



Commercial Loudspeaker & CBT Recommended DSP Tunings

Ver. 170410

Protective High-Pass Frequency (Slope 24 dB/oct)	Limiter Voltage (Ave/RMS -- not "peak")
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CEILING SPEAKERS

Control 12C/T (&12C-VA)

Low-Z (8Ω)	70 Hz	12V RMS
15W Tap	80 Hz	Amp's 70V or 100V clipping limiter
7.5W Tap	60 Hz	
Lower Taps	50 Hz	

Control 14C/T (&14C-VA)

Low-Z (8Ω)	75 Hz	15V RMS
25W Tap	75 Hz	Amp's 70V or 100V clipping limiter
12.5W Tap	55 Hz	
Lower Taps	45 Hz	

Control 16C/T (&16C-VA)

Low-Z (8Ω)	65 Hz	20V RMS
30W Tap	70 Hz	Amp's 70V or 100V clipping limiter
15W Tap	55 Hz	
Lower Taps	40 Hz	

Control 18C/T

Low-Z (8Ω)	45 Hz	30V RMS
60W Tap	60 Hz	Amp's 70V or 100V clipping limiter
30W Tap	50 Hz	
Lower Taps	50 Hz	

Control 45C/T

Low-Z (8Ω)	50 Hz	20V RMS
60W Tap	85 Hz	Amp's 70V or 100V clipping limiter
30W Tap	60 Hz	
Lower Taps	50 Hz	

Control 47C/T

Low-Z (8Ω)	55 Hz	23V RMS
60W Tap	85 Hz	Amp's 70V or 100V clipping limiter
30W Tap	60 Hz	
Lower Taps	50 Hz	

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SURFACE-MOUNT SPEAKERS

Control 23-1	Low-Z (8Ω)	80 Hz	16V RMS
	15W Tap	70 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	Lower Taps	60 Hz	
Control 25-1	Low-Z (8Ω)	60 Hz	24V RMS
	30W Tap	60 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	Lower Taps	50 Hz	
Control 28-1	Low-Z (8Ω)	45 Hz	26V RMS
	60W Tap	75 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	30W Tap	50 Hz	
	Lower Taps	40 Hz	
Control SB2210	Low-Z (8Ω)	45 Hz	60V RMS
	Top 2 Taps <i>(with optional MTC-SBT300)</i>	45 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	Smaller Taps <i>(with optional MTC-SBT300)</i>	35 Hz	
Control HST	Low-Z (8Ω)	50 Hz	25V RMS
	60W Tap	80 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	Lower Taps	50 Hz	

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OUTDOOR SPEAKERS

AWC62	Low-Z (8Ω)	60 Hz	28V RMS
	120W Tap	60 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	60W Tap	50 Hz	
	Lower Taps	40 Hz	
AWC82	Low-Z (8Ω)	65 Hz	34V RMS
	200W Tap	65 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	100W Tap	45 Hz	
	Lower Taps	40 Hz	
AWC129	Low-Z (8Ω)	50 Hz	43 VRMS
	200W Tap	55 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	100W Tap	45 Hz	
	Lower Taps	40 Hz	
AWC159	Low-Z (8Ω)	50 Hz	52 VRMS
	200W Tap	55 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	100W Tap	45 Hz	
	Lower Taps	40 Hz	
AWC15LF	Low-Z (8Ω)	40 Hz	52 VRMS
	200W Tap	40 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	100W Tap	40 Hz	
	Lower Taps	35 Hz	
Control 85M	Low-Z (8Ω)	65 Hz	22V RMS
	30W Tap	60 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	Lower Taps	50 Hz	
Control 88M	Low-Z (8Ω)	45 Hz	26V RMS
	60W Tap	80 Hz	<i>Amp's 70V or 100V clipping limiter</i>
	Lower Taps	50 Hz	

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CBT COLUMN SPEAKERS

CBT 1000
CBT 1000E (in parallel with CBT 1000)
 (driven separately)

Low-Z (4Ω)	35 Hz	63V RMS
Low-Z (4Ω)	35 Hz	63V RMS
Low-Z (8Ω)	35 Hz	96V RMS

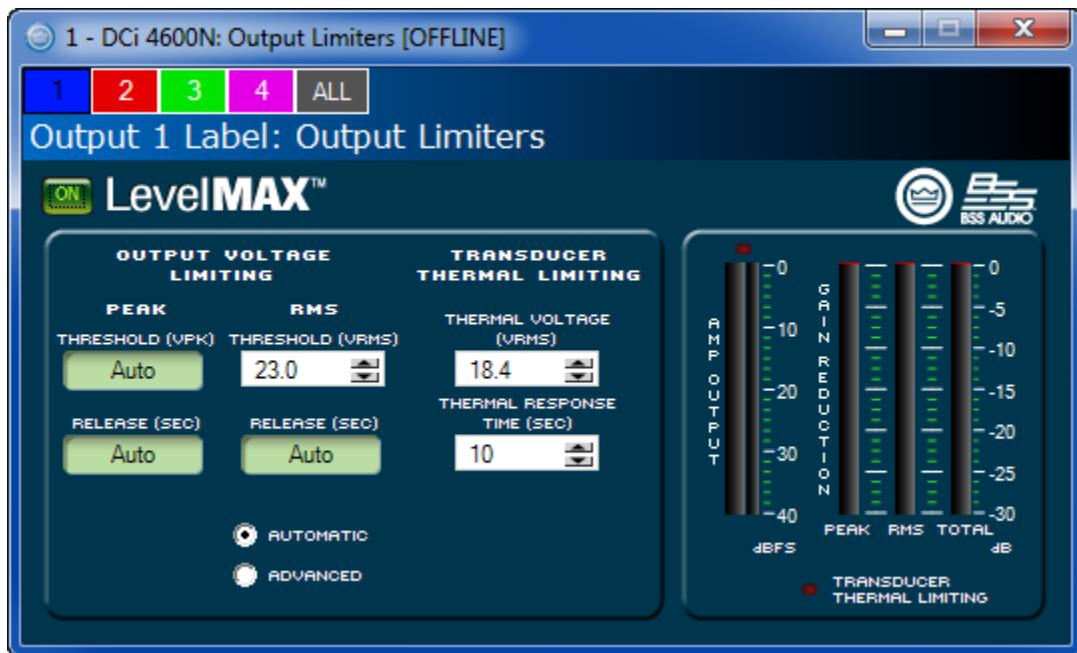
NOTES:

- High-Pass Frequencies apply to stated tap setting figure, regardless whether driven by 70V or 100V distributed line.
- Limiter for 70V system to be set to eliminate amp clipping at 70V; for 100V system to eliminate amp clipping at 100V.
- Tunings apply to all colors of specified loudspeaker models.

Setting the LevelMAX™ Limiter on HARMAN Crown DCi and CDI DriveCore Power Amplifiers

- Set the RMS THRESHOLD (VRMS) to the RMS Voltage figure from the chart
- Set the THERMAL VOLTAGE (VRMS) to 80% of RMS THRESHOLD (VRMS) value.
- Check the bubble for AUTOMATIC, which will set PEAK THRESHOLD (VPK), PEAK RELEASE (SEC), and RELEASE (SEC) to Auto.

Important Note: At the very end of the process, after inputting the tuning data, it is important to double-check that the high-pass filter (HPF) is still engaged. For example, even if you set and engaged the HPF earlier in the process, it may become disabled by changing the output mode (low-impedance, 70V, 100V) setting (or under some circumstances, when the mode setting is reviewed).



Shown as set for Control 47C/T at Low-Z (8Ω), listed for a Limiter Voltage of 23V RMS

The dynamics of limiters incorporated into various brands of power amplifiers vary. For other brands of power amplifier, contact the manufacturer to adapt the RMS Output Voltage Limiting figure listed in this chart to determine the various other settings for which they may allow the selection.