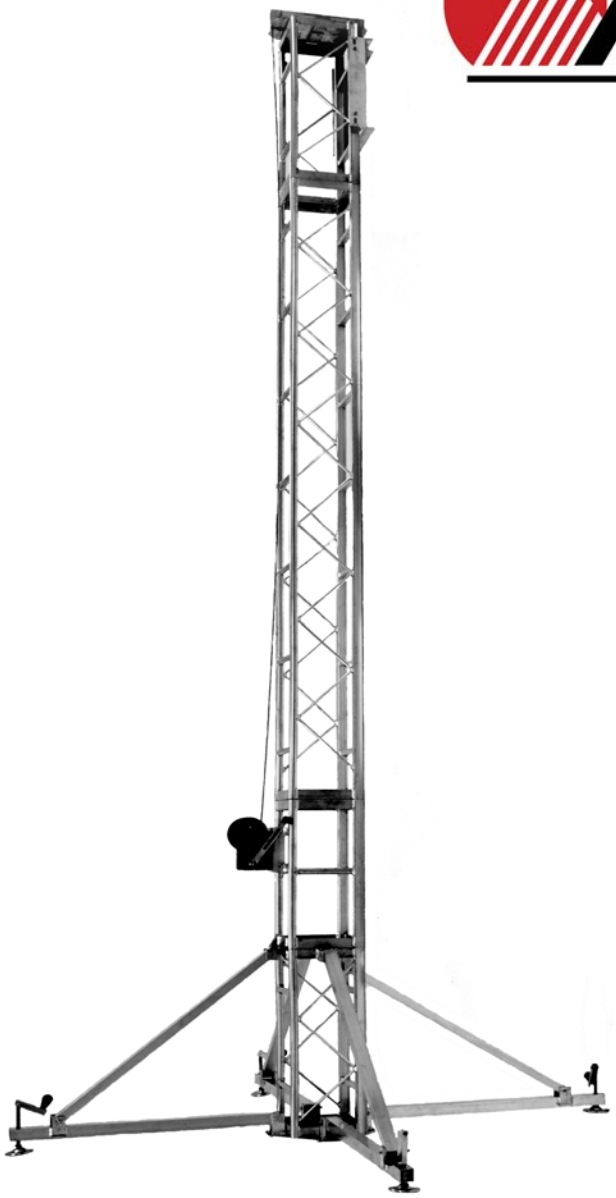
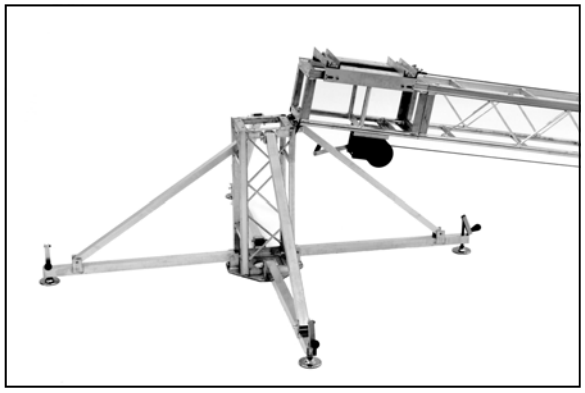
Electronics Applied



Instruction &

Operation

Manual



L-25
Mini Tower System

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L-25 MINI TOWER SYSTEM

- This tower is intended to support a truss carrying a light load **(NO MORE THAN 1200 lbs. PER TOWER)**, mainly stage lighting equipment. Although the load is light, the stability of the structure is of extreme importance.

- Starting with the tower base, fold down all outriggers and attach the outrigger braces as shown in **FIGURE A.**

- For outdoor use, it is suggested that a ¾" sheet of plywood, approximately 16" x 16" be placed directly under the tower column to distribute the weight over a large area and to help provide a leveled support. Blocking (wood, concrete or metal) can be placed under the outrigger leveling screws to facilitate leveling.

- Now is the time to level the tower, using a reliable level. Leveling is achieved by adjusting the leveling screws. When complete, **all leveling screws need to be seated solidly to a plate which is between the leveling pad and the ground**. After the leveling screws are adjusted to level the tower, the columns must be exactly vertical. The outriggers must be extended as far as possible with no play in the connection for better stability.

Note: All hardware used to assemble this system must bear the imprint of a Grade 5 as a minimum.

- Keeping the outrigger brace rotated out of the way, insert the slide block into the top of the assembled tower base 180 degrees away from the winch mount.

Note: It is a good idea to position the tower bases in the approximate positions that they will be located in before attaching the tower extensions to them. The unit is much easier to move at the 5' height.

- Lay out the perimeter trussing in the approximate positions and begin to assemble the trusses to each other and to the slide block. Make sure the system is positioned in the location that you will ultimately want.

- Using (4) 3/8" x 1.25" bolts, connect the pulley block to the top of one of the tower extensions. **SEE FIGURE B.**

- Now you are ready to connect the tower base section to the bottom of the 20' assembled tower extensions. Align the bottom of the tower extensions to the top of the 2' hinging section of the tower base and join with (8) 3/8" x 1.25" bolts. **SEE FIGURE B.**

- Careful attention needs to be paid to guiding the cable onto the winch so that it cannot cross itself. Always maintain the cable to eliminate fraying, crushing, wear, etc. If the cable is damaged in any way, please call Applied Electronics Inc. about a replacement cable.

- After the winch is secured to the tower base, the winch cable will need to be unwrapped from the winch and routed through the pulley block and back to the cable termination point on the slide block. Each of the pins above the pulleys will need to be removed to allow the cable to pass across the top of the pulleys. **Failure to replace these pins will most certainly allow the cable to jump off the pulleys and cause the system to be bound from movement.**

- Termination of the wire rope to the slide block is achieved by removing the pin at the cable termination point, aligning the thimble so the clevis pin passes through it between the angles, and reinserting the pin. **SEE FIGURE C.**

- Using a rope of your choice, attach one end to the top of the tower on the pulley block end. Position one person standing on the outrigger on the pulley side, one (holding the loose end of the rope) about 25' away from the tower on the same side, and two on the pulley end of the tower. The person on the outrigger should be ready to insert the (8) 3/8" x 1.25" bolts into the hinge block as soon as the tower is hoisted into position.

- The person with the rope should now begin pulling the tower upward while the two other persons simultaneously walk the tower up much like one would walk a ladder up. While the three people are balancing the tower, the fourth shall quickly secure the two halves of the hinge block together as mentioned above.

- At this point, the anchors for the guy wires should be positioned and set into the ground. This will allow the anchors to be waiting and ready the instant they are needed.

Note: With this complete you should have:

1) A tower standing erect 25' high
2) Outriggers attached to the tower base at three points
3) One outrigger brace folded away from the tower to allow for travel of the slide block
4) The winch mounted to the tower base
5) The slide block resting at the bottom of the tower
6) The wire cable routed through the pulleys and back to the termination on the slide block
7) The perimeter trussing assembled and attached to the tower

- Pay careful attention how as to the positioning of your system in relationship to the stage or other area that the system is associated with.

- At this point, it may become necessary to re-level some or all of the towers. Again, **it is extremely important that all towers be exactly vertical**.

- Anything else that would be attached to the truss, i.e. lights, cabling, etc, could be loaded at this point. If desirable, you may raise your system into place prior to complete loading.

Note: The structure that you have attached to the towers should be sitting approximately level to avoid loading the towers in a potentially hazardous fashion. This level should be maintained to within 12" vertically throughout the lifting procedure over a 40' span.

- If the system does not maintain approximate level, then one or more blocks will stop moving. Should this occur, the other corners need to either catch up or be lowered to allow the bound corner to move. If the other corners continue to crank up, damage will occur to the towers.

- With a person stationed at each tower, begin to crank up the system simultaneously to approximately 5', attempting to maintain level.

- With this done, the remaining outrigger brace can now be attached to the base section. As mentioned previously, all of the slack needs to be taken out of the braces by the leveling screws.

- At this time in the set-up, it is a good idea to attach the guy wires. Attach the guy wires as shown in **FIGURE D**.

- Anchor the top of the tower to the ground at about a 45 degree angle in the vertical and horizontal directions. The ground anchors could be any type of anchors (such as helical anchors) which will have a minimum capacity of 100 lbs. tension. The cable should not have 1000 lbs. tension in them when erected, but rather enough to stabilize the structure.

- With a person at each tower, again begin to simultaneously crank the system upward maintaining level.

- When your system has reached the desired height, safeguard the winch against tampering by unauthorized individuals. This may be done by wire tying the winch handle to the tower or by some other means.

- At this time, the safety brakes should be set on every tower. This is accomplished by using the ladder side of the tower to reach the height which the system will remain and tighten the brake as shown in **FIGURES E & F**.

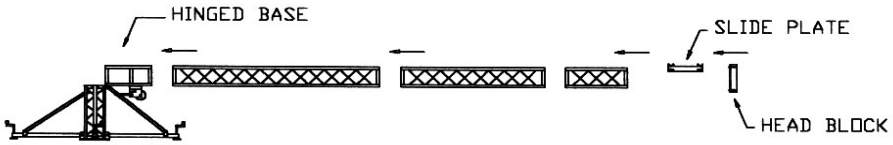
Note: The tower is designed to be used in conditions of 30 mph wind or less. If at any point the wind speed exceeds this limit, the system should be lowered to within 1' of the outrigger braces.

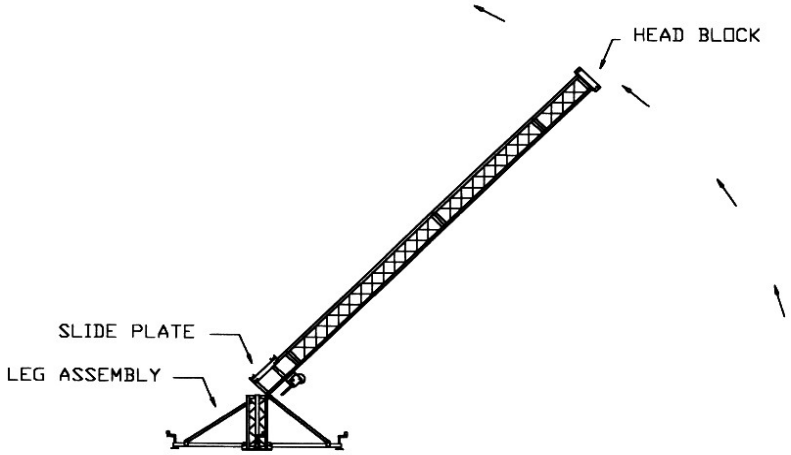
- In a situation where the system will be used or be in a place for extended periods of time, it is recommended that the system be lowered at the end of the day. Do not leave the system cranked up overnight since there would be no one around to lower the system if needed.

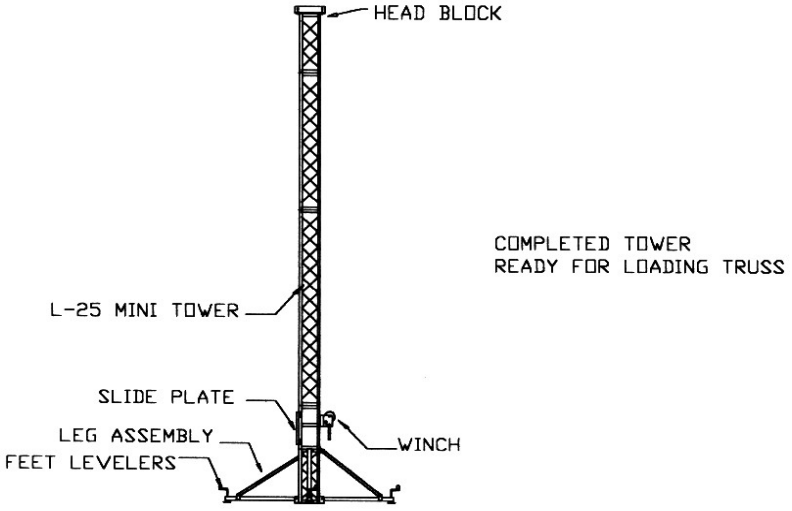
Note: The customer would be advised to contact Applied Electronics Inc. for any explanations needed for operation of the system.

- <u>All bolts shall be used where there are holes provided at all joints</u>. Failure to use all hardware could result in undue stress in the aluminum causing damage.

IMPORTANT: LEVEL BASE BEFORE RAISING TOWER







COMPLETED TOWER
READY FOR LOADING TRUSS

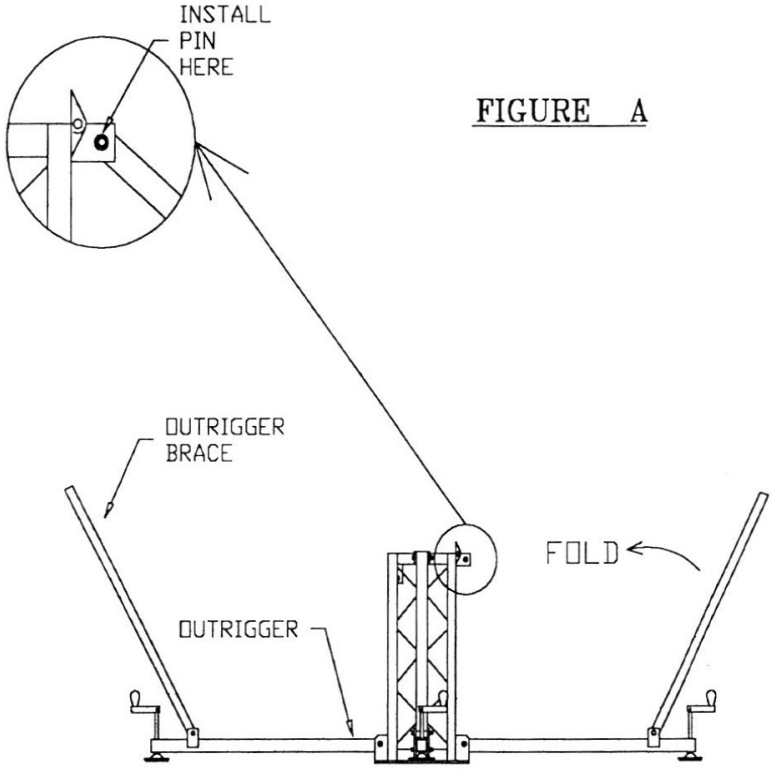
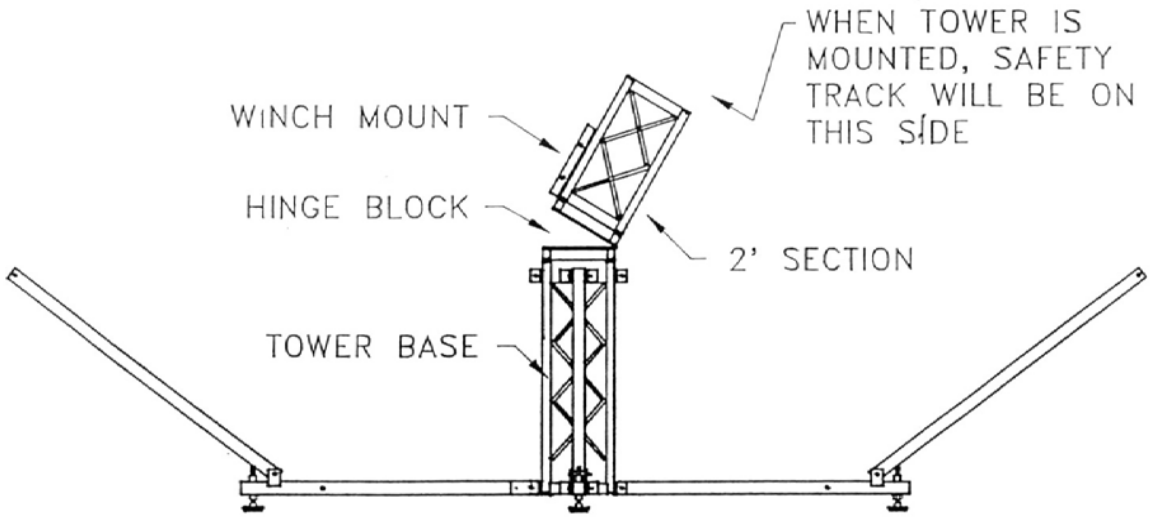


FIGURE A

FIGURE B


WHEN TOWER IS MOUNTED, SAFETY TRACK WILL BE ON THIS SIDE
WINCH MOUNT
HINGE BLOCK
2' SECTION
TOWER BASE

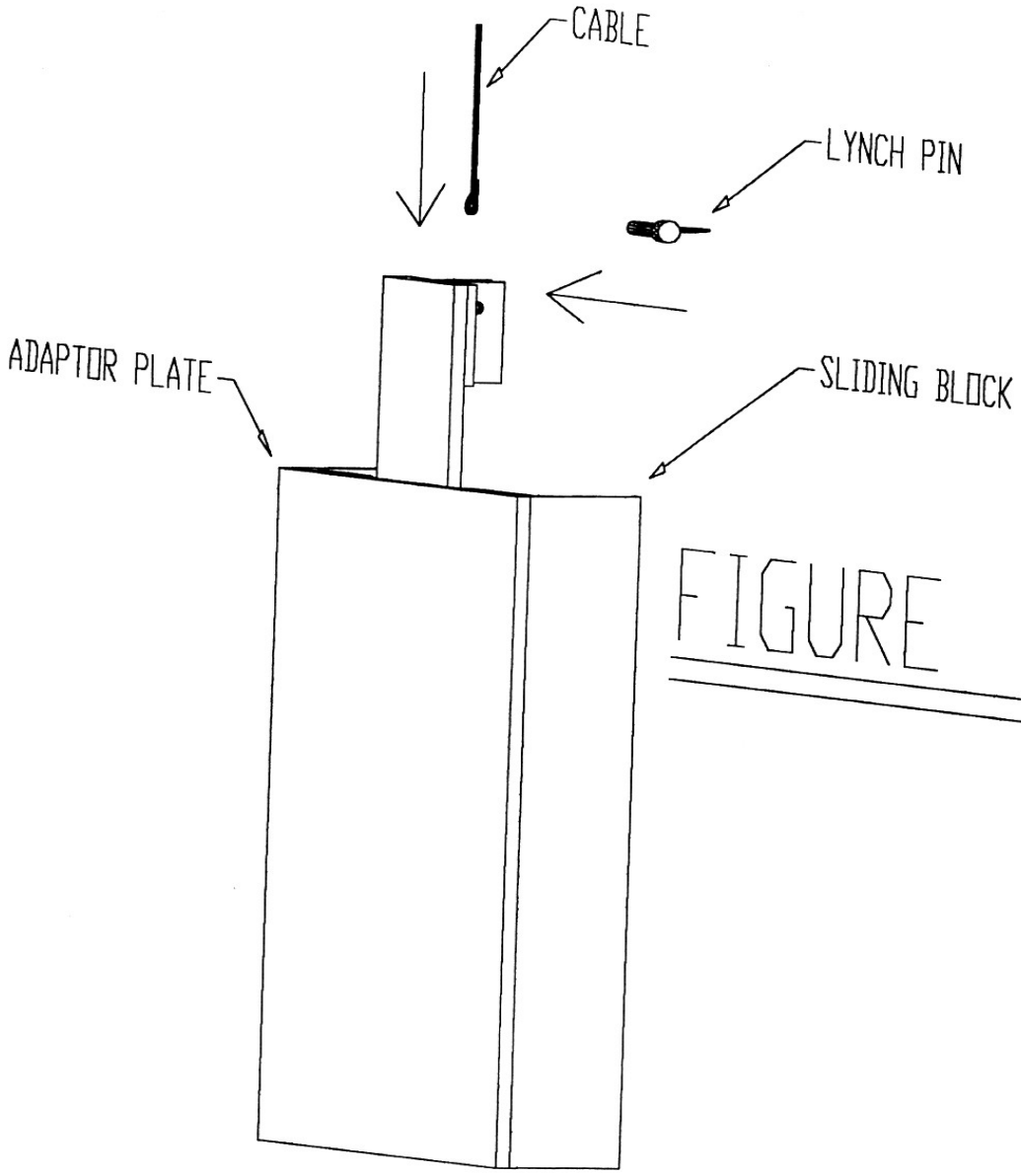
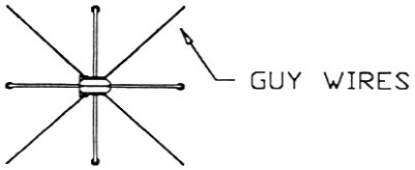


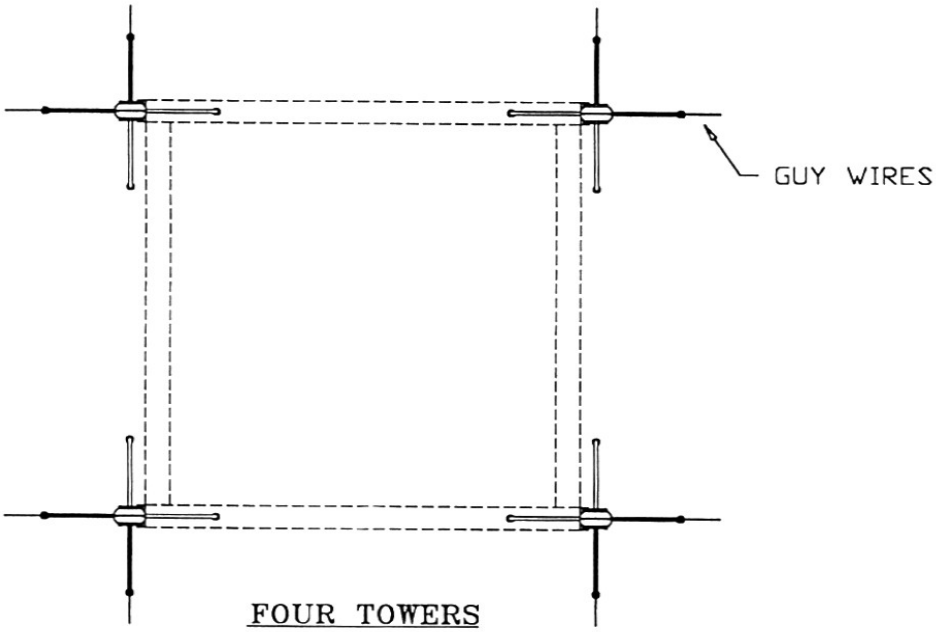
FIGURE C

FIGURE D



ONE TOWER

TWO TOWERS



FOUR TOWERS

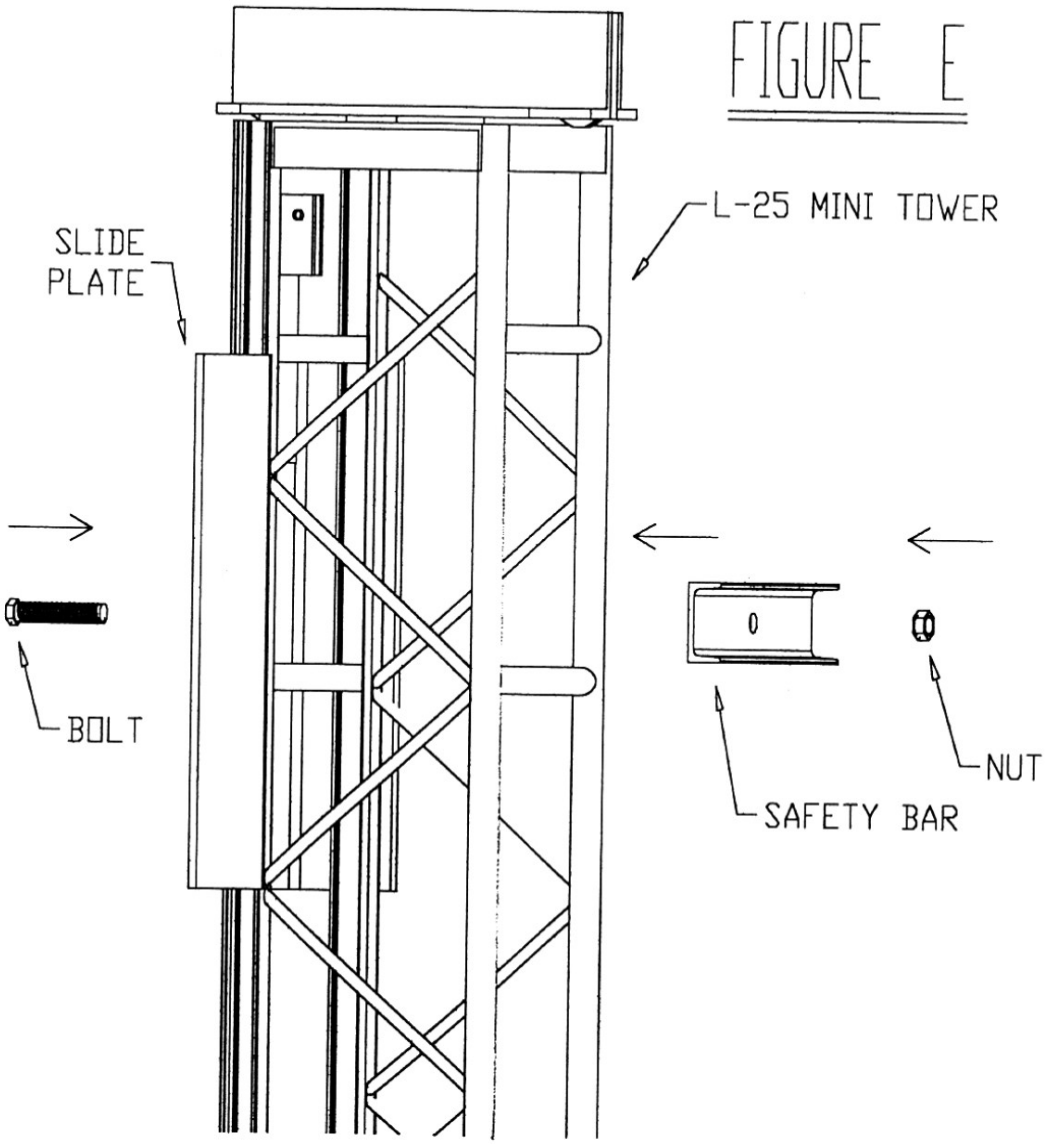


FIGURE E
L-25 MINI TOWER
SLIDE PLATE
BOLT
NUT
SAFETY BAR

FIGURE F