

ACOM

ACOM 1400S

1.8-54 MHz Linear Power Amplifier
with Touch-Screen Remote Control



OUTSTANDING HF POWER PRODUCTS

MAIN FEATURES

USAGE

The ACOM 1400S is a state-of-the-art 1200 W, solid-state linear power amplifier, covering all amateur bands from 1.8 through 54 MHz.

EASY TO OPERATE

The overall operation of ACOM 1400S is extremely simplified: the touch screen menus on the Remote Control Unit are intuitive and easy to follow, and no special skill is required from the operator when changing frequency bands.

USER-FRIENDLY AUTOMATIC CONTROL

When connected to a transceiver with CAT capability, the amplifier will track the operating frequency, and will change bands accordingly. Even if not CAT connected, the amplifier monitors the input signal frequency through the built-in frequency counter and automatically switches bands.

HIGH-RESOLUTION COLOR TOUCH SCREEN

Amplifier status indications are explained via detailed text displayed on the RCU 7" high-resolution color touch display. All indicators and controls (except the primary mains switch and power indicator) are accessible via the RCU's touch screen, as well as, all command input to the RCU is menu-driven.

BROADBAND INPUT CIRCUIT

Broadband input circuit, providing a perfect transceiver load with SWR below 1.2 (typically 1.1), without retuning throughout the whole frequency range from 1.8 to 54 MHz.

LDMOS TRANSISTOR TECHNOLOGY

The final PA stage uses a rugged 65 V LDMOS transistor for heavy operation modes.

INTELLIGENCE

Takes care of itself during operation via continuously working protection circuits in all modes.

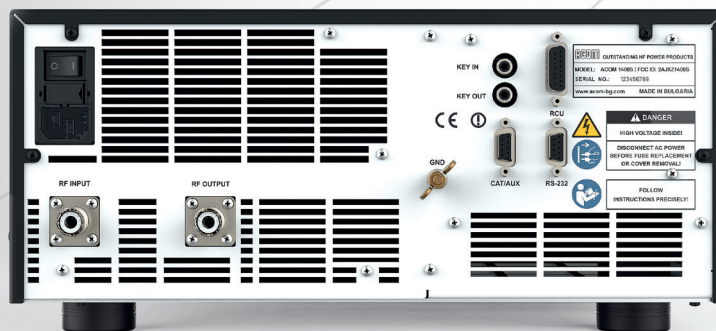
The operator can monitor many parameters of the amplifier in operation.

EASY MAINTENANCE

Detailed data (55 parameters) about each of the last 28 hard-fault protection trips is stored in the amplifier's memory.

COMPACT CONSTRUCTION

Extremely compact construction with built-in switching-mode power supply (SMPS) that operates with an extended mains voltage range of 90-264 VAC, with no internal switch over. The consumed current is purely sinusoidal, Power Factor Corrected (PFC) and inrush current limited. This makes the operation of unstable mains and generators easy and trouble free.



TRANSCEIVER-INDEPENDENT

Compatible with all transceiver models - does not need any special signals: "ground on transmit" and up to about 50 W of RF drive power is sufficient.

REMOTE CONTROL CAPABILITIES

Remotely controlled via the Internet through integrated Web interface and Ethernet RJ45 port.

ELECTROMAGNETIC COMPATIBILITY

Perfect electromagnetic compatibility (EMC) with both highly sensitive devices and the powerful devices in the radio station (receivers, computers, other amplifiers) exceeding the standard EMC requirements due to the used PFC and built-in radio-frequency filters.

SPECIFICATIONS

FREQUENCY COVERAGE

All amateur bands in the 1.8-54 MHz frequency range

RATED POWER OUTPUT

- 1200 W \pm 0.5 dB, PEP or continuous carrier, without mode limitation, at 200-264 VAC mains
- 600 W if operated at 90-132 VAC mains

INTERMODULATION DISTORTION

Better than 31 dB below the rated PEP

HARMONIC AND PARASITIC EMISSIONS OUTPUT SUPPRESSION

-60 / -70 dB or less (HF/50 MHz band)

RF POWER GAIN

14 dB \pm 1 dB (typically 50 W for 1200 W output power)

PERFECT MATCHED ANTENNA IMPEDANCES WITH ACOM 04AT OR 06AT TUNER

- All impedances with SWR from 1:1 to 3:1 towards 50 Ohm, any phase angle, unbalanced input and output
- For some frequencies and impedances, matching is possible at SWR above 3:1 at the antenna output (up to 10:1), but the maximum allowed power is reduced
- ACOM 04AT or 06AT tuners are recommended option



The amplifier is shown near to ACOM 06AT tuner.

INPUT AND OUTPUT IMPEDANCES

- Nominal value: 50 Ohm unbalanced, UHF (SO-239) type connectors
- Input circuit: Broadband, SWR below 1.2 (1.1 typically), 1.8-54 MHz continuous range without retuning or switching
- RF bypass path SWR: Below 1.1, 1.8-54 MHz
- Acceptable SWR at the output load (the antenna): Up to 3 with proportional power reduction and up to 1.5 for full output power

MAINS POWER CONSUMPTION AT FULL OUTPUT POWER

- Power factor of 0.95 or higher
- Up to 3100 VA at rated output (200 VAC)
- Up to 2000 VA at 600 W output from 100/120 VAC

MAINS POWER CONSUMPTION IN LOW ENERGY (WAITING) MODE

Less than 1 VA

SAFETY AND ELECTROMAGNETIC COMPATIBILITY

Complies with CE safety and electromagnetic compatibility requirements, as well as with the US Federal Communications Commission (FCC) regulations

SIZE & WEIGHT

(Operating, excluding connected cables)

- Amplifier, WxDxH: 372x418x170 mm, 14.6 kg (14.7x16.5x6.7 inches, 32.2 lbs.)
- Remote Control Unit, WxDxH: 179x118x86 mm, 0.730 kg (7.1x4.7x3.4 inches, 1.6 lbs.)

OPERATING ENVIRONMENTS

- Temperature range: -10...+40 °C (14 °F to 104 °F)
- Relative air humidity: up to 95% @ +35 °C (95 °F)
- Height above sea level: up to 3050 m (10000 ft) without output deterioration

Dealer/Partner's address:

ACOM



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ACOM 1400S Brochure | First Edition, Revision 02 | October 2024.

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