

Specifications

The W8ZR H.F. Receiver Multicontroller is an active 8-channel antenna distribution amplifier, or multicoupler, designed to cover the frequency range 0.1 MHz – 55 MHz. A low-pass filter limits the high-frequency response and an (optional) internal high-pass filter can be installed to limit the low-frequency response below 1.8 MHz. The Multicontroller features a BNC input for 50 Ohm unbalanced (coaxial fed) antennas, and an RCA-type phono jack for high-impedance antennas. It has a front-panel-selectable low-noise preamplifier, and capability for muting any combination of seven receivers. Grounding a control input mutes all seven receivers, and internal protection circuitry disconnects the antenna and mutes all receivers if the external r.f. voltage exceeds 1000 mV. There are seven BNC receiver outputs, plus an auxiliary BNC output which is always active and can be used for an eighth receiver, frequency counter, oscilloscope, etc.



The Multicontroller can also be used for testing, production, and frequency measuring and calibration. It will transform almost any impedance to 50 Ohms, can split a signal generator output into 8 isolated outputs. It makes an excellent wideband buffer and line driver and provides a convenient way to control a linear amplifier.

Amplifier Specifications

1. Frequency Range:

50 Ohm input:	0.1 MHz – 55 MHz	LF filter not installed
	1.8 MHz – 55 MHz	LF filter installed

Hi – Z input:	0.1 MHz – 55 MHz
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2. Voltage Gain (nominal, per channel):

1.0 (0 dB)	50 Ω load, preamp off
2.0 (6 dB)	no load, preamp off

There is a broad 3 dB peak in the response from 40-60 MHz.

3. Typical 3 dB Bandwidth:

0.025 MHz – 72 MHz	50 Ω load, preamp off, LF filter not installed
1.8MHz – 72 MHz	50 Ω load, preamp off, LF filter installed

4. Antenna Input (50 Ω) :

Impedance:	50 Ω nominal, d.c. blocked
Clipping threshold:	1300 mV (+18 dBm), preamp off
Connector:	BNC

5. Antenna Input (high-Z)

Impedance:	1000 Ω nominal, d.c. blocked
Clipping threshold:	1500 mV, preamp off
Connector:	RCA-type phono

6. Outputs (each channel):

Impedance:	50 Ω nominal, d.c. blocked
Connector:	BNC

7. Preamplifier:

+12 dB (nominal)	50 Ω input only
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8. Internal Noise:

$V < 0.2 \mu\text{V}$	1 kHz bandwidth @ 10 MHz
$V < 30 \mu\text{V}$	broadband 1.8 – 30 MHz

9. Absolute Maximum Input Voltage:

Maximum D.C. voltage :	$\pm 50 \text{ V}$
Maximum RF voltage	3.5 V(rms)

10. Overload Trip Threshold:

1000 mV(rms) nominal	50 Ω and high-Z inputs
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Mute and Control Specifications

11. Mute Specifications:

Independent mute outputs:	7
Configuration:	open-to-mute or close-to-mute, common ground
Connector:	RCA-type phono

12. Mute Relay Ratings:

max. switched current:	1 A, derate as switched voltage increases
max. switched voltage:	125 VDC (25 mA), 150 VAC (100mA)

13. Control Input (ground to activate):

Open-circuit voltage: +12V
Short-circuit current: 1.2 mA
resistance to mute: <2.2 k Ω

General Specifications**14. Power Requirements:**

90-130 VAC or 180-260VAC
15 Watts (nominal)
fuse: 1/4A 3AG (115V) or 1/8A 3AG (230V)

15. Dimensions:

Height: 3.5" (excluding feet)
Width: 7.2"
Depth: 6.00"

16. Weight:

5 lbs (2.27 kg)