

## SUMMARY OF DATA

## PURPOSE

To provide 2-way communication via associated military satellite systems.

## BRIEF DESCRIPTION

The equipment forms a small shipborne earth station. It is permanently fitted to designated ships using Outfit YBN (fitted to receive) components and consists of the following main assemblies:

- (1) Two radome protected antennae mounted either side of the ship's superstructure centre line providing maximum coverage with minimum wooding. Each antenna is separately stabilised but uses a common servo control system such that when activated in the automatic mode they track the satellite simultaneously.
- (2) Satellite Engineering Cabin (SEC) containing the communication and servo control equipments.
- (3) Rack mounted remote control equipments in the MCO.
- (4) Rack mounted modulation and baseband terminal equipment in the MCO and speech compartments.

## TRANSMITTER SYSTEM CHARACTERISTICS

Input	Baseband, FDME or CDMA
Modulation	FM or PM
Frequency	7975–8005 MHz
Modulator Sub-Carrier	70 MHz centre
Drive Power	120 mW
Power Output	50 W–1.2 kW

## RECEIVE SYSTEM CHARACTERISTICS

Input	FM or PM Beacon and Communications
Frequency	7250–7300 MHz
Pre-Amplifier	Uncooled Parametric Amplifier
1st I.F.	60–120 MHz
Output	Baseband, FDME or CDMA

## ANTENNA CHARACTERISTICS

Beam Width	1.3°
Gain	40 dB
Tracking Rate	>30°/s
Training Angle	Fully Rotatable
Elevation Angle	+100° to –15°
Cross Level Angle	± 20°
Mode of Control	Manual or Auto Track
Auto Track Capability	Satellite tracking with angular velocities $\geq 2^\circ/\text{h}$ for elevations up to 85°

## PHYSICAL DATA

	Height	Length	Width	Weight
SEC	2750 mm	2650 mm	2068 mm	2700 kg
Antenna	2820 mm	—	2990 mm	1000 kg

## POWER REQUIREMENTS

440 V, 60 Hz, 3-phase	11.3 kVA
115 V, 60 Hz, 3-phase	1 kVA
115 V, 60 Hz, 1-phase	6.25 kVA
115 V, 400 Hz, 1-phase	0.33 kVA
115 V, 60 Hz, 3-phase	3 kVA (each antenna)
115 V, 60 Hz, 1-phase	1.2 kVA (MCO)

## SHIP SERVICES

Water (Chilled or Salt)	6 gal/min (maximum pressure 150 lb/in. <sup>2</sup> )
Air	2 ft <sup>3</sup> /h at 8 in. wg
Compass Transmission	Synchronous S1, S2, S3 transmissions from transmitter of minimum Size 15, reference voltage being provided from the SCOT equipment
1 MHz Frequency Standard	1 V, for lining-up and test purposes

## HANDBOOK

BR 8160 Series

## ESTABLISHMENT LIST

S1829

## INSTALLATION SPECIFICATION

B1155

B1297