

CONFIGURING NON-EAW LIMITERS

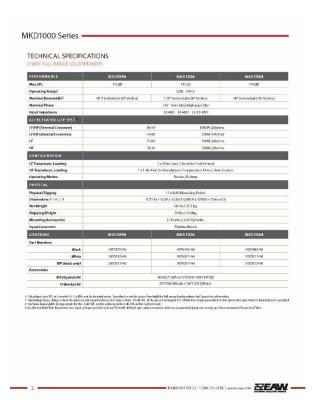
EAW Products are designed to perform their best using EAW electronics and signal processing within the Greybox settings. When EAW electronics and signal processing cannot be used, it is highly recommended to use the minimum FIR/IIR based processing designed for the specific product along with proper speaker protection. Since EAW cannot control the behavior or protection dynamics of third-party products, these instructions should be considered as a general guide and be aware it is the responsibility of the end-user or person configuring the system to protect the loudspeaker system from damage. EAW cannot be responsible for loudspeaker system damage using third-party products.

ITEMS NEEDED TO CONFIGURE LIMITERS

- Pink Noise Generator This can be an industrial device designed specifically for pink noise measurement or a source such as a mixing console or pre-recorded sound files. It should have a crest factor of 12dB (which is typical of most Pink Noise sources).
- True RMS Multi-Meter Such as a FLUKE 117. Many multi-meters can measure AC voltage. Make certain that it specifies it can measure true-RMS AC voltage.
- Model-Specific Loudspeaker Specifications Each EAW spec sheet will designate values for "Accelerated Life Test". You will need these values (###Watts/#Ohms) to determine the correct protection voltage. Do not use any other values for determining limiter values.







STEPS FOR CONFIGURING LIMITER SETTINGS

- First setup the system gain structure as required.
- Disconnect all loudspeakers from the amplifier! Do not connect any loudspeakers while setting limiters. This step is very important since there will be high-level signals sent through the system and damage to the loudspeakers will occur.
- Connect the RMS Volt meter to the speaker output terminals of the amplifier.
- Send pink noise through the system.
- Using the chart and formula below, raise the pink noise level until the meter measures RMS voltage just above the recommended value, approximately 2-3Volts.
- Reduce the threshold of the limiter until the RMS voltage measured is at or just below the recommended value.
- If the limiter supports attack/release values, use the table below to set them accordingly.

SQRT(WATTS*IMPEDANCE)*0.707

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12.00	5/	Set Limit The Shold	5/	Set Limit The show
18 4	$\{ \}$		5/	
4C.Cole Pate of 1/10 (W)	1/2	17 Set Linit 17 Set Linit 10 Set Old	1	10 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
100	8	20	4	14
150	8	24	4	17
175	8	26	4	19
200	8	28	4	20
250	8	32	4	22
300	8	35	4	24
350	8	37	4	26
400	8	40	4	28
450	8	42	4	30
500	8	45	4	32
600	8	49	4	35
750	8	55	4	39
800	8	57	4	40
900	8	60	4	42
1000	8	63	4	45
1100	8	66	4	47
1200	8	69	4	49
1500	8	77	4	55
1800	8	85	4	60
2000	8	89	4	63



WARNING!!! Amplifier connections produce high-voltages. Electrical shock or damage to the product can occur if handled improperly.

Attack/Release Example:

If the HPF is 50Hz, use a release of 256ms If the LPF is 2000Hz, use an attack of 0.5ms

Attack (ms)	I PF or HPF	Release (ms)
/ titasit (iiis)	21 1 01 111 1	rtelease (me)
45	31	720
16	63	256
8	125	128
4	250	64
2	500	32
1	1000	16
0.5	2000	8
0.3	22000	4