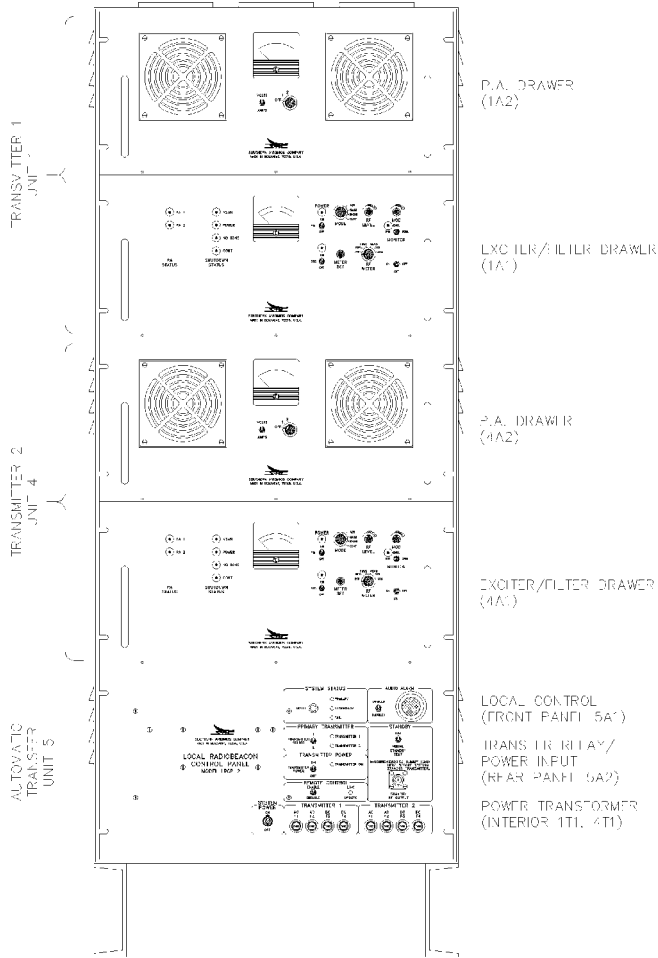




Southern Avionics®
Company's 500-Watt Dual Non-
Directional Radiobeacon.



SA500 Dual Transmitter

QUALIFICATIONS: Meets applicable requirements of ICAO, FCC, and CCIR.

FREQUENCY: 190-535 KHz, Crystal controlled synthesizer, switch selectable in 500 Hz increments, stability better than .005% (-40°C to +70°C).

TYPE OF EMISSION: AO, A2, A3 or any combination.

POWER OUTPUT: Carrier power into 50 ohms continuously adjustable 100 to 500 watts (400 to 2000 WPEP).

SPURIOUS EMISSION: Radiated harmonics (measured at a dummy antenna) are better than 70 dB below the 500 watt carrier.

TYPE OF EMISSION: A0, A2, A3 or any combination.

MODULATION: Switching modulator/regulator provides high level modulation 0-95 percent. Internal 400 Hz and 1020 Hz tone is selected with a jumper. Internal keyer normal operates at eight baud (approximately 7 WPM) and is adjustable from 5 to 16 baud. In normal operation, carrier is on continuously with keyed tone modulation. A1 keying can be provided. When the optional voice modulation is used, the tone signal can be adjusted to any level when voice signal is present. Voice input is at 600 ohms, -17 dBm nominal signal level. Automatic gain control maintains a constant average modulation level. At maximum sensitivity, voice input levels from -28 dBm to +5 dBm will cause negligible modulation percentage change. Modulation is limited to 100% during severe overload of the automatic gain control circuitry.

AUDIO DISTORTION: Less than 5%.

NOISE AND HUM LEVEL: Better than 40 dB below the carrier level.

INPUT POWER: 110/220V ±10%, single phase 50-60 Hz, 144 VDC. Nominal input power is 895W at 500W carrier and tone keying at 95% modulation.

METERING: Power output, reflected power, antenna current, PA voltage, PA current, modulation percentage, audio input.

KEYER: The solid state keyer provides 95 DIP switch programmable dot spaces. A dot space is adjustable from 63 to 166 ms. Special coding is available.

CIRCUIT PROTECTION: Individual fuses are used to protect the AC and DC circuits. VSWR circuit that shuts down the transmitter if VSWR exceeds an adjustable value.

WORKING CONDITIONS: Continuous unattended operation in the following environments: Ambient temperature, (-50° to +70°C); Relative humidity, 0-100% noncondensing; High salinity as encountered in offshore conditions.

MONITORING: Transmitter shuts down with loss of tone, drop in modulation below an adjustable value, or continuous tone, or when power falls below an adjustable value, or when VSWR rises above an adjustable value. With a dual system, a shutdown signal initiates a transfer from the primary transmitter to the secondary transmitter.

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PC.5Kilo Autotuning Antenna Coupler

INPUT IMPEDANCE: 50 ohms.

LOAD IMPEDANCE: 2 to 25 ohms resistance, 700 to 1500 pF capacitance.

FREQUENCY: 190 - 535 KHz with a 700 to 1500 pF load.

POWER INPUT: 1000 watts average, 2000 watts peak.

METERING: Antenna current. Single meter with 4 position switch, OFF, TUNE, 0-20 amps, 0-10 amps.

TUNING: Large coil with coarse taps and fine taps and a rotatable tuning ring. The coarse tap is selected with a solder connection behind an access panel. The fine tap is selected with a 10 position switch. The autotune system drives the tuning ring for exact tuning. Inductance range is 25 μ H to 1 mH.

WORKING CONDITIONS: Continuous unattended operation in the following environments: ambient temperature, -50°C to +70°C; humidity, up to 95% noncondensing; altitude, up to 4000 meters. The antenna coupler is designed for outdoor installation at the base of the antenna.

POWER REQUIREMENTS: 12 VDC, 500mA, supplied to coupler from Southern Avionics transmitters. Optional 110/220 VAC, 50 - 60 Hz supply for use with other transmitters.

SIZE: 22 1/2" (57 cm) wide, 21 1/2" (55 cm) deep, and 26 1/2" (67 cm) high.

ACCESS: Access to the tuning controls and meter is available behind the hinged, weathertight, front access door. Access to the coarse taps on the loading coil is available behind a removable panel above the tuning controls panel.