

## Transmitting Attenuators

These attenuators replace those that were being made for use with Johnson transmitters when used with Grid-Driven amplifiers such as the Thunderbolt. Those units were designed for 350 ohm impedance which made them basically useless when used with modern equipment with a 50 ohm fixed output. Also, the attenuators built to the Johnson design had two versions, a "high power" version which was intended for use with transmitters such as the Valiant and Viking II, and a "low power" version which was intended for use with the Ranger. The "high power" version incorporated an incandescent light bulb which further affected the impedance.

These new attenuators have an impedance of 50 ohms which allows them to be used with virtually all equipment in use today (including "boat anchor" equipment). Also, they have a higher power handling ability. The design now employs resistors with a maximum power rating of 150 watts and also has a heat sink attached. However, running much over 100 watts into the attenuator is discouraged.

The new attenuators come in two models: One with a bypass switch and one without.

Another feature of these attenuators is that they are symmetrical, unlike the Johnson design which had a definite input and output. That is, the attenuators can be installed with the input and the output cables going to either jack.

If so desired, an attenuator that has the 350 ohm impedance can be ordered. However, it is suggested that a 50 ohm attenuator be used because one with 50 ohm impedance can be used with virtually any "boat anchor" or modern transmitter whereas the 350 ohm model can only be used with "boat anchor" transmitters.

Since "standard" value resistors are used to keep down the cost, the absolute value of attenuation is not "exactly on the money". However, for all practical purposes, they are definitely "close enough". The attenuators are available with the following attenuation:

50 ohm:

6 dB (actually 5.8 dB) which reduces the power to about 25% of the input power.

10 dB (actually 9.93 dB) which reduces the power to about 10% of the input power.

350 ohm:

6 dB (actually very close) which reduces the power to about 25% of the input power.

A transmitting attenuator can not only be used with Grid-Driven amplifiers, but can be used in other applications where the output power of a transmitter needs to be reduced. Of course, the attenuator also works on received signals.

Prices do not include shipping and handling. For United States and Possessions, that charge is \$10.00 per attenuator. For Canada, that charge is \$15.00 per attenuator. For other countries, please contact Z-Communications at [zcomco@sbcglobal.net](mailto:zcomco@sbcglobal.net) (this is NOT a clickable link) for cost unless you want it shipped by "flat rate" international air mail which the cost is \$45.50. At least 3, maybe even more, attenuators will fit in the box so additional shipping costs are not necessary.

Photos of the attenuators follow:



**Model AT-1S**  
(with bypass switch)

Price: \$119.95 except for Texas residents who must include 8.25% sales tax making price \$129.85.

This plus shipping.



**Model AT-1**  
(without bypass switch)

Price: \$109.95 except for Texas residents who must include 8.25% sales tax making price \$119.02.

This plus shipping.