

AL-7207/8/9

Maritime Stabilized TVRO System



AL-7208-POLDC

Enabling C-Band Circular Polarization



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1 INTRODUCTION

1.1 Purpose

This document details step-by-step instructions for AL-7207/8/9 TVRO systems, of AL-7208-POLDC, to enable C-Band Circular polarization instead of the C-Band Linear polarization.

Please note that a transition from C-Band Linear polarization to C-Band Circular polarization is as per this document and that a transition from C-Band Circular polarization to C-Band Linear polarization is not possible once this transition has been made.

1.2 Principle

The AL-7208-POLDC includes 2 Dielectric plates – with the same shape but different thickness.



The 2 Dielectric plates should be installed on the feed horn itself to change the C-Band polarization to Circular polarization.
Installing the 2 Dielectric plates have no effect on the Ku-Band polarization, it remains Linear.

2 Installing the Dielectric plates

2.1 Positioning of Feed horn

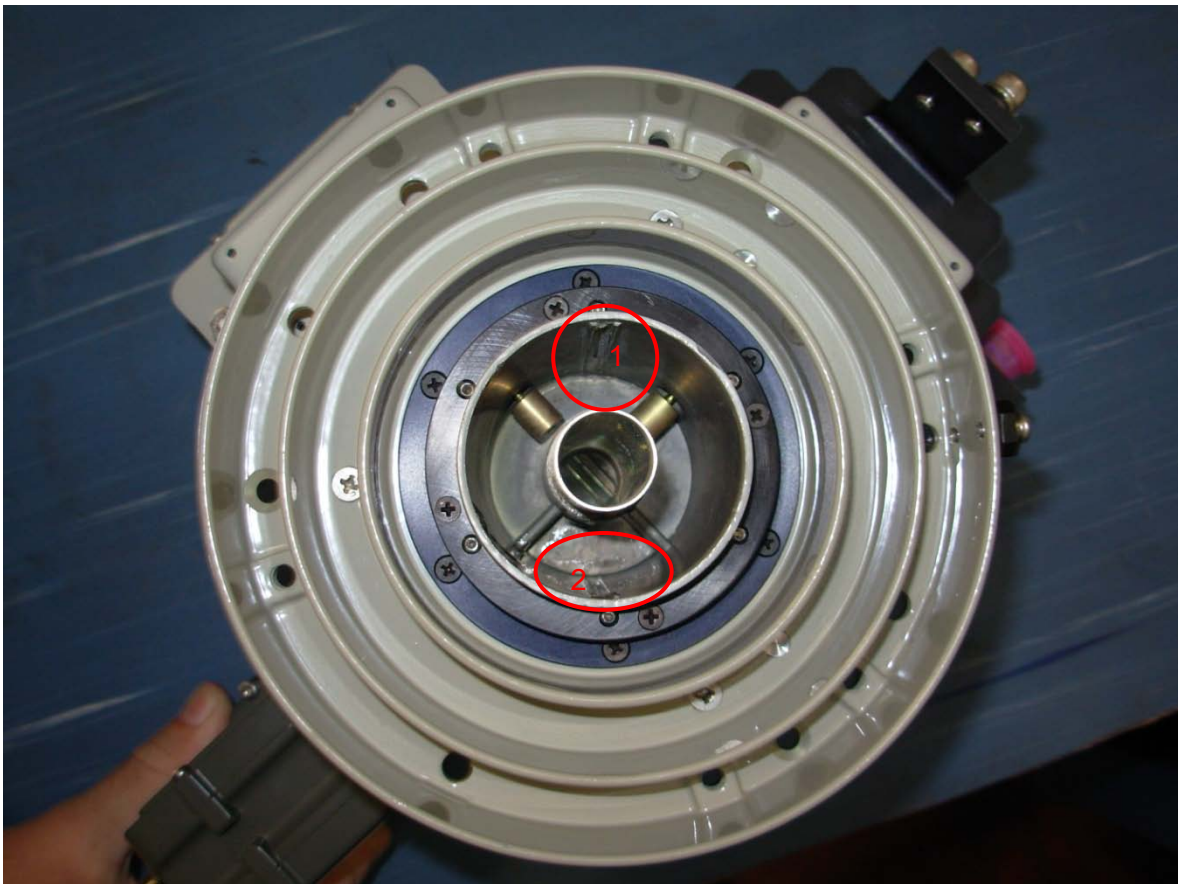
Please note the direction of the feed horn and its components to identify the correct location of the 2 rails of the Dielectric plates.

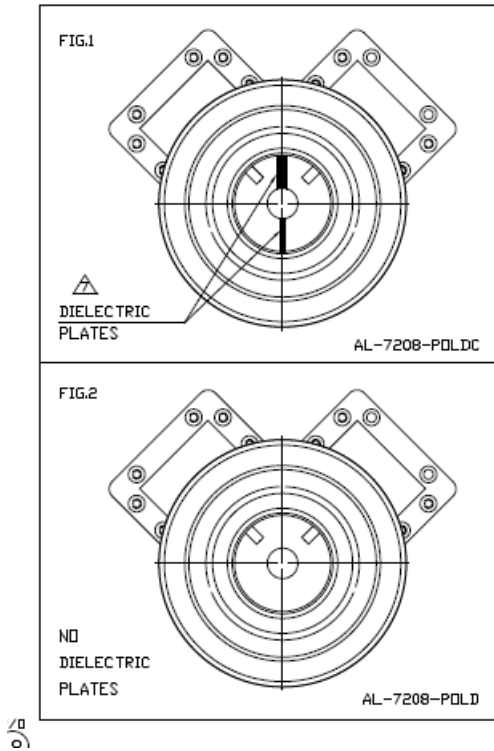
The 2 rails can be seen on the inner side of the central pipe

#1 – for the thicker Dielectric plate

#2 – for the thinner Dielectric plate

This can be noticed in the picture and drawing below:





2.2 Which EPOXY to use?

Orbit recommends using HARDMAN “EXTRA FAST SETTING EPOXY” P/N: 04001 (See Picture below), to securely attach the Dielectric plates to the feed horn.

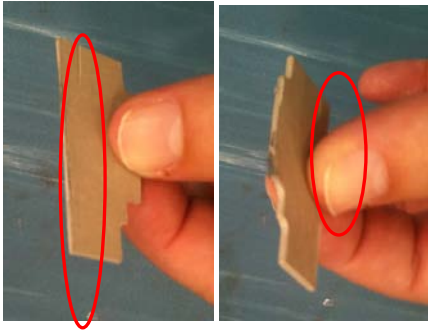


2.3 Applying the EPOXY

Please apply the epoxy on the 2 sides of the Dielectric plates that are in contact with the feed:

Long side is the side attached to the rail – you can apply epoxy on the rail as well as on the Dielectric plate panel side,

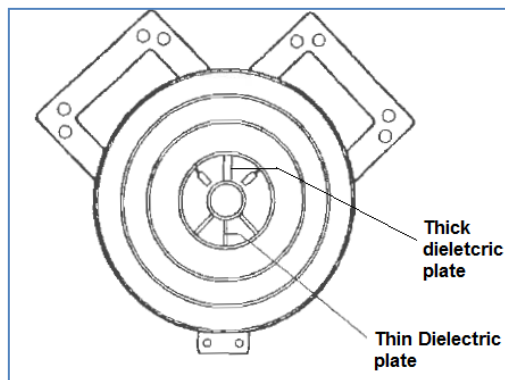
Short side is the side in touch with the inner pipe.



2.4 Inserting the Dielectric plates – WHERE?

Each Dielectric plate has its thickness to distinguish it from the other one. Their shape is the same.

Please insert the Thick Dielectric plate to the thicker rail – thicker rail is the rail between the two probes and as we saw the position of the thicker rail relative to the feed design. Please insert the Thin Dielectric plate to the thinner rail – thinner rail is the rail between the two walls.



2.5 Inserting the Dielectric plates – HOW?

The Dielectric plate shape has a narrow side and a wider side – please make sure that both of the Dielectric plates are inserted when the narrow side is facing in (towards the feed cup) and the wider side is facing out (towards the technician)

