

AIR-2000



118.000 ~ 136.975 MHZ BAND

VHF GROUND-TO-AIR AVIATION TRANSCEIVER

ECOM AIR-2000 is the state of the art synthesized VHF ground-to-air radio transceiver covering the commercial aviation frequencies 118.000~136.975 MHz bands. It complies with rugged MIL-STD 810E environmental and EMC specifications. Variants are available to cover world wide aviation standards of 25KHz or the European 8.33KHz channel spacing. 35 Watts of solid RF power provides reliable long range communication.

GROUND TO AIR COMMUNICATION TRANSCEIVER where safety matters.....

- **Rugged and reliable for serious ground crew communications:** Setting a new standard for ground based communications, provides durability and reliability in demanding operational environments.
- **760 channels** at 25KHz spacing, or optionally 2280 channels at 8.33 kHz channel spacing.
- **Convenient scan functions:** Such as VFO and priority scans are available and priority channel, fixed list or auto scan functions.
- **Memory channel name capability:** 20 user preset memory channels can be preset each can be assigned a 7-character alphanumeric name allows simple and quick channel recognition and selection. Preset Memory channel only operation possible.
- **Extended Range: 35 watts** PEP RF output (10 Watts carrier) gives it punch for extended range.
- **Front mounted loud speaker – provides loud** audio even in noisy environments, 7 Watts Audio Output
- **Dial selection:** With a simple rotation of the dial, frequently used memory channels, or desired frequency selection can be made. Limited number of keys for simple manipulation, but providing advanced multi-functions
- **Side tone function:** Operator transmitted messages and calls are audio modulated and can be heard in the headset, even in the most demanding operating airport conditions.
- **Universal Power Operation:** Operates of 110/220VAC and 12VDC.
- **Usable in extreme temperatures:** The LCD is usable in temp from -30°C to +70°C.

GENERAL DESCRIPTION:

The **AIR-2000** is a versatile transceiver designed for use in commercial and military air space environments covering 118.000~136.975 MHz civil aviation bands meeting ICAO radio communication regulations. The radio has a sensitive receiver that delivers a loud 7 watts audio output to a front panel mounted speaker. The transmitter has a solid-state power amplifier with a 35 Watts PEP output power, providing reliable long-range communication.

The unit has simple uncluttered operation; displaying frequency, channels and all important features on a back lit bright LCD. The user can program 20 preset channels which contain channel frequency OR an associated 7 character name of the channel, e.g. 123.700 **OR** OPRNATC. Features include channel scanning and Gurad Channel Scan. It can be powered from 110/220 VAC and 12VDC. The radio meets MIL-SPEC standards for shock, vibration, temperature and humidity. An optional internal 12V-7 Ahr battery makes the radio completely power independent.

SPECIFICATIONS

GENERAL	
Frequency range	118.000 - 136.975 MHz
Channel spacing (as per version)	8.33/25 kHz auto selection or 25 kHz only
Mode	6K00A3E (AM)
Number memory channels	20 (with 7 alphanumeric name tags)
Antenna connector	SO-239 (50Ω)
Power supply requirement	12V DC and 110/220VAC
Current drain (at 13.75 V DC)	Transmitting 5.0 A max.: Receiving 4.0 A (max audio): 0.5 A (at stand-by)
Operating temperature range	30°C to +60°C ; -22°F to +140°F
Frequency stability	±5 ppm (-30°C to +60°C)
Dimensions (projections not incl.)	19" (W) × 5" (H) × 12" (D)
Weight (approx.)	5.5 kg
Internal Standby Battery (Optional)	Sealed Rechargeable Battery 12V – 7 Ahr
TRANSMITTER	
Output power	35 Watts typical PEP (10 Watt Carrier)
Modulation limiting	70 - 100%
Modulation compression*	Linear 85%: Max. 95%
AF harmonic distortion	Less than 10% (at max. mod.)
Hum and Noise ratio	More than 40 dB
Spurious emissions	Less than -46 dBm; (less than -36 dBm for harmonics) 9 kHz to 1 GHz
Adjacent channel power	Less than 60 dB (25 kHz): Less than 50 dB (8.33 kHz)
Microphone connector	8-pin modulator (600Ω)
RECEIVER	
Receiving system	Double conversion super heterodyne
Intermediate freq.	1st 38.85 MHz: 2nd 450 kHz
Sensitivity (pd)	Less than 1 μV (at 6 dB S/N)
Squelch sensitivity: (pd; at threshold)	Less than 0.3 μV
Selectivity	More than 60 dB/±25 kHz (25KHz spacing)
Spurious response	More than 74 dBμ
Intermodulation rejection ratio*	More than 64 dB
BIocking/desensitisation*	More than 70 dB
Cross modulation rejection*	More than 70 dB
Audio output power	More than 7W into 8Ω load (13.75V supply; 10% dist.; 60% mod)

Standard	ENVIRONMENTAL TEST STANDARDS					
	MIL 810C		MIL 810D		MIL 810E	
	Method	Procedure	Method	Procedure	Method	Procedure
High/Low temp.					501.3: 502.3	II
Humidity					507.3	II
Vibration	514.2		514.3	I	514.4	I
Shock					516.4	IV

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