Satellite Polarization Skew setting on JCSAT and Superbird

For historical reasons, some of the JCSAT and Superbird satellite's polarization plane are tilted by an angle with respect to the equatorial plane. This tilt is called by various names, such as 'Sat Skew', 'Pol Skew', 'Skew Offset', 'Tilt Angle' and so on. In this document, we call it as **Satellite Polarization Skew** (hereinafter called as **'Satellite Skew'**).

Customers are required to set the Satellite Skew when using an auto-tracking antenna. Please find Satellite Skew of JCSAT and Superbird satellites following table below.

Satellite (Freq. Band)	Satellite Skew
JCSAT-2B (Ku-band)	+29.2deg
JCSAT-3A (C-band)	+22deg
JCSAT-5B (C-band)	+22deg
SuperBird-C2 (Ku-band)	+12deg
SuperBird-B3 (Ku-band)	+31deg

＊"Satellite Skew" of JSAT satellites is an angle clock-wise when looking at the satellite from the earth.

[Details]

Most satellites polarizations are aligned square with the equator. However, some JSAT satellites have skew in polarization angle. We call such a skew as **Satellite Skew (Satellite Polarization Skew)**.

All the vessels have to take Satellite Skew into consideration when they access the satellites. If Satellite Skew adjustment has not been configured properly, the vessels will create interference into the opposite pol. That will do serious damage on the network if it's running there, and YSCC (JSAT NOC) may have to request such vessels to suspend operation untill Satellite Skew adjustment is secured.

On vessels using Automatic Beam Switching (ABS) and OpenAMIP protocol between modem and Antenna Control Unit, Satellite Skew setting can be also included in the modem option file. With the option file, Satellite Skew setting is updated for each satellite automatically when changing satellites. This setting is done by the Network Operation Center of Service Provider when they create the option file for the modem.

If Satellite Skew setting has been modified through carrier activation (commissioning test), the Network Operation Center must make sure the latest modem option file is deployed to all the vessels under the network.