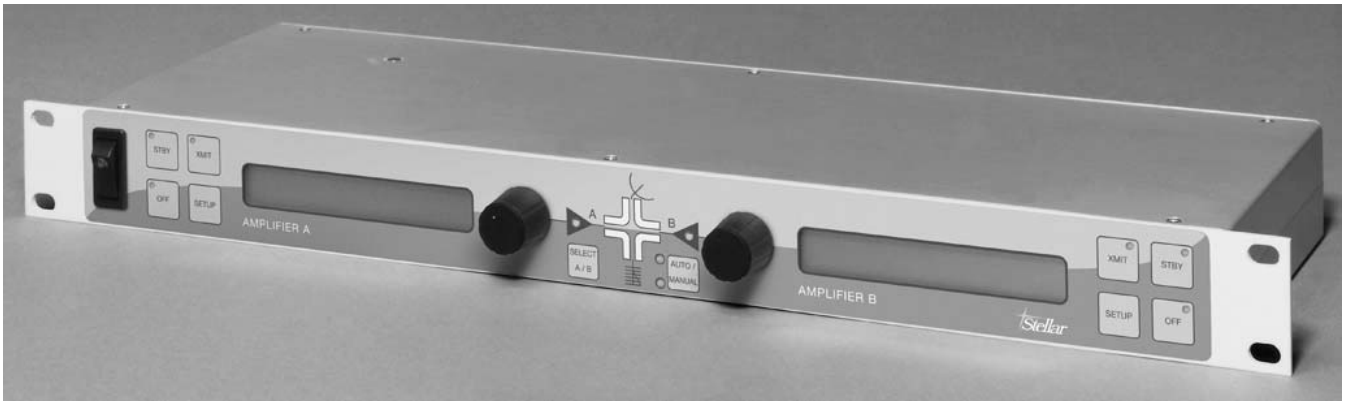
e2v technologies

N6143 Stellar Control Unit and 1:1 Redundant Assemblies



DESCRIPTION

The N6143 controller is a compact and user friendly unit providing full remote control of up to two Stellar amplifiers and a redundant switch.

The N6143 is also available with a range of 1 for 1 redundant switch waveguide networks, designed specifically to interface with the Stellar range of amplifier products. Customer specific system requirements can be provided.

FEATURES

- **Remote Serial interface** Provided as standard to allow remote control and monitoring of the system.
- **User Friendly** Easy to use controls with clear, high visibility displays. A dedicated display and separate controls are provided for each amplifier, avoiding operator confusion.
- **Mimic Display** An intuitive mimic display with indicators is provided on the front panel to clearly show the condition of each amplifier and the position of the waveguide switch

SPECIFICATION

Electrical

Voltage	99 to 264 V
Frequency	47 to 65 Hz
Power requirement	15 W nom
Power factor	0.96 min
Input surge current (% of normal line)	100 % max

Mechanical

Weight	2 kg
Dimensions:	
width	483 mm (19 inches)
height	1U, 44 mm (1.75 inches)
depth (not including connector mating halves)	153 mm (6 inches)
Cooling	natural

Environmental

For operation outside these parameters, refer to e2v technologies for guidance.

Operating temperature	−20 to +50 °C
Storage temperature	−40 to +70 °C
Vibration	MIL-STD-810E; common carrier and field transportation
Shock	IEC Publication 68-2-27 Part 2 Test Ea 25 g
Electromagnetic compatibility	EMC Directive 89/336/EEC ETS 300 327
Safety	Low Voltage Directive 73/23/EEC BS EN 60950

CONNECTORS

Mains (see note 1)	IEC320
Amplifier interface (see note 2)	9-pin D-type plug
Waveguide switch unit (see note 2)	15-pin D-type plug
Remote serial interface (see note 2)	9-pin D-type socket

CONTROLS

Main power on/off switch

Front panel control keys:

AMPLIFIERS A and B
- Off mode select (OFF)
- Standby mode select (STBY)
- Transmit mode select (XMIT)
- Set-up enter (SET-UP)

REDUNDANCY
- RF switch position select (SEL A/B) (see note 3)
- Automatic or manual mode select AUTO/MAN

Two rotary shaft encoders for parameter selection and gain control (see note 4).

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FRONT PANEL DISPLAY

Backlit LCD, functions selected by front panel keys, shows:

Amplifier status	Output Power
Helix Current	Fault identification
Set-up parameters	

FRONT PANEL INDICATORS

Audible alarm

Amplifier state (1 and 2):

Off	Standby
Transmit	Summary fault

Redundancy state:

Automatic/manual mode	RF switch position

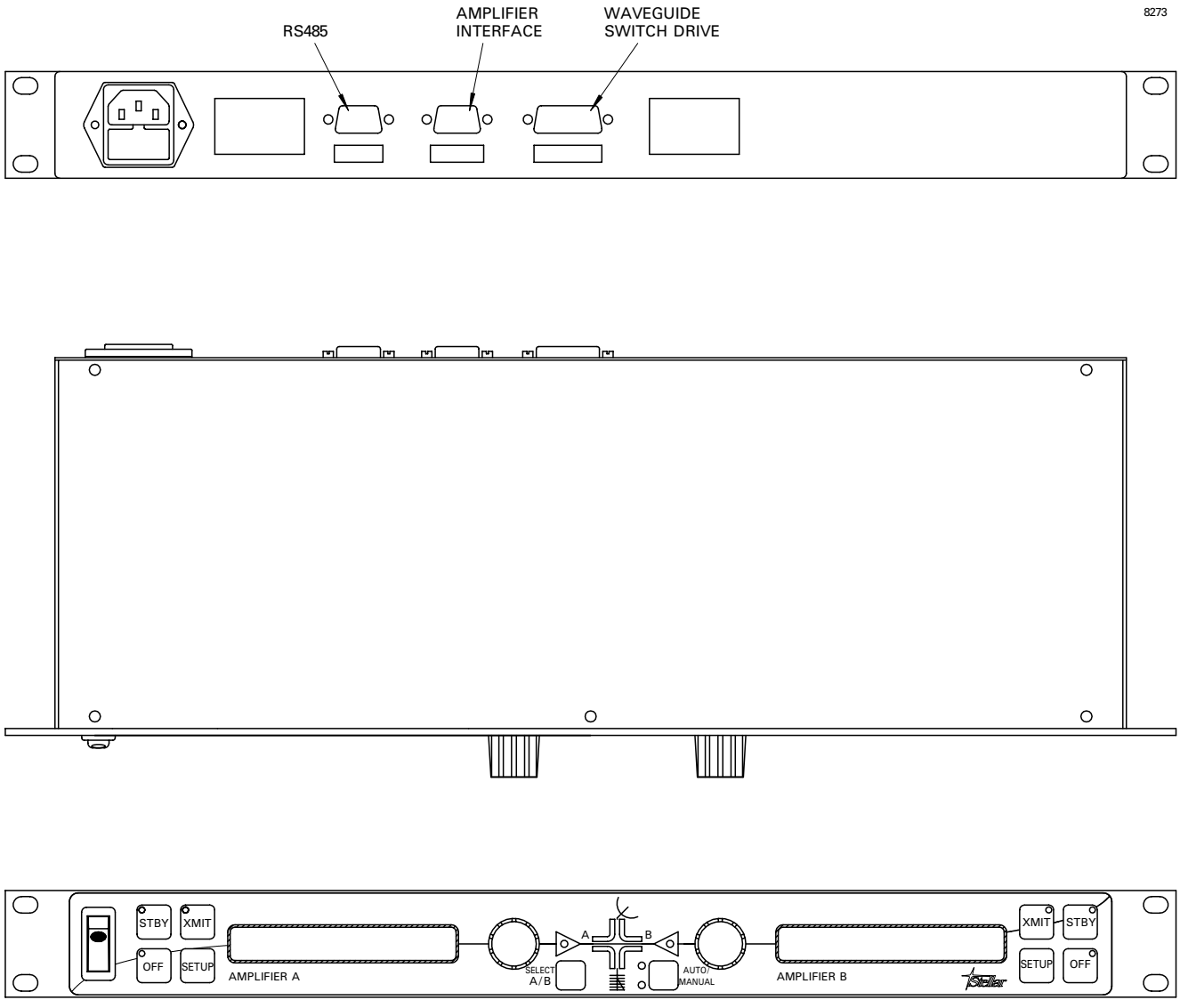
DOCUMENTATION

An operation manual is supplied with each unit

NOTES

1. A mating connector is supplied with each unit.
2. Interconnecting cables are not provided. Refer to the e2v technologies data sheet A1A-Stellar Cables for recommended cable assemblies.
3. Only operational when manual mode is selected (AUTO/MAN key).
4. Gain control function is only applicable if specified as an option when purchasing amplifiers.

OUTLINE



HPA COMPATIBILITY

The N6143 is compatible with the N631x series, N6612 series, N6712 series, N6812 series and STA1000 series of e2v HPAs.

APPLICATIONS

Single HPA Operation

The N6143 can be used to operate a single HPA. The typical configuration is shown in Fig. 1 below, with the N6143 connected using e2v technologies cable assembly DAS564492AA (contact e2v technologies for ordering information). Full interconnection details are given in the relevant HPA operation manual.

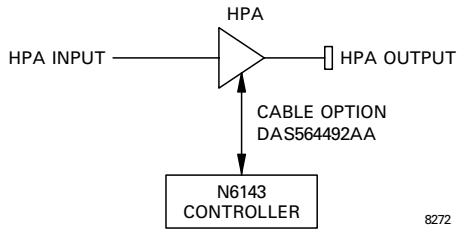


Fig. 1 Single HPA Configuration

1:1 Redundant Switch Assemblies

e2v technologies also provide a range of pre-configured waveguide switch assemblies that, when used with an N6143 and two HPAs, form a fully automated 1:1 redundant HPA assembly. Fig. 2 shows the typical configuration for a 1:1 system, with the N6143 connected to the HPAs using e2v technologies cable assembly DAS548660BA. Full interconnection details are given in the relevant HPA operation manual.

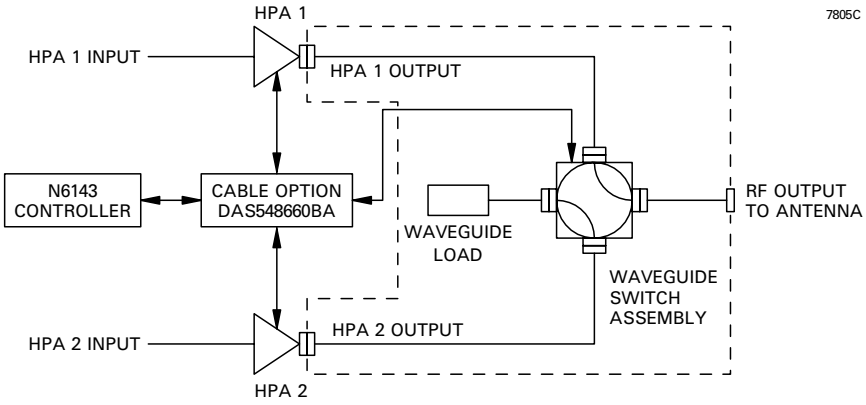


Fig. 2 Redundant Switch Configuration

Details of waveguide switch assembly and HPA compatibility are provided in the following table.

Waveguide Switch Assembly	For Use With HPA Type				Cable Option
	N631x	STA1140	STA1240	STA1340	
DAS563702BA	●				DAS548660BA
DAS705652AA		●			DAS548660BA
DAS705651AA			●		DAS548660BA
DAS705650AA				●	DAS548660BA

Drawings of the waveguide switch assemblies are available on request.