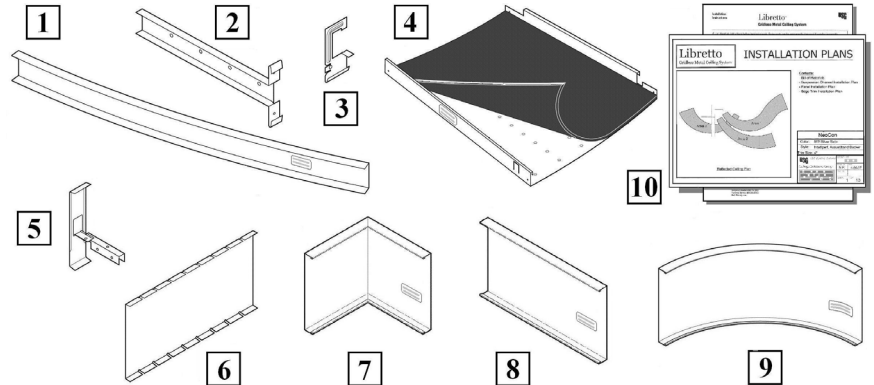


**Tip:** *Read all instructions before beginning work. Some parts can be permanently damaged if installed incorrectly.*

### PARTS:

- 1) Carrier Channels
- 2) Channel Splice/Extensions
- 3) Panel Hangers
- 4) Panels (factory applied backer optional)
- 5) Trim Attachment Clips
- 6) Trim Splices
- 7) Edge Trim – PreMitered Corners
- 8) Edge Trim – Straight
- 9) Edge Trim – Custom Curved
- 10) Installation Plan\* and these Instructions



In addition to the materials supplied, you will need an adequate supply of hanger wire and hardware as specified on the architectural plans and an adequate supply of self drill sheet metal screws (#8 x 1/2" Tek recommended).

*\* IMPORTANT: A custom engineered Installation Plan [10] is supplied with each Libretto project. The Instructions below refer to important diagrams and dimensions found in the Installation Plan that you will need for a successful installation. Review the "Bill of Material" section of the plan to confirm that all parts are present and undamaged. For additional help, contact your USG representative.*

### TOOLS:

In addition to standard suspended ceiling installation tools, you will need 6 to 10 spring clamps and a laser plumb bob.

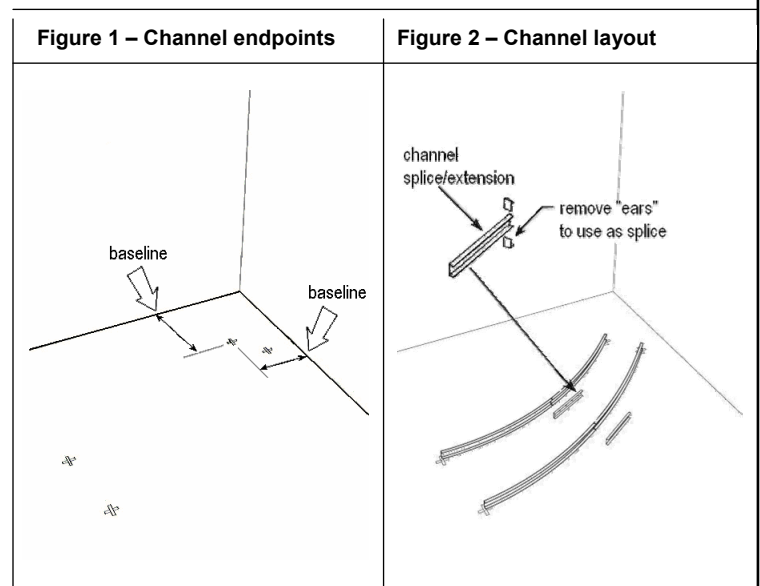
### INSTALLATION:

#### ① Layout and Install Hanger Wires

Turn to the section in the Installation Plans titled "Suspension Plan". Baselines and a grid pattern have been overlaid on these drawings to assist in the assembly process. Compare these to the architect's plan and identify the locations of these baselines on the job site. Mark them on the floor as to use as a reference during installation.

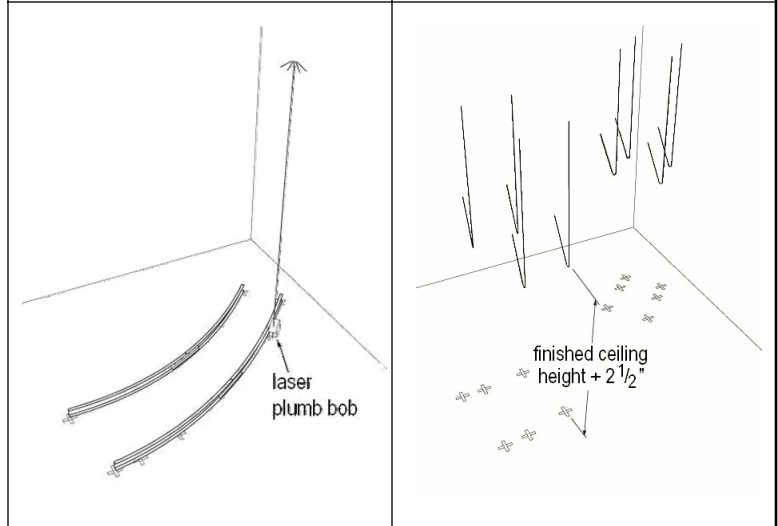
1. Clear the floor area of any debris or obstacles.
2. Measure from the baselines to locate the endpoints of the Carrier Channels. Mark them on the floor **[Figure 1]**.
3. Lay out all the Carrier Channel sections on the floor end-to-end as indicated on the *Suspension Plan*. Part ID codes are labeled on the ends of the channel sections and are keyed to the *Suspension Plan*.
4. Prepare channel splices as needed by snipping the "ears" off of Channel Splice/Extensions **[Figure 2]** (The ears are useful only when using this part as a channel *extension* in later steps).
5. Install the splices using 4 self drill screws.

**Tip:** *For best results, use #8 x 1/2" self drill screws.*



6. Hanger wires are required every 4 feet along each channel but obstacles and site conditions may require improvisation in the field. With a laser plumb bob, trace along the length of the channels to spot convenient attachment points on the ceiling [Figure 3]. Mark these spots on the floor and on the channel.
7. Disassemble the channels and move them aside for later use. Using a laser plumb bob, transfer the location marks to the ceiling and attach hanger wires [Figure 4].
8. Using a rotary laser level, bend all hanger wires 2½ inches above the finished ceiling elevation. This establishes the proper elevation for the Carrier Channels.

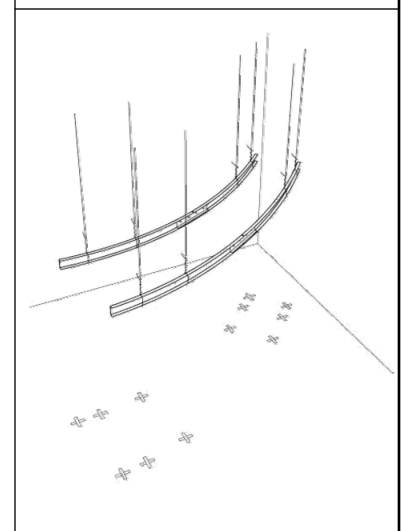
Figure 3 – Suspension points



## ② Install Carrier Channels

1. Position and hang the Carrier Channels based on the *Suspension Plan*. Wrap hanger wire tightly around the channels. Connect the ends of channels by re-applying the channel splices [Figure 5].
- 👉 **STOP! Examine the finished suspension system. Extra care at this point will increase the speed and accuracy of complete installation.**
- ✓ Check to see that all hanger wires are taught, straight, and plumb within 1:6 (about 10 degrees). If any wires need to be moved or adjusted, fix them now.
  - ✓ Check the endpoint positions with a laser plumb bob. The endpoints of the carrier assemblies must be within ± 2" of plan. If adjustments are needed, make them now.
    - 👉 *Tip: If necessary, short pieces of carrier channel may be cut off or spliced on so long as the general shape of the curve is not significantly changed.*
  - ✓ Check the elevations of all channels using a rotary laser. If any points are out of level, make final adjustments now.

Figure 5 – Installed Channels

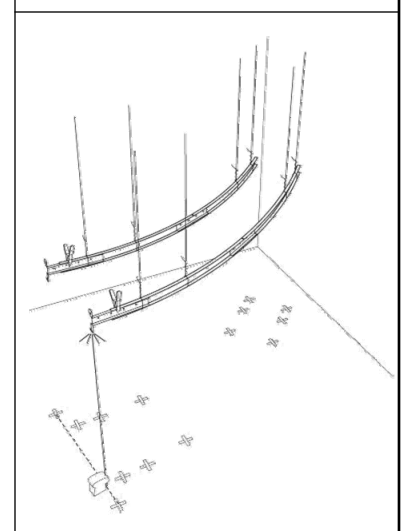


## ③ Install "Start" Panel

Turn to the section in the Installation Plans titled "*Panel Plan*". The "Start" Panel is labeled S1. If the project includes multiple islands, additional Start Panels will be labeled S2, S3, etc. Part ID codes labeled on the edges of the panels and are keyed to the *Panel Plan*.

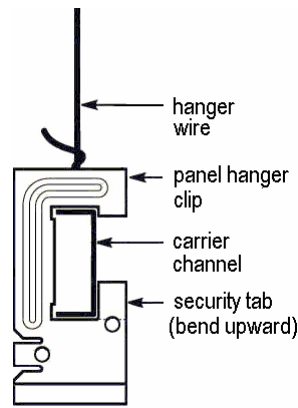
1. Mark a line on the floor reflecting the edge and corners of the Start Panel. Exact dimensions are provided on the *Panel Plan*.
2. Apply Channel Splice/Extensions at the ends of the Carrier Channels. Temporarily secure them with spring clamps [Figure 6].
3. The lower hook on the Channel Extension should be 1/8" to the inside of the marked line. Use a laser plumb bob to gauge position. Extend or retract the part to the right location.

Figure 6 – Channel Extensions

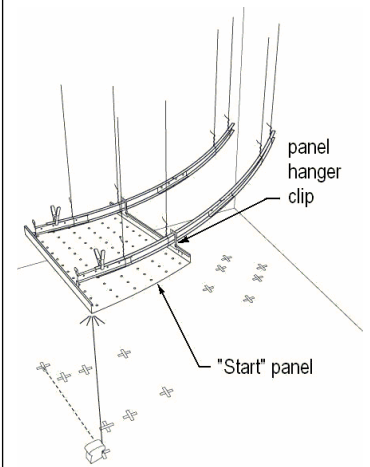


4. Hook a Panel Hanger Clip on to each carrier channel at the approximate locations where the panel edge will intersect. Note the proper orientation of the clip in **Figure 7**. Bend the security tab upward as shown to trap the clip on the channel.
  5. Hook the outer edge of the Start Panel onto the lower ear of the Channel Extension and the opposite edge on to the panel hanger clips [**Figure 8**].
- STOP! The accurate positioning of the Start Panel will prevent troublesome misalignments in later steps. The locations of the panel corners must be within 1/4" of plan. With a laser plumb bob, confirm/adjust the location of the panel corners now.*
6. Fasten the Channel Extension in place with 2 self drill screws [**Figure 9A**] and remove the temporary clamps.
  7. Install a self drill screw into the hole provided in the lower ear of the Channel Extension to lock the panel and prevent it from dislodging [**Figure 9B**].
  8. Bend the unused (upper) legs of the Channel Extensions back and out of the way [**Figure 9C**].

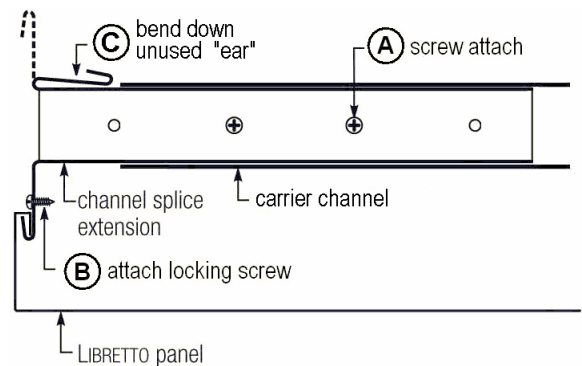
**Figure 7 – Hanger Clip**



**Figure 8 – Start Panel**



**Figure 9 – Start/End panel attachment**

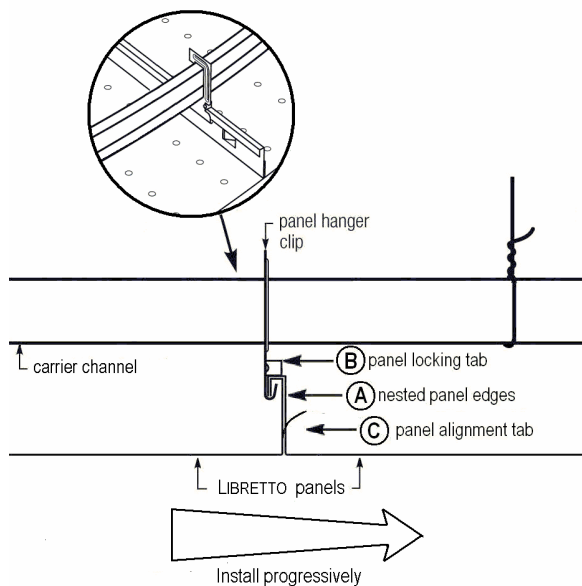


#### ④ Install “Field” Panels

Libretto panels require progressive installation. Field Panels are labeled F1, F2, F3, etc. in the order they must be installed.

1. Install additional Panel Hanger Clips to each carrier channel at the approximate locations where panel edges will intersect them.
2. Hook the outside edge of the new panel over the vertical leg of the previous panel [**Figure 10A**] and the opposite edge on to the hanger clips.
3. Trap the nested panel edges by bending the panel locking tab on the Hanger Clips [**Figure 10B**].
4. Check end-to-end alignment of adjacent panels then bend the panel alignment tab to lock the panels in place [**Figure 10C**].
5. Repeat this process for the remaining Field Panels.

**Figure 10 – Field Panels**



#### ⑤ Install “End” Panel

The “End” Panel is labeled E1. If the project includes multiple islands, additional End Panels will be labeled E2, E3, etc. Installation of End Panel(s) is similar to the Start Panel. Refer to **Figure 9** for construction details.

1. Apply Channel Extensions to the ends of the channels and temporarily secure them with spring clips.
2. Install the End Panel.
3. Adjust the position of the Channel Extensions and secure them with 2 self drill screws [**Figure 9A**].
4. Install a locking screw into the Channel Extensions to prevent the panel from dislodging [**Figure 9B**].
5. Bend the unused (upper) leg of the Channel Extensions back and out of the way [**Figure 9C**].



## ⑥ Install Trim Attachment Clips

Trim Attachment Clips should be spaced no more 36 inches apart.

1. Apply clips to the ends of the panels along the edge of the island **[Figure 11A]**. If panels are narrow (18" or less), apply clips to EVERY OTHER panel provided maximum spacing does not exceed 36"
  - a. Pivot the saddle and push the clip back on the panel so that the lower flange overlaps the face of the panel **[Figure 11B]**.
  - b. Apply a self drill screw in any one of the holes provided in the saddle **[Figure 11C]**.
2. Apply Trim Attachment Clips along the edges of the Start and End panels **[Figure 11D]**.
  - a. Pivot the clip saddle 90° (counter clockwise as viewed from above) and slip the saddle over the edge of the panel **[Figure 11E]**.
  - b. Apply a clip within 1 foot from each corner and additional clips in between as necessary.
  - c. Apply a self drill screws to secure all clips in place.

Figure 11 – Trim Attachment Clips

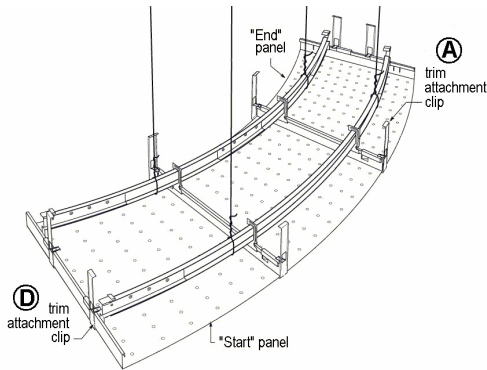
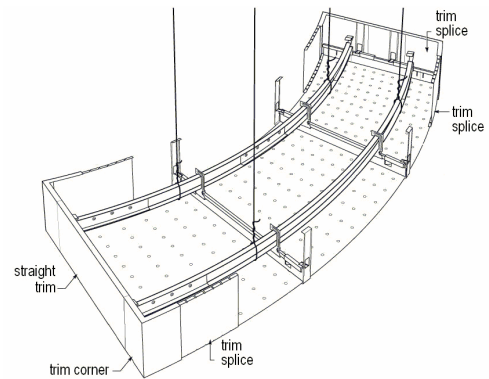


Figure 12 – End Trim

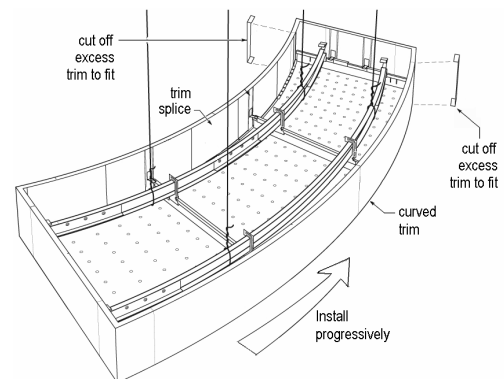


## ⑦ Install Edge Trim

Turn to the section in the Installation Plans titled "Trim Plan". Part ID codes are labeled on the insides of all parts and are keyed to the *Trim Plan*. Libretto Edge Trim requires progressive installation. The last piece(s) are designed to be cut-to-fit so it is important to install them in the proper sequence.

1. Apply Edge Trim to the ends of the island **[Figure 12]**.
  - a. Connect the straight trim and corners with splice clips.
  - b. Center the assembly over the end of the island and snap it over the Trim Attachment Clips
  - c. Repeat this process at the opposite end.
2. Apply Edge Trim to the sides of the island **[Figure 13]**.
  - a. Beginning at the Start Panel, apply trim pieces and splices in progression working towards the End Panel.
  - b. Measure and cut the last piece of trim to fit.
  - c. Repeat this process on the opposite side.

Figure 13 – Side Trim



### Note

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### SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installing of all products and systems. Take necessary precautions and wear appropriate personal protective equipment. Read material safety data sheets and related literature on products before specification and/or installation

## ⑧ Final Detailing

1. Check and adjust the alignment of all components. Eliminate any gaps using additional fasteners and/or clips.
2. Clean exposed surfaces as required. Parts may be wiped down with a mild household cleaner to remove fingerprints, oil, etc.



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