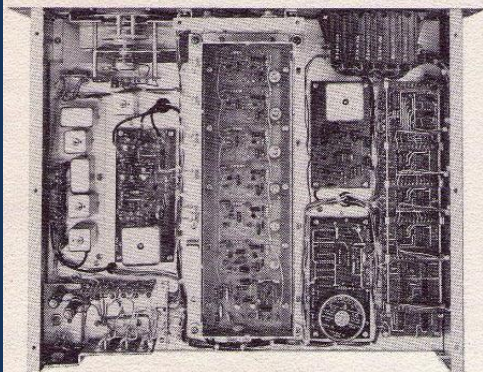




CA-35MS

SINGLE SIDEBAND MARINE COMMUNICATION SYSTEM

The CA-35MS represents an entirely new concept in marine single sideband communications. Utilizing an integrated circuit digital frequency synthesizer, the CA-35MS offers over 40 programmed channels in the frequency range of 2.0 through 30.0 MHz. The CA-35MS is capable of providing 150 watts peak envelope power output in single sideband or AME modes. The system has been designed to meet or exceed the FCC type acceptance requirements for parts 81, 83 and 85 of the Commission's Rules and Regulations.



Integrated Circuit Digital Frequency Synthesizer



CA-35MS Transceiver with Digital Frequency Synthesizer

THE CA-35MS PROVIDES FOR THE FUTURE ADDITION OF AUTOMATICALLY PROGRAMMED TELETYPE OPERATION.



CA-35MS Control Head with Hang-up Box and Handset

DESIGN FEATURES

Since the CA-35MS offers ten bands of operation, it is possible to provide the unit with four 2.0 MHz. frequencies as well as several channels in each of the 4, 6, 8, 12, 16 and 22 MHz. HF bands. The transceiver may be used for either simplex operation or half duplex operation. Full remote control of all functions including channel selection is available as well as options such as an automatic noise compensated squelch unit and selective tone calling.

The programmed digital synthesizer concept represents a significant innovation in marine SSB communications. Among the advantages now possible are the following:

- Elimination of the crystal oven warm-up time.
- Elimination of crystal aging problems.
- Simplified operation by non-technical personnel.
- High reliability and low maintenance costs.
- Exceptionally high frequency stability.
- Unusually low spurious content greater than 70 db. below synthesizer output.

The frequency synthesizer uses plug-in programming cards as a means of automatically selecting the appropriate frequency for each channel of operation. Frequency changes within any given band may be made by simply removing one program card and replacing it with the new one.

All oscillator injection frequencies are referenced to a single high stability temperature compensated crystal oscillator within the frequency synthesizer. This reference oscillator offers a stability of one-half part per million or better.

The unique control head furnished with the CA-35MS is finished in a rugged epoxy base finish and offers universal mounting for either bulkhead or table top surfaces. The illumination level of the channel indicator and power lamp may be adjusted for night operation by the panel mounted dimmer control. Rocker switches are utilized for the power and squelch disable functions. A panel mounted push-button is provided for the selective tone calling function. A separate handset hang-up box with speaker on-off switch may be mounted separately away from the control head to suit the operator's convenience.

The CA-35M is also available offering up to ten crystal controlled channels (instead of the frequency synthesizer) for applications with limited channel requirements.

The CA-35 series represents a trend setting innovation from CAI, the pioneer in high quality commercial single sideband systems.

communication associates, inc.

new hyde park, new york

www.radiopharos.it



CA-35MS

SINGLE SIDEBAND MARINE COMMUNICATION SYSTEM

TECHNICAL SPECIFICATIONS

GENERAL	<p>FREQUENCY BANDS:</p> <p>FREQUENCY CONTROL: FREQUENCY STABILITY: CRYSTALS REQUIRED: MODE OF OPERATION: ANTENNA REQUIRED:</p>	<p>Ten bands are normally set up as follows: Bands 1 through 4: Entire 2.0 MHz. marine band. Band 5: Entire 4.0 MHz. marine band. Band 6: Entire 6.0 MHz. marine band. Band 7: Entire 8.0 MHz. marine band. Band 8: Entire 12.0-13.0 MHz. marine band. Band 9: Entire 16.0-17.0 MHz. marine band. Band 10: Entire 22.0-23.0 MHz. marine band.</p> <p>Integrated circuit digital frequency synthesizer. One-half part per million. None. Simplex telephone or half duplex telephone. 50 to 75 ohms with a maximum VSWR of 2:1.</p>
TRANSMITTER	<p>R.F. POWER OUTPUT: EMISSION:</p> <p>UNWANTED SIDEBAND & CARRIER SUPPRESSION: INTERMODULATION DISTORTION PRODUCTS: AUDIO CHARACTERISTICS: AUTOMATIC ENVELOPE COMPRESSION:</p>	<p>150 watts peak-envelope-power. 37 watts AME carrier level. 2.8 A3A (-16 db carrier level) 2.8 A3H (-6 db carrier level - AME) 2.8 A3J (upper sideband fully suppressed carrier)</p> <p>50 db or greater.</p> <p>Greater than 30 db down. Not more than 6 db down at 470 and 2600 Hz.</p> <p>Capable of at least 16 db of compression.</p>
RECEIVER	<p>SENSITIVITY: SELECTIVITY:</p> <p>IMAGE REJECTION: A.G.C. RESPONSE: AUDIO FREQUENCY RESPONSE: AUDIO POWER OUTPUT: DISTORTION:</p>	<p>Single sideband - less than one-half microvolt for 10 db signal to noise ratio. AM - 1½ microvolt for 10 db signal to noise ratio at 30% modulation. Determined by the crystal filter characteristics: SSB - 2.2 KHz. nominal bandwidth for 6 db attenuation. - 5.0 KHz. nominal bandwidth for 50 db attenuation. AM - 6.5 KHz. nominal bandwidth for 6 db attenuation.</p> <p>Better than 50 db. Less than 6 db increase from 3 microvolts to 100,000 microvolts. Not more than 6 db down at 470 and 2600 Hz. 4 watts. Less than 6% at 1 watt output.</p>
POWER REQUIRE MENTS	<p>LINE VOLTAGE:</p>	<p>115/230V AC, 50/60 Hz. Standby: 100 watts. Transmit: 400 watts (at 150 watts single tone output).</p>
PHYSI- CAL	<p>DIMENSIONS: WEIGHT:</p>	<p>Transceiver: 20½" wide by 20-7/8" high by 8" deep. Control Head: 8¼" wide by 8" high by 8" deep. Transceiver: 100 pounds. Control Head: 11 pounds (includes hang-up box and hand-set).</p>
CONTROLS	<p>CONTROL UNIT:</p> <p>TRANSCIEVER CHASSIS:</p>	<p>Power Switch. Channel selector. Volume control. Dimmer control. Squelch disable switch. Power indicator. Transmit indicator. Speaker on-off switch (located on hand-set hang-up box). Service and alignment controls are located on the transceiver chassis for maintenance purposes.</p>

Since CAI continually improves its products, specifications are subject to change without notice.

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BW 3744SG/2.5M/470

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