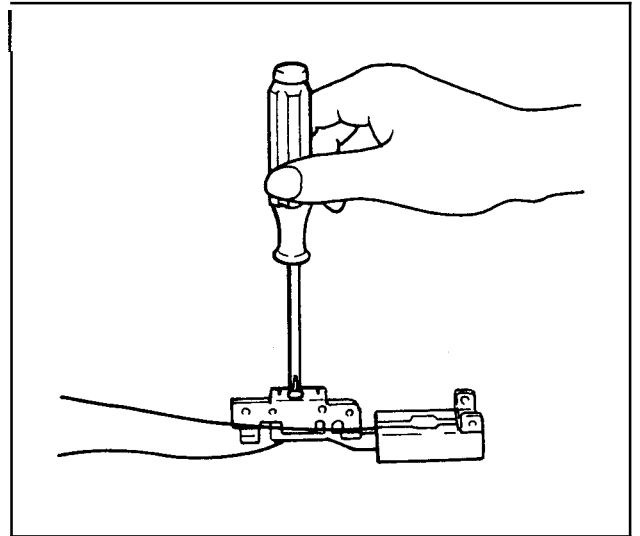


Fig. 14

3. Starting at the motor pulley housing end, lay the cable into the aluminum track about 4" making sure it is not twisted. While gently applying tension (pulling) on the cable, insert the closing plate into the track. (Fig. 15) Be sure to keep the cable on the outside of the wheels. (Fig. 16) Attach motor and end pulley housings to ends of track. Make sure the track is butted up to the stops inside the housings. Reinstall securing plates to motor pulley and end pulley housings.

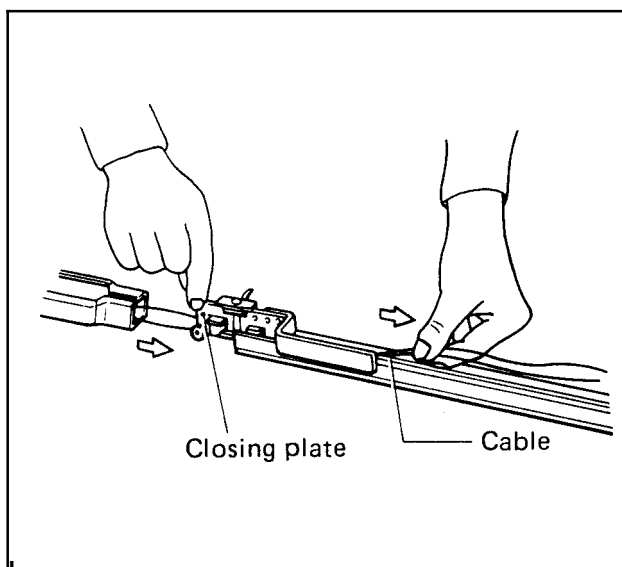


Fig. 15

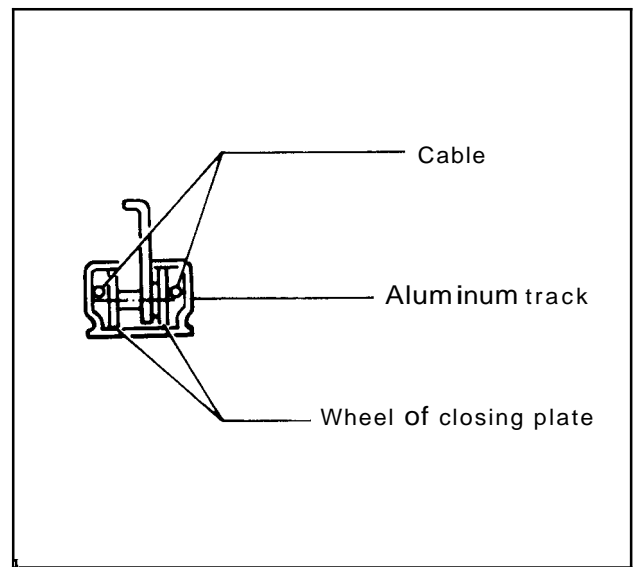


Fig. 16

4. Loosen the cable retaining screw on the top of the remaining closing plate (with overlap arm). The screw need only be loosened; be careful not to remove it completely. (Fig. 17)

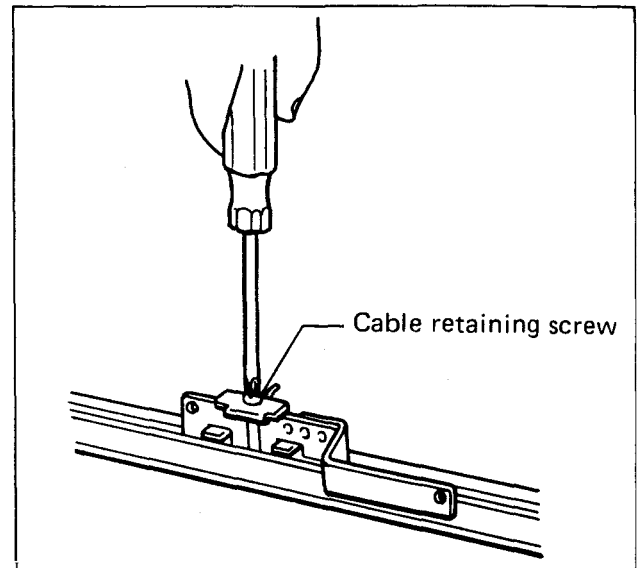


Fig. 1

5. With pliers grab sleeve (A) and gently pull all excess cable. (Fig. 18) While keeping tension on the cable, re-tighten the screw. Check that the cable rides in the groove of the pulley in both housings. If not, realign and repeat steps 4 and 5. Move the closing plate by hand to make sure that the movement is smooth. If it is not, it can be caused by: (1) The cable is twisted, (2) The cable is not properly routed around the pulley wheel, or (3) The cable is not riding correctly in the groove of the pulley. If any of these are the case, make appropriate corrections.

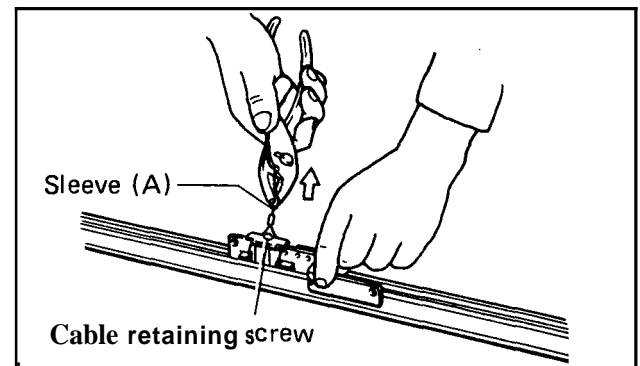


Fig. 18

6. Using a screwdriver or the handle end of the provided wrench, lift out and remove the temporary steel spacer from the motor pulley housing and discard. (Fig. 19)

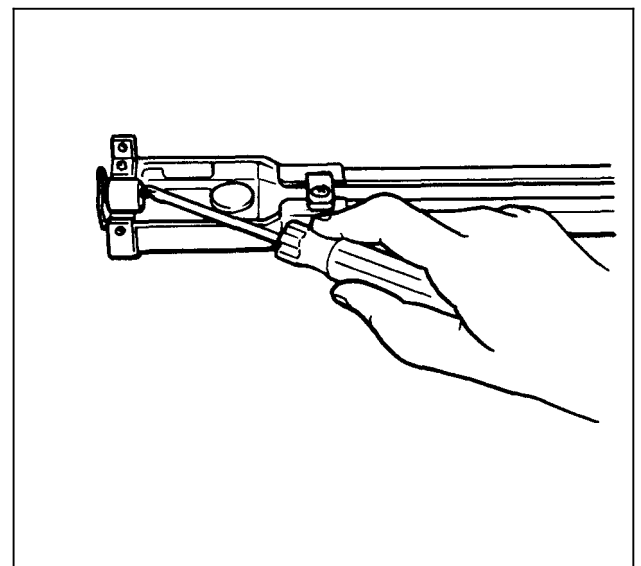


Fig. 19

7. With the provided wrench turn the tension-adjusting bolt clockwise leaving a gap between tension plates of approximately $1/16''$, or the thickness of a nickel. (Fig. 20)

NOTE:

Rod lengths in excess of 10' may require more tension to prevent slipping of the cable on the pulley wheels.

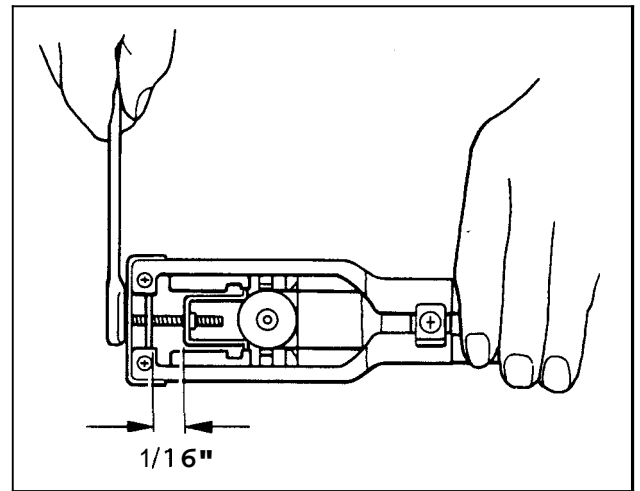


Fig. 20

8. After again making sure the movement of the closing plate is smooth, move sleeve (B) up to the closing plate. With pliers, crimp the sleeve and cut off the excess cable. (Fig. 21)

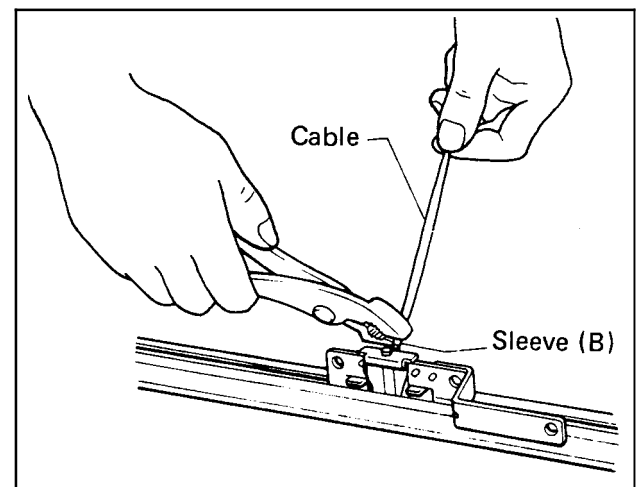


Fig. 21

9. The motor is designed to be hidden behind the drapery stack. Determine on which side the draperies will stack when open (right or left). The rod assembly comes set up for right stacking draperies. For left stacking draperies it is necessary to reverse the overlap arm on the closing plate. Remove the two screws that fasten the arm to the closing plate (Fig. 22), switch it to the opposite side and reattach. (Fig. 23) This allows the motor to be on the left side of the track behind the draperies when open.

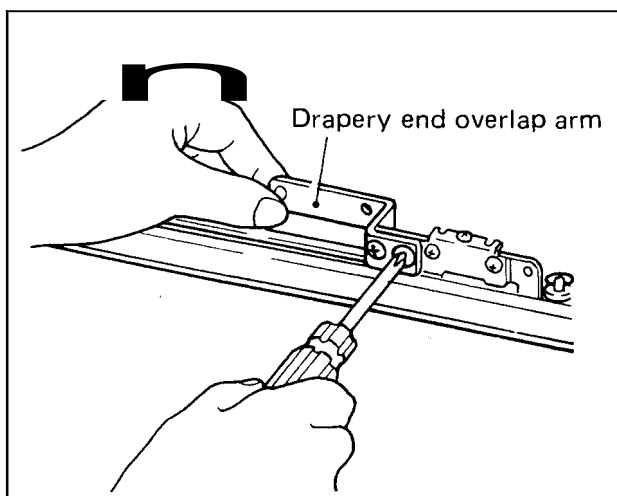


Fig. 22

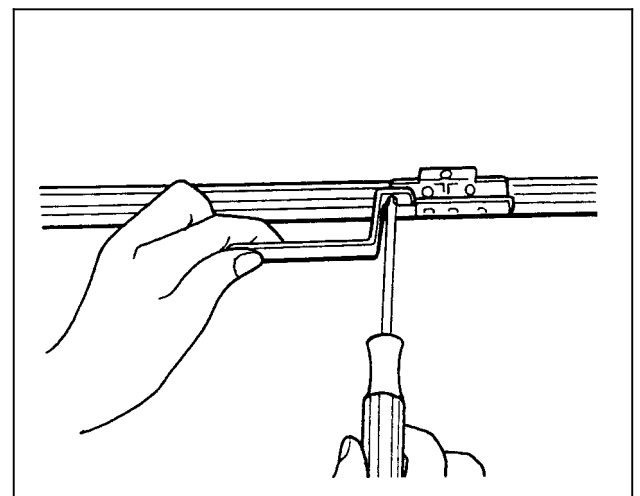
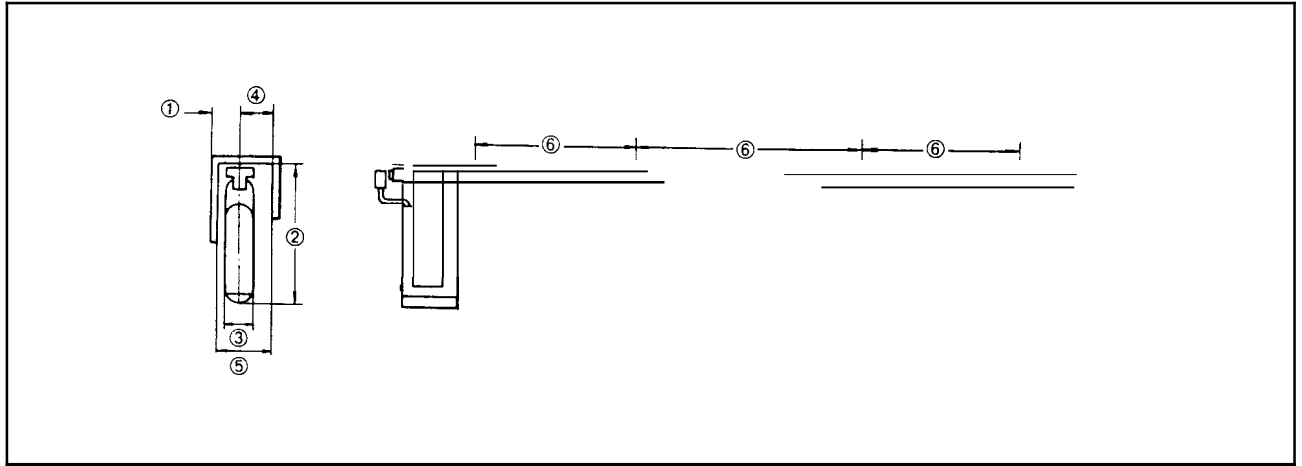


Fig. 23

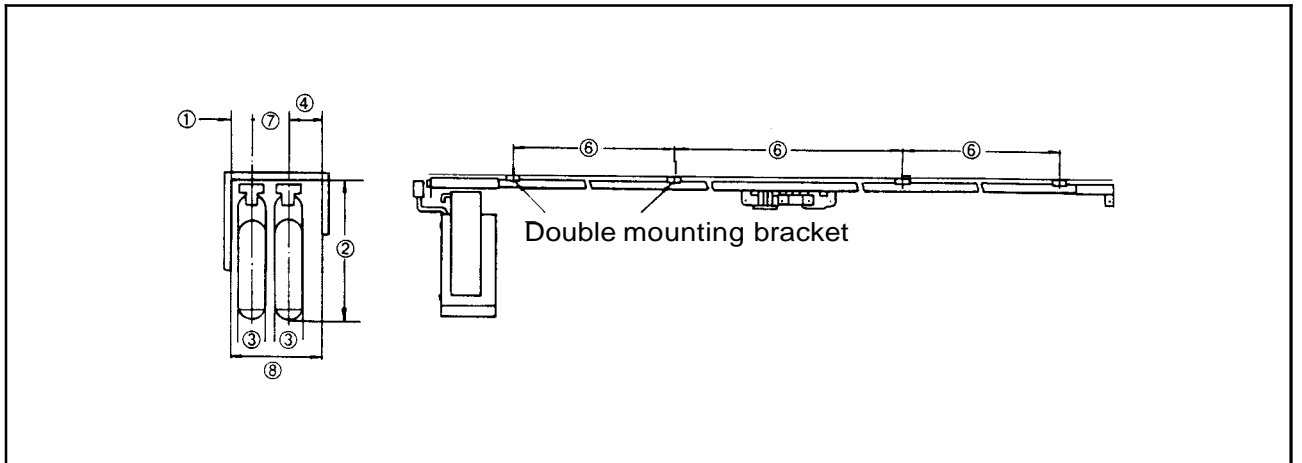
Installation Chart

Motor(s) may be attached on the right or left using the same components.

- 1 rod, 1 motorsystem



- 2 rods, 2 motors system



(1)	3"	(2)	8-7/8"	(3)	1-7/8"	(4)	2"
(5)	5"	(6)	24"	(7)	3"	(8)	8"

Mounting Rod

Supplied brackets will accommodate either wall or ceiling mount applications. Due to the various building materials used in construction, i.e., concrete, drywall or wood, we do not supply fasteners. Your local hardware store can help you in choosing the proper fastener for your needs.

1. Attach appropriate brackets (ceiling or wall) to the rod approximately every 24". Make sure to place a bracket close to each end since this is where the most weight is placed when the draperies are open.

NOTE :

When mounting rod to wall or ceiling allow extra space to accommodate for the necessary floor and track clearance. Typical allowance will be 1-1/2" to 2" greater than drapery length. This will prevent the draperies from dragging across the floor while allowing the draperies to be hung below the rod for smooth operation.

2. Position rod in desired location and mark bracket mounting holes on wall or ceiling depending on your specific application. (See Fig. 24 for bracket mounting dimensions.) It is important for proper operation to mount the rod straight and level. Many times walls and ceiling will not be straight or true. Wall mount brackets have the ability to adjust for this. Once the rod is up, loosen the screw that attaches the ceiling clip to the wall bracket. This will allow the rod to relax to its natural straight shape. Retighten the screws. In the case of ceiling mount, it may be necessary to place shims between the bracket and ceiling in order to make the rod straight and level.
3. Detach brackets from rod, drill marked holes to size for the fasteners chosen and attach brackets.

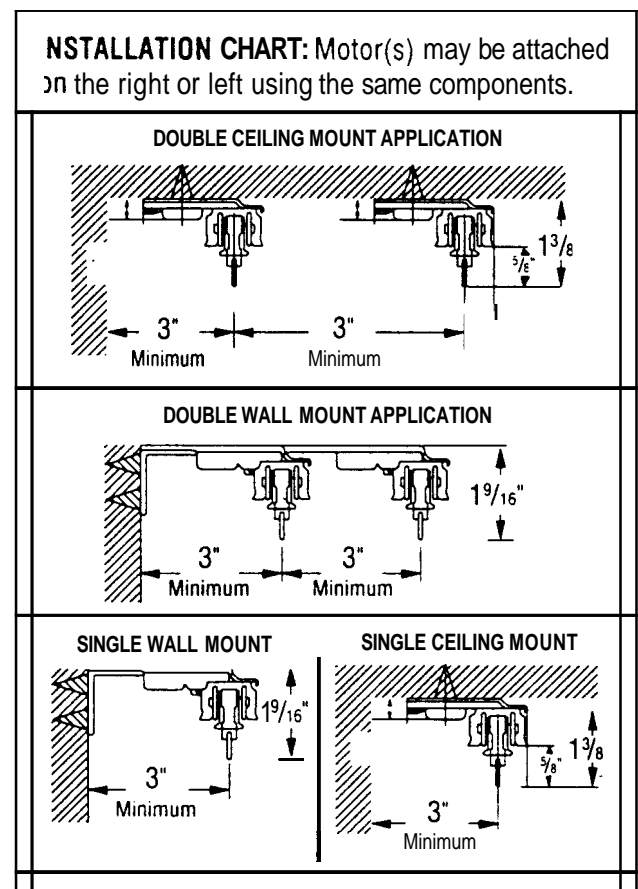


Fig. 24

4. Starting at the center of the rod, snap rod into brackets. (Fig. 25) Be sure to fully attach rod into bracket; a snap or click can be felt and heard when properly engaged.

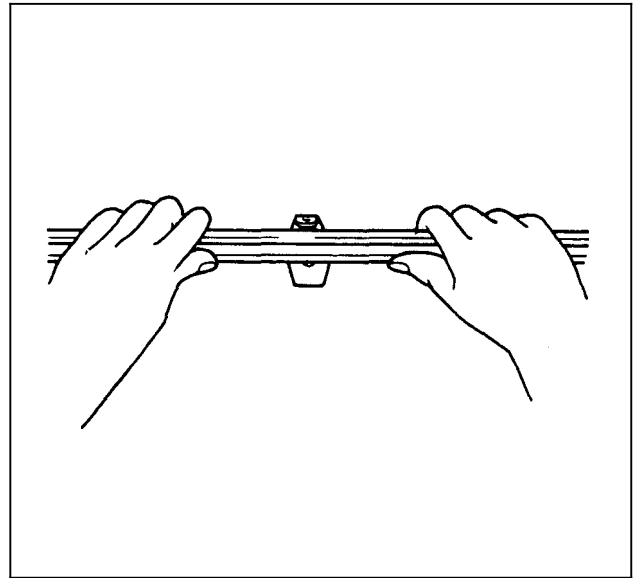


Fig. 25

Loading Carriers

After installing the rod, remove securing plates and load carriers (Fig. 26) into both ends of the rod. In the case of one-way applications, carriers would be loaded from motor pulley housing end only. Load the proper amount of carriers based on your specific drapery size. Be careful to keep cable on outside of wheels when loading carriers. Reinstall securing plates at this time.

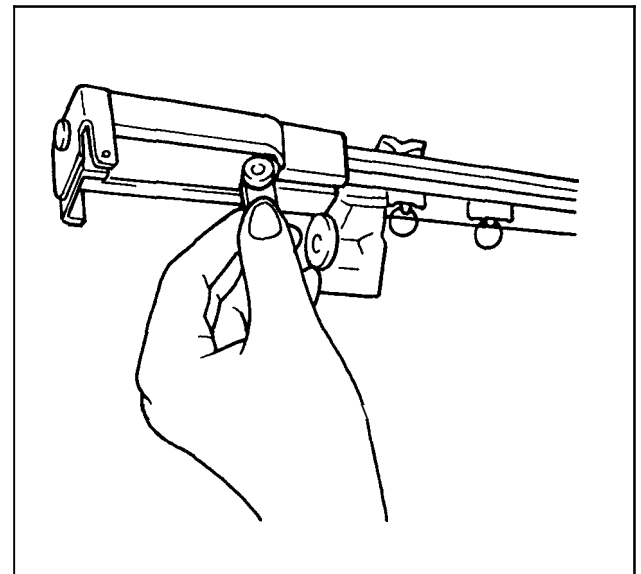


Fig. 26

Stop (Optional)

The stop is designed to give more pinning position options for attaching draperies. Tighten securing plate at end pulley only. Leave motor pulley securing plate (with return arms and extra pinning holes) loose since it must be slid down the track in order to attach the motor. After motor is attached to the motor pulley housing, slide the securing plate back until it is centered over rubber section and tighten.

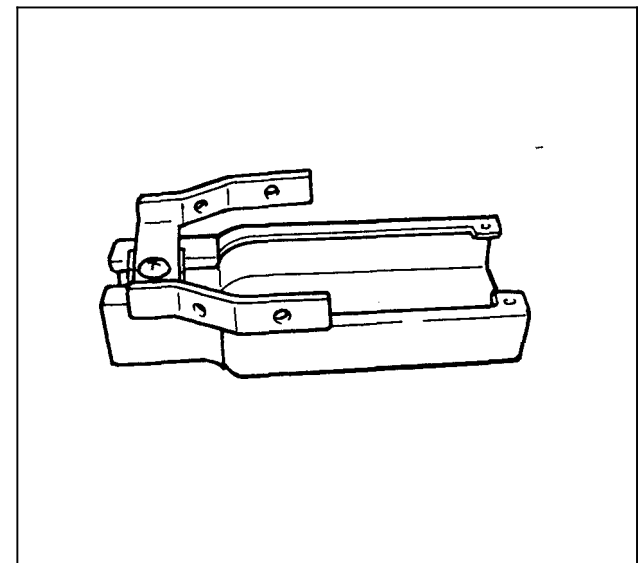


Fig. 27

Attaching Motor

One Motor, One Track System

With rod mounted to either wall or ceiling, attach the motor to the rod.

1. Holding the motor at 45 degree angle to the track, push down on the lever on the motor, insert the shaft into the hole in the motor gear and turn the motor parallel to the track. (Fig. 28) Release the lever and the motor will lock into the motor pulley housing. Without pushing the lever, gently try to twist the motor to ensure it is securely attached. (Fig. 29) some play will be felt, however the motor should not release.

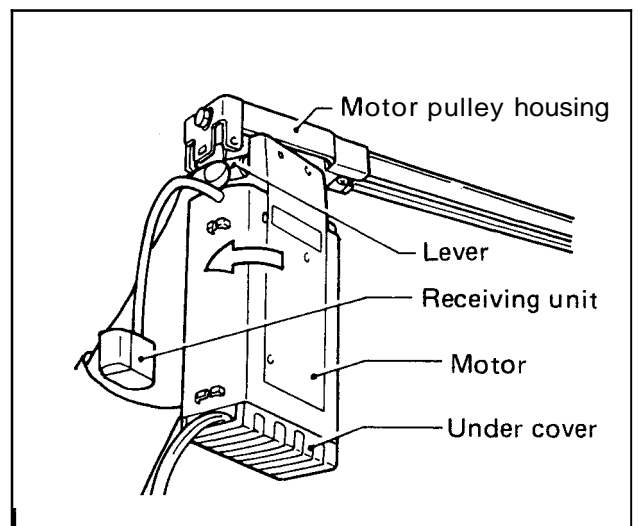


Fig. 28

2. Slide back the under cover from the motor to expose the female modular connecting ports.

3. Connect timer to modular port labeled "Timer". The timer comes with Velcro for attaching to the wall. We recommend it be put behind the stack of the draperies where it will out of view. See **TIMER** section for instructions on how to program.

4. Return under cover to original position.

5. Position the infrared receiving eye so as to have the black part facing the room without any obstructions.

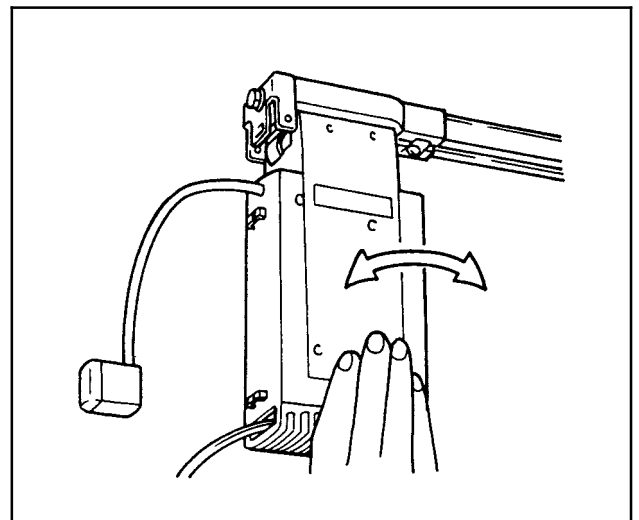


Fig. 29

6. Hang draperies. Remember to adjust pins so the top of the draperies ride just below the bottom of the rod.

7. Plug motor into standard 120 V polarized receptacle.

NOTE :

The infrared receiving eye is designed to receive the signal through most draperies and be hidden from view. However, some black-out type draperies can impede the signal. In these cases the receiving eye must be exposed.

Two Motors, Two Tracks System

1. Follow step 1 of **ONE MOTOR, ONE TRACK SYSTEM** starting with rod closest to window.

NOTE :

With the two motor system (over and under draperies), the "parent" motor (ZZCM101) should be on the inner-most rod (room side), and the "kid" motor should be on the rod closest to the window. (Fig. 30)

2. Slide back the under cover from both motors to expose the female modular connecting ports.
3. Connect provided modular connecting wire from port labeled number "2" on the "parent" motor to the "kid" motor. (Fig. 31) Route wire through the retention clips on the side of the motor. (Fig. 32) This will give a more finished look and prevent the wire from interfering with the draperies.
4. Connect timer to modular port labeled "Timer" on "parent" motor. The timer comes with Velcro for attaching to the wall. We recommend it be put behind the stack of the draperies where it will out of view. See **TIMER** section for instructions on how to program.
5. Reinstall under cover on both motors.
6. Position the infrared receiving eye so as to have the black part facing the room without any obstructions.
7. Hang draperies. Remember to adjust pins so the top of the draperies ride just below the bottom of the rod.
8. Plug motors into standard 120 V polarized receptacle.

NOTE :

The infrared receiving eye is designed to receive the signal through most draperies and be hidden from view. However, some black out-type draperies can impede the signal. In these cases the receiving eye must be exposed.

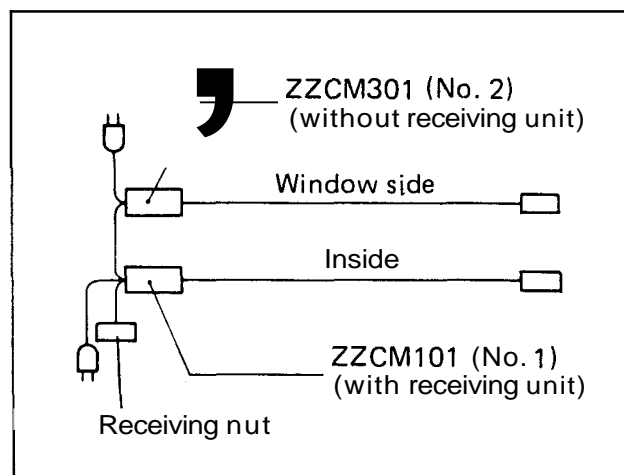


Fig. 30

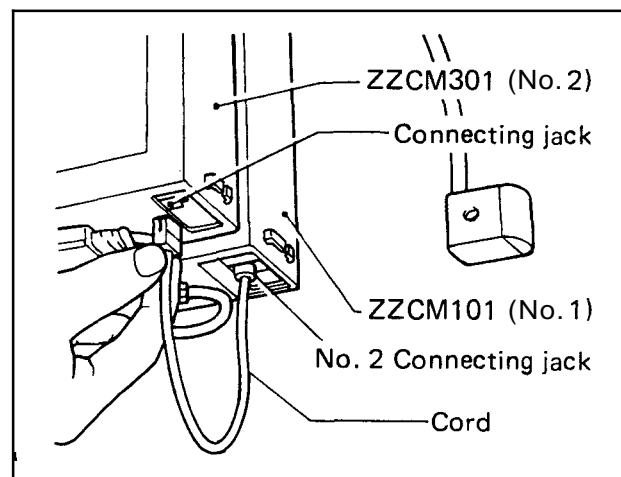


Fig. 31

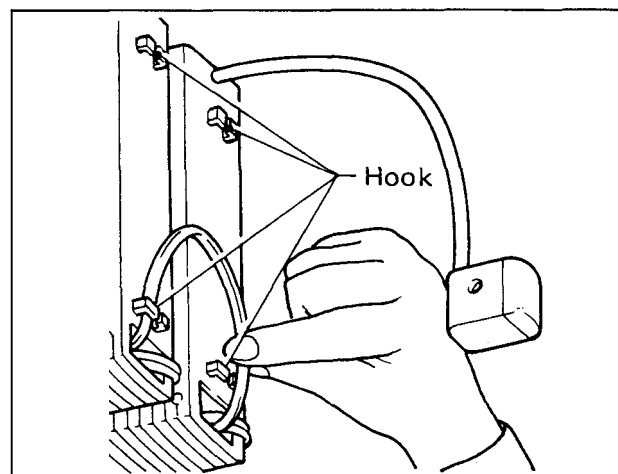


Fig. 32

Remote control unit

Point the remote control unit in the direction of the receiving unit. The operating range of the remote control unit is 32.8 ft.



Button indicated above opens the drapery.

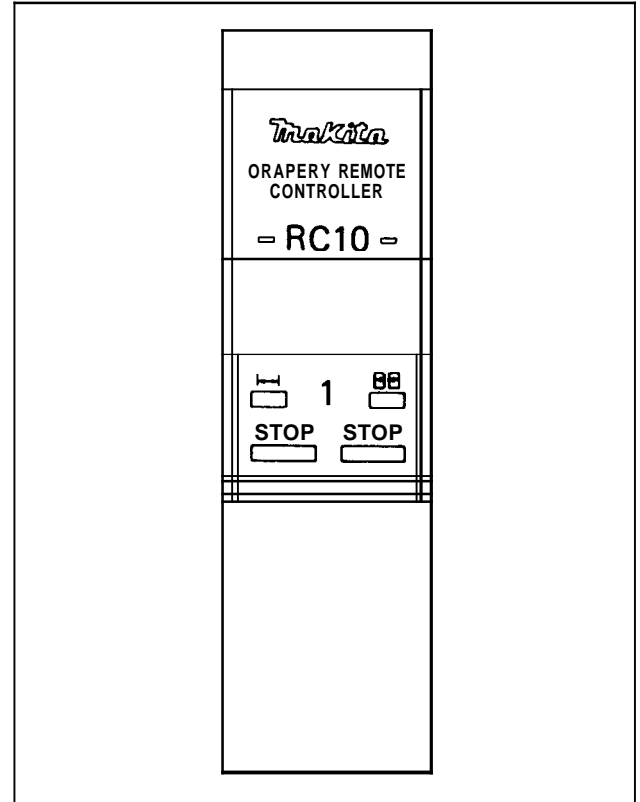


Button indicated above closes the drapery.



Button indicated above stops the drapery in any position.

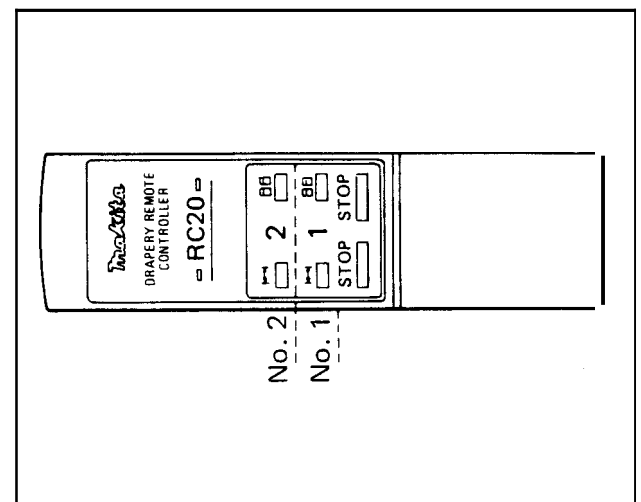
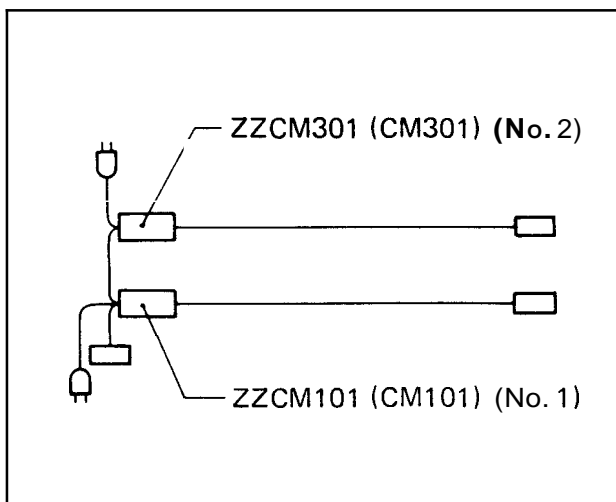
Push button slightly. One push of the button is sufficient. When you want the drapery fully open or fully closed, there is no need to operate the **STOP** button, because it will automatically stop when the drapery is fully open or fully closed.



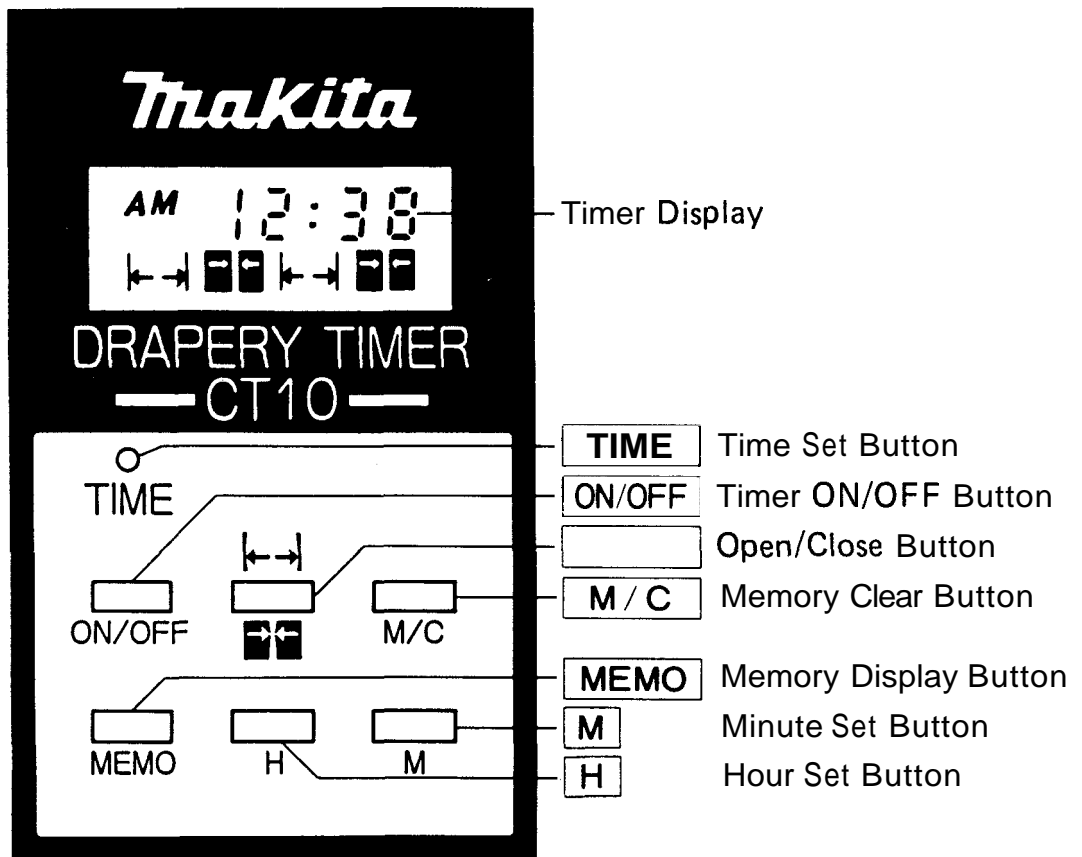
NOTE :

When the motor is stopped at the fully open or fully closed position, and you then push the button to move in the same direction, it will not operate.

In the case of ZZCMIOI (CM101) + ZZCM301 (CM301), ZZCMIOI (CM101) (No. 1) and ZZCM301 (CM301) (No. 2) can be operated by No. 1 and No. 2 buttons on the remote control unit, respectively.



24 Hour Timer – 4 Memory Functions



CAUTION :

- Do not install in locations where temperatures exceed 50°C (122°F) or where direct sunlight can strike the timer.
The LCD (liquid crystal display) can be damaged by excessive heat.
- Avoid locations where temperatures may become excessively low. LCD response time may be slowed or the time may become inoperative. These low temperature symptoms are not permanent. Normal functions will return after the timer warms up.
- Do not drop or impact the timer, Do not attempt to disassemble or damage may result.

Installing timer

Connect the timer cord to the connecting jack marked "TIMER" on No. 1 motor (with receiving unit). Use velcro tape provided on the back of the timer to attach the timer to the appropriate location.

Setting for present time

- Entire display flickers when the power comes ON.

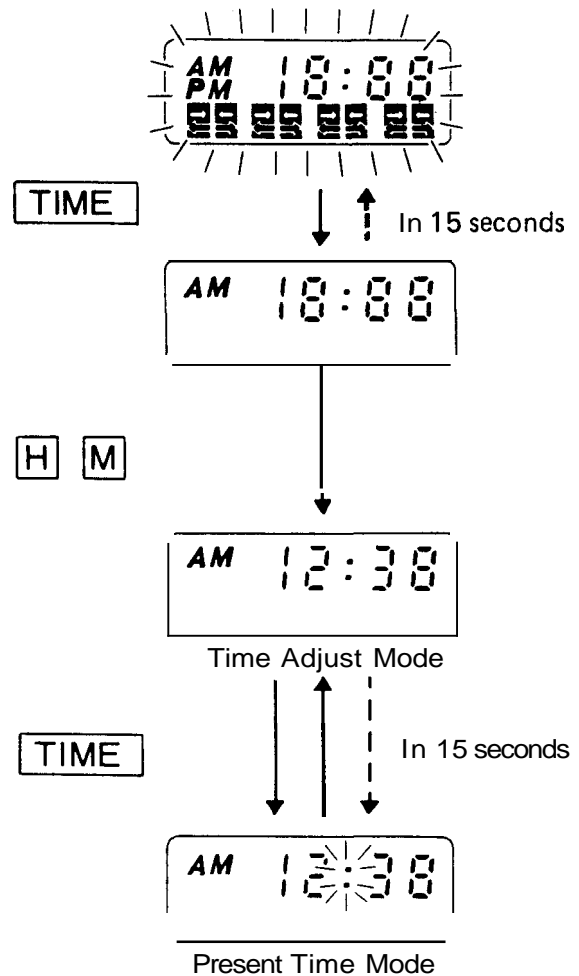
- When the **TIME** button is pushed, only the "Hour", "Minute" and "AM-PM" indicators light up steadily. The display will return to the flickering status after about 15 seconds, if left as is.

- Adjustment to the correct present time can be made using the **H** and **M** buttons. Adjusting past 60 minutes does not advance the "Hour" indicator. During this mode, the colon ":" between the hour and minute digits will keep lighting up steadily. If either the **H** or **M** button is pressed and held, the "Hour" or "Minute" indicator will continue to advance.

- About 15 seconds after setting the time, the display will turn to the "Present Time" automatically. During the "Present Time" mode, the colon ":" will keep flickering.

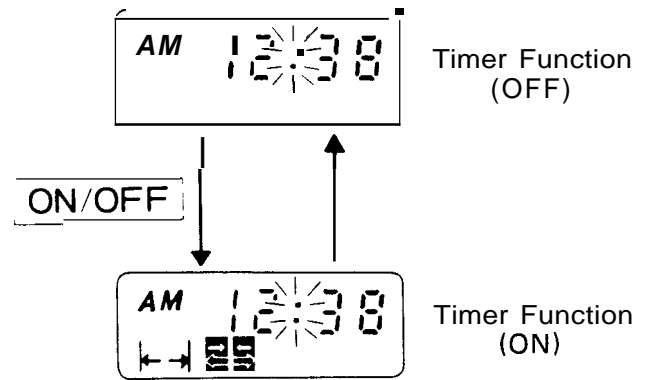
- To adjust the time to the nearest second, push the **TIME** button and release it at the exact moment when the minute changes. The time will begin from that moment from "00" seconds.

- After setting the time, if you wish to readjust the present time, first push the **TIME** button to change modes from the "Present Time" to the "Time Adjust". Then adjust the time according to the previous instructions.



Timer function

- To actuate the timer, push the **ON/OFF** button. The open/close indicator will appear.
- To turn the timer off, push the **ON/OFF** button again. The open/close indicator will disappear from the display.



Confirming open/close time

To confirm the open/close time, push the **MEMO** button. Each time you push the **MEMO** button, the set times for memory No. 1, 2, 3 and 4 will be displayed. Reset the memory whenever necessary.

Note:

- Memories No. 1 – 4 need not relate to the exact sequence of functions that you have programmed into the timer. Memories can be set independently of each other: not necessarily sequentially.
- The operating time for opening or closure is approximately 6 seconds. During this operation time, remote control operation is not possible.
- If the motor is unplugged or electric failure happens, memory will be lost. You must reprogram memory as previously explained. The present time also needs to be re-set.

Maintenance

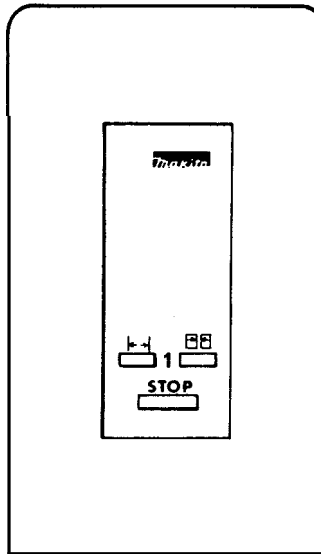
Wipe the timer with a soft, dry cloth. Do not use alcohol, benzene or thinner type products, or damage to the timer may result.

OPTIONAL ACCESSORIES

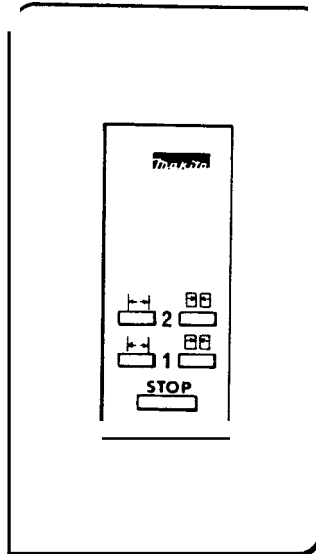
WALL SWITCH (For class 2 wiring only)

Wall switch can only be used in conjunction with ZZCM101 (CM101).

Model ZZWS10 (WS10)
for **one** motor



Model ZZWS20 (WS20)
for two motors.



MAINTENANCE

Test operation

After assembling the complete system, connect to the power supply. Test the manual and automatic operation to be sure the system functions properly. In case of a problem, check the following "Trouble Shooting Chart".

Trouble Shooting Chart

Problem	Cause	Solution
Remote control unit does not operate.	Power plug is not engaged properly.	Plug power supply cord into power receptacle properly.
	Battery in remote control unit is dead.	Replace battery in remote control unit.
	Receiving unit is obstructed.	Remove interfering object.
Motor does not stop automatically at fully open and fully closed positions,	Not enough tension on the cable.	Increase tension of the cable by turning tension adjusting hex. bolt.
Can operate ZZCM101 (CM101) (No. 1) but cannot operate ZZCM301 (CM301) (No.2) or ZZCM301 (CM301) (No.3).	Cord on motor (with receiving unit) is not connected properly.	Reconnect cord according to instructions in this manual.
Drapery automatically stops without pushing button before drapery is fully open or fully closed.	Interference with movement of drapery.	Remove object which restricts drapery.
Cannot open and close drapery by hand.	Assembly of drapery track is incorrect.	Re-assemble track according to instructions in this manual.

To maintain product SAFETY and RELIABILITY, repairs should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

MAKITA LIMITED THREE YEAR WARRANTY

Warranty Policy

Every Makita motor is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of THREE YEAR from the date of original purchase. Should any trouble develop during this three-year period, return the COMPLETE motor, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

- This Warranty does not apply where:
- repairs have been made or attempted by others;
 - repairs are required because of normal wear and tear;
 - The motor has been abused, misused or improperly maintained;
 - *alterations have been made to the motor.
 - The battery has not been charged immediately after purchase.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE THREE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.
