ACOM 3x2000A

HF Power Splitter-Combiner for 3 Amplifiers

The splitter/combiner shown is mounted
in rack housing with three ACOM 2000A amplifiers.

OUTSTANDING HF POWER PRODUCTS

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MAIN FEATURES

The ACOM 3x2000A is a HF power splitter/combiner which is a passive device designed to sum the outputs of three HF linear amplifiers into a common load while the amplifiers are driven by a single exciter.

EASY TO OPERATE

There is no difference from the operation of a three times more powerful single amplifier.

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OPERATION

For optimal operation of the combiner, three amplifiers with similar characteristics are needed. The three signals must be coherent and have close amplitudes, and their phase differences must be small enough, so that there is no excessive loss of useful power in the ballast loads at the combiner output.

In 3x2000A this is achieved by dividing the common input signal from the transceiver into three same channels by the input-power splitter and using three identical amplifiers per channel.

For best results we recommend three automatic amplifiers of the type ACOM 2000A.

COMPATIBILITY

We recommend to use ACOM 3x2000A power splitter/combiner with following ACOM amplifier models:

- 2000A | Automatic HF Linear Amplifier
- 2100 | HF + 6 m Linear Amplifier
- 1500 | HF + 6 m Linear Amplifier
- 1000 | HF + 6 m Linear Amplifier
- 1010 | HF Linear Amplifier.

All these models use a broadband input network which sets minimum phase differences between the units.

AUTOMATIC PROTECTION

An automatic protection circuit is implemented in the ACOM 3x2000A, which monitors the three amplifier outputs during operation.

In case of an imbalance, the protection trips thus cutting the drive to the amplifiers and switching the transceiver output to an internal 50 Ohm dummy load.

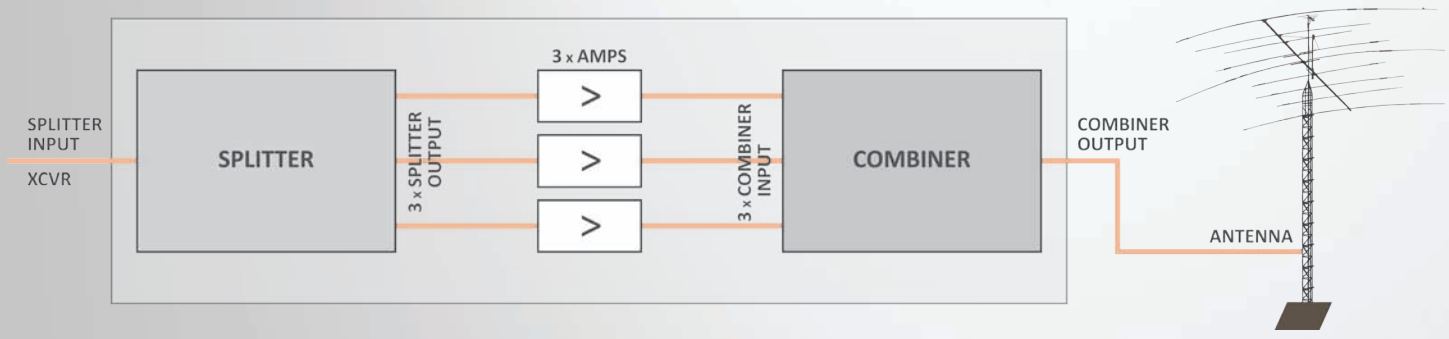
The imbalance power, both input and output, is swamped by powerful loads until the protection trips. Therefore the transceiver and the three amplifiers are well protected.

After fixing the trouble you can resume operation by pressing the button RESET.

MOUNTING POSSIBILITY

As an option, a metal rack (shown on the cover page), designed for housing three ACOM amplifiers (preferably the ACOM 2000A model) and the ACOM 3x2000A splitter/combiner, is available.

The rack is built with four identical slots. Matching black anodized, machined aluminum facia perfectly accents the amplifiers and splitter/combiner. Heavy duty casters provide easy movement and transport.



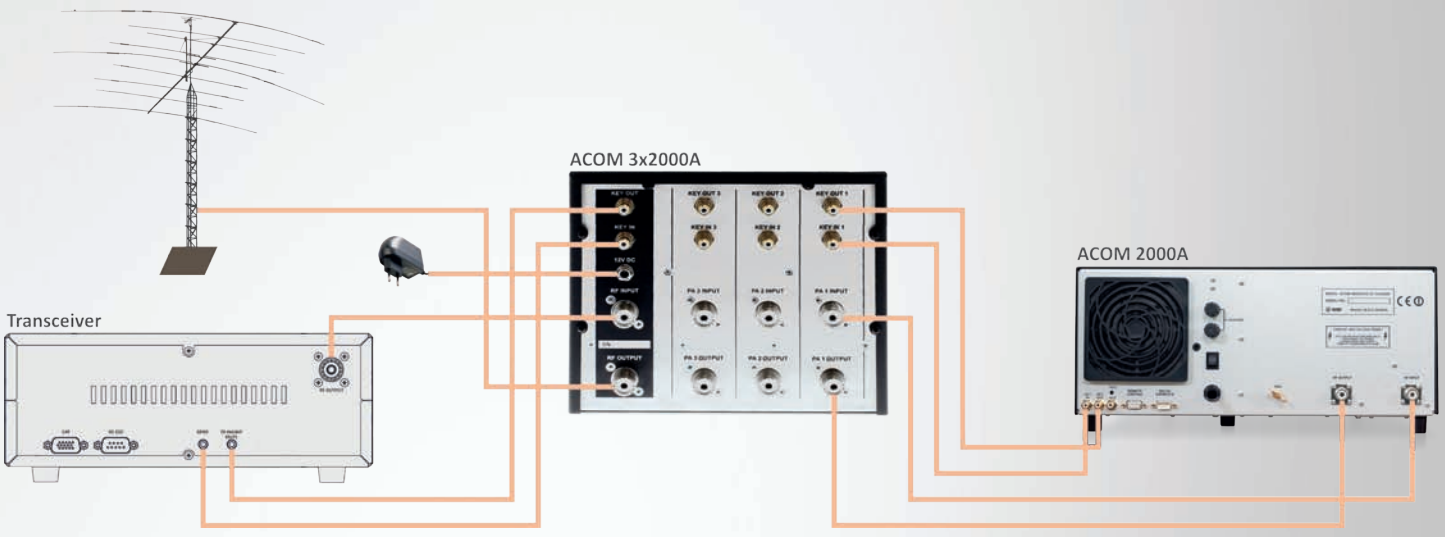
ACOM 3x2000A logical diagram

SPECIFICATIONS

FREQUENCY COVERAGE
1.8-30 MHz continuous

POWER OUTPUT
5000 W PEP or continuous carrier into a matched load (VSWR below 1.3:1). Reduce the output at increased VSWR, linearly down to 2500 W at VSWR up to 2:1.

POWER SUPPLY (Amplifiers)
Three Phase Electrical Wiring Installation is recommended due to high power demand. An additional benefit is lower AC hum in the combined RF output.



ACOM 3x2000A connections
An example with only one ACOM 2000A amplifier is shown. The same connections should be run to the other two amplifiers.

INPUT AND OUTPUT IMPEDANCES
- Nominal value: 50 Ohm unbalanced, UHF SO-239A (PTFE) type connectors
- Input circuit: Broadband
- Input VSWR with 50 Ohm loads at the three splitter outputs: Less than 1.3:1, 1.8-30 MHz continuously (no tunings, no switching)
- Maximum output mismatch: Up to 2:1 at reduced output

POWER SUPPLY (Splitter-Combiner only)
- Via wall wart power supply adapter
- Input: 100-240 VAC
- Output: 12 VDC / 0.5 A max.
- Cable length: Approx. 1.5 m
- Power input plug type: Europlug

SIZE & WEIGHT
- Operating (excluding connected cables) Splitter/Combiner, WxDxH: 212x325x195 mm, 6.4 kg (8.4x12.8x7.7 inches, 14.2 lbs.)
- Shipping Splitter/Combiner, WxDxH: Approx. 350x350x400 mm, 10.5 kg (13.8x13.8x15.8 inches, 23.2 lbs.)

OPERATING ENVIRONMENTS
- Temperature range: 0...+50 °C (32 °F to 122 °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:

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