



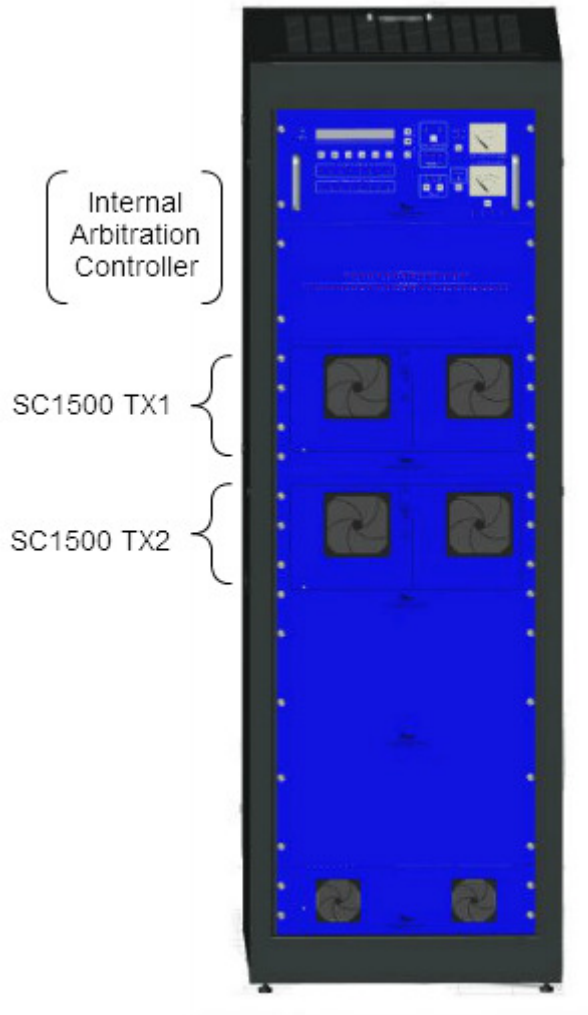
# Southern Avionics Company

## DGPS Transmitter SC1500 Dual, One Rack

Part Number: SLF39002

SPECIFICATION SHEET

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FEATURE	SPECIFICATION
Power Output	Carrier power into 50 Ohms continuously adjustable from 150 - 1500 W (max)
Frequency Range	283.5 - 325 kHz
Spurious Emission	Less than -70dBc (measured at a dummy antenna)
Radiated Harmonics	Less than -60dBc (measured at a dummy antenna)
Type of Emission	N0N, G1D
Noise and Hum Level	Less than -40dB
Input Power	190-260VAC, 144VDC (reduced output)
Power Consumption	2000 W for 1500 W RF Output
Metering	Forward power output, reflected power output, PA voltage and PA current
Ambient Temperature	-15°C - +55°C at 0 - 95% relative humidity
Qualifications	Meets applicable requirements of the FCC

\*Information provided is subject to change without notice

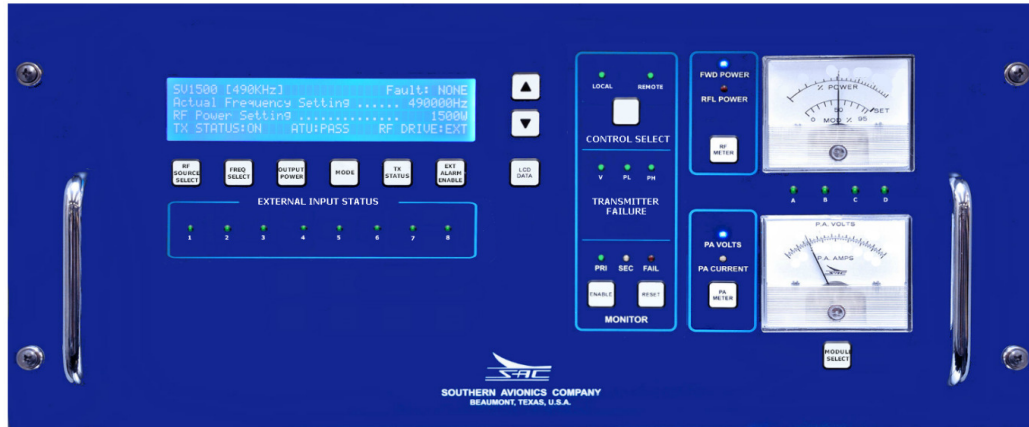
**Application:**

The SC1500 Dual with one (1) rack is a complete DGPS transmitter that operates in the 283.5-325 Khz band and has a carrier output power that can be varied from 75-1500 Watts (Max). An internal arbitration controller is required which provides switch over in case of a failure. The transmitter uses Class D switching technology in the power amplifiers and power controllers to provide a highly efficient system. The transmitter units are modular with each module providing up to 750 Watts of power. Each module consists of a power supply regulation stage, power controller, switching power amplifier, post filter and power monitoring stage. The modules are hot swappable thereby allowing service on parts of the transmitter without completely removing output power.

**Monitoring:**

The SC1500 can be remotely monitored by RS485 with full control available at the remote controller. The SC1500 includes an Ethernet server and allows control and monitoring over an Ethernet connection. ***No special software is required to monitor the SC1500 over the Ethernet.*** Total RSIM control and monitoring is also included in the SC1500. The RSIM monitor shuts down the transmitter if VSWR exceeds 2.62. DC operation is also available as an option on the SC1500 but with reduced carrier output.

Radio Technical Commission for Maritime Services (RTCM) Standard Integrity Monitor with RS232, RS422, RS485 or Ethernet communications is available. A membrane keypad provides user controls for the Remote Station Integrity Monitor (RSIM) panel. An LCD displays either the last RSIM command completed or test point data within the transmitters. A powerful microcontroller within the RSIM controller monitors critical parameters and provides control for abnormal conditions. A low power condition will cause the primary transmitter to shutdown and the system to transfer to the secondary transmitter. A secondary low power shutdown causes the system to fail. A shutdown override can be implemented either at the transmitter or by remote access. A master reset can also be implemented remotely.



### Key Features:

- Graphical User Interface for Local and Remote Control and Monitoring
- Powerful Renesas M16C/65 Microcontroller with Ethernet Interface for extensive User Control (Parameters, Alarms, and Selective Transmitter Control)
- Hot Swap 750W RF modules for ease of service
- External or Internal RF Source select from Front Panel
- 40 character by 4 line LCD Display
- Built-In Test Equipment (BITE) allows Troubleshooting from anywhere
- Dual Front Panel Meters
- Alarm Monitoring
- All Alarms, Parameters, and Full Transmitter Control via Remote Control Panel through RS485
- Full Function Membrane Keypad
- 8 External Opto Isolator/Relay Contact Interface
- 8 External Monitor Switch Closure Interface
- Automatic ATU Interface by either RS485 or MultiMode Fiber
- Circuit Protection includes: DC circuits are protected by individual fuses, a VSWR circuit cuts back on transmitter power when VSWR exceeds an adjustable value, individual RF Power Amplifiers have a special over-current protection circuitry with transient recovery capability, MSK signal conditioning protects the Power Amplifiers from signal loss

### Alarm Monitoring Includes:

- VSWR
- Power Decrease by 3 dB;  
Power Increase by 2 dB
- ATU or Transmitter Excessive Temperature
- Cooling Fan Failure
- Low Input AC Power
- RF Drive Failure
- External Alarms (Door Open, Air Conditioning Failure)
- Self Protection Feature Includes Power Reduction upon sensing elevated VSWR

### Parameters Displayed on LCD Display:

- Forward and Reflected Power
- Power Amplifier Voltage and Current
- AC Input Voltage and Current
- ATU and Transmitter Temperatures
- VSWR
- Antenna Current
- Desired Frequency and Actual Frequency of Incoming RF Drive
- External RF Drive Level
- Local and Remote Control
- Internal or External RF Drive
- Low Voltage and High Voltage Power Supply Outputs
- Transmitter, ATU, Antenna, External RF Drive, Cooling Fan Status
- Status Alarms for Internal Transmitter
- ATU and External Sensors