



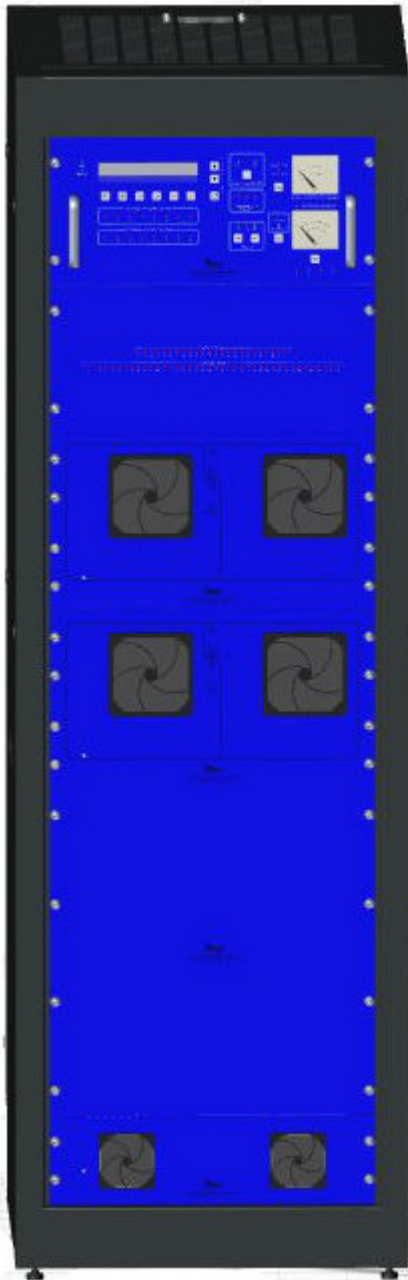
Southern Avionics Company

DGPS Transmitter SC3000

Part Number: SLF39001

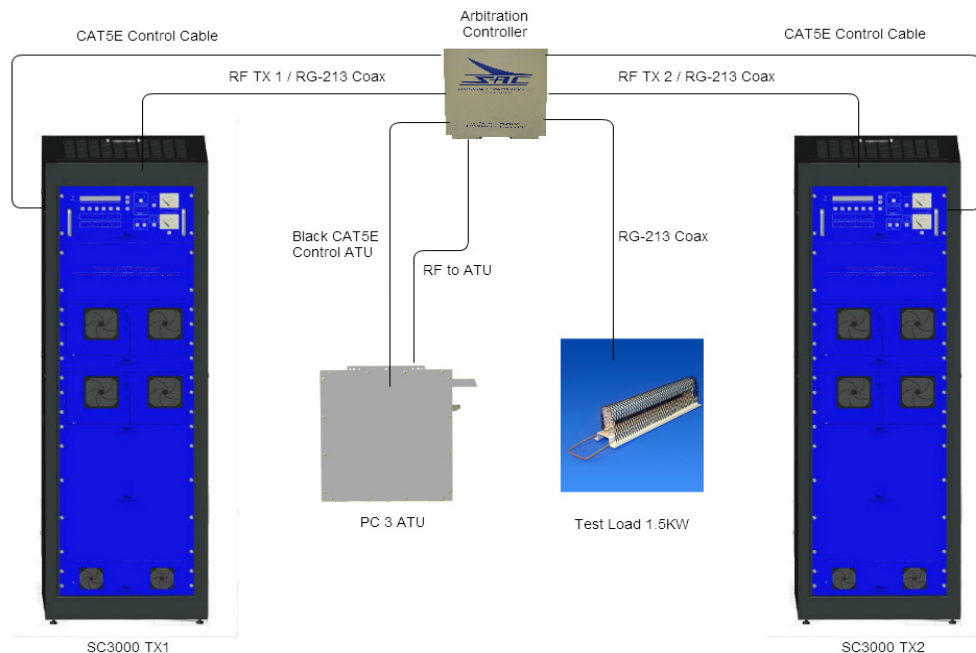
SPECIFICATION SHEET

5055 Belmont, Beaumont, TX 77707
Phone +409.842.1717/1.800.648.6158 (Toll Free in the US)
Fax +409.842.2987
sales@southernavionics.com



FEATURE	SPECIFICATION
Power Output	Carrier power into 50 Ohms continuously adjustable from 75 - 3000 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	3750 W for 3000 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 SC3000 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 150-3000 Watts (Max). 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 shutting the system completely down.

Dual Systems:

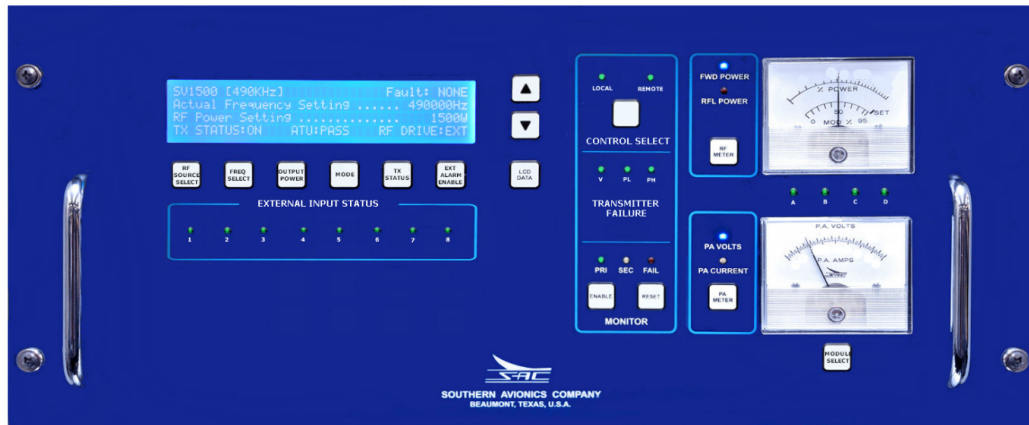
A Dual SC3000 (SLF39004) system will require two SC3000 Transmitters along with an arbitration controller which provides switch over in case of a failure. This requires two separate racks, each being SC3000 Transmitters.

Monitoring:

The SC3000 can be remotely monitored by RS485 with full control available at the remote controller. The SC3000 includes a Ethernet server and allows control and monitoring over an Ethernet connection. ***No special software is required to monitor the SC3000 over the Ethernet.*** Total RSIM control and monitoring is also included in the SC3000. DC operation is also available as an option on the SC3000 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