

Assembly Instructions and Parts List for

TW-12

Trio-Wade

Purple Martin Safety System

With Winch and Cable

A complete system is packed in two boxes — post box and house box. House box contains hardware for house and post.

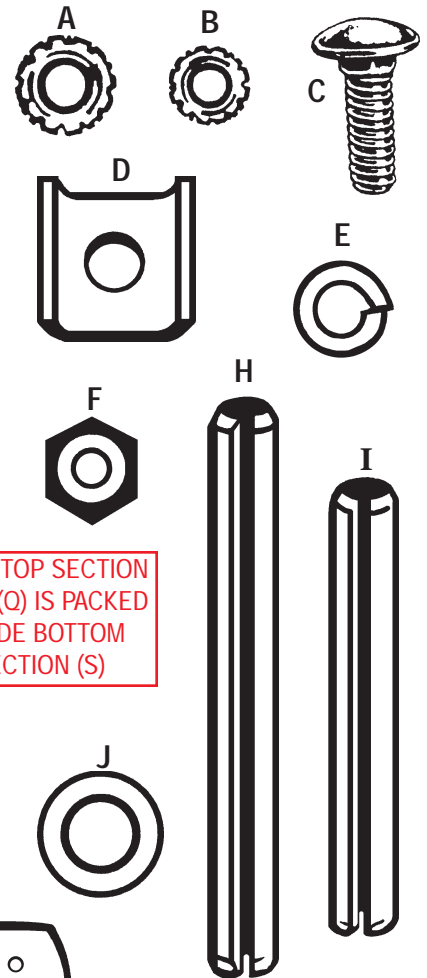
Note: It is necessary to install post before house is put up, but the house can be assembled at any time.

Check parts received against lists on pages 1 and 2.

Refer to packing slip claim instructions if any shortages are found.

Please use "Product Code #" when ordering replacement parts

CAUTION: Carefully read instructions for safe installation and operation.



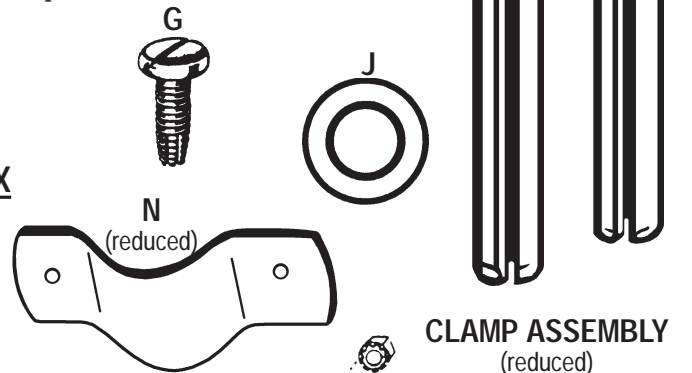
NOTE: TOP SECTION POST (Q) IS PACKED INSIDE BOTTOM SECTION (S)

PARTS PACKED IN POST BOX

Product Code #	Item	Qty	Description
27806	Q	1	1-1/2"x74" Post (top section, 3 holes in end)
927808	R	1	1-1/2"x74" Post (center section with splice)
27810	S	1	1-3/4"x72" Post (bottom section)
27812	U	1	1-3/4"x28-1/4" House tube
27860	1	1	2"x30" Ground socket
900003	1	1	Ground socket hardware

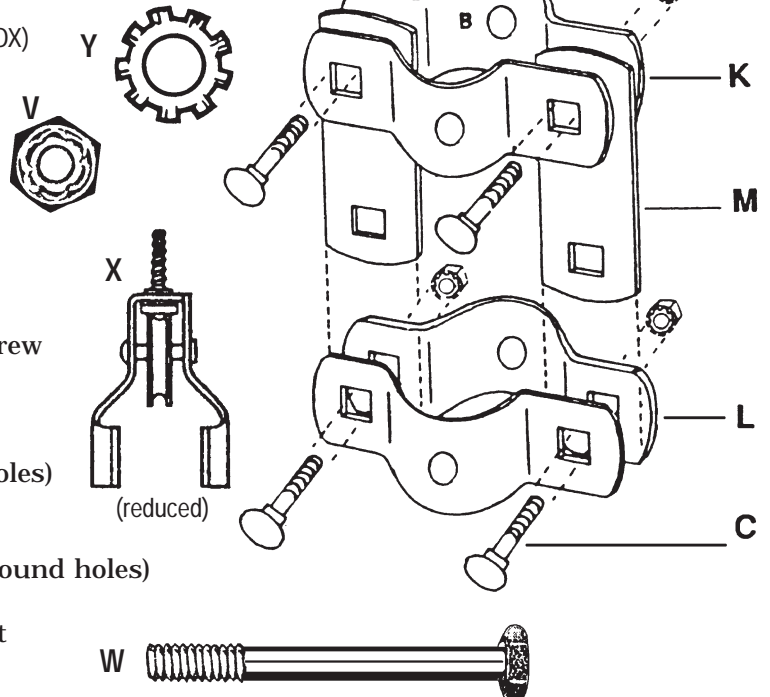
PARTS PACKED IN WINCH/HARDWARE BOX

Product Code #	Item	Qty	Description
728000	AA	1	Winch (assembled)
728205	BB	1	Safety clamp (assembled)
728040	CC	1	Winch cable
900019	DD	1	Post and winch hardware (plastic bag)



PARTS IN PLASTIC BAG (PACKED INSIDE WINCH BOX)

Product Code #	Item	Qty	Description
42550	A	6	1/4-20 keps nuts
40550	B	1	10-24 keps nut
30052	C	4	1/4-20x3/4 carriage bolts
28032	D	1	Plate washer
35283	E	1	#10 lock washer
40750	F	1	10-32 hex nut
35264	G	1	10-32x1/2 self-threading screw
32004	H	1	1/4x2 split pin
32005	I	1	1/4x1-1/2 split pin
24500	J	1	#10 I.D. x7/16 O.D. washer
28024	K	2	1-1/2 B clamps (2 square holes)
20413	L	2	1-3/4 clamps
20416	M	2	Links
28025	N	1	1-1/2 B clamp modified (2 round holes)
32019	V	1	1/4-20 insert nut
32006	W	1	1/4-20x2 hex head (HH) bolt
726210	X	1	Pulley end assembly
32020	Y	1	5/16 star washer



Parts list continued from Page 1

Parts packed in house box and winch hardware box

This house has an opening through the center which takes a 1-3/4" O.D. tube (house tube). This tube is clamped to the top of the ceiling and to the bottom of the lower floor. The house and tube slide up and down the pole and is raised and lowered by the cable over a pulley at the top of the pole. See drawing.

HOUSE PARTS PACKED IN THIS BOX

Product Code #	Item	Qty	Description
826220	1	4	Floor sections
26234	2	2	Roof sections
26232	3	1	Ceiling
26226	4	4	End panels
25040	5	12	Doors
826228	6	2	Center dividers
26230	7	8	Short dividers
26238	8	1	Chimney
35278	9	4	6-32x18-5/8 tie rods
726222	10	4	Front rail assembly
726224	11	4	Side rail assembly
25015	12	2	Gable ends
25065	13	12	Winter door stops (in plastic bag)
27408	14	1	Mounting plate for bottom floor
27407	14a	1	Mounting plate riveted to ceiling (dimpled)
26246	15	2	Roof perch
26240	16	8	Floor trays
26242	17	4	Center floor trays
826236	18	1	Chimney cap with riveted clip
28036	18a	1	3/8 O.D.x12" cable tube

PARTS IN PLASTIC BAG

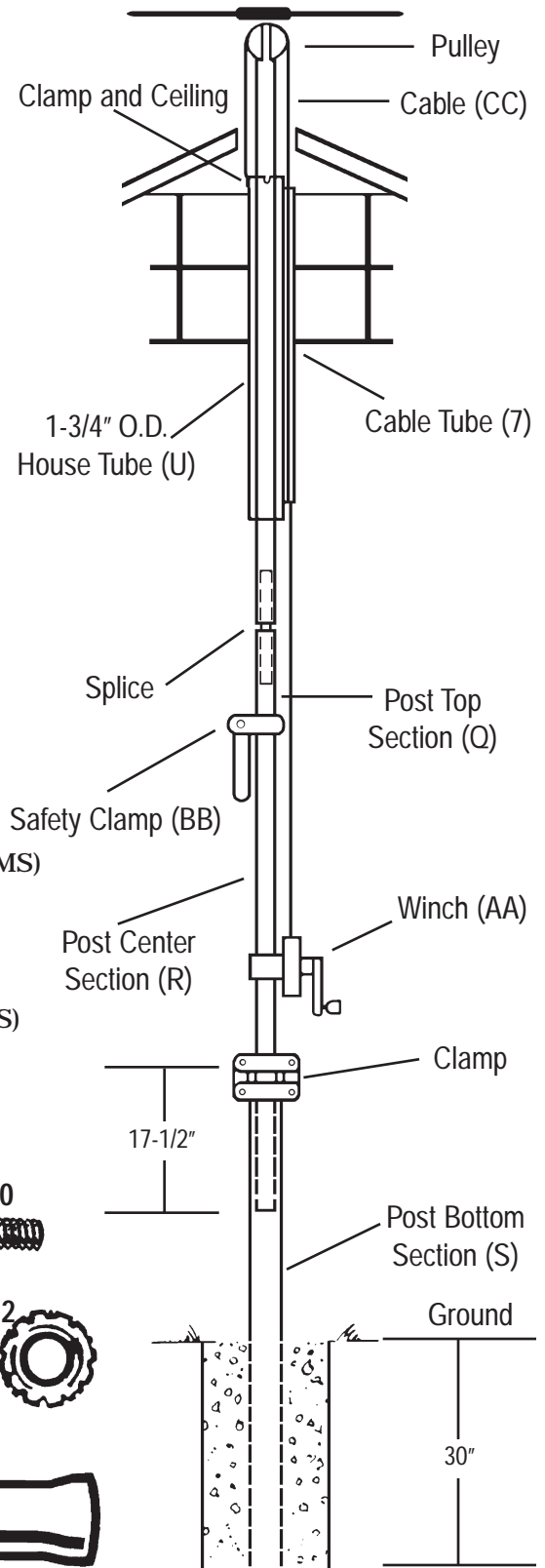
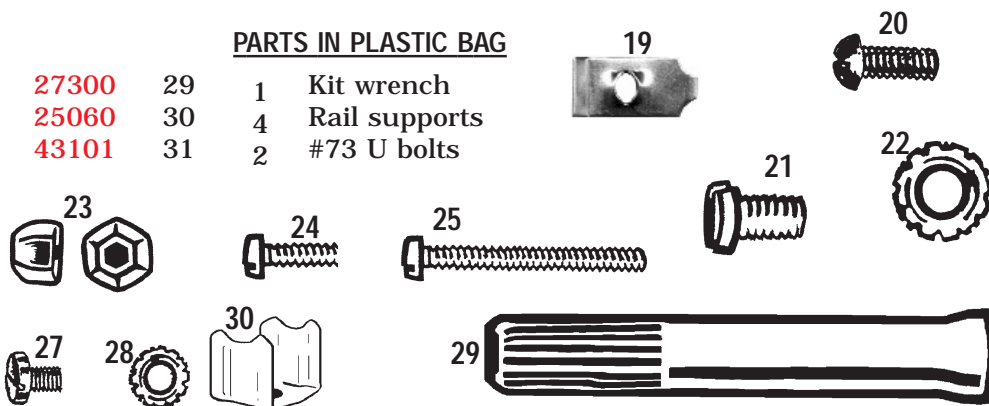
35286	19	6	Flat C nuts
40050	20	4	10-24x1/2 round head machine screws (RHMS)
40550	21	4	10-24 keps nuts
42550	22	4	1/4-20 keps nuts
35288	23	32	6-32 acorn nuts
35262	24	26	6-32x3/8 pan head machine screws (PHMS)
35270	25	4	6-32x1-3/4 pan head machine screws (PHMS)

PARTS IN SMALL PLASTIC BAG

35260	27	8	6-32x1/4 pan head machine screws [PHMS]
35252	28	8	6-32 keps nuts

PARTS IN PLASTIC BAG

27300	29	1	Kit wrench
25060	30	4	Rail supports
43101	31	2	#73 U bolts



Assembly Instructions

Read all instructions **before** starting assembly. This will acquaint you with each step required.

Wipe protective oily coating from all martin house parts surfaces prior to assembly.

IMPORTANT: MAKE SURE PARTS ARE IN CORRECT LOCATIONS BEFORE BENDING TABS!

Use screws in holes as shown **ONLY** —

1. For bottom floor, assemble two floor sections [1] with two end panels [4] using six each 6-32x3/8 PHMS [24] and 6-32 acorn nuts [23]. Use kit wrench [29].

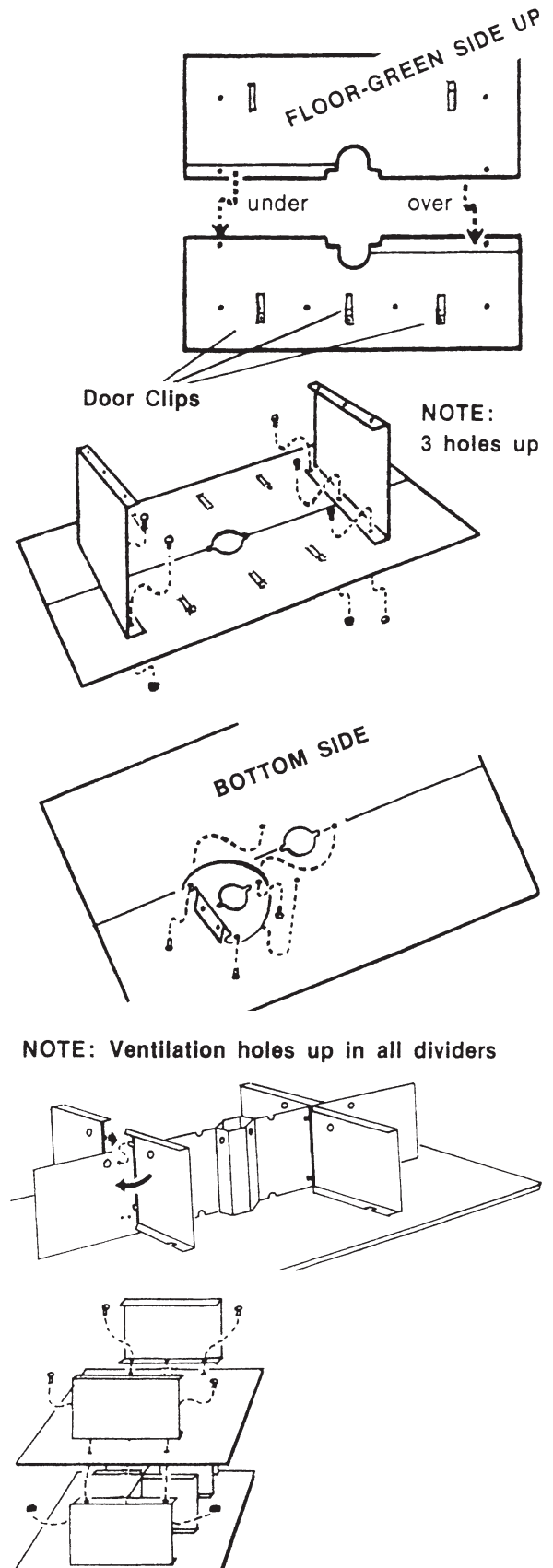
NOTE: Green side of floor is up. Floor sections interlock as shown, over and under. End panels have 3 small holes on top. Screw heads are on green side of floor.

2. Install mounting plate [14] on bottom side of floor, using three each 10-24x1/2 RHMS [20] and 10-24 keps nuts [21]. Screw heads are on green side of floor.

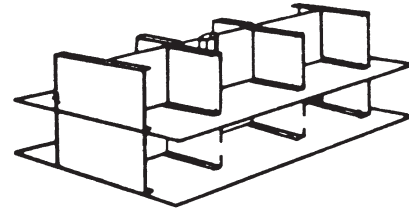
Note: Mounting plate [14] is bolted to mounting plate riveted to ceiling for shipment.

3. Place center divider [6] between end panels [4], 1/2" dia. ventilation holes are up. Place short dividers [7] in position with tabs entering floor and center divider. **BE SURE FLANGES ON SHORT DIVIDERS FACE AS SHOWN.** When properly placed bend tabs against straight side of 'D' hole to lock in place on floor and on center divider.

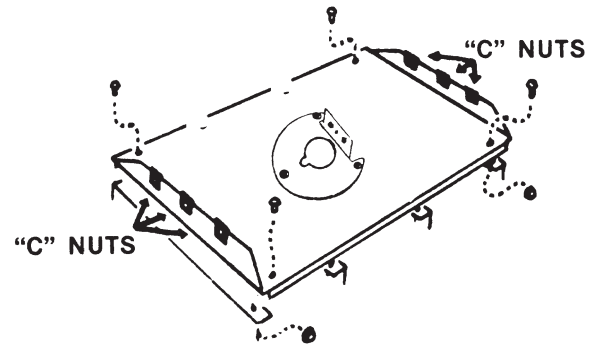
4. Place two floor sections [1] on top of bottom floor assembly and with two end panels [4] using four each 6-32x3/8 PHMS [24] and 6-32 acorn nuts [23] fasten upper end panels through floor and lower end panels.



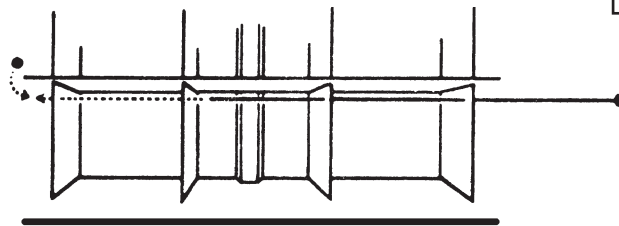
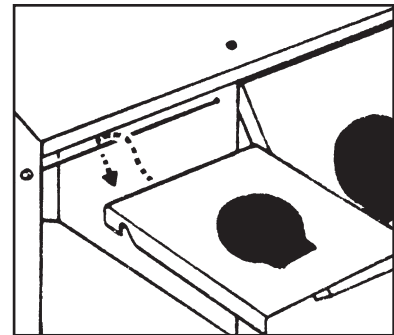
5. Repeat step 3 (page 3) for second floor, installing center divider [6] and short dividers [7] then bend tabs in 'D' holes.



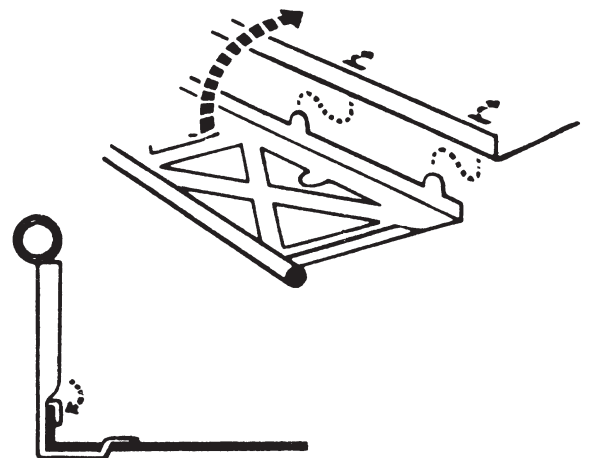
6. Slip flat C nuts [19] over holes on ceiling edge. Flat side is out. Install ceiling [3] on house assembly using four each 6-32x3/8 PHMS [24] and 6-32 acorn nuts [23] through end panels [4]. **Note:** Mounting plate on ceiling must be positioned the same as mounting plate on bottom floor.



7. Install tie rods [9] as shown by placing 6-32 acorn nut [23] on one end of rod; pushing rod through house and placing acorn nut [23] on other end of rod. Hang doors over rod. **Do not force.** Doors should hinge freely and snap into door clips on floor.



8. Install guard rails [10] & [11] on both floors, slip lower guard rail tabs into slots in floors from under side of floor. Rotate guard rails 90° into an upright position. This will allow second set of guard rail tabs to slip over the top of the turned up porch edge. Secure by bending these tabs down over porch edge.



9. Fasten chimney [8] to **one** roof section [2] using two 6-32x3/8 PHMS [24] and two 6-32 acorn nuts [23]. Do not tighten screws until assembly is completed.

IMPORTANT: THIS STEP MUST BE FOLLOWED EXACTLY USING ONLY THE 1/2 ROOF ASSEMBLY IN ORDER FOR THE CHIMNEY TO FIT PROPERLY. Note that flange on chimney is placed on underside of roof.

10. Place second roof section [2] as shown, interlocking flanges on roof over and under. Use four 6-32x3/8 PHMS [24] and acorn nuts [23]. Bolt through two end holes in peak of roof (these are temporary and will be removed later) and then through two holes in other side of chimney.

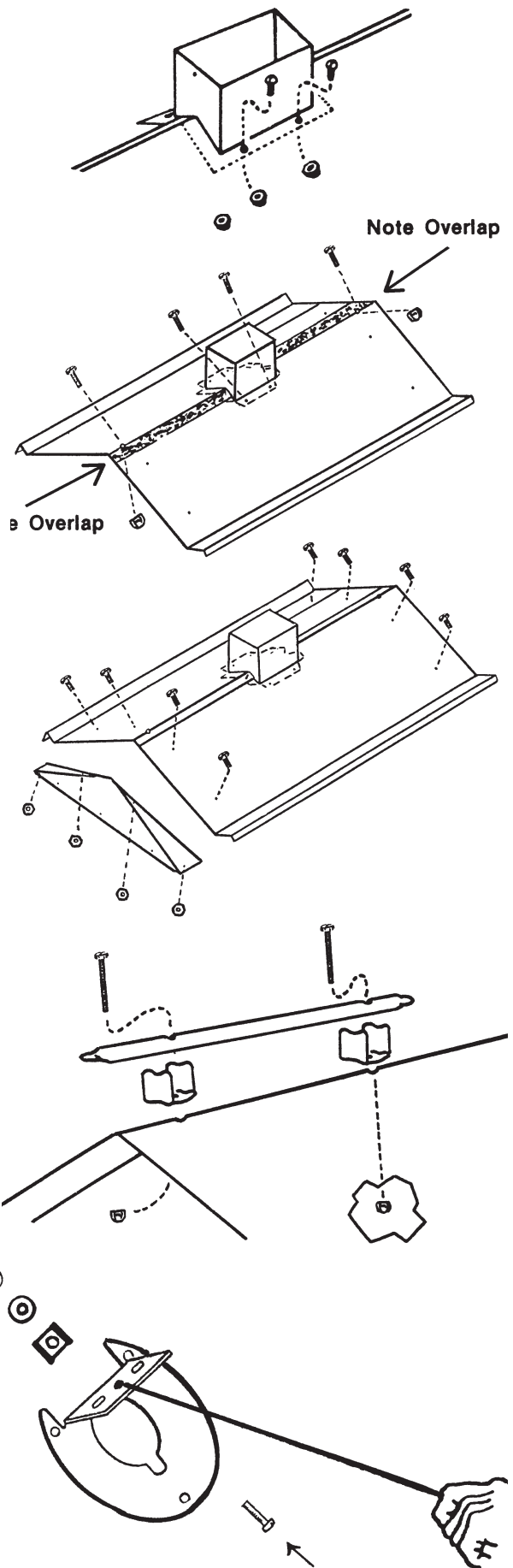
11. Using eight each 6-32x1/4 PHMS [27] and 6-32 keps nuts [28] fasten two gable ends [12] to roof assembly.

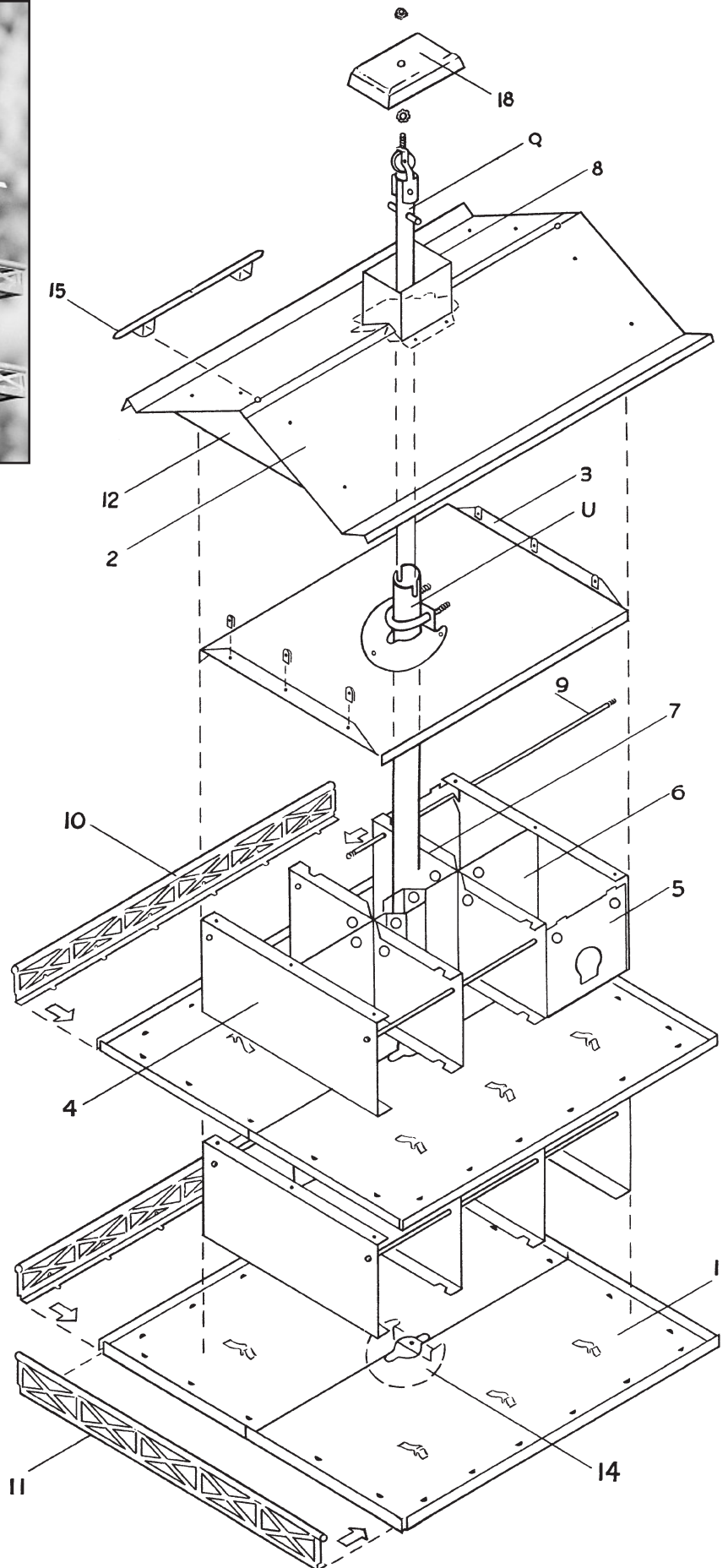
12. Remove the two screws and nuts from roof peak installed at step 10. Install two roof perches [15] using four 6-32x1-1/4 PHMS [26] through perch, rail support [30] and roof peak with 6-32 acorn nuts [23] as shown.

Tighten bolts and nuts until snug on these parts, then tighten on balance of roof assembly.

Chimney cap [18] is part of house but is installed on post at step 24.

13. Cable is attached at point shown to mounting plate on ceiling using 10-32x1/2 self-threading screw [G]. Insert screw from inside of mounting plate. Place plate washer [D] over screw with bevel out. Loop end of cable [CC] is now placed over screw and plate washer. Add #10 washer [J], #10 lock washer [E], 10-32 hex nut [F] and tighten securely with cable in perpendicular position to ceiling.

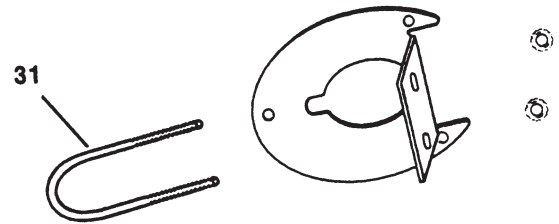




**Make *sure* parts are
in correct location
before bending tabs.**

14. Assemble two U-bolts [31] with mounting plates on ceiling and bottom floor, using four 1/4-20 keps nuts [22] as shown.

DO NOT TIGHTEN AT THIS TIME

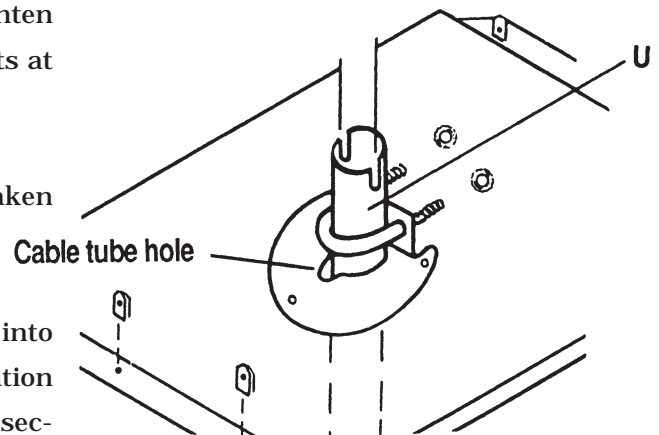


15. Turn house on end with cable tube holes down. Insert cable tube [18a] through hole in center of house and drop into cable tube hole. Flanges on ends of tube should be on outside of mounting plates [14]. Seam of cable tube is towards center of house.

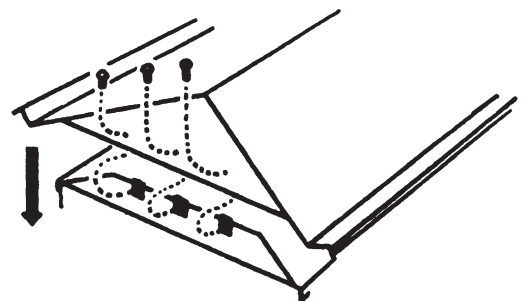
16. Install house tube [U] through house and U-bolts. Tighten nuts with slotted end of tube 2" above ceiling and with slots at 90° to cable hole in ceiling as shown.

This assembly should be quite tight but care must be taken not to distort house tube.

Make sure that 1-1/2x74 post center section [R] slips into house tube freely. The notch in house tube, when installation is complete, engages with a pin below pulley on post top section [Q] and limits the height to its proper position and prevents the house from turning on pole.



17. Thread cable through chimney from underside of roof. Attach roof to ceiling as shown with six 6-32x3/8 PHMS [24]. Flat 'C' nuts can be positioned with a small nail if required. Roof is on outside on both ends.



MPS Ground Socket Installation

Ground socket allows the pole and house to be moved to another location without losing the post bottom section.

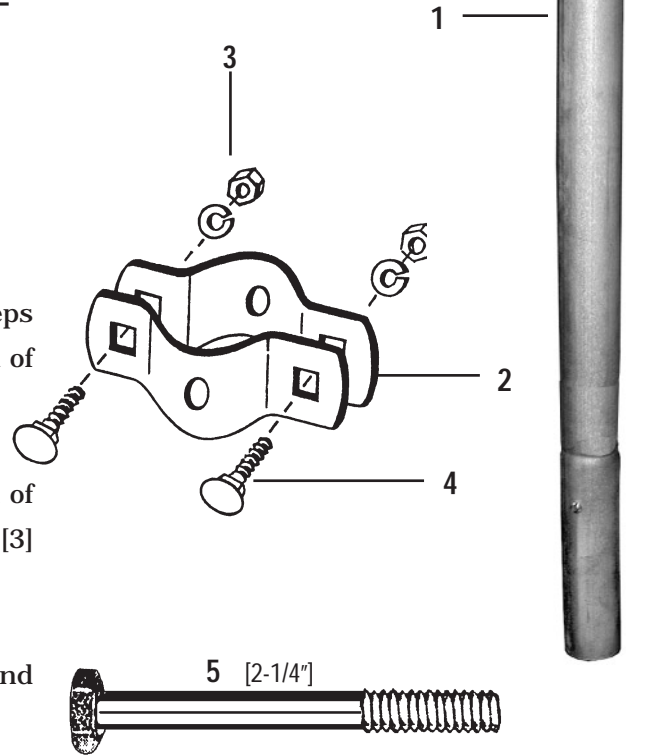
Please use "Product Code #" when ordering replacement parts

Ground socket and hardware is packed inside post box.

HARDWARE PACKED IN POST BOX WITH MPS

Product Code #	Item	Qty	Description
27860	1	1	2"O.D.x30" long galvanized tube
20413	2	2	Tube clamps
42550	3	3	1/4-20 keps nuts
30053	4	2	1/4-20x1-1/4 carriage bolts
32003	5	1	1/4-20x2-1/4 hex head (HH) bolt

GS 1. Assemble tube clamps [2] as shown. Start 1/4-20 keps nuts [3] but do not tighten. Place assembly over slotted end of MPS galvanized tube [1] and tighten nuts until snug.



GS 2. Insert 1/4-20x2-1/4 HH bolt [5] in hole near bottom of 2"O.D.x30" long galvanized tube [1]. Place 1/4-20 keps nut [3] on end of 1/4-20x2-1/4 HH bolt [5] and tighten.

GS 3. Slide post bottom section (S) into ground socket 24" and tighten 1/4-20 keps nuts [3] until post section is secure.

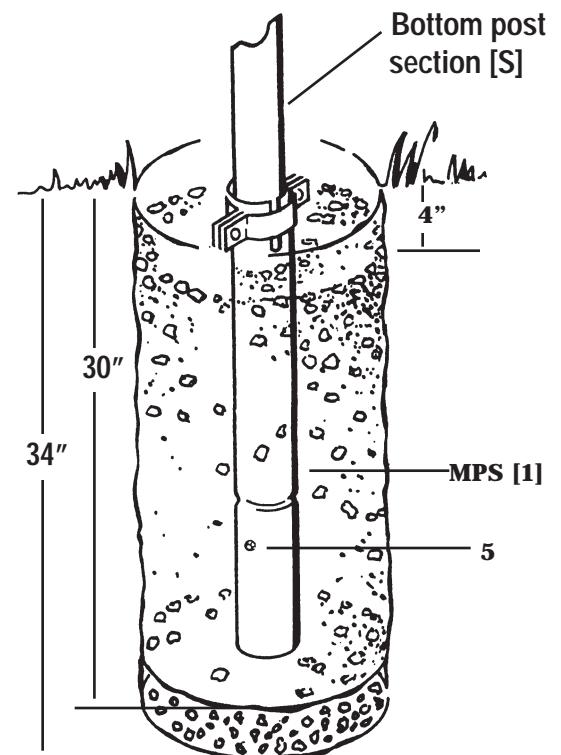
GS 4. Dig hole 8" diameter and 34" deep. Put coarse gravel in bottom of hole until top of ground socket is to ground level [30"].

GS 5. Place crumpled newspaper inside lower end of socket to prevent concrete from sealing post. This will allow any water to drain from inside post.

GS 6. Place ground socket/post section assembly in center of hole. Fill with concrete mix to just below slots in upper end of the socket [approx. 4" from ground surface]. This will require approximately 80 to 90 pounds of mix. Use guy wires or rope to hold assembly in vertical position while concrete sets.

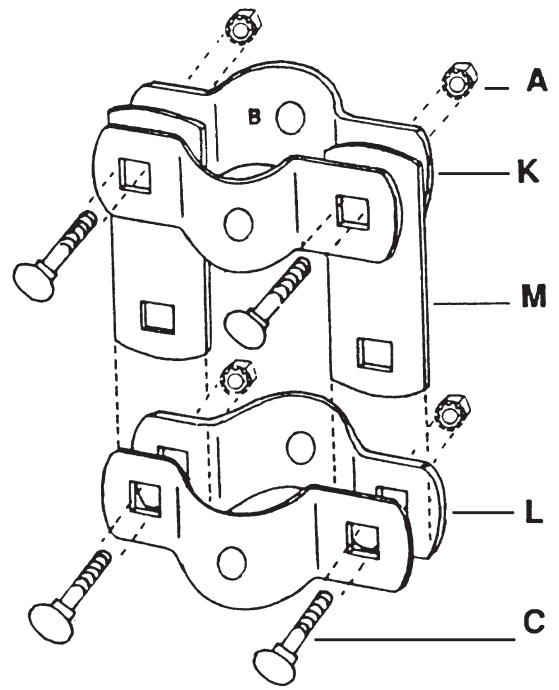
BE SURE to allow sufficient clearance above concrete to use wrench on clamp.

GS 7. After concrete has hardened, loosen clamps and slide post section to bottom of socket. Re-tighten clamps securely.

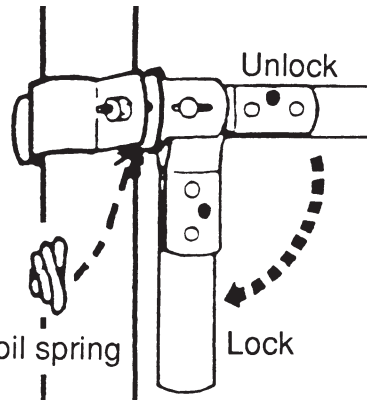


Post Installation Instructions

P 1. Assemble clamps as shown using 1/4-20 keps nuts [A], 1/4-20x3/4 carriage bolts [C], 'B' clamps [K], 1-3/4 clamps [L], and links [M]. Place 1-3/4 clamps [L] over top end of post bottom section [S]. Top is end with four rings. Tighten nuts on 1-3/4 clamps [L] securely. Leave "B" clamp [K] nuts loose.

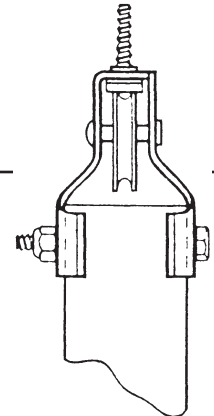
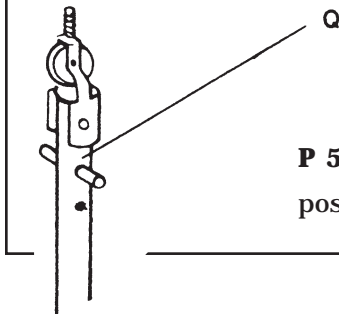


P 2. As safety clamp [BB] will be used in assembly, adjust at this time. Slide clamp over either end of center post section [R]. Adjust by tightening nut with handle against post until snug. Handle is down when nut is adjusted and to right side of pole. Raise and lower handle a few time.



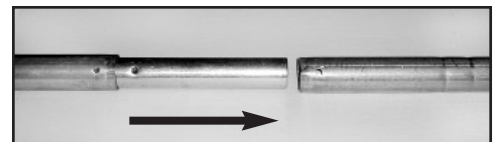
P 3. If handle is not locking tight, turn nut 1/2 turn tighter; if too tight, loosen 1/2 turn. Raising handle will release clamp. Remove from post. When installation is completed, this clamp is an added safety feature and should be positioned just above head height. As house is lowered, clamp is loosened and lowered also.

P 4. Using the 1/4-20x2 HH bolt [W] and 1/4-20 insert nut [V], bolt pulley end assembly [X] to post top section [Q] as shown. Tighten nut until secure.



P 5. Install 1/4x2 split pin [H] in second hole below pulley in post top section [Q]. Drive pin through post until centered.

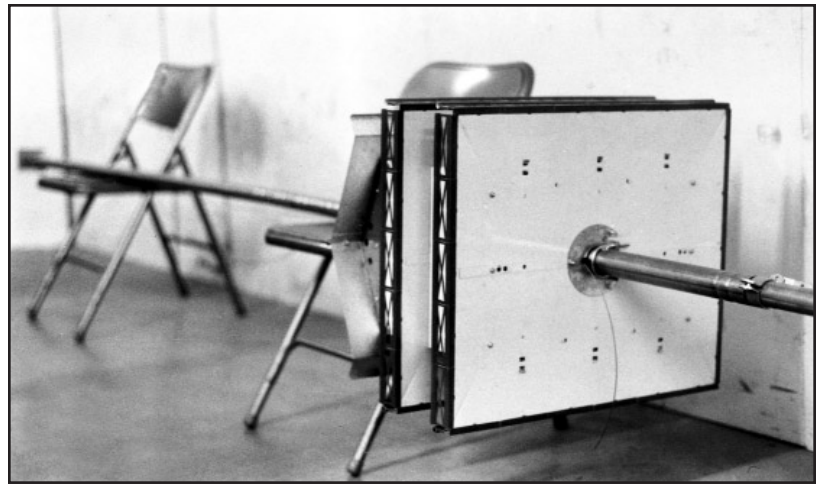
P 6. Slip center post section [R] into top post section [Q] as shown. Post should be assembled on a level surface such as a sidewalk or lawn. Turn post sections until holes in splice are in accurate alignment through post; then tap 1/4x1-1/2 split pin [I] through post until flush.



NOTE: This pre-alignment is essential and pin should drive through assembly with ease.

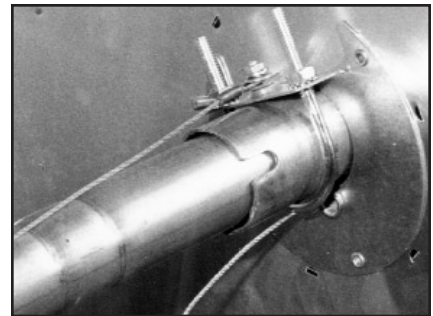
P 7. With post assembly supported in a horizontal position, **slide martin house over post from lower end.** Slip safety clamp over post and lock into position 18-1/2 inches from bottom end of post to lower edge of clamp.

Note: In order to support post, it is suggested that two chairs be used.

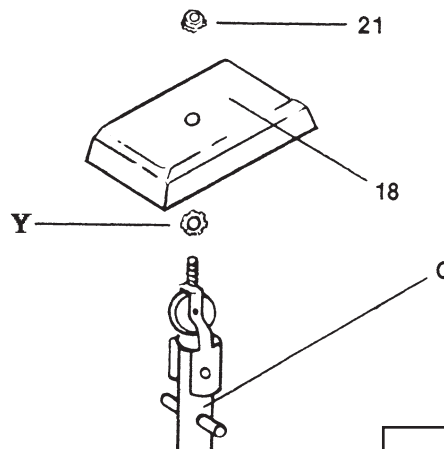


The safety clamp was designed for the user's protection. **Always keep the safety clamp above your head when making installation, raising or lowering of house.**

P 8. Thread cable over pulley at top end of post. Insert through cable tube [18a]. From bottom of house pull cable until slack has been taken up. **Make sure cable is not twisted above house.**



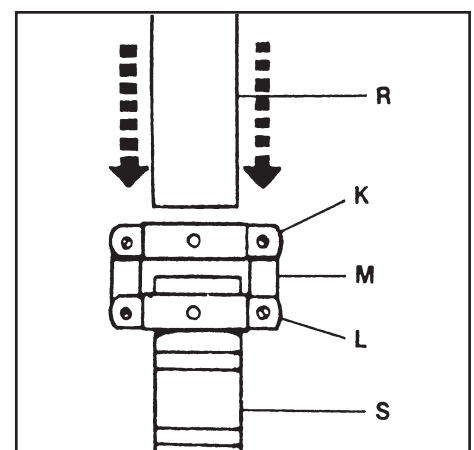
P 9. Place star lock washer [Y] over threaded stud above pulley, then add chimney cap [18] and fasten in place using 10-24 keps nut [21].



Note: Place chimney cap on post in same direction as shown on drawing.

P 10. House is ready to install in bottom post section [S]. **It is best to use two people on this phase of the installation.** Pick the house and post assembly up and with post in vertical position insert into the bottom post. Allow assembly to rest on safety clamp (installed at Step P 7) and tighten nuts on "B" clamp [K].

Note: When raised, house will be oriented in same direction as chimney cap.



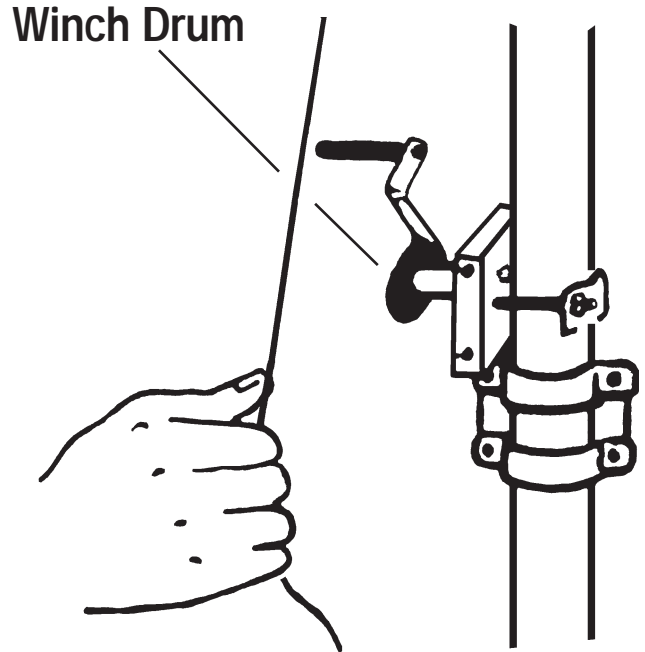
**NATURE HOUSE MARTIN SAFETY SYSTEMS
ARE THE ONLY MARTIN HOUSES OFFERED
WITH SAFETY FEATURES FOR THE USER'S
PROTECTION.**

P 11. Release safety clamp and raise clamp and house manually a few inches so that winch can be installed. Re-lock clamp.

Winch [AA] is attached to center post section [R] just above "B" clamp [K]. Use 1-1/2 "B" clamp modified [N] and two 1/4-20 keps nuts [A].

Note: Label on winch case cover should be to the right.

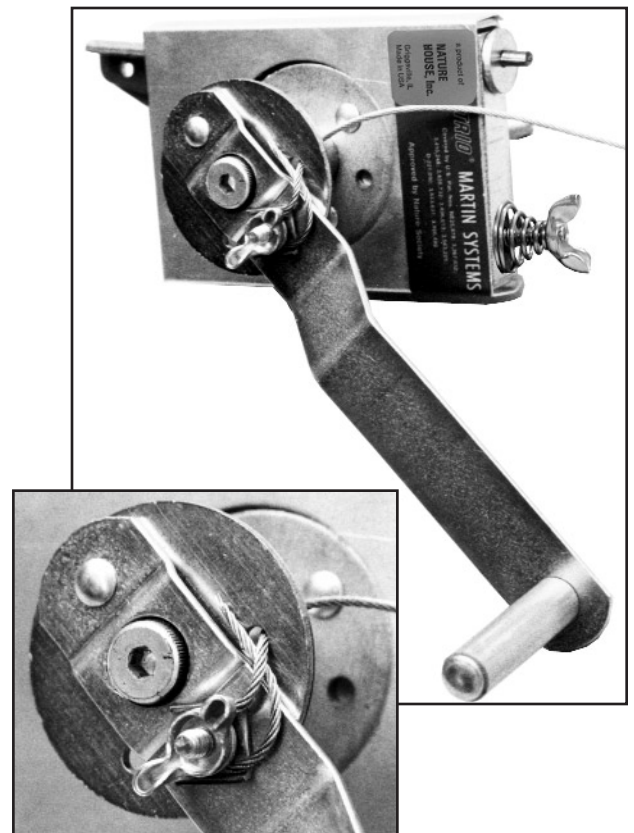
Align winch drum under cable hole in bottom of house and with pulley. (Cable will be parallel to post.) Again, check cable to make sure it is free.



P 12. Loosen wing nut on winch drum, thread cable end through either hole in drum face from inside of drum. Wind cable around stud, between plate washer and round washer, and tighten wing nut. Cable end should be at least 1/2" beyond washers. Slack cable can be wound onto drum by turning winch handle in clockwise direction.

DO NOT RAISE HOUSE YET!

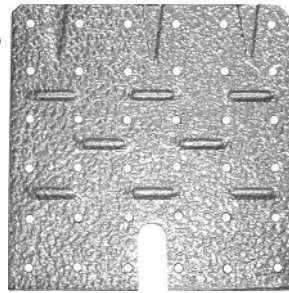
Two safety features are designed into the winch. First, a brake mechanism to carry the weight of the house and, second, a ratchet and pawl to hold weight of house. The pawl lever is on upper left of winch. In operation, it is necessary to disengage pawl to lower house. To adjust brake, tighten spring tension by turning wing nut on lower right in clockwise direction until brake will hold weight of house. Raise house an inch or two and release pawl. If house slips down, tighten brake further.



To reduce tampering with installation, pawl and winch case can be fastened together through holes provided. If this is desired, use bolt and nut, wire or padlock for this purpose.

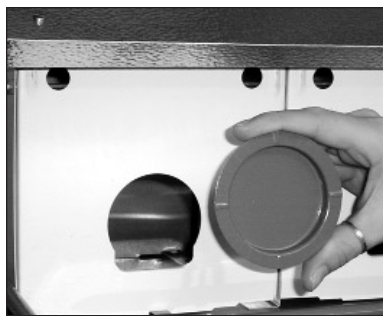
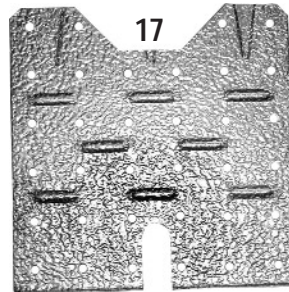
Floor trays [16] and center floor trays [17] can now be placed in house. Flanges on sides of floor trays go down. Floor trays with cutout 'A' [17] go in center compartments.

16



Dri-nest subfloors (floor trays) keep nests drier and allow additional airflow, keeping nestlings more comfortable.

17

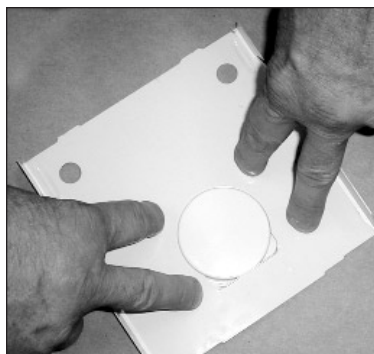


Use winter door stops [10] to close house during winter months — keeps unwanted species away.



To install door stops, simply snap door stop in closed door.

OR



You may find it easier to remove the door, place door stop upside down on a flat surface and press door onto door stop then rehang door.

CABLE SHOULD BE CHECKED YEARLY AND REPLACED IF WORN.



For replacement parts or accessories, contact:



Nature House Inc.

Purple Martin Junction, PO Box 390, Griggsville IL 62340-0390

Phone 800-255-2692

E-mail <nathouse@adams.net>

Fax 217-833-2123

Nature House products offer safety as a feature, not as an option