INSTRUCTION MANUAL MS-24C180

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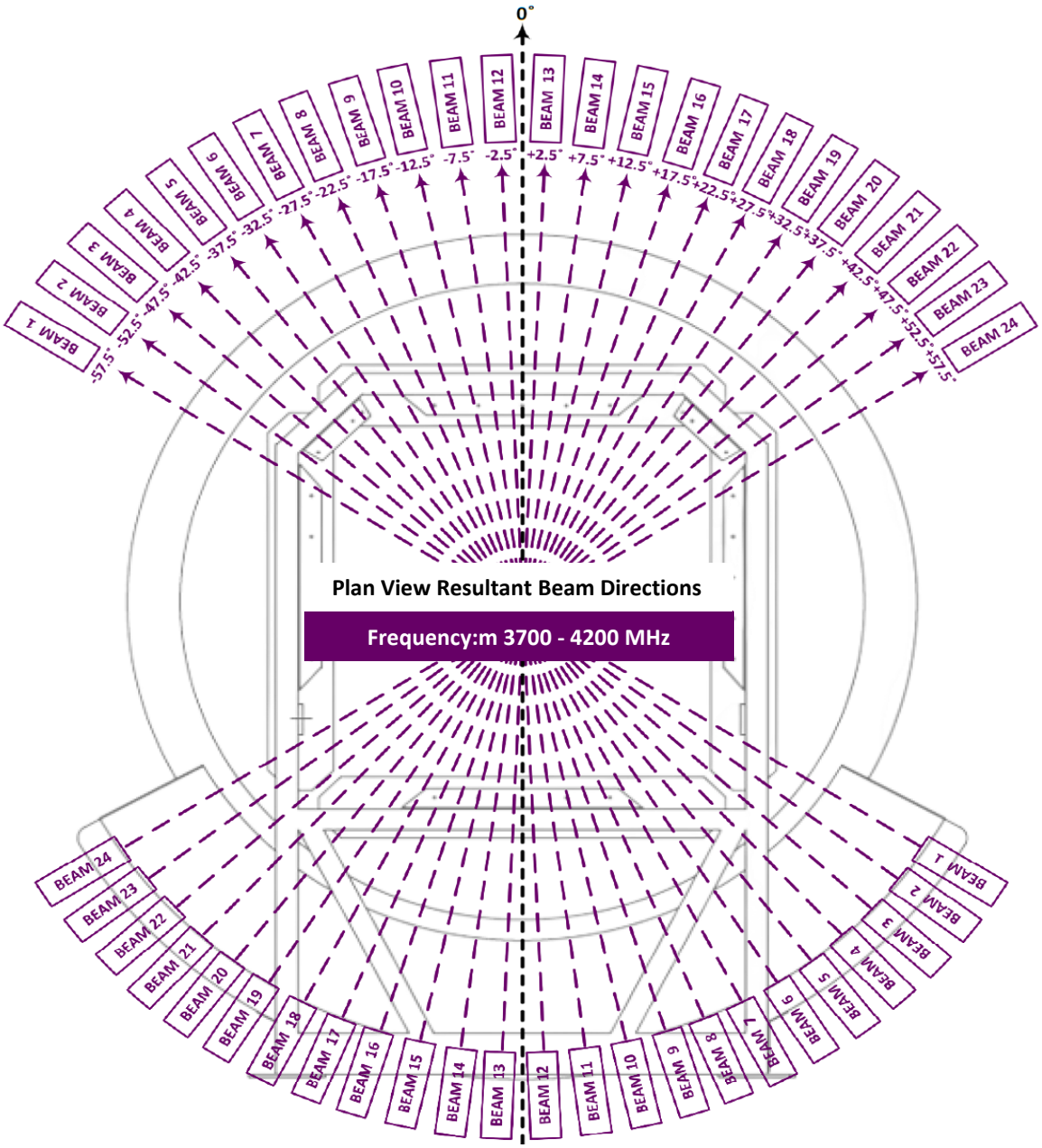
Revision History:

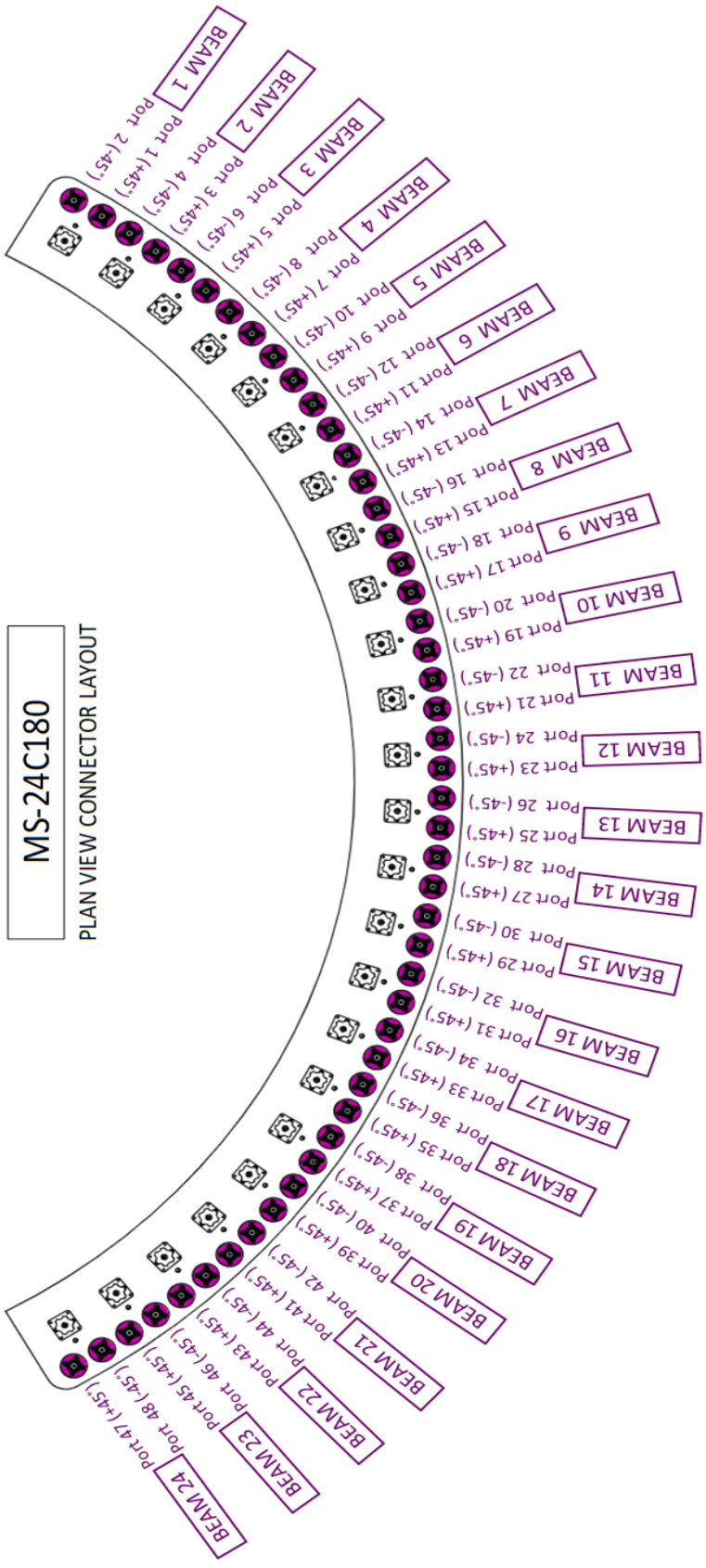
Date	Description	Revised by	Revision nos.

1.00 BEAMS & CONNECTORS:

1.10 Plan View Resultant Beam Direction



1.20 Plan View Connector Layout

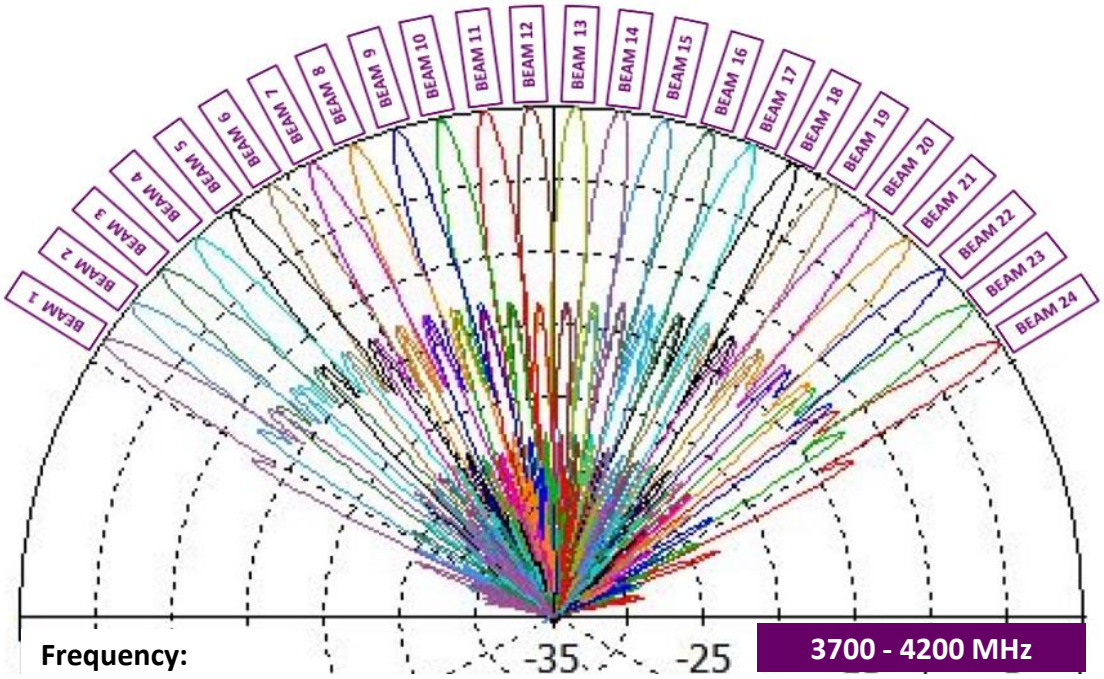


1.30 Connector Port Table

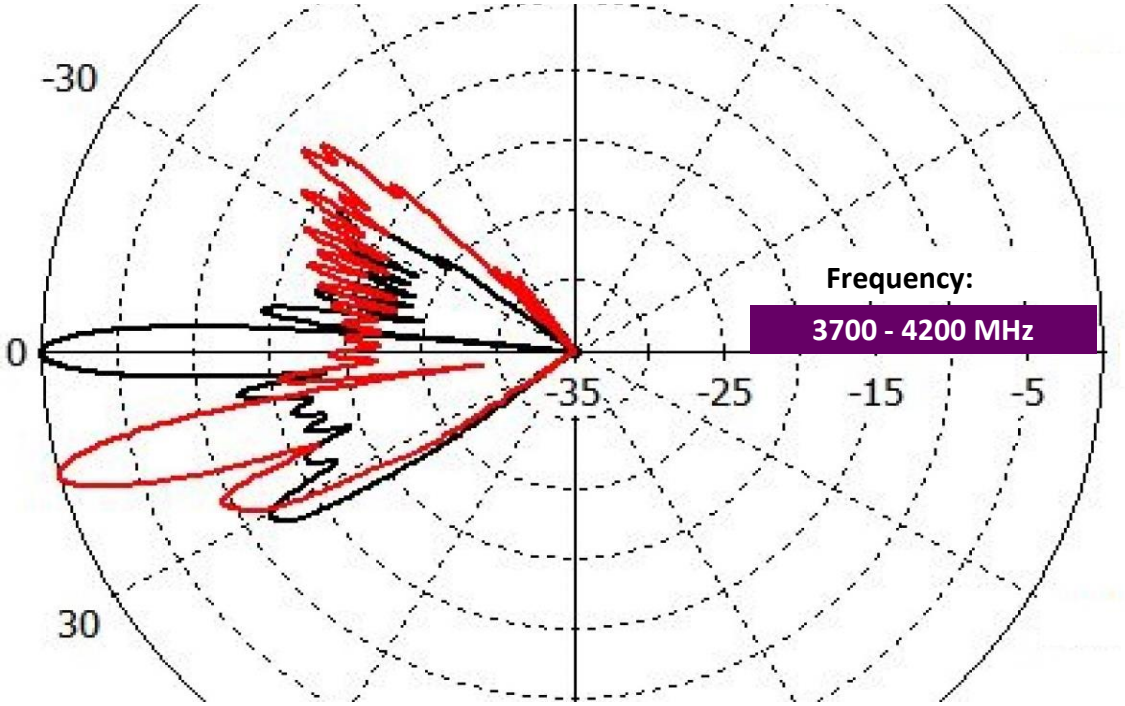
BEAM		
BEAM	1	PORT 2 (-45°)
		PORT 1 (+45°)
BEAM	2	PORT 4 (-45°)
		PORT 3 (+45°)
BEAM	3	PORT 6 (-45°)
		PORT 5 (+45°)
BEAM	4	PORT 8 (-45°)
		PORT 7 (+45°)
BEAM	5	PORT 10 (-45°)
		PORT 9 (+45°)
BEAM	6	PORT 12 (-45°)
		PORT 11 (+45°)
BEAM	7	PORT 14 (-45°)
		PORT 13 (+45°)
BEAM	8	PORT 16 (-45°)
		PORT 15 (+45°)
BEAM	9	PORT 18 (-45°)
		PORT 17 (+45°)
BEAM	10	PORT 20 (-45°)
		PORT 19 (+45°)
BEAM	11	PORT 22 (-45°)
		PORT 21 (+45°)
BEAM	12	PORT 24 (-45°)
		PORT 23 (+45°)
BEAM	13	PORT 26 (-45°)
		PORT 25 (+45°)
BEAM	14	PORT 28 (-45°)
		PORT 27 (+45°)
BEAM	15	PORT 30 (-45°)
		PORT 29 (+45°)
BEAM	16	PORT 32 (-45°)
		PORT 31 (+45°)
BEAM	17	PORT 34 (-45°)
		PORT 33 (+45°)
BEAM	18	PORT 36 (-45°)
		PORT 35 (+45°)
BEAM	19	PORT 38 (-45°)
		PORT 37 (+45°)
BEAM	20	PORT 40 (-45°)
		PORT 39 (+45°)
BEAM	21	PORT 42 (-45°)
		PORT 41 (+45°)
BEAM	22	PORT 44 (-45°)
		PORT 43 (+45°)
BEAM	23	PORT 46 (-45°)
		PORT 45 (+45°)
BEAM	24	PORT 48 (-45°)
		PORT 47 (+45°)

2.00 BEAM PATTERN

2.10 Horizontal Beam Pattern

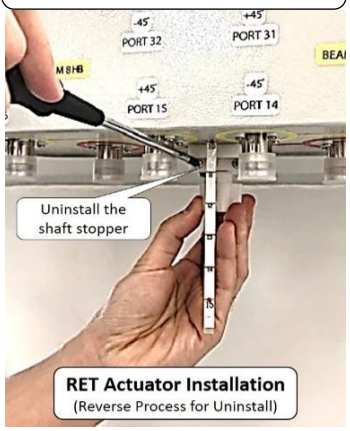


2.20 Vertical Beam Pattern



3.00 RET REPLACEMENT / INSTALLATION PROCESS

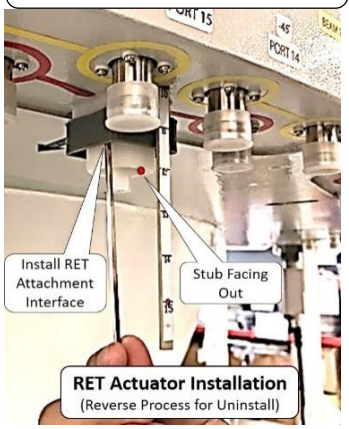
Step 1: Uninstall the shaft stopper



Step 2: Uninstall the shaft Handle

Step 3: Install the Hex adaptor and screw it on

Step 4: Install the RET attachment interface



Step 5: RET Actuator stub gap facing out

Step 6: RET Tighten to attachment interface

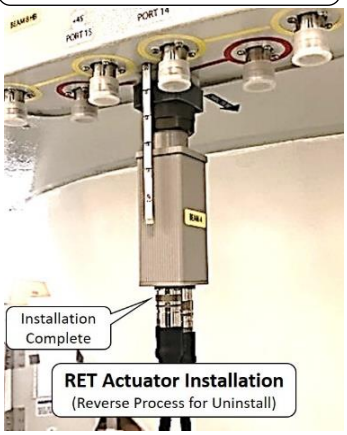
Step 7: Screw and tighten RET cable

ADVICE:
***** Replace the AISG cable if is faulty.***
***** Same caution apply***

Step 7 CAUTION

1. Do not apply any rotation force to the cable
2. Carefully align same direction to the keyway before insertion.
3. Insert direct (not angular) until well fully seated before turning.
4. Once both thread is fit can start slowly turning.
5. Tighten the AISG connector by hand only.
6. If use torque wrench do not exceed 1.1 Nm (0.8 ft if) torque.

Step 8: RET Actuator installation complete.



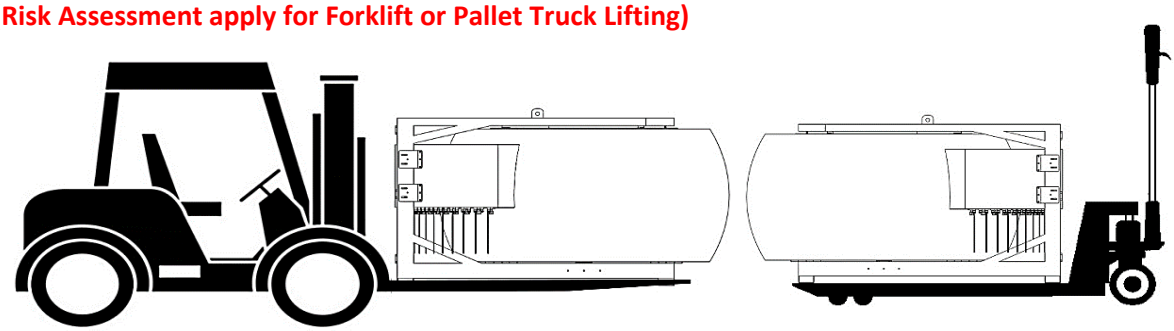
Repeat the same process for other actuator installation.

4.00 TRANSPORTATION / INSTALLATION

4.10 Transportation (From Point to Point)

Strictly comply to the Local authority and regulatory on Workplace Safety and Health Control and Measure when moving and transportation of large or heavy equipment, appropriate material handling machine should be use.

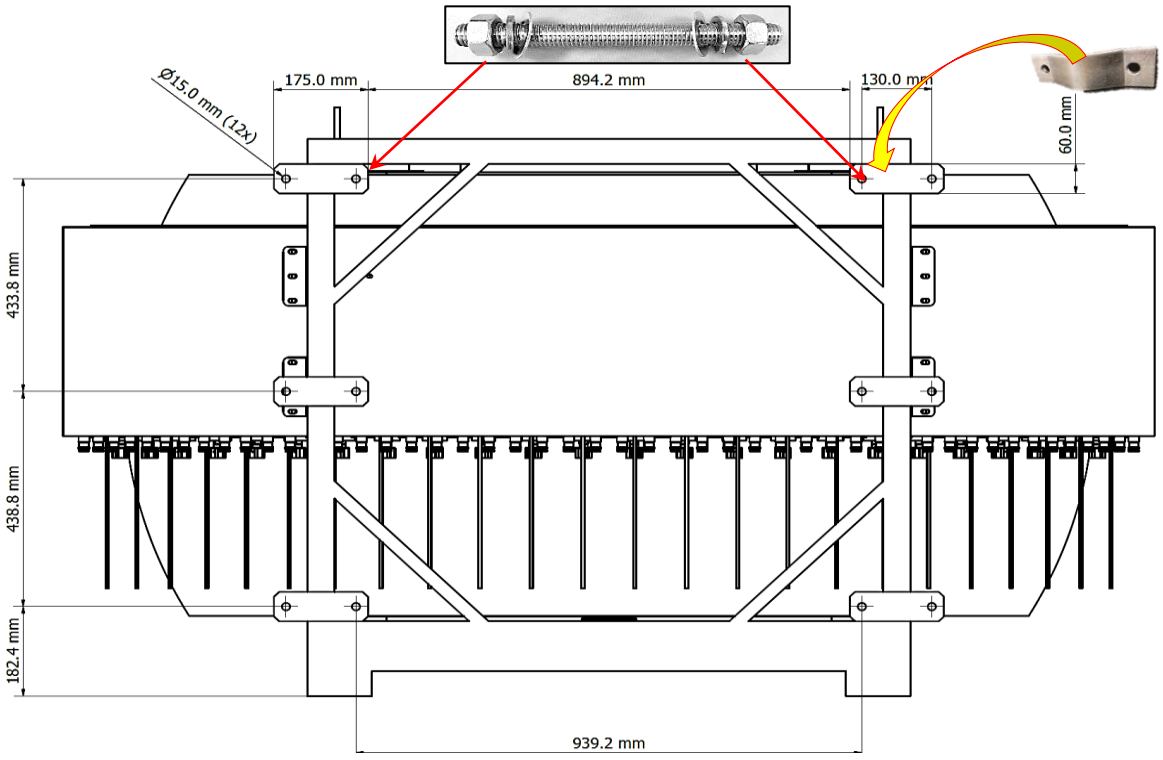
(Risk Assessment apply for Forklift or Pallet Truck Lifting)



4.20 Bracket Mounting

Item	Lens Size	Holes Size	Bracket Qty	Bolt & Nuts Sets
1	180cm	Ø15mm x 12	6	M14 x 20cm = 12 Sets

Attached the bracket tighten with specified bolts sets.



Important Notes:

End User is require to Custom-Make the additional supporting bracket and tighten to the existing Antenna bracket to meet the deployment needs.

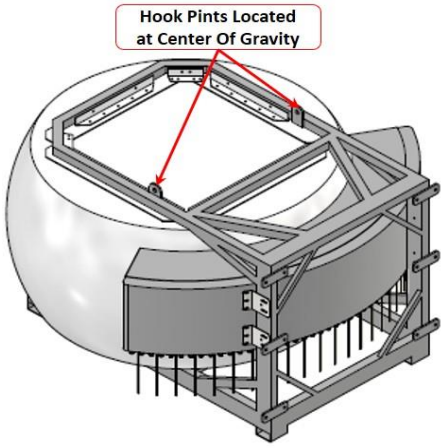
4.30 Installation using a crane

Strictly comply to the local authority and regulatory on Workplace Safety and Health Control and Measure when performing lifting of large or heavy equipment, appropriate material handling machine should be used and only certified personnel should perform the task.

(Risk Assessment requirement applies for both Up-Lifting and Down-Lifting.)

4.31 Lifting the Antenna

The antenna has 2 hook points installed on the top frame (located slightly behind the center of the sphere). These hooks are designed at the center of gravity point of the antenna. A cable, rope can be securely fastened to the hooks and the antenna can be lifted using a crane as pictured below.

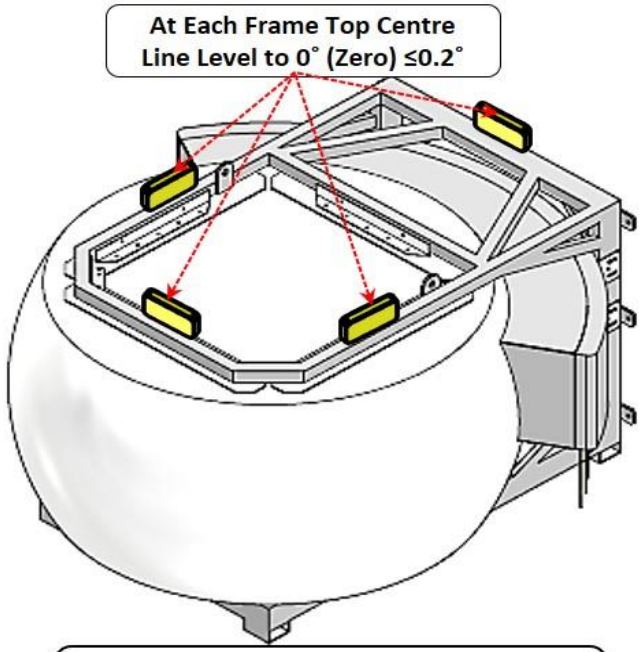


4.40 Antenna Installation

With reference to "**Bracket Mounting" Procedure**, End user is required to Custom-Make the additional supporting bracket and tighten it to the existing Antenna bracket to meet the deployment needs.

4.41 Antenna Levelling

After the Antenna is mounted to the bracket, it is required to be adjusted to 0˚ (Zero Degree) with ≤0.2˚ on 3 sides of the frame top level.(Rear, Right & Left=As shown in picture)



ANTENNA LEVELING ADJUSTMENT
(AFTER INSTALLATION)

4.42 Digital Level Gauge Calibration

4.43 Adjustment Requirement

ANTENNA LEVELING ACCEPTED

REQUIRE ADJUSTMENT