REV 4 / Preliminary Ampex VU-meter testing

VU type	Resonance	Overshoot	Meter Z*	V_{in}=0VU**
Weston 862	2.0 Hz	100K source: 1 dB 6.8K source: 0.125 dB 3.9K source: 0.063 dB Zero ohm source: 0 dB	3.98K	1.3 Vrms
#1 Burlington (Ampex 350) with 1N34 diodes	1.7 Hz	100K source: 0.75 dB 6.8K source: 0.5 dB 3.9K source: 0.125 dB Zero ohm source: 0 dB	3.94K	1.45 Vrms
#2 Burlington (Ampex 350) with 1N295 diodes	1.68 Hz	100K source: 0.25 dB 6.8K source: 0 dB 3.9K source: 0 dB Zero ohm source: 0 dB	4.28K	1.22 Vrms
Simpson 142 (Ampex 351)	2.0 Hz	100K source: 0.25 dB 6.8K source: 0 dB 3.9K source: 0 dB Zero ohm source: 0 dB	3.23K	1.3 Vrms
Simpson SK525-529 (AG-350)	2.13 Hz	100K source: 0.5 dB 6.8K source: 0 dB 3.9K source: 0 dB Zero ohm source: 0 dB	2.7K	1.04 Vrms
Dixson 330S (AG-440/440B)	1.7 Hz	100K source: 1 dB 6.8K source: 0.250 dB 3.9K source: 0 dB Zero ohm source: 0 dB	3.19K	1.3 Vrms
*** No external resistors, impedance tested using 1kHz signal at approximately 1 Vrms** ****1 kHz signal (zero source impedance) with 3680-ohm series resistor**				

Meter construction notes:

- **Weston 862 (industry standard) uses a copper-oxide rectifier; internal 800 Ω resistor in series with input terminal, possibly 6K resistor across meter coil**
- **Burlington (Ampex 403, 350) uses Ge diodes (#1 test meter retrofitted with 1N34 diodes, #2 with original 1N295 diodes); internal 1K resistor in series with input terminal**
- **Simpson 142 (Ampex 351) uses unbranded Ge glass diodes; 910 Ω resistor in series with input terminal**
- **Simpson SK525-529 (AG-350) uses what appears to be a copper-oxide rectifier and an internal 25K series resistor between the negative output of the bridge and the meter movement**
- **Dixson 330S (AG-440/440B) uses what appears to be a copper-oxide rectifier but *no internal resistor* though there appears to be a copper eddy-current strap shunting the magnetic field in series between the negative output of the bridge and the meter movement**
- **Both the Simpson SK525-529 (AG-350) and the Dixson 330S (AG-440/440B) meters have four terminals; the extra pair is shorted for audio use but when opened, allow use of a resistor (typically 6200Ω) in series with the negative output of the diode bridge for bias metering**

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