



**DURALUM**  
HOME IMPROVEMENT PRODUCTS

## **BASIC INSTALLATION GUIDE FOR THE PATIO ENCLOSURE**

### **SUGGESTED TOOLS**

#### **Power Tools**

- Dewalt 12" compound miter (60-80) tooth minimum carbide blade)
- Skill worm drive (24 tooth carbide blade)
- Skill 10" circular saw (60-80 tooth carbide blade)
- Milwaukee ½" hammer drill
- Milwaukee ½" hole shooter
- Makita 14.4 volt drill/driver (variable speed, torque setting)

#### **Misc.**

- Framing square
- Power strip
- Extension cord
- Tool belt
- 6' ladder
- Gloves
- Goggles
- Tool box for misc. fasteners

#### **Hand Tools**

- Pop rivet gun
- 16 oz. Rubber mallet
- 16 oz. Hammer
- Stanley "99" utility knife
- Flat and Phillips head screwdriver
- Pliers
- Flat head vise grips
- Needle nose pliers
- 4' level
- Tin snips
- Chalk line
- Putty blade
- 30' measuring tape
- Caulk gun

#### **Drill Bits**

- Magnetic bit holder w#2 Phillips bit
- 2" or 3" Phillips bit extension
- Magnetic nut setters (1/4", 5/16", 3/8")
- ¼", 9/64", 2,16" drill bit
- ¼" mason bit
- 5/8" wood boring bit or hole saw

## **JOB SITE PREPARATION REMINDERS**

Most rooms are built on existing foundations. These foundations may have variables that can hinder the installation of the room. The information provided below may help locate the problem areas within the job.

- Check to see if the foundation is level. If the foundation is not level, an all glass kick plate may not be used in the room, but a 2 stage kick plate (part solid/part glass) can.
- The foundation must be higher than the grade of the surrounding area. The tracks that are secured to the foundation have weep holes in them and standing water can get in the tracks and the room.
- The foundation may have small hairline cracks, but large buckling of concrete will need to be repaired.

Note: this manual has basic instructions only. You must refer to the engineering data to find any additional information you may need.

These guidelines are not written for every room configuration. These are basic guidelines only. You must make allowances for any deviations from the basic guidelines that may apply to your particular enclosure layout.

You must refer to your cut sheet (layout design) that was delivered with your patio enclosure.

## **JOB SITE PREPARATION REMINDERS**

- The attachment channel may need to be counter flashed to the house wall for a water tight seal.
- If attachment is made to the fascia of the house, make sure that the back side of the fascia and existing eaves do not leak. This can be seen by looking for water stains on the bottom of the eaves and back of the fascia.
- Add a gutter to the existing house if possible to reduce the amount of water on added room.

## **WOOD FOUNDATIONS OR DECKS**

When securing bottom tracks to an existing deck or wood foundation, make sure the counter flashing goes under the entire bottom track and overlaps down on to

the outside of the deck. There are no sealants that will bond aluminum to wood, so make sure the flashing is sealed to the bottom of the bottom track with silicone.

## MATERIAL DELIVERY AND SITE PREPARATION

DIAGRAM 1.

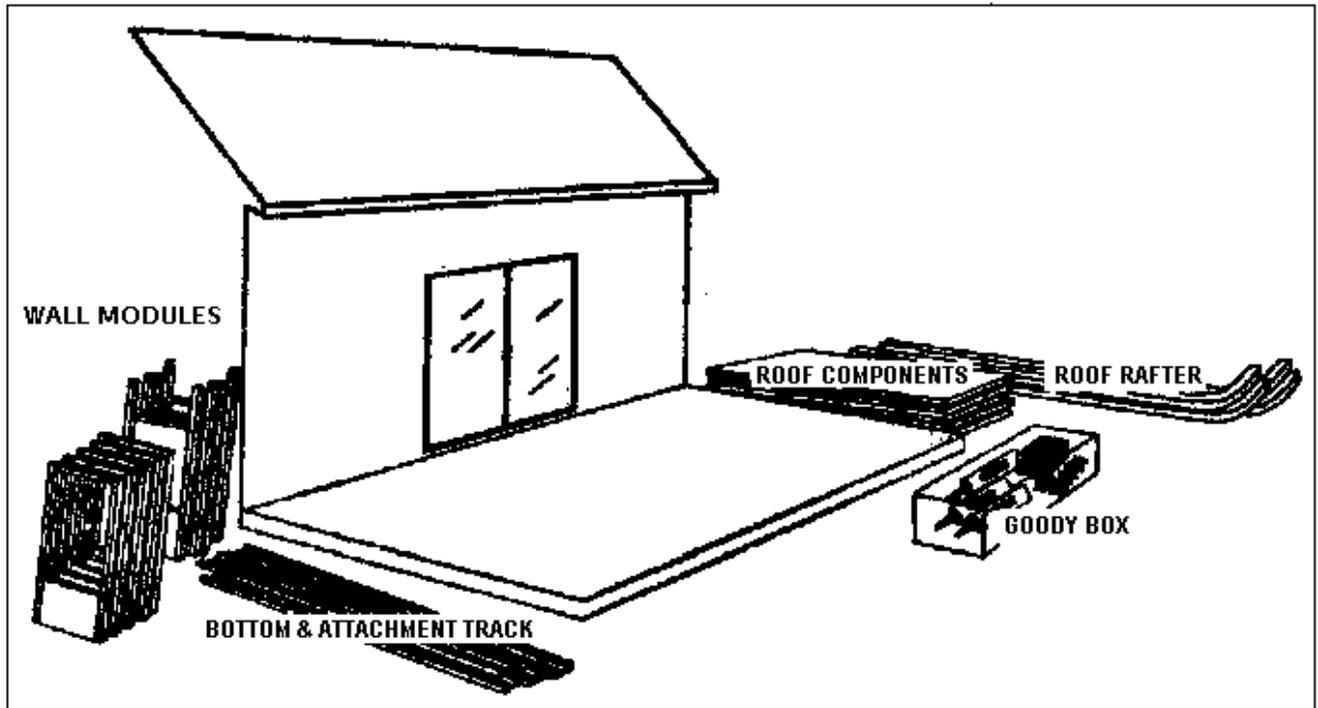
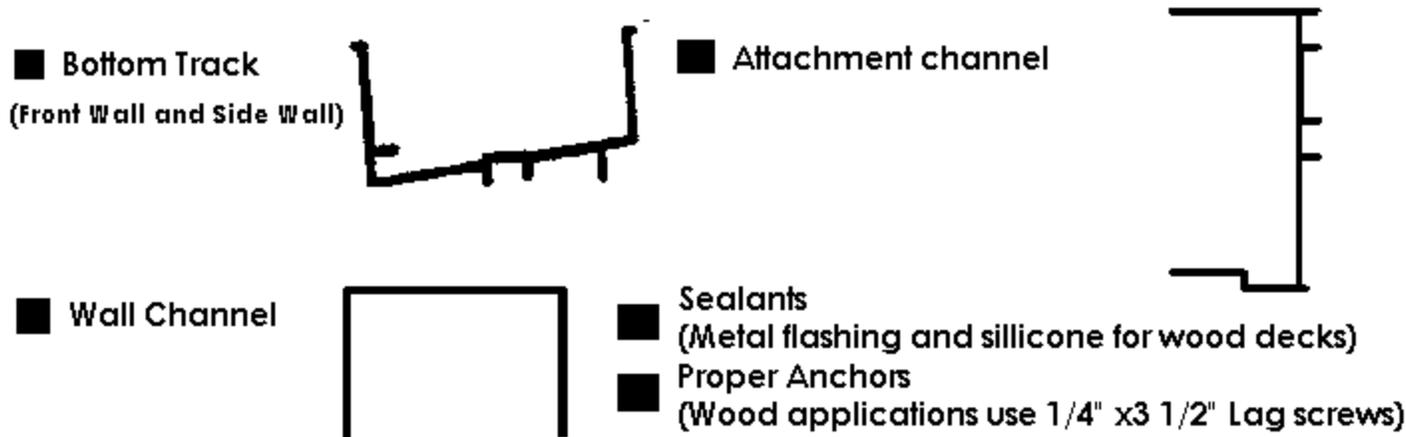


DIAGRAM 1.

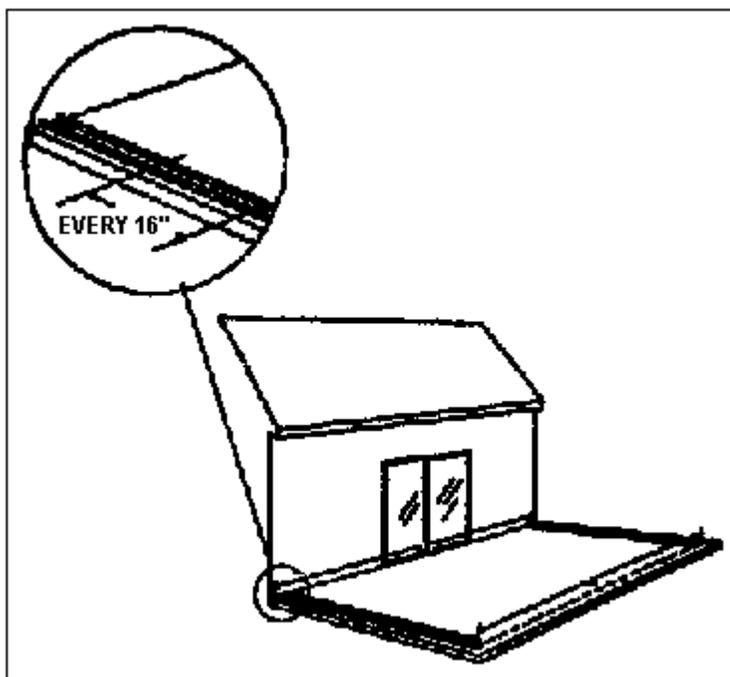
When the materials have been delivered to the job site, the first step is to lay out all like materials together. This is done to inventory all the material for the installation and to be able to select only the material needed for each step. The layout sheet and the cut list will help in the inventory process.

**The material should be placed outside the perimeter of the room being built. All window panels and screens should be removed from windows during this step.**



The most important part of any room layout is to make sure the room is square to the house. This is essential in the building process because all components meet or join at a 90 degree angle. Take the time to do it right, and it will save hours in the installation.

**DIAGRAM 2.1**



**Diagram 2.1**

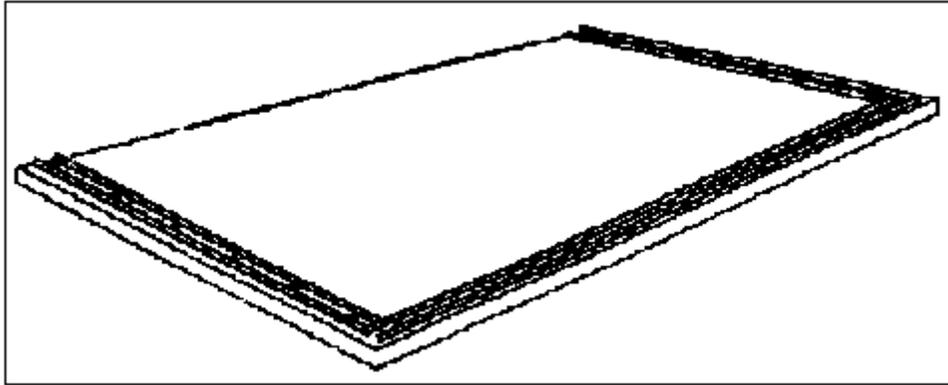
Bottom tracks should be measured for the correct size. Measurements can be confirmed on the layout sheet provided.

Pre-drill holes down the center of the bottom tracks every 16" with a 1/4" drill bit. Determine the width of the room at the house wall and mark on the foundation.

This width is usually the length of the front wall on the layout sheet. Place the side wall bottom tracks (weep holes facing out) down just to the inside of each mark. Drill through the first hole that is closest to the house wall in each side wall bottom track. Temporarily secure the bottom track to the foundation with a lag screw or nail set. This is a fixed point to pivot off of when squaring the bottom track.

## **BOTTOM TRACK INSTALLATION**

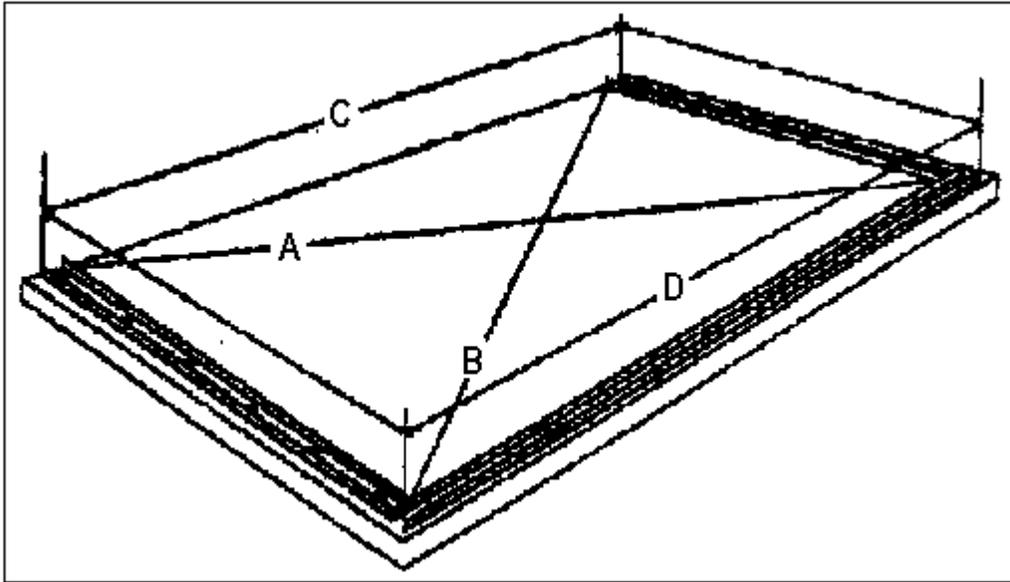
**DIAGRAM 2.2**



**DIAGRAM 2.2**

The SIDE WALL BOTTOM TRACK will always be short of the FRONT WALL BOTTOM TRACK. Place the FRONT WALL BOTTOM TRACK in front of the SIDE WALL BOTTOM TRACKS (weep holes to out side) and make a 90 degree angle at each corner. This will give you the correct width and projection of the room.

**DIAGRAM 2.3**

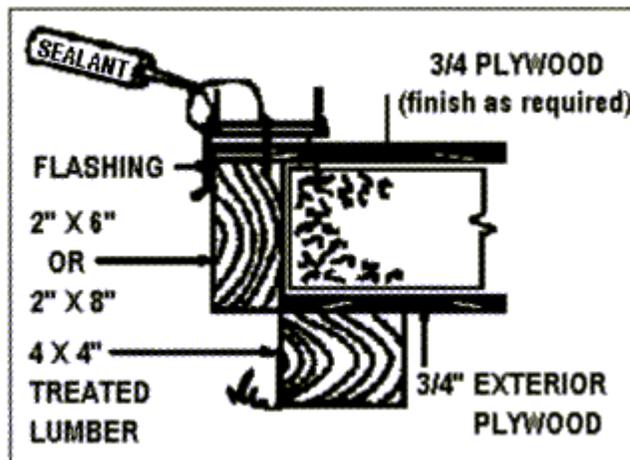


**DIAGRAM 2.3**

Take a diagonal measurement from corner to corner, both measurements are the same. Line A must equal line B, & line C must equal to line D to assure corner is square. When this is done, the bottom tracks are ready to be secured to the foundation. Check to make sure weep holes are facing out. Begin drilling through your pre drilled holes starting at the end of the bottom track. Place a screw or drill bit in these holes as needed to prevent shifting of bottom track out of square while drilling remaining holes (if foundation is wood use lag screws). After drilling is complete, remove & clean bottom track & foundation thoroughly.

**BOTTOM TRACK INSTALLATION**

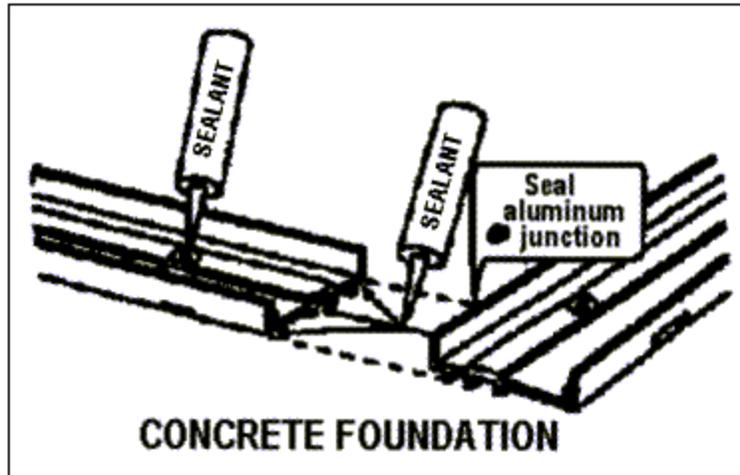
**DIAGRAM 2.4**



## DIAGRAM 2.4

A polyurethane sealant should be used to seal bottom tracks to concrete (concrete is too porous to use silicone).

## DIAGRAM 2.5

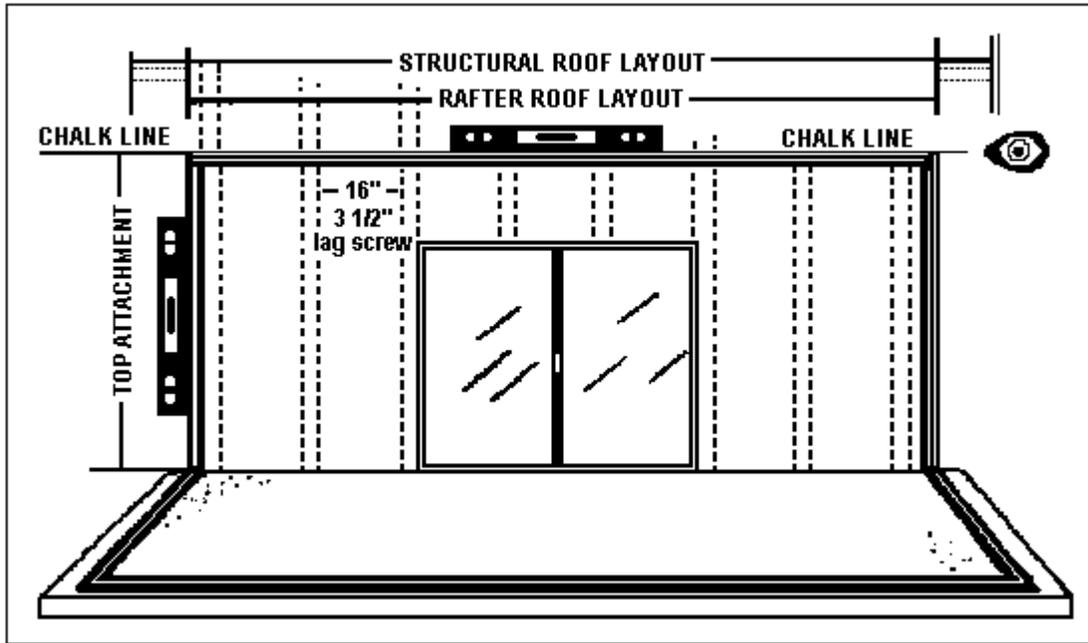


## DIAGRAM 2.5

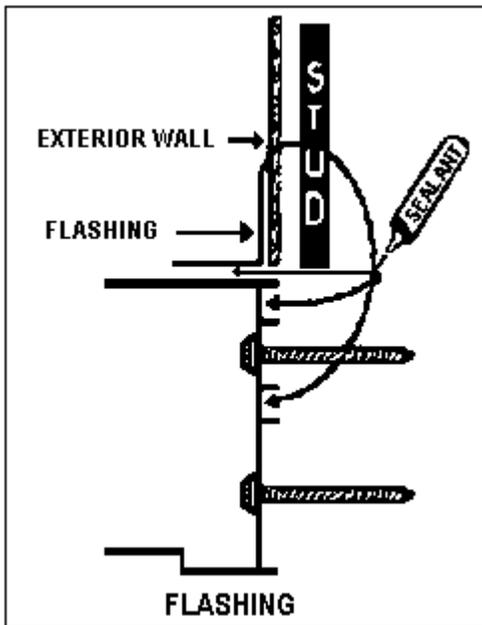
Apply a large bead of sealant into the sealant reservoir of the bottom tracks (on under side).

## ATTACHMENT CHANNEL AND WALL CHANNEL

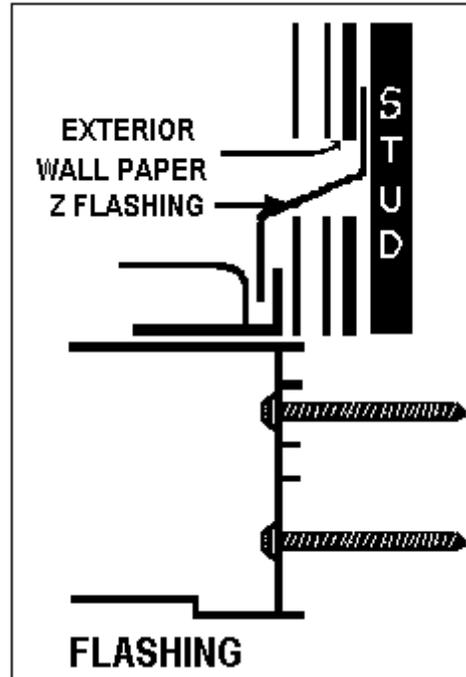
**DIAGRAM 2.6**



**DIAGRAM 2.7**



**DIAGRAM 2.7**



**DIAGRAM 2.6**

The adjustment Channel or Wall track is placed in the Bottom Track at the house wall and plumed up to the top attachment height of the Attachment Channel (look at the layout sheet for top Attachment Height, not wall height). Place a mark on the outside of the Adjustment Channel at that height. If done on both sides and measured from mark to mark, this should be the same dimension as the front wall width.

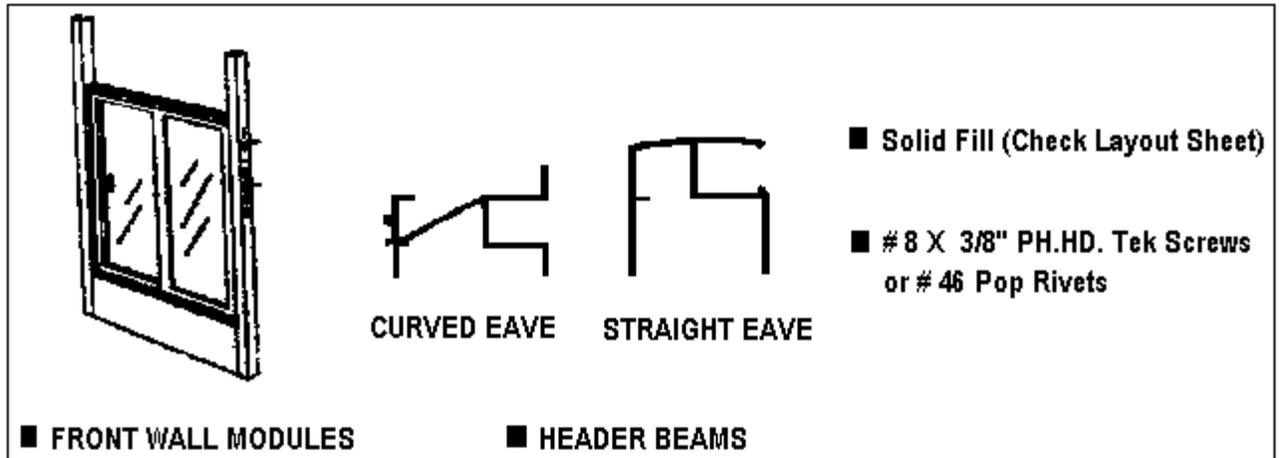
### **DIAGRAM 2.7**

Chalk two level lines on the house wall. The top line will be at the top Attachment Channel height and the second line, approximately 1 3/4" below the top chalk line reflects the center of the Attachment Channel. This is also where to drill through the house wall and find the studs to attach to. Locate studs in the house wall (should be about every 16") by drilling along the lower line, remember not to go beyond the widths of the Attachment Channel. The Attachment Channel will cover these holes drilled into the house wall.

### **DIAGRAM 2.8**

If the Attachment Channel requires counter flashing, as in the case with wood siding, it will be necessary to remove a course of siding or cut a groove in the house walls that counter flashing may be attached under the felt paper behind the siding. After the studs have been located, use the Attachment Channel to make a template and mark the location of the studs. The beam roof will have the Attachment Channel cut to the room width. The foam roof Attachment Channel will be longer than the room width to allow for overhang that acts like eaves on the house. Double check the overall roof length of the Foam Roof. Pre drill 1/4" holes at the location of the studs you marked on the Attachment Channel. For stucco walls remove and caulk the back of the Attachment Channel with sealant and secure with 3 1/2" Lag Screws. On walls with siding secure the Attachment Channel just under the counter flashing.

## **FRONT WALL INSTALLATION**

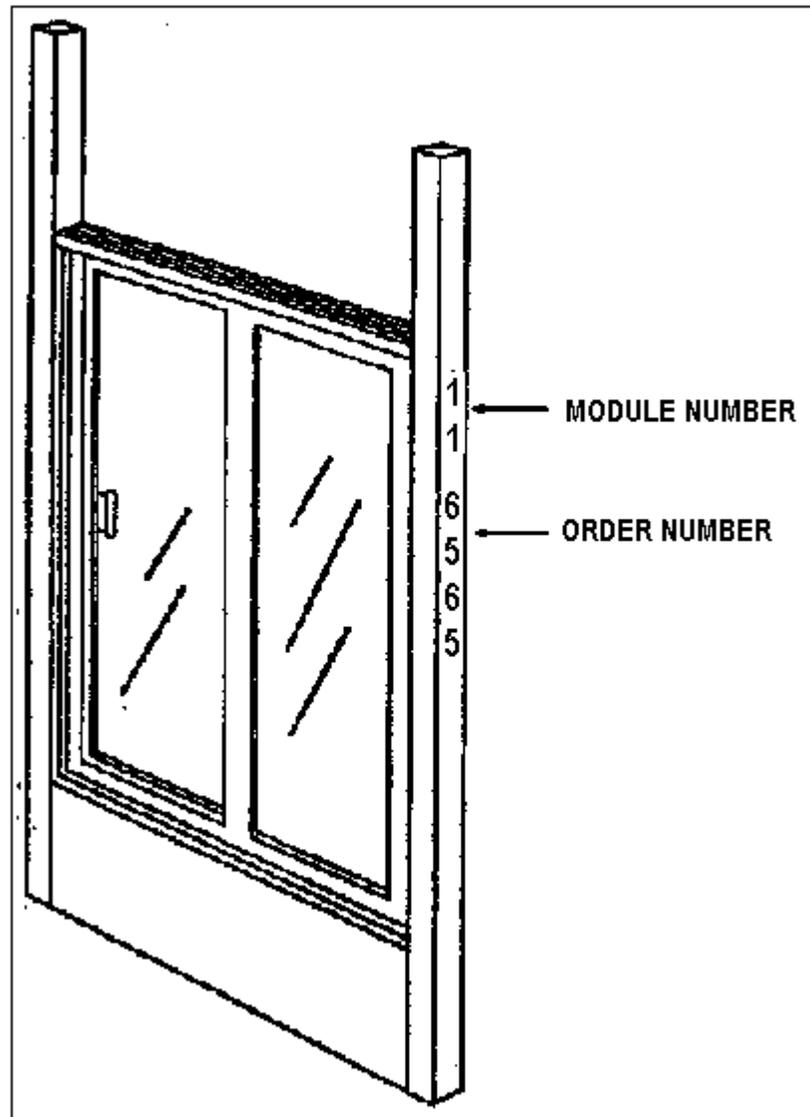


**DIAGRAM 3.1**

**DIAGRAM 3.1**

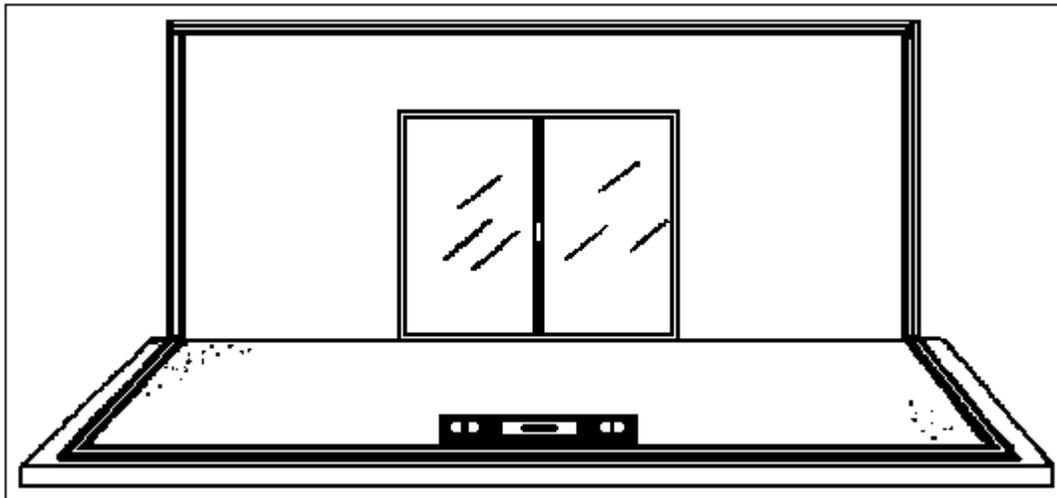
You may assemble the walls in sections, if you desire, like the drawing, or just follow the "cut sheet" (design layout) looking from the OUTSIDE of the room. If you should assemble the wall sections by modules, as shown, you should NUMBER the modules, as in the diagram, so you can identify them later.

**ALWAYS REFER TO THE LAYOUT DESIGN PRIOR TO MAKING ANY CUTS.**



## FRONT WALL INSTALLATION

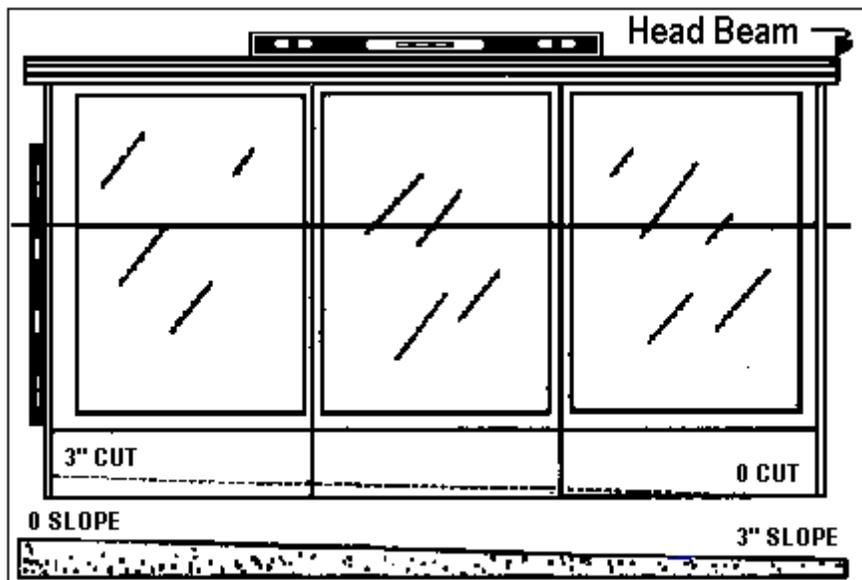
**DIAGRAM 3.2**



**DIAGRAM 3.2**

On most concrete foundations & some deck applications, the front wall is not always level. To find out if your foundation is level, place a 4' level on the inside edge of your front wall bottom track. If there is a slope of more than 3/4" in the entire width of the front wall, the solid kick plates must be trimmed.

**DIAGRAM 3.3**



### **DIAGRAM 3.3**

Tops of the front wall need a continuous level surface for the head beam application. Any slope must be trimmed off bottom of the wall section.

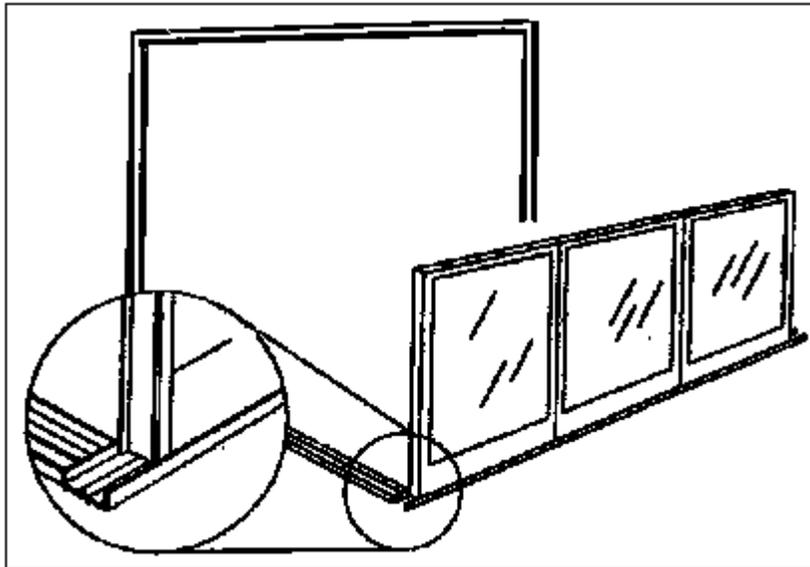
The kick plates should be trimmed from the opposite direction. If the slope is not uniform, then each section must be cut separately. Remember, all sections may not be the same size and each cut should be according to the size of the section you are working on.

2 stage kick plates (1/2 glass 1/2 solid) you need to adjust to an un-level deck space for the section affected with tempered glass kick plates.

- Remember, if kick plates are not cut to adjust to a slope, your windows may not fit properly
- Remember, if there is slope & you have tempered glass kick plates with no solid fill, your windows may not fit properly.

### **FRONT WALL INSTALLATION**

#### **DIAGRAM 3.4**

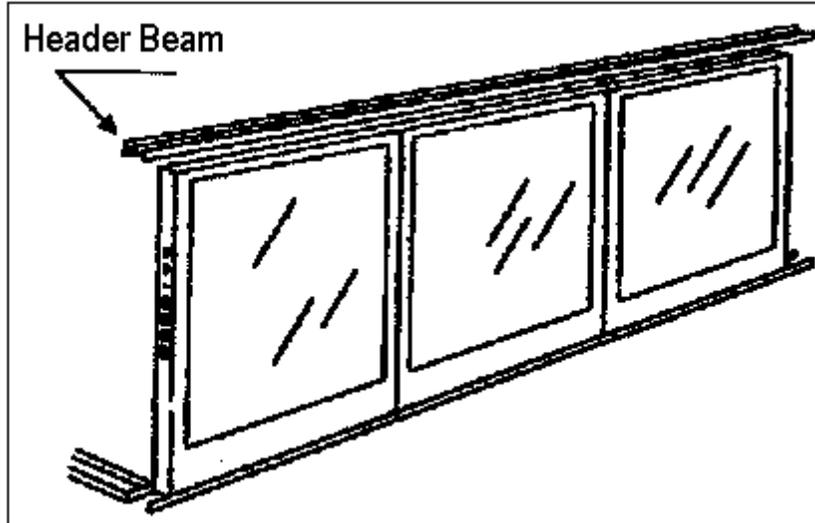


#### **DIAGRAM 3.4**

After any cutting on the front wall as per the layout design, cut the solid fill panel (if applicable) starting at the left side. The layout sheet will note solid or window sections on the corners of the front wall. The left side or solid should intersect the inside corner of the Sidewall Bottom Track & Front Wall Track. (If there is any

solid on the sides of the front wall, place these in the same position as you would with a starting module). Add all other front wall sections to the first one in their correct order, mating the width the extrusion.

**DIAGRAM 3.5**



**DIAGRAM 3.5**

Place the Header Beam on top of the front Wall. This Header should overhang the sides of the front wall at the same distance as the Front Wall Bottom Track (2 1/8" on a 2" wall and 3 1/8" on a 3" wall measured from the outside web of the vertical mullion). Be sure that the electrical raceways (if applicable) line up the walls line up with the chase nipples in the Header.

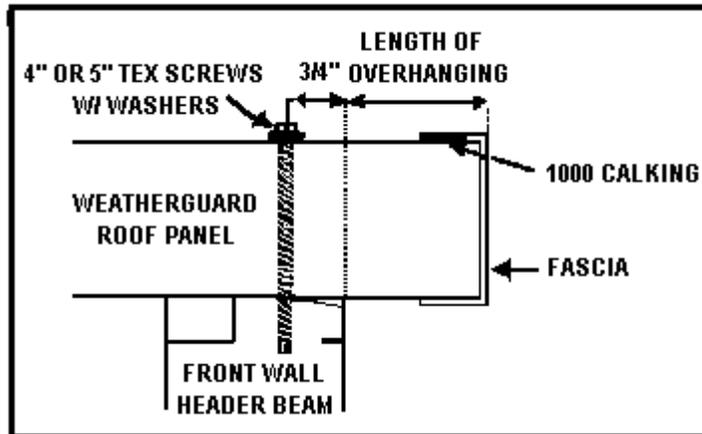
**A roof panel may be used to steady the front wall as you secure it to the header & bottom track.**

**FOR THE INSULATED FOAM ROOF FOR THE ENCLOSED PATIO  
OR GARDEN ROOM**

## **DIAGRAM**

### **6.2**

When the Front wall is plumb, secure the Insulated roof panel to the Header Beam. This is done by measuring the overhang of the roof from the plumb front wall on the underside of roof to the Header Beam. Add 3/4" to this measurement and mark the top side of the roof, 4" from the seam edge, (there should be a screw 4" on each side of the seam joining the roof Panels) this measurement will give a strong bite into the Header Beam but will not penetrate the electrical raceway in the Header Beam. Secure the Insulated roof panels to the Header Beam with 4" lag screws with washers

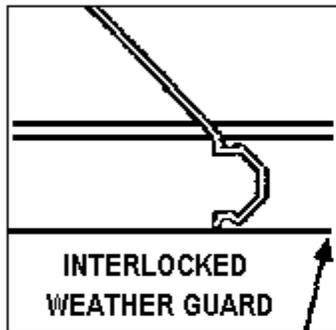


attached, (4" roof will require 5" lag screws) finish securing the roof panels with screws 12" on center.

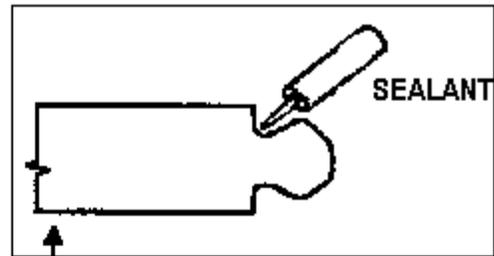
**DIAGRAM 6.3**

The next Roof Panel tongue and groove should be cleaned and free of oil and dust. The tongue side that mates with the first Panel should have silicone applied to the top of the tongue. This is to ensure a weather tight seal after interlocking the panels together. This will also seal the roof with a seal that is not exposed to the UV rays of the Sun.

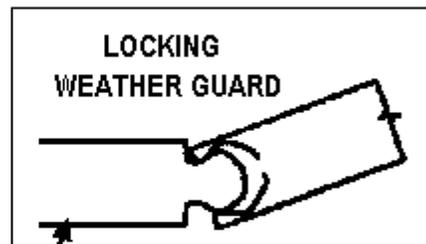
**DIAGRAM 6.5**



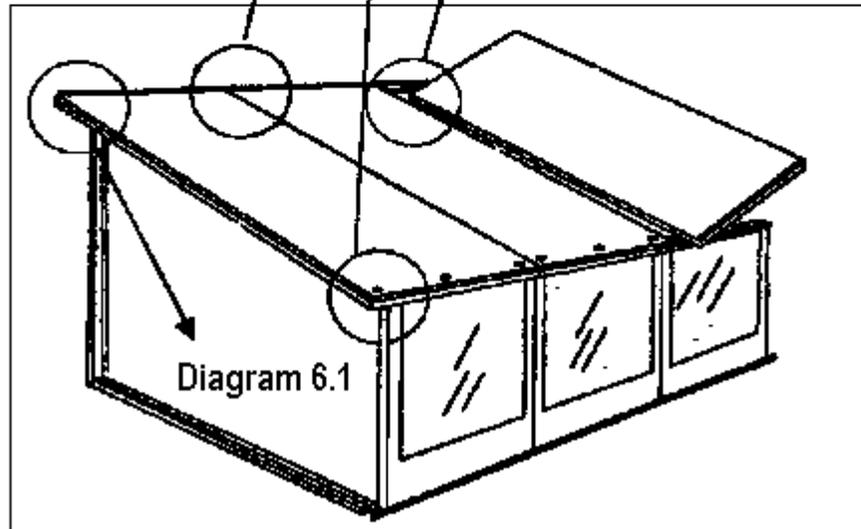
**DIAGRAM 6.3**



**DIAGRAM 6.4**



**DIAGRAM 6.0**



**DIAGRAM 6.4**

Place the second panel, parallel to the first, 3" from the Attachment

Channel and overhanging the Header Beam. Tilt the panel up and push towards first panel until the top of the panels are interlocked.

Slowly lower the panel until the bottom of the tongue & groove are interlocked.

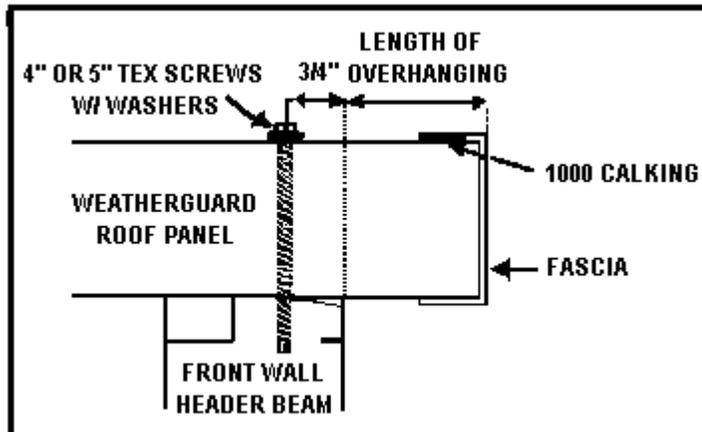
See Diagram **6.5** Now push the second panel into The Attachment Channel and secure the panel to the Attachment Channel.

Plumb the wall module under the second roof panel and secure the roof panel to the Header Beam. Repeat this process for the remaining Weather guard Roof. Seal all of the Roof Panel seams with a small bead of Silicone, for a second weather tight seal. Seal the top junction of the Roof

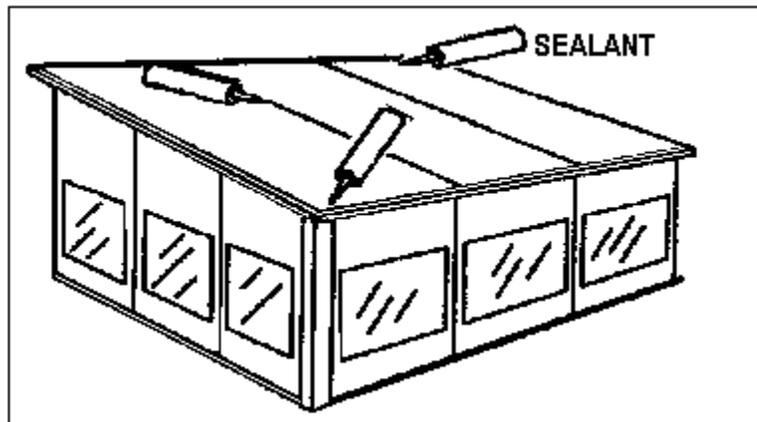
Panel to the outside lip of the Attachment Channel. Seal all of the Roof Panels seams with a small bead of Silicone, for a second weather tight seal. Seal the top junction of the Roof Panels to the outside lip of the Attachment Channel.

## INSULATED FOAM ROOF PANELS

There will be a front and side Fascia that will cover the outside perimeter of the Roof System. This piece may look like the Attachment Channel on a 3" Roof. Cut to length and secure to the roof.



The roof will leak without additional sealing. To ensure a long dry life of the room, run a small bead of silicone (not poly-urethane) on every seam.



The optional Gutter System should be attached in the same way as the Fascia. Dams may be required at each end of the Gutter. Downspouts and Elbows will be required at the corners of the Gutter to channel the water from the roof. When all Fascia pieces and or Gutters have been installed, run a bead of Silicone at the junction of the roof panels and the Fascia. The Downspouts and Elbows are usually installed a maximum of 20' from each other. A hole saw can be used to drill a hole for the Downspout dropout in the Gutter. The dropout should be secured and sealed to the bottom of the Gutter. And any necessary elbows and downspouts should be added to the dropout. The Downspout connector should be secured to the front of the outside corners to accept the downspout.

### SIDEWALL INSTALLATION USING TRANSOMS

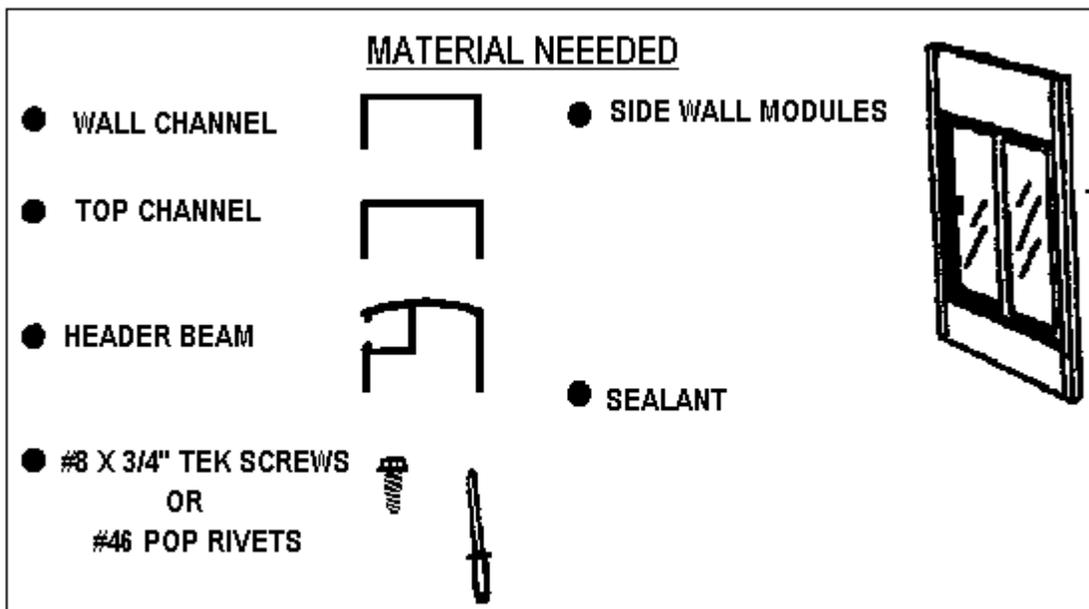
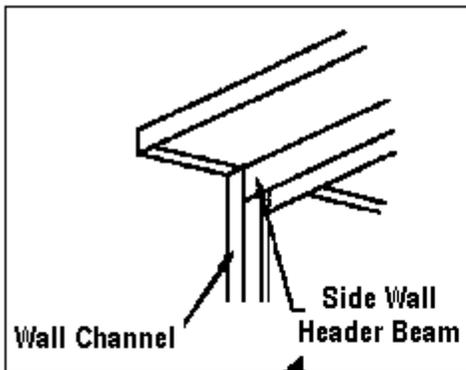


DIAGRAM 8.1



DIAMGRAM 8.2

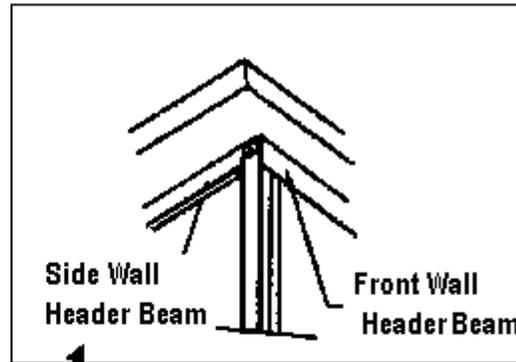


DIAGRAM 8.3

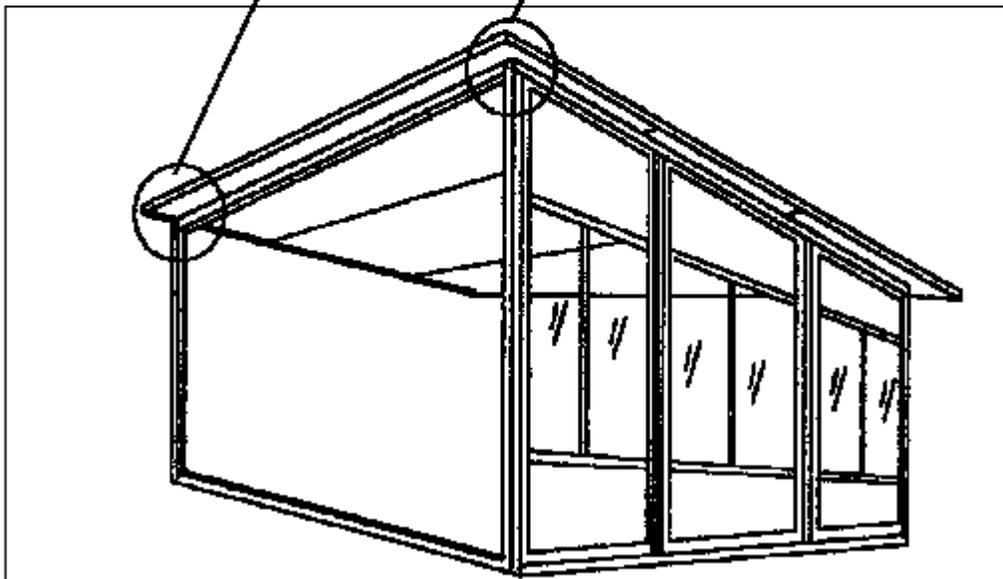


DIAGRAM 8.3

After the structural roof has been installed and secured to the front wall, the side wall header is ready to be attached to the bottom of the roof panel above the side wall bottom track. Cut the wall channel (the wall channel may need to be slit) between the inside dimension of the bottom track and the roof panel at the house wall. This will give you a piece of material that will enable you to mark the under side of the roof plumb with the bottom track below. Using the Top Channel as a header, secure to roof starting at your mark, Diagram 8.1 and intersecting with front wall Header. **Diagram 6.2** Secure with # 8 x 3/4" Tek Screws every 16".

## SIDEWALL INSTALLATION USING TRANSOMS

Note: There are two types of headers one for electrical and a Top Channel for non electrical. Check layout sheet for material supplied.

The Sidewall sections will normally have solid material above the windows. The Solid material will give you the ability allow for the slope in the roof line. Remember that if you have a foundation that slopes, you must cut the slope on the kick plates before you cut the slope for the roof. As in all the room layouts, the wall sections are normally starting from the left sidewall as you face the front of the room from the outside. Check your layout sheet for any solid material that may be in the front corner of the sidewall prior to cutting the first wall section.

Measure the first wall sections width and mark that dimension on Sidewall Header

DIAGRAM 8.4

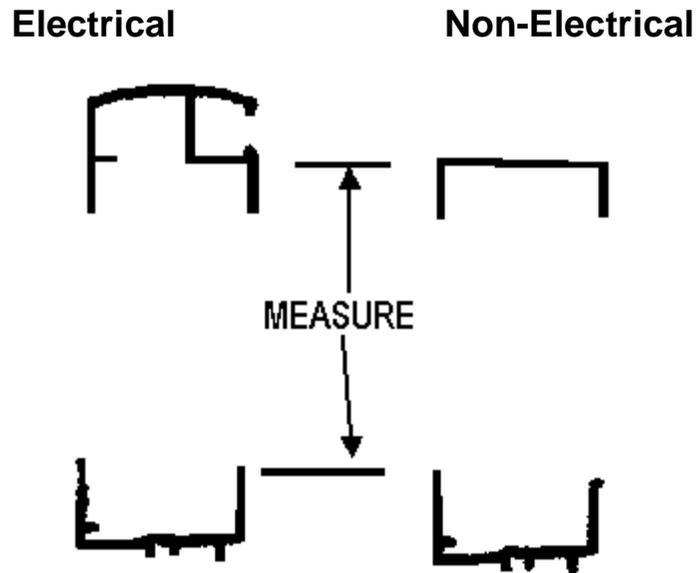
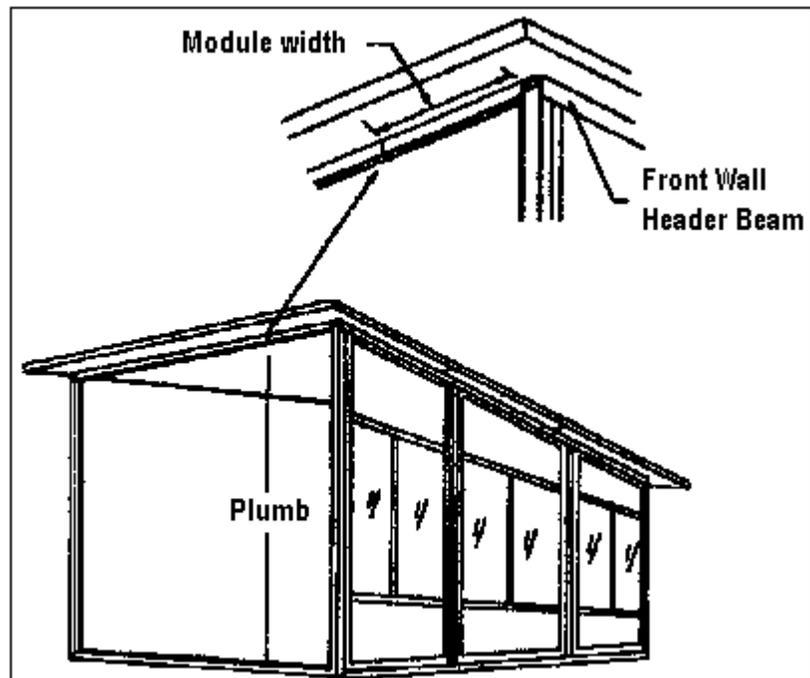


DIAGRAM 8.5



and Bottom Track.

**Diagram 8.5** At these marks measure between the Bottom Track and the inside of the Header Beam.

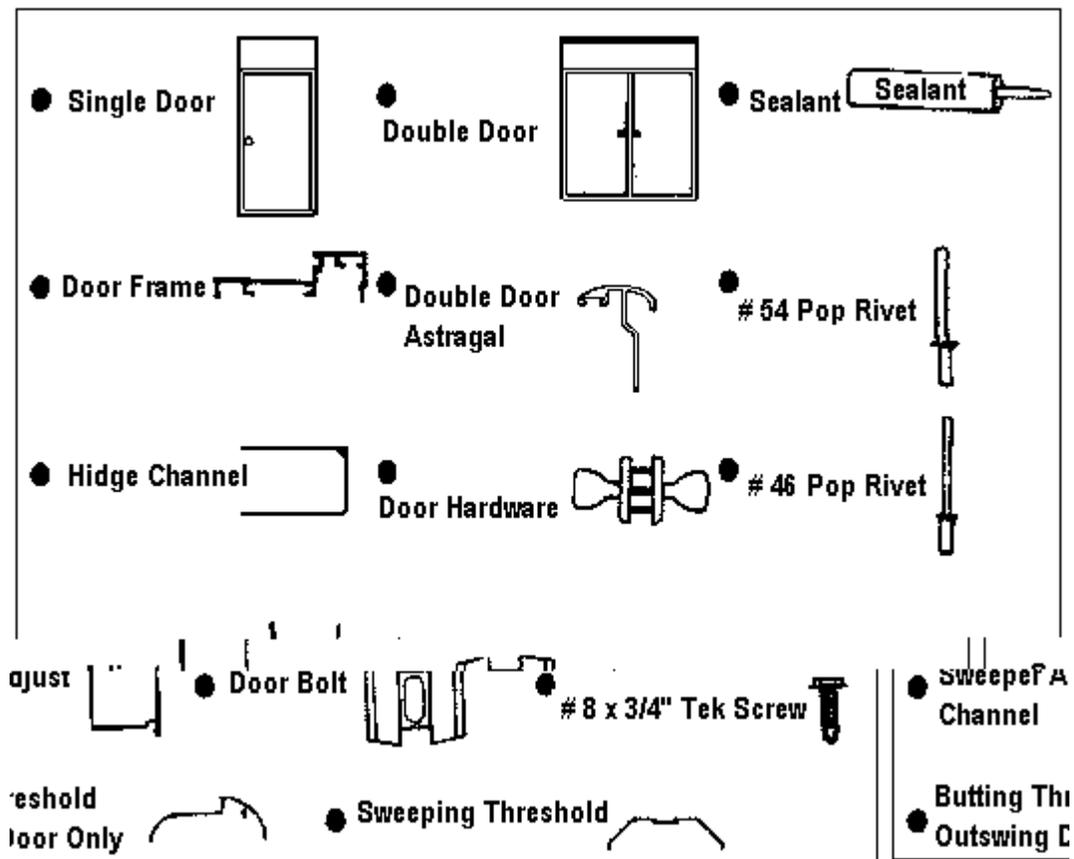
**Diagram 8.4** deduct 1/2" from this dimension to arrive at the size to mark the left side mullion now measure the same way at the front wall and mark the right side mullion using a straight edge scribe a line from mark to mark this gives you the cut line for cutting that section.

To fit each section into position, you may have to start it closer to the house wall to slide it into place because of the narrowing of the opening. Repeat this process until your last section, (the section closest to the house wall).

When all wall sections have been installed, start from the front wall & level and plumb each until you reach the house. Secure the walls to the Bottom Track & Header Beam on the inside & outside with 4 8 x 3/4" Tek Screws or Pop Rivets at the junction of the male & female mullions. Any gap that may occur between the last wall section & the house wall may be trimmed out with solid fill or an H - section split down the middle. (The junction of the Front Wall and Side Wall will be trimmed & secured with an inside & outside angle finishing the corner. The Side Wall must be sealed at the junction of the Bottom Track to the kick plates & the window header to the Solid Transom. Seal the Side Wall to the house wall.)

# PEDESTRIAN DOOR INSTALLATION

## MATERIAL NEEDED



Unlike the Sliding Door, The Pedestrian Door is placed in the wall the same way a section is. Its sides are normally constructed with either a male or female mullion. The single frame is assembled while the double frame will require some assembly.

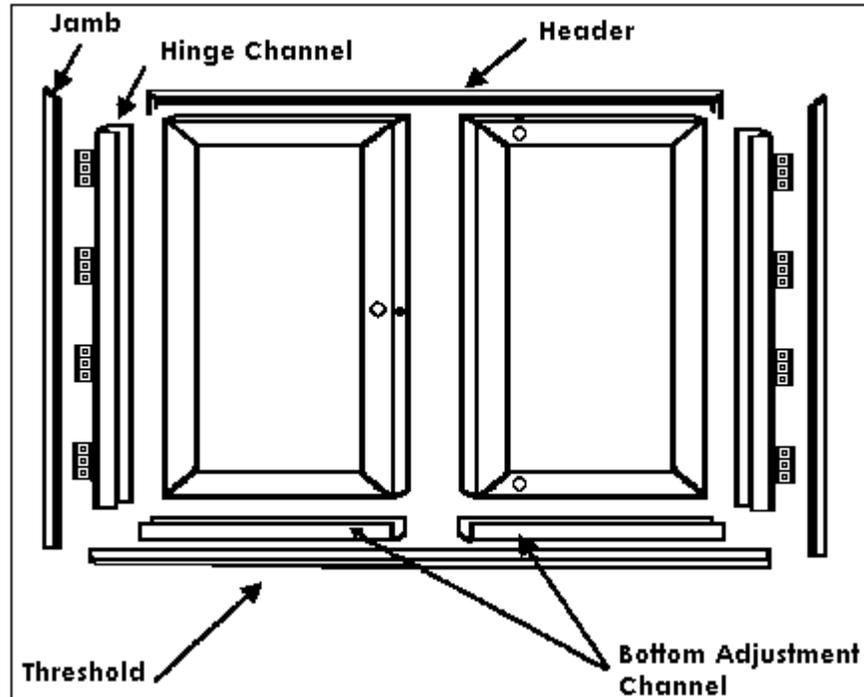
With the Single Door Frame Assembly, cut the top to the proper height (follow same procedure as in Dia.8.5), Place the frame in line with the rest of the wall. Before securing the Door Frame, attach the threshold to the Bottom Track. Next square and level the frame and secure to the Header and Bottom Track with either #8 x 1/2" Tek Screws or Pop Rivets.

Cut bottom portion of Hinge channel to fit in door frame. Attach the hinge to the door frame. Start by securing one hole in the top hinge to the door frame with a 3/8" x 1/2" Tek screw. Determine that the Hinge Channel is tight with the bulb vinyl on the door frame when closed. Next, secure in one hole with Tek screw, recheck the alignment. Now drill all holes of the hinges with a 3/8" drill bit and secure with # 64 x 1/8" Pop Rivets.

Place door in Hinge Channel and square up with the Door Frame. Secure with #46 x 1/8" Pop Rivets four even locations both on the inside and outside through the Hinge Channel into the door. Cut the Bottom Adjustment Channel to fit from the edge of the door to the inside edge of the Hinge Channel. Place on the bottom of the door and adjust so that the Bottom Adjustment Channel brushes along the Threshold. Secure to Door with a couple of #46 x 1/8" Pop Rivets.

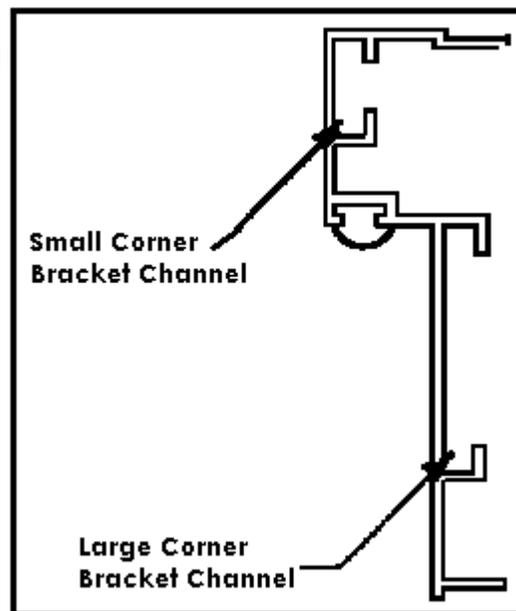
## PEDESTRIAN DOOR INSTALLATION

The Double Door Frame normally comes in 4 parts, 1 Header, 2 Jamb, and 1 Threshold.



Assemble the Header and Jamb together by inserting the corner brackets of the Header into the channels of the Jamb shown in **Diagram 10.1**.

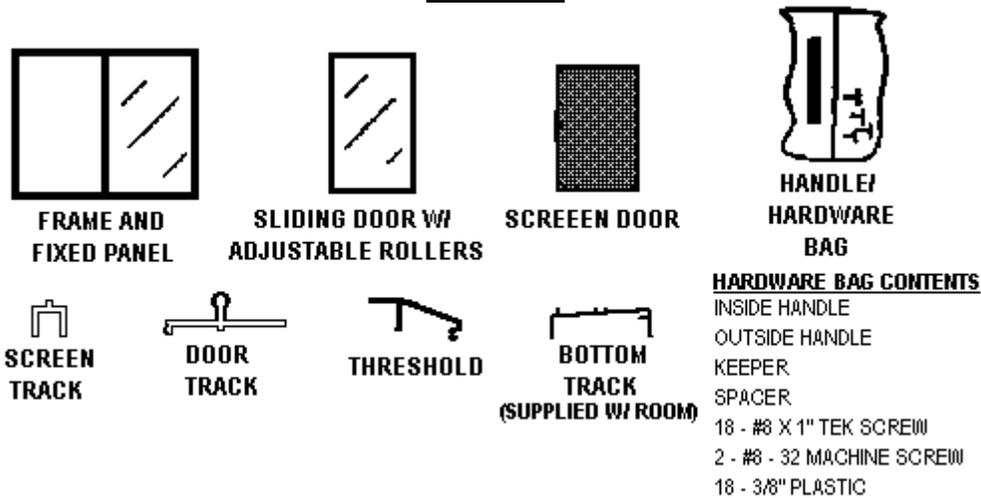
Rest the jamb against a wall to support it while you hammer in the corner brackets. Go back and forth hitting the large



bracket a couple times and then the small bracket. Repeat the process until the corners of the frame are matched up.

## INSTALLATION GUIDELINES FOR MOST SLIDING GLASS DOORS

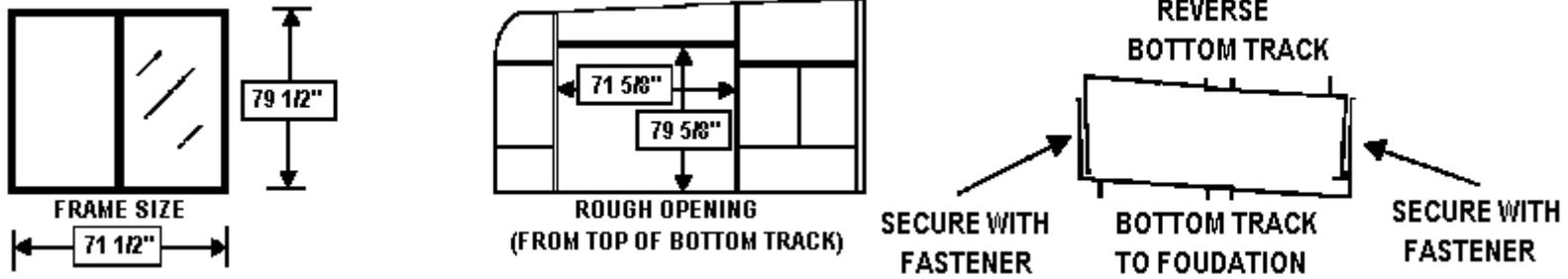
### PARTS:



### STEP I

#### MEASURE OPENING:

The opening should be larger than the doorframe. (See the illustration and see layout design for measurements) above for rough opening sizes. Plumb and secure the mullions on either side of the opening to the rough opening width.



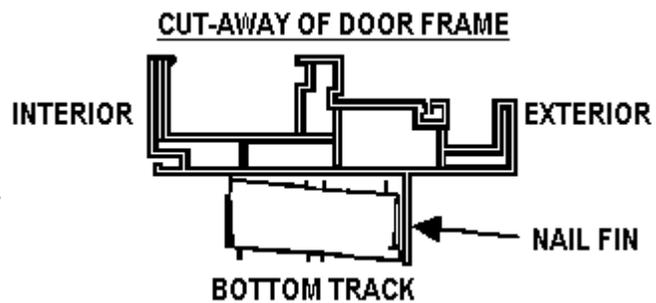
## LEVELING FOUNDATION

Place bottom track (supplied with room order) upside down into the bottom track fastened to the foundation. Level off to insure doorframe will be level and square. Fasten reverse bottom track at two or three points to the existing bottom track (see illustration) using either #8 tek screw or pop rivet.

## STEP 2

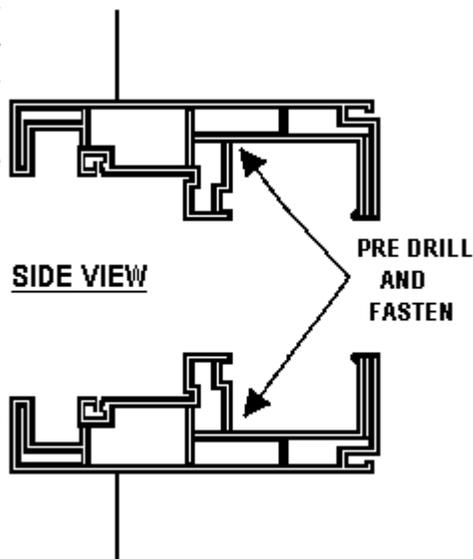
### FRAME INSTALLATION:

The frame may or may not have weep holes pre-drilled, if not you need to drill them to allow for proper weeping of water. Weep holes punched on the top and bottom. This will allow the door to open and close from which ever side is necessary. After determining the direction the door will be opening place into the opening with nail fin to the outside of the room (see illustration)

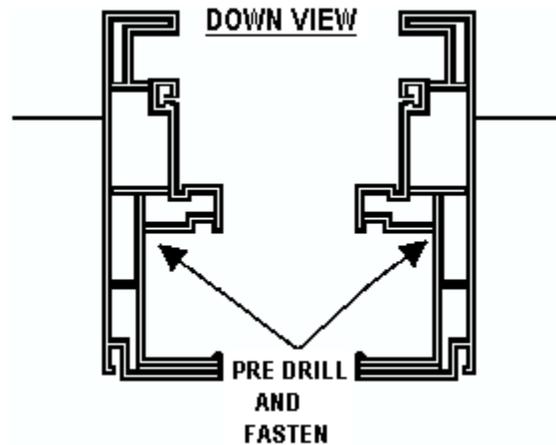


### FASTENING:

Before fastening the door to the room, check the square of the frame (measure diagonally). Make any adjustments that would be necessary to match up the two diagonal measurements. Pre-drill 3/8" pilot holes through the first layer of the door (see illustration)

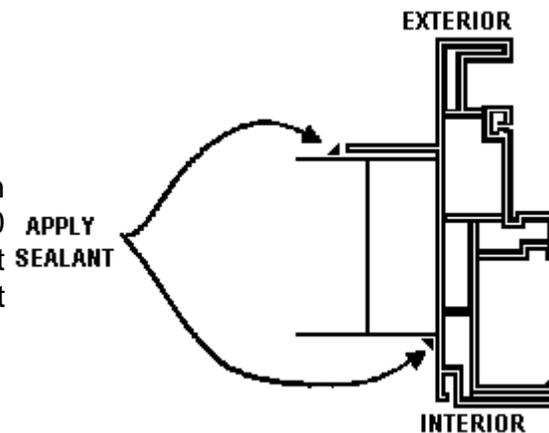


and fasten doorframe to mullions on all four sides with #8 x 1" tek screws. There are enough screws supplied to fasten four screws to each side of the doorframe. After securing the frame seal the holes.



### **SEALING FRAME TO WALL:**

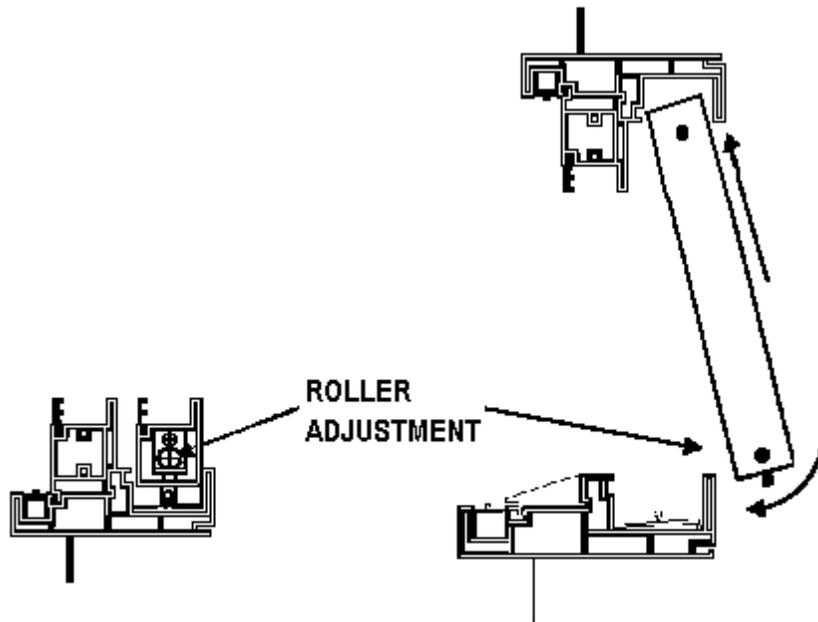
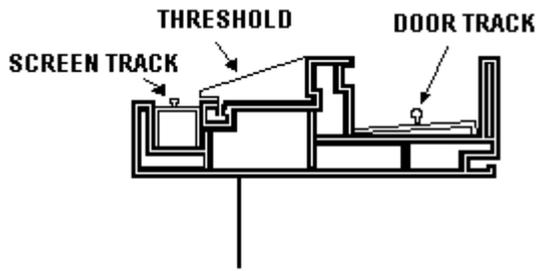
Seal sliding door frame to modules on both the inside and outside using 1400 silicone (see illustration). This will not only seal the door frame to the room but also provide a finished look.



### **STEP 3**

### **PLACEMENT OF DOOR TRACK, SCREEN TRACK AND THRESHOLD:**

All tracks and threshold will snap into place (see illustration). Note the direction that the door track is placed into the main frame. It may be necessary to use the end of a hammer handle to ensure that the track is securely locked in to place. Otherwise, the door may not roll properly.



## **STEP 4**

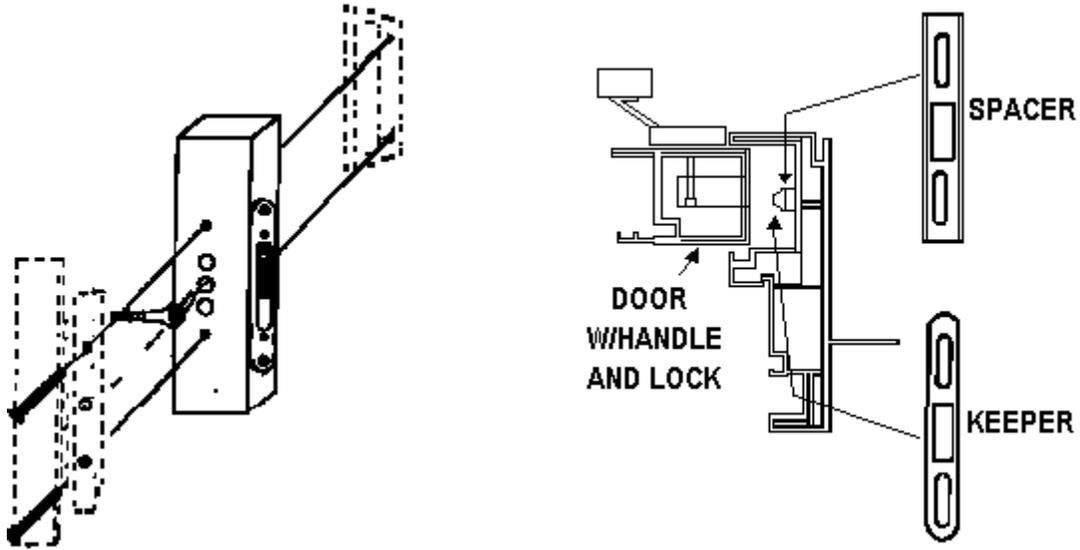
### **DOOR INSTALLATION**

Before placing sliding door into the frame, adjust (see illustration) the rollers so that the wheels are about a 1/4" out of the bottom. The sliding door frame is inserted from the inside of the room. Slide the door into the top of the frame and swing it over the bottom portion of frame. The wheels should rest on the top of the door track. Make any adjustments necessary to ensure the door is plumb and rolling smoothly. After door has been adjusted, screw out the top rollers to lock it into place.

### **HANDLE INSTALLATION**

Install striker to the doorjamb (illustrated below) using #8 x 1" tek screws. Note: Install sliding door handle as illustrated. The spacer must be used in order for

Note: The wood portion of the handle is the lock to work properly. to be on the inside of the room.



## **STEP 5**

### **INSTALLATION INSTRUCTIONS FOR TOP AND BOTTOM ADJUSTMENT WHEELS FOR PATIO SCREEN DOORS**

1. After unpacking screen door, locate the handle latch. This latch should be facing the inside of the opening when the door is installed.

2. Anti-rattle devices may be supplied in hardware pack. If needed, snap into top of door at this time.

3. Place the top of the door into the channel on the upper frame. Push the door up to compress the top rollers.

4. While holding pressure against the top rollers, swing the bottom of the door into the bottom track. Compress each of the two bottom rollers and place the groove of the roller over the bottom track. (See step 1).

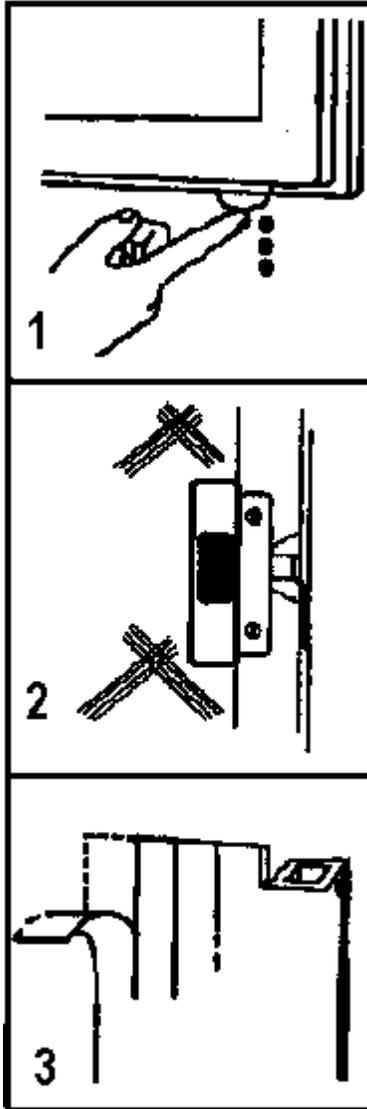
5. With a Phillips screwdriver, turn screws at the bottom of the screen door clockwise to raise the door off the track. Adjust range = 3/8", top & bottom. Warning: Do not over adjust.

The door should be adjusted so that the lock stile is parallel to the locking jamb and the bottom of the door does not drag on the track at any point of travel.

6. Adjust the top roller up if necessary to contact the frame header. (Turning the adjustment screw clockwise raises the rollers). The door should move freely throughout its range of travel.

7. With the catch slide in the upper position, locate the strike plate 1/4" down from the catch. Secure the strike plate to the jamb with the two screws provided. (See step 2).

8. If a bug seal is provided and is too wide, rip off excess at tear-off groove. Cut off any excess length. (See step 3).



**\* Note: use of a power screwdriver increases the possibility of stripping the adjustment screw.**