Intercommunication System Control
Model A301-1 (C6533/ARC)

FACILITIES AND OPERATING CONTROLS

All operating controls are mounted on the front panel.

TALK OPERATION: A six position rotary switch provides for selection, control and voice modulation of five transmitters. The extreme CCW position of the selector provides Intercommunication on the INTERPHONE line.

HOT MIKE OPERATION: A HOT MIKE talk switch provides HOT MIKE operation on the INTERPHONE line.

MONITORING: Seven monitor switches provide for individual selection and mixing of eight audio input lines. One switch controls two inputs.

LEVEL ADJUSTMENT: A master volume control permits adjustment of the headset level.

OPTIONS: Night Vision capabilities available.

DESCRIPTION AND USE

The Andrea Model A301-1, Intercommunication System Control, is designed to be the basic control unit for a two or three position intercommunication system of advance design.

Systems employing the A301-1 are currently providing excellent service in a variety of helicopters, commercial aircraft, pleasure aircraft and small boats of all descriptions. The small size, lightweight, high reliability and versatility of the A301-1 makes it adaptable to many applications.

The A301-1 contains microphone and headset amplifiers and the necessary switching facilities to provide for intercommunication (with or without hot mike) and modulation, monitoring and control of up to 5 transceivers.
**SPECIFICATIONS**

**GENERAL CHARACTERISTICS**
- Mean Time between Failure: 18,000 hrs. calculated
- Input Voltage: 27.5 VDC (21-29 V)
- Input Power: 3.75 W Maximum
- Weight: 1.85 lbs. Maximum
- Size: 3 3/4" W x 2 5/8" H x 5" D
- Lighting: Two 27.5 V lamps w/red filters

**ENVIRONMENTAL**
- Temperature
  - Continuous Operation: -54˚ C to +55˚ C
  - Intermittent Operation: +55˚ C to +71˚ C
- EMI: MIL-STD-461

**IMPEDANCE LEVELS**
- Microphone input: 5 ohms (Dynamic microphone)
- Talk-out (INT & XMIT): 150 ohms load
- Receiver Input: 150 ohms load
- Headset Output: 8 ohms load

**POWER LEVELS**
- Microphone input: -80 to -30 dBm
- INT. Talk-out: 50 mW (2.75 V)
- Transmit Talk-out: 0 dBm (1 mW = .4 V) Adjustable ±3 dB
- Receiver Input: 50 mW (2.75 V)
- Headset Output: 200 mW (1.25 V)

**MICROPHONE AMP PERFORMANCE**
- AGC: The AGC maintains constant output for wide variations in input
- Breakpoint: 0.2 to 0.5 V applied to the 5000 to 5 Ohm pad
- Slope: 3 dB max. output change for 20 dB input change
- Attack Time: 0.2 Sec. Maximum
- Release Time: 7 Sec. +/-20%
- Distortion: 3% Maximum for -50 dBm input, 5% Maximum up to -30 dBm input

**HEADSET AMP PERFORMANCE**
- Distortion: 10% Maximum for 200 mW output
- Freq. Response: +1 dB, -3 dB, 300 to 6000 Hz (both amps)
- Ripple: 5 mV maximum for both amps with 1.0 V on the power line, 400 to 6000 Hz

**ISOLATION AT 1 KHz**
- Open Monitor Switch: -60 dB minimum
- Audio Input Lines: -60 dB below 50 mW
- Transit Lines: -70 dB below 50 mW (2.75 V)
- Volume Control Range: 28 to 37 dB

* Specifications subject to change without notice.