

### Combination Pan-Tilt Bracket Kit for Community's ENTASYS Column Line Array System

The ENTASYS Pan-Tilt Bracket Kit, designated ENT-PT, is used to provide a down-tilt angle (rotation about a horizontal axis) and a panning action (rotation about a vertical axis) when an ENTASYS column or tall array is mounted to a wall. The Pan-Tilt Bracket Kit consists of two primary parts, a Top Assembly and a Bottom Piece, as shown in Figure 4. The Top Assembly consists of multiple parts that are configured and assembled to yield the desired down angle for an array of up to five columns. After the Pan-Tilt Bracket Assembly is put together it is mounted to a wall and then the ENTASYS loudspeaker(s) are attached to it. The Pan-Tilt bracket can be used with a one, two, or three column array for a down-tilt angle of up to 10°. With a four or five column array the maximum down-tilt angle is 5°. All parts in the kit are engineered to provide a high margin of safety when used in accordance with these instructions. The brackets are manufactured of steel and are covered with a durable powder-coat finish. Kits are available in either black or white to match the color of the enclosures.



**Table 1: Pan-Tilt Bracket Kit Part Numbers**

Part No.	Description
ENT-PT	ENTASYS Pan-Tilt Bracket, Black
ENT-PTW	ENTASYS Pan-Tilt Bracket, White

No hardware is provided to attach the ENTASYS column assembly and Pan-Tilt Bracket to the mounting surface. Such hardware must be supplied by the installer and should be sized and rated for the weight load of the enclosures. The installer is solely responsible for determining if all rigging components that are used to mount or suspend the enclosure(s) are adequately sized and rated, and if the structure they are mounted or suspended from is capable of safely supporting the aggregate weight load. If multiple enclosures are suspended, it is the installer's responsibility to insure that the combined weight load does not exceed the Working Load Limit of any one rigging fitting. This is particularly important if the enclosures are steeply angled upward or downward, as most or all of the weight may be supported by the front or rear points only.



**NOTE:** A single tall array of up to five (5) ENTASYS columns joined together by the ENTASYS Coupler Bracket(s) may be mounted using a single Pan-Tilt Bracket Kit. If multiple columns are to be mounted using a Pan-Tilt Bracket Kit, purchase the ENTASYS Coupler Bracket (part number ENT-CB) and follow the instructions in the complete ENTASYS Installation/Operation Manual included with each ENTASYS column loudspeaker.

For more information on using the ENTASYS Pan-Tilt Bracket Kit, please refer to the complete ENTASYS Installation/Operation Manual enclosed with each ENTASYS column.

**Table 2: Pan-Tilt Bracket Kit - Parts List**

*\*\*The installer must supply all other hardware for the installation.*

Part	Qty	Part	Qty
Top Wall Bracket	1	10mm Flat Washer	3
Top Angle Bracket	1	M10 x 20mm Hex Head Machine Screw	1
Locking Bar	1	M10 x 25mm Hex Head Screw	1
Bottom Bracket	1	M6 x 25mm Philips Pan Head Screw	1
Bracket Cover	2	M6 x 16mm Philips Pan Head Screw	12
Small Extension Bracket	1	6mm Hex Nut	21
Medium Extension Bracket	3	6mm Lock Washer	17
Large Extension Bracket	2	6mm Flat Washer	18
M10 Hex Nut	1	M6 x 30mm Flat Head Screw	4
10mm Lock Washer	2		



**WARNING:** A single ENTASYS Pan-Tilt Bracket assembly must not be used to support more than five (5) ENTASYS loudspeakers. Attempting to do so will exceed the Working Load Limit of the bracket and could result in the failure of the bracket and potentially result in severe injury and/or loss of life.



**WARNING:** The bolts used and wall material into which the Pan-Tilt Bracket assembly is bolted must be capable of supporting the load of the ENTASYS array to be mounted. It is the responsibility of the installer to verify these items.

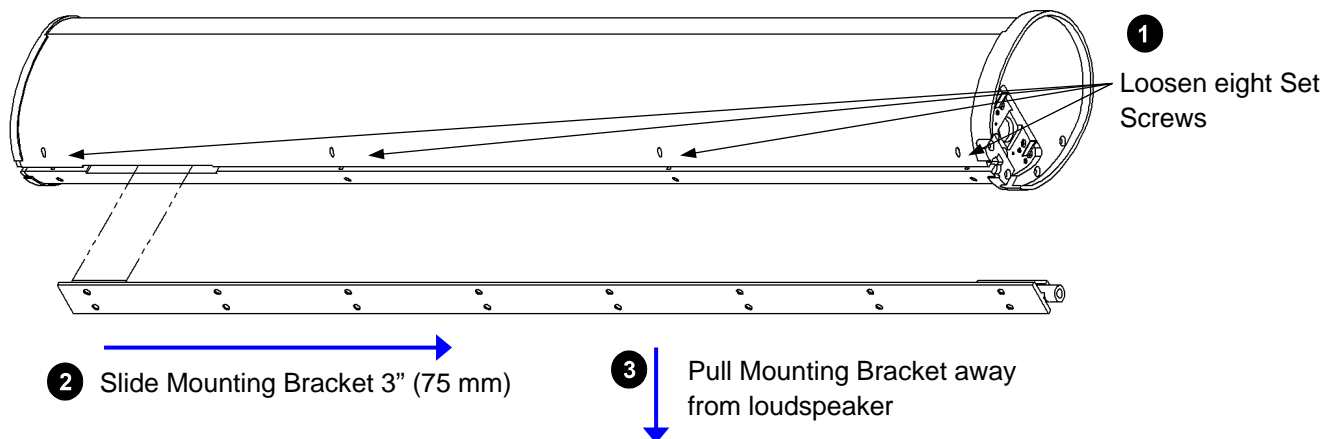


**CAUTION:** Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.

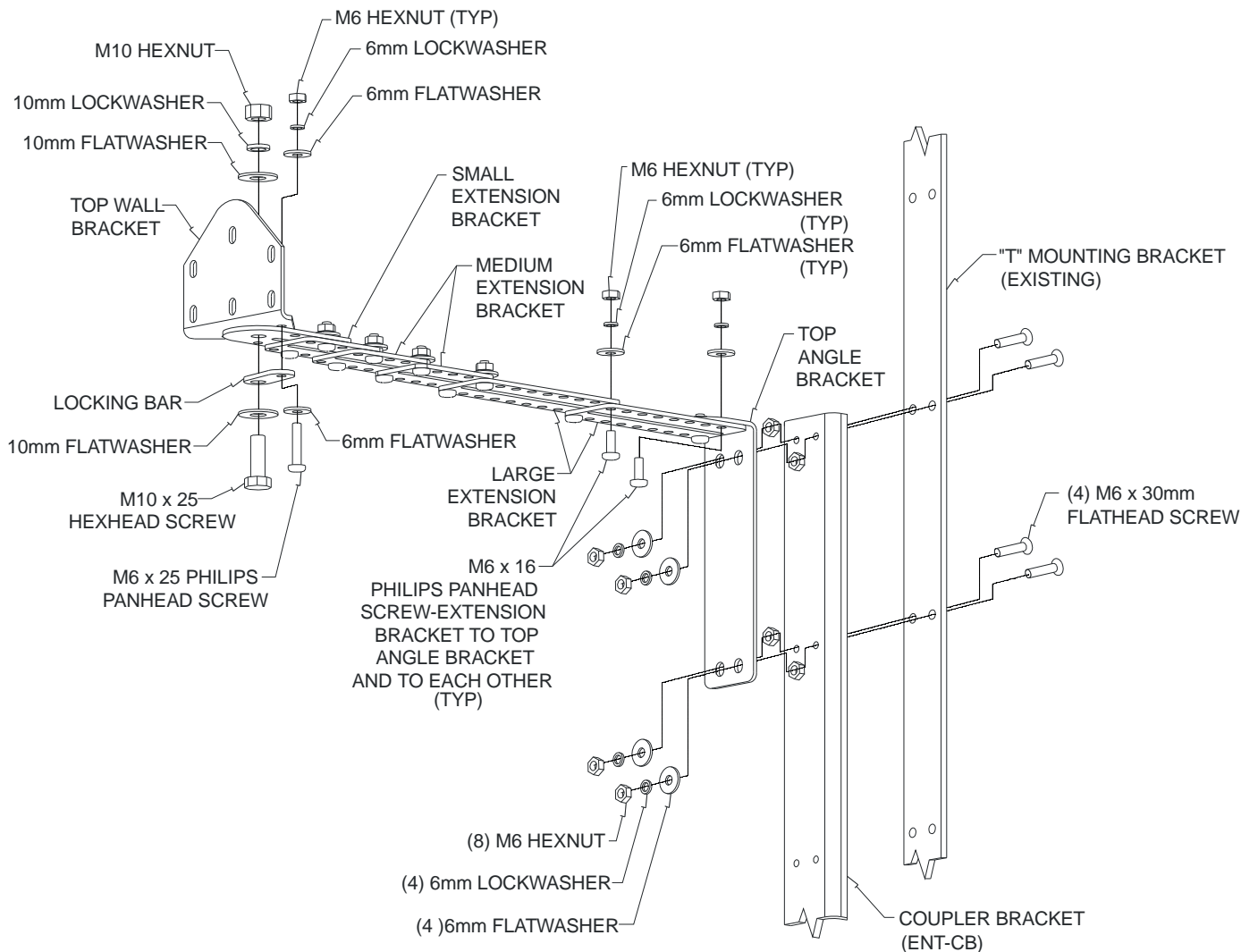
## ENTASYS Pan-Tilt Bracket Kit Assembly Instructions

1. The ENTASYS T-Bar Mounting Bracket, sometimes referred to as the "T-bracket", is included and shipped attached to each ENTASYS column loudspeaker. Remove the T-Bar Mounting Brackets from each ENTASYS column to be connected together. This is most easily accomplished by either laying the ENTASYS loudspeaker on its side or placing it upside down on a level surface. There are eight set screws, four on each side of the rear of the enclosure, that secure this bracket to the enclosure. Once these are sufficiently loosened, the Mounting Bracket may be slid down parallel to the enclosure, as if pulling it away from the bottom of the enclosure, approximately 3 inches (75 mm). It can then be pulled out of the slot and away from the enclosure.

**Figure 1: T-Bar Mounting Bracket Removal**



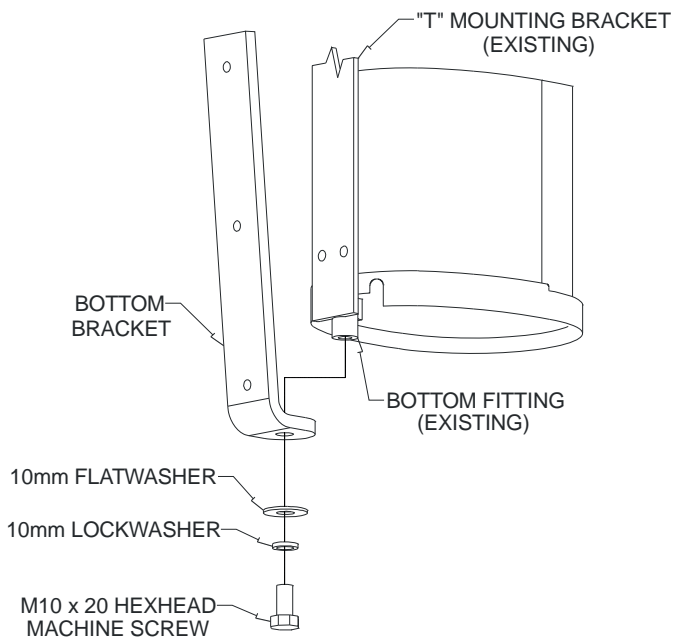
**Figure 2: Top Assembly Detail**



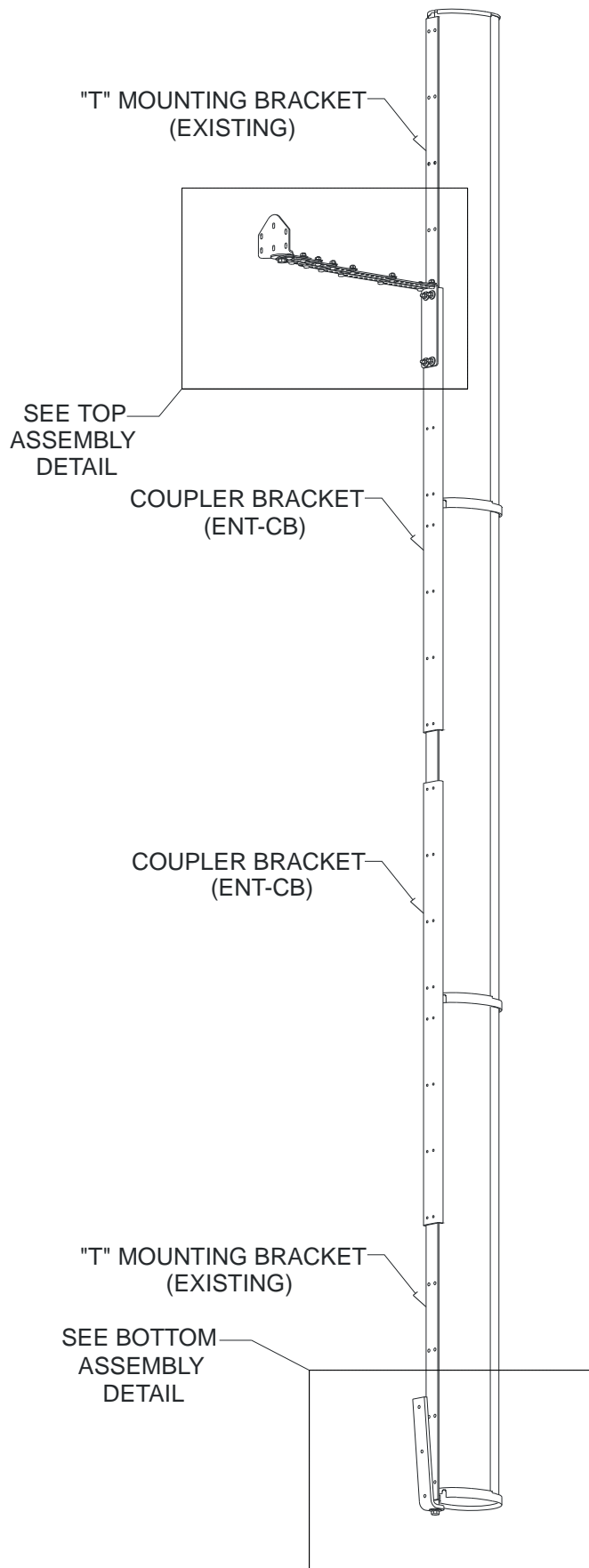
If multiple columns joined in a tall array are to be mounted using a single Pan-Tilt Bracket, purchase the ENTASYS Coupler Bracket (part number ENT-CB) and follow the instructions in the complete ENTASYS Installation/Operation Manual included with each ENTASYS column loudspeaker.

2. For a single loudspeaker array, securely fasten four of the M6 x 30mm bolts and nuts to the "T" Mounting Bracket in the top four holes of the "T" Mounting Bracket. For a multiple loudspeaker array, securely fasten the four M6 x 30mm bolts and nuts to the top four holes in the top Coupler Bracket and "T" Mounting Bracket (Note that screws currently in these holes in the Coupler Bracket must be removed first). This will yield four mounting studs for the Top Angle Bracket. Do this before attaching any other parts of the Pan-Tilt Bracket or the washers to the "T" Mounting Bracket.
3. Attach the Top Angle Bracket to the four mounting studs using the four M6 nuts, lock washers, and flat washers. Tighten these nuts securely.
4. Attach the Top Wall Bracket to the Small Extension Bracket using the M10 x 25mm bolt, flat washer, lock washer, and nut. Be sure to place the Locking Bar into position during this step. Only finger tighten the M10 bolt and nut.
5. Attach the Medium and Large Extension Brackets to the Small Extension Bracket as needed to achieve the correct length for the desired down-tilt angle. Use the M6 x 16mm pan head screws, flat washers, lock washers, and nuts. Tighten securely. **The ENTASYS Installation/Operation Manual contains informational tables detailing which Extension Brackets to use for a particular array size and down-tilt angle.** Use the fewest number of Extension Brackets possible to achieve the correct total length. Be sure to attach additional Extension Brackets below the previous Extension Bracket as they progress away from the Small Extension Bracket.
6. Insert the M6 x 25mm screw, flat washer, lock washer, and nut into position in the Locking Bar and Top Wall Bracket and tighten.

**Figure 3: Bottom Assembly Detail**



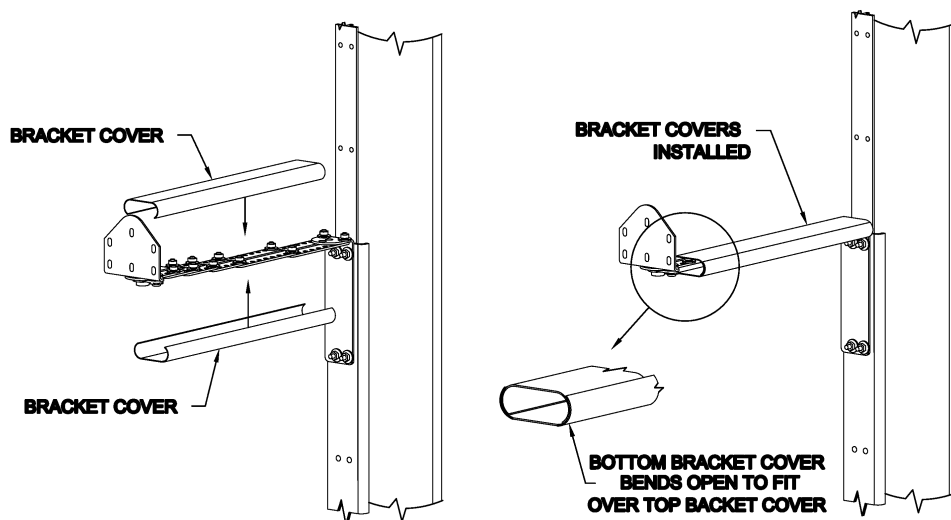
**Figure 4: ENTASYS 3-Column Array with Pan-Tilt Bracket**



7. Attach the Extension Bracket assembly to the Top Angle Bracket using M6 x 16mm screws, flat washers, lock washers, and nuts. Tighten securely.
8. Attach the Bottom Bracket to the Bottom Fitting at the bottom of the "T" Mounting Bracket using the M10 x 20mm bolt, lock washer, and flat washer.
9. Place the Pan-Tilt Bracket assembly on the wall where the ENTASYS array is to be installed. Mark the positions on the wall where the holes in the Pan-Tilt Bracket are located.
10. Remove the Pan-Tilt Bracket assembly from the wall and properly prepare the wall to accept the correct type of bolts with which to attach the Pan-Tilt Bracket assembly to the wall.
11. Attach the Pan-Tilt Bracket assembly to the wall using the proper bolts for the wall material and the weight of the ENTASYS array to be mounted.
12. Slide the bottom ENTASYS loudspeaker onto the "T" Mounting Bracket. Tighten all eight of the M4 Set Screws on the ENTASYS enclosure. Place each additional ENTASYS enclosure on the "T" Mounting Bracket in the desired order. Tighten all eight of the M4 Set Screws for an enclosure before another ENTASYS enclosure is placed on top of it. Any Dual Banana Plug Jumpers should be placed into position during this step.
13. Loosen the M6 screw on the outside portion of the Locking Bar. This will allow the array to pivot to point toward the desired location. Aim the array and then tighten the M6 screw on the Locking Bar.
14. Securely tighten the M10 bolts on the Top Wall Bracket and the Bottom Bracket.

A bracket cover is also provided to help maintain a cosmetically appealing installation. This cover consists of two pieces of black or white PVC extrusion. These should each be cut to the required length and then placed above and below the Extension Bracket assembly as shown in Figure 5. The two pieces of extrusion will snap together to enclose the Extension Bracket assembly and hide the hardware.

**Figure 5: Pan-Tilt Bracket - Cover Assembly**



**Assembly Tip:** If it is difficult to determine the exact downward aiming angle required for a specific application, the Extension Brackets may be temporarily assembled with a single nut and bolt placed in the center slot of the Extension Brackets. This will help to more quickly determine the required angle without having to disassemble the Extension Brackets when changing the downward aiming angle. Once the desired downward aiming angle has been determined, assemble the Extension Brackets using the nearest sets of holes along the sides of the Extension Brackets.



**WARNING:** Never use the center slot of an Extension Bracket for the permanent assembly of this kit.



**WARNING:** Do not extend ENTASYS arrays beyond a 10° down angle for a one, two, or three column array or beyond a 5° down angle for a four or five column array. Attempting to do so will exceed the Working Load Limit of the bracket and could result in the failure of the bracket and potentially result in severe injury and/or loss of life.