

Date	Prepared by	Approved by	Document nos	Revision
28 Feb 2019	Ray Ling	Patrick Yeo	MS-12H180-IM-001	0

INSTRUCTION MANUAL MS-12H180

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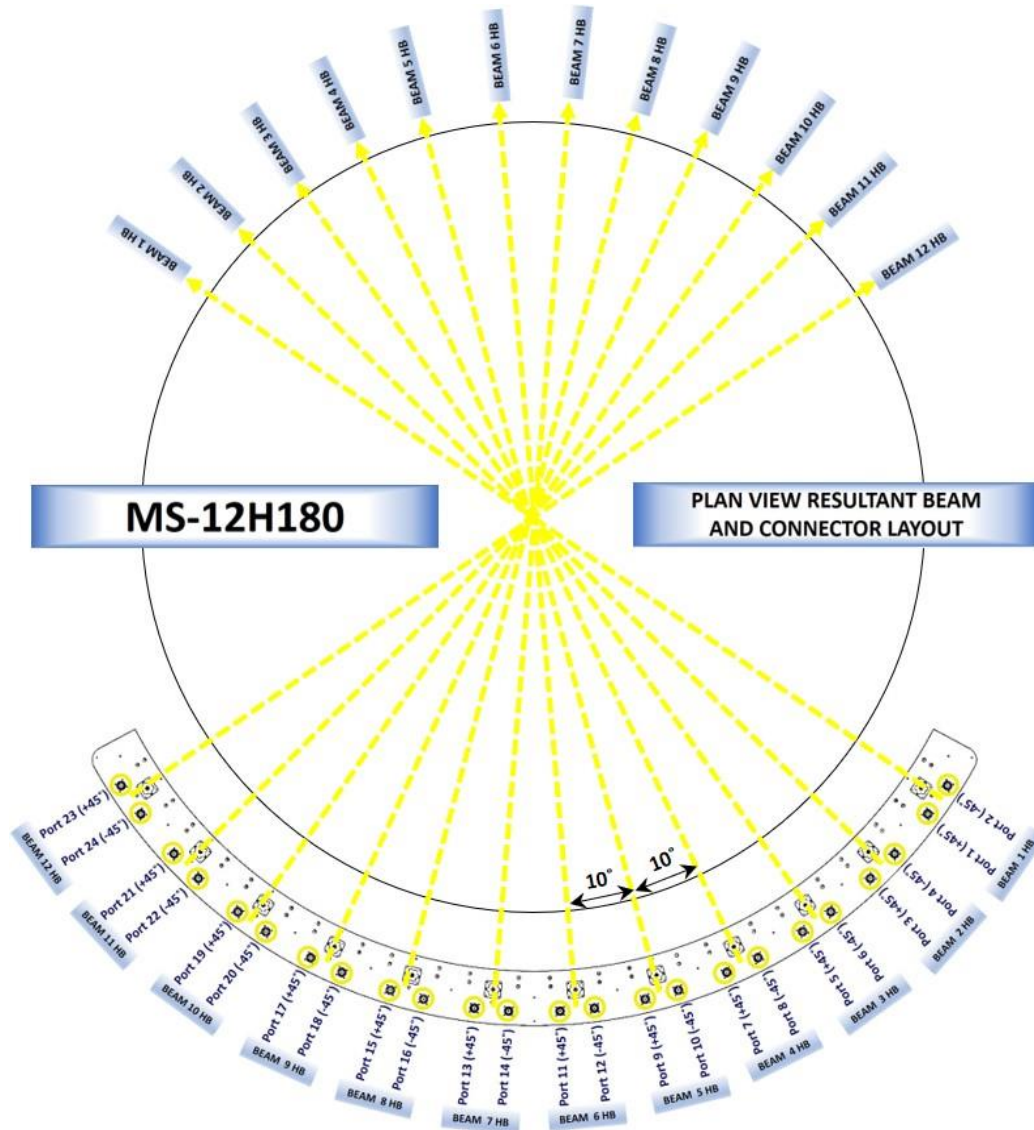
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Revision History:

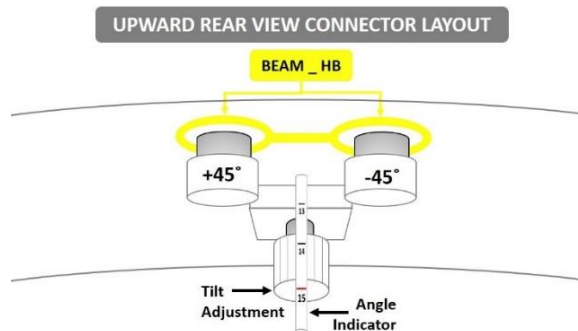
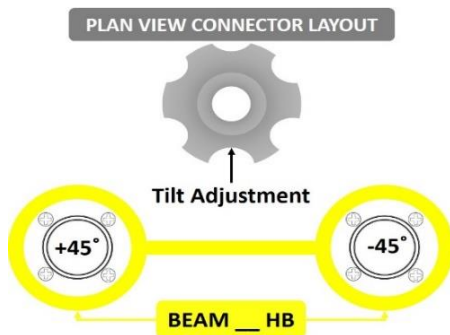
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1.00 BEAMS & CONNECTORS:

1.10 Plan View Resultant Beam And Connector Layout



1.20 HB Connector



1.30 Connector Ports Table

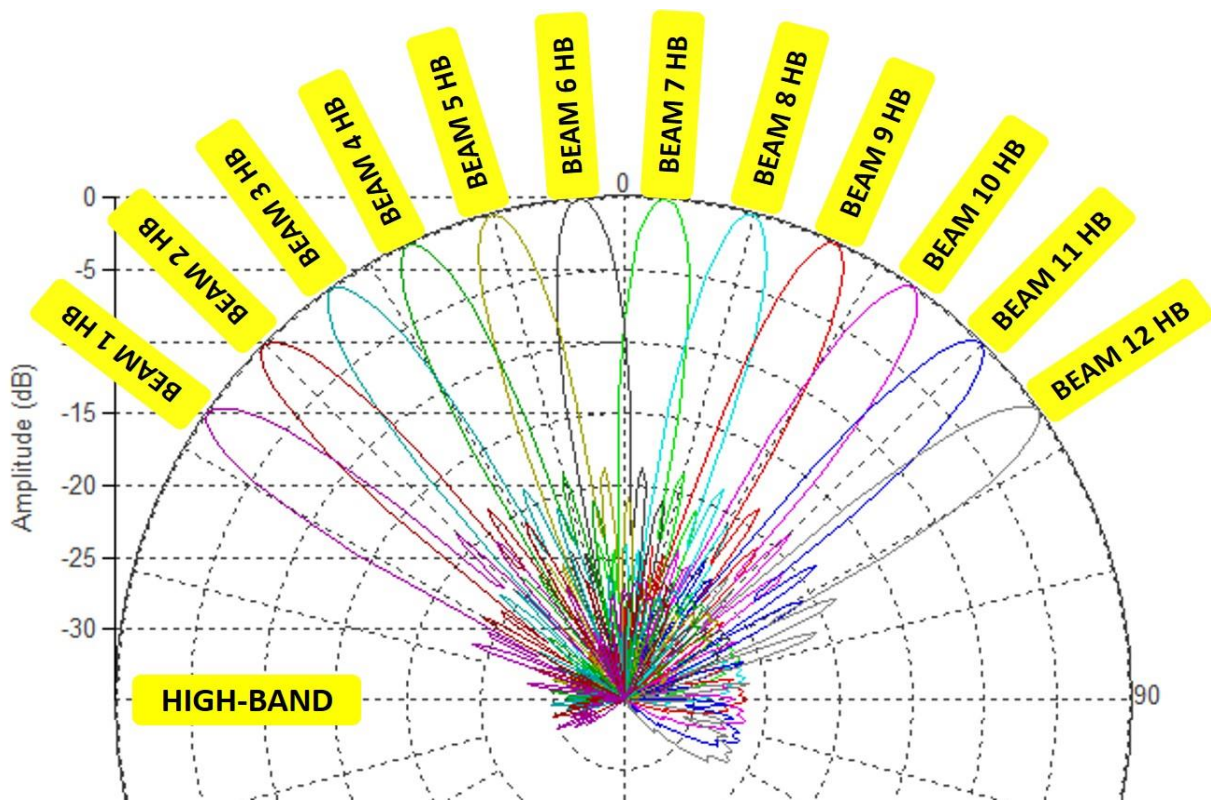
BEAM 6 HB	BEAM 5 HB	BEAM 4 HB	BEAM 3 HB	BEAM 2 HB	BEAM 1 HB
Port 11 (+45°)	Port 12 (-45°)	Port 9 (+45°)	Port 10 (-45°)	Port 7 (+45°)	Port 8 (-45°)
Port 5 (+45°)	Port 6 (-45°)	Port 3 (+45°)	Port 4 (-45°)	Port 1 (+45°)	Port 2 (-45°)

← Rear View Left Continue BEAM 7 HB Rear View Right →

BEAM 12 HB	BEAM 11 HB	BEAM 10 HB	BEAM 9 HB	BEAM 8 HB	BEAM 7 HB
Port 23 (+45°)	Port 24 (-45°)	Port 21 (+45°)	Port 22 (-45°)	Port 19 (+45°)	Port 20 (-45°)
Port 17 (+45°)	Port 18 (-45°)	Port 15 (+45°)	Port 16 (-45°)	Port 13 (+45°)	Port 14 (-45°)

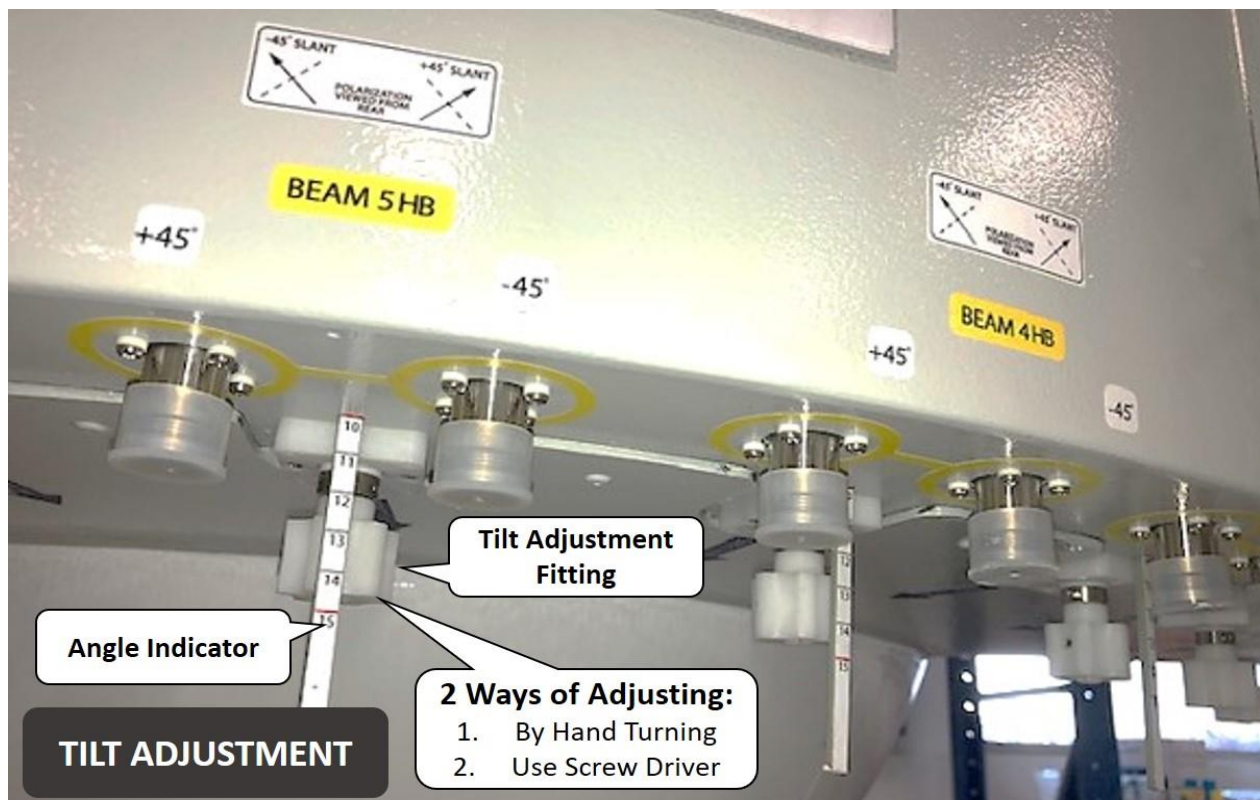
2.00 PATTERN DIAGRAM

2.10 High Band



3.00 MANUAL TILT ADJUSTMENT

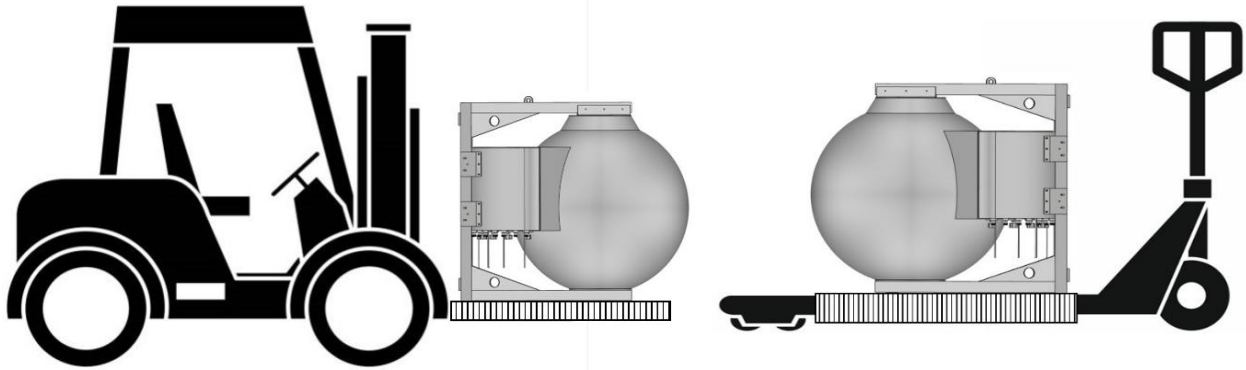
There are 2 ways of adjustment: 1. By Hand turning. 2. Use Screw Driver as shown in pictured below. When using this method, please be extra careful not to adjust tilt beyond the 0-15° tilt range, as there is no restrictor on the tilt knob.



4.00 TRANSPORTATION / INSTALLATION

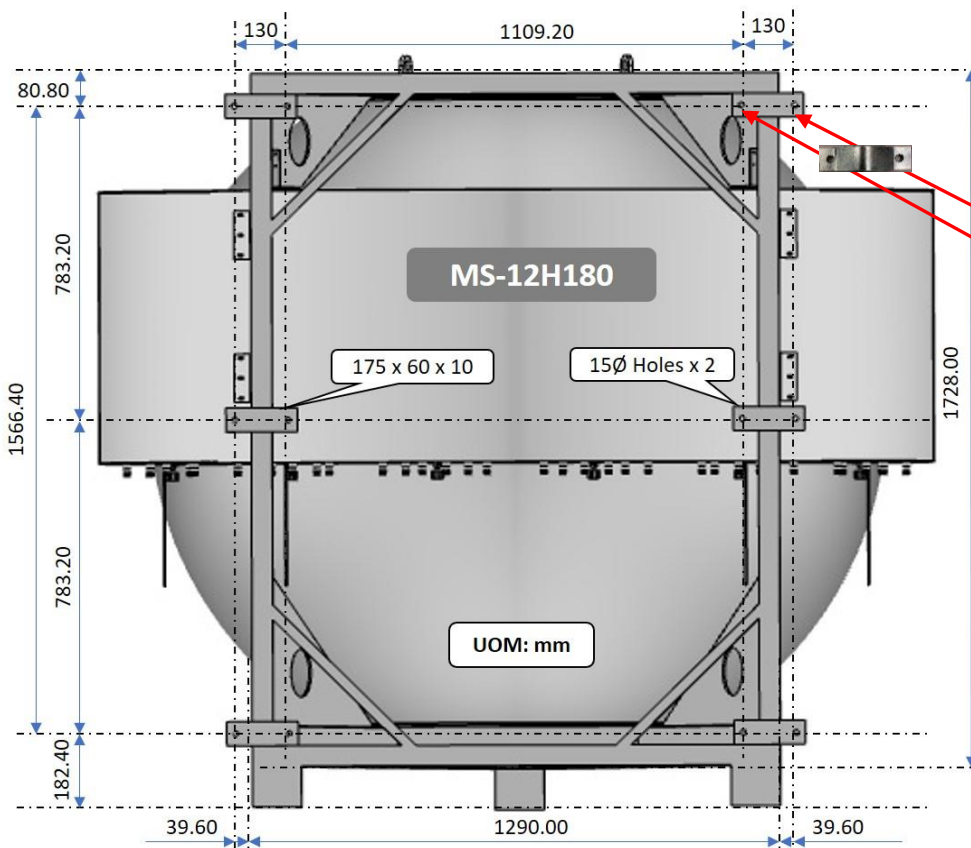
4.10 Transportation (From Point to Point)

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

Lens Size (Model)	Bracket Qty (pc)	Bolt & Nuts Size	Bolts Set (pc)
MS-XXX180 Lens	6	M14 x 15cm	12
MS-XXXX 60,90,120 Lens	4	M12 x 15cm	8



Tighten to the pole with Bolt & Nuts 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 use and only certified personal should perform the task. **(Risk Assessment require to apply 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 or forklift as pictured below.

