FEATURES

- Comprehensive integration of DSP, amplification and network
- U-Net network / EAW Pilot control software
- Push-button 2 box cardioid and hyper-cardioid capability
- Simple-to-use rigging allows flown and ground-stacked arrays to be constructed with ease

DESCRIPTION

The extraordinary NTS250 powered subwoofer is architected to serve as a companion subwoofer for any EAW system. As the name suggests, it is an obvious choice to use in conjunction with the NTL720 compact line array. This professional, high output yet compact and lightweight premium subwoofer unites a push-pull pair of high efficiency neodymium 15 inch woofers, 2000W of amplification, powerful system optimization DSP and EAW Pilot software accessible front-end DSP, the proprietary U-Net audio and communications network, a professional rigging system and push button 2 box cardioid and hyper-cardioid configurability within a comprehensively integrated, RoadCoat™ clad package.

ORDERING DATA

Description	Part Number
EAW NTS250 Black 115 V	0030378-00-90
EAW NTS250 Black 230 V	0030378-01-90
Optional Accessories	**Part Number**
Pole, 1-3/8 in (35 mm) dia, 4 ft (1.2 m) high	179074
Caster Pallet PLT52N (for up to three NTS250)	0032933-90

COMPLIANCE

CE	EN 60065:2002, EN55103-1:1997, EN 55103-2:1997EN 55103-1, EN55103-2, EN60065
CSA	CAN/CSA 60065-03, UL Std No. 60065-03
FCC	Part 15

DUAL 15 INCH SELF-POWERED SUBWOOFER

See *NOTES TABULAR DATA* for details

CONFIGURATION

Subsystem:

	Transducer	***Loading***
LF	2x 15 in	Vented, Push-Pull

Operating Mode:

	Amplifier Channels	***External Signal Processing***
Bi-amp	LF1, LF2	DSP w/1-way filter

ACOUSTICAL PERFORMANCE

Operating Range: 35 Hz to 130 kHz

Nominal Beamwidth:

Horz	360°
Vert	360°

Axial Output Limit *(whole space SPL)*:

	Average	***Peak***
Calculated LF1, LF2	129 dB	135 dB

ELECTRICAL PERFORMANCE

Input

Type	Electronically balanced XLRF	
Sensitivity	3.1 V / 12 dBu at Limit	6.2 V / 18 dBu at Clip
Impedance	20 k ohm (balanced to chassis), 10 k ohm (unbalanced)	
Wiring	Pin 1: chassis, Pin 2: signal +, Pin 3: signal -	
Loop	Electronically balanced XLRM	

DSP *(50 Mflop 32 bit Sharc):*

Encoding	24 Bit / 48 kHz
Filters	Proprietary
Latency	2.97 ms

User Addressable DSP

	Array	***Box***
EQ	10 Parametric	10 Parametric
Delay	1200 ms	1200 ms
Level	15 dB +/-	15 dB +/-

Amplifier *(Each of two)*

Type	Modified Class D
Maximum Output	63 V, 1000 W @ 4 ohm
THD + noise	< 0.3%
Dynamic Range	> 105 dB
Driver Protection	Integral DSP limiting

AC Mains *(Nominal)*

		115 V	***230 V***
	Connector	Neutrik PowerCon®	
	Input	100 V to 120 V	220 V to 240 V
	Frequency	50 Hz to 60 Hz	50 Hz to 60 Hz
Current:	Idle	0.25 A	0.15 A
	In Rush	0.9 A	0.6 A
	Output Limit	1.6 A	1.0 A
	Fuse Rating	10 A	6.3 A
AC Loop:			
	Connector	Neutrik PowerCon®	
	Circuit Breaker Limit	10A	5A

CONTROLS

Gain	0 dB / +6 dB / +12 dB
Rear Speaker DSP	Cardioid / Hypercardioid

INDICATORS *(LED)*

	Signal Present	System Gain
	Limiter Active	Rear Speaker DSP
	Clip	Input Selection
	Amplifier Status	U-Net Status
Input Selection	Analog, AES Ch 1, AES Ch 2, U-Net (1 - 64)	
Communication	USB, U-Net 1, U-Net 2	

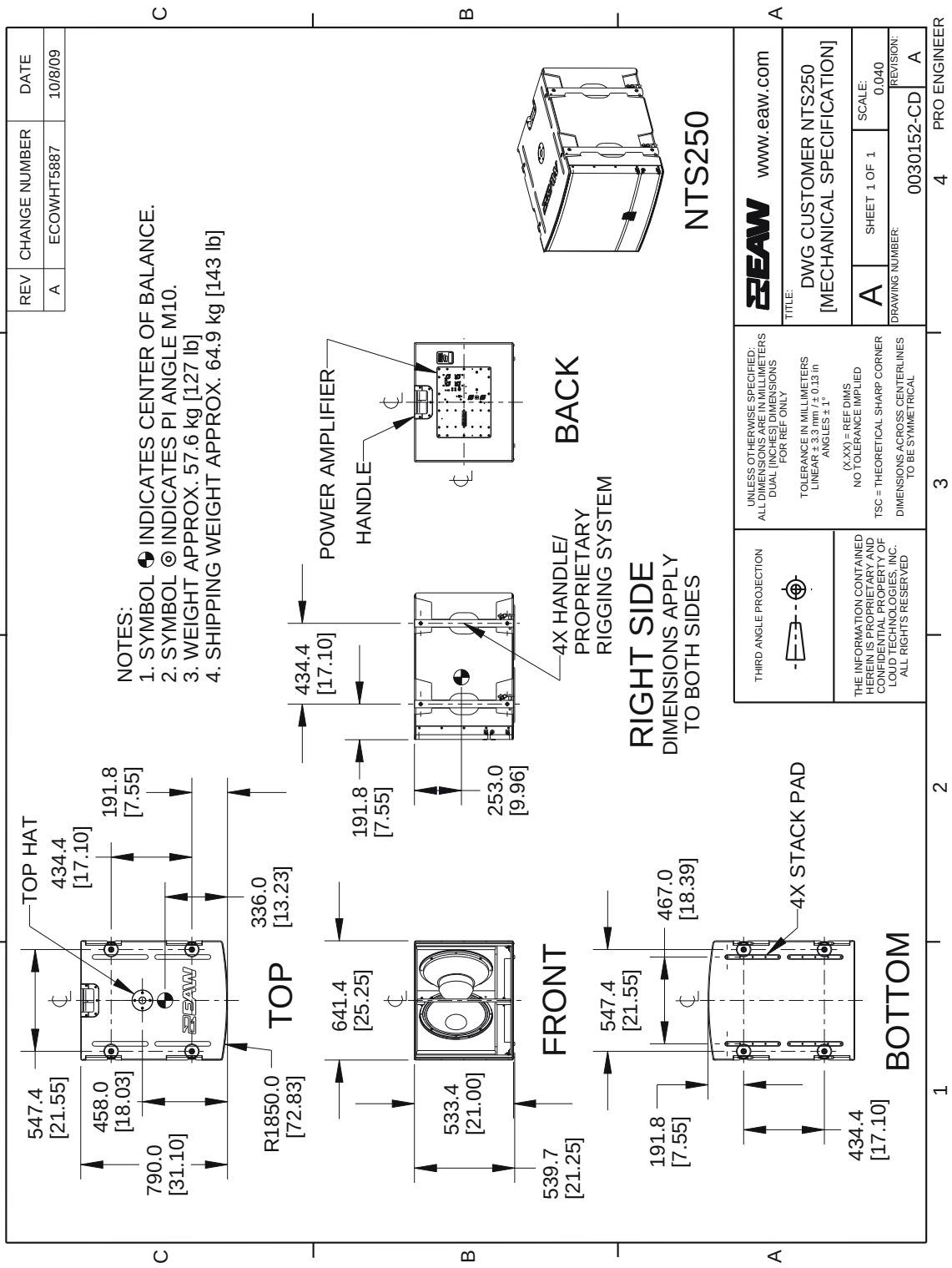
S3 SYSTEM SPECIFICATION STANDARD

Eastern Acoustic Works • One Main Street • Whitinsville, MA 01588 • tel 800 992 5013 / 508 234 6158 • fax 508 234 8251 • www.eaw.com

Part Number: RD0509 (A) NTS250 SPEC March 2010

ENCLOSURE

Material	Exterior-grade Baltic birch plywood
Finish	RoadCoat™ textured black paint
Grille	Powder-coated perforated steel



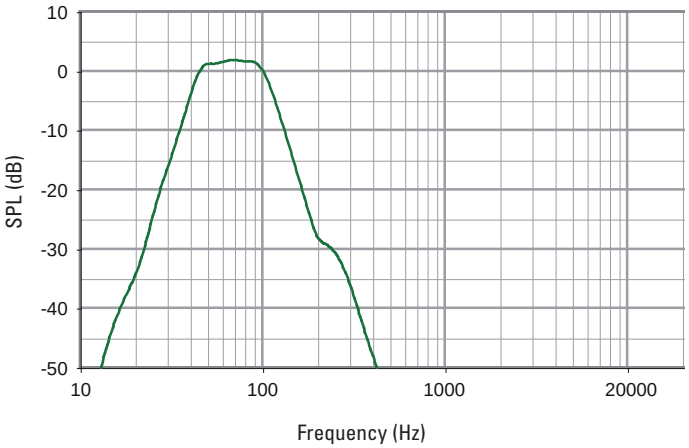
NOTE: This drawing has been reduced. Do not scale.

PERFORMANCE DATA

See *NOTES GRAPHIC DATA* for details

Frequency Response: Processed Dual-amplified

LF 1, LF 2= green



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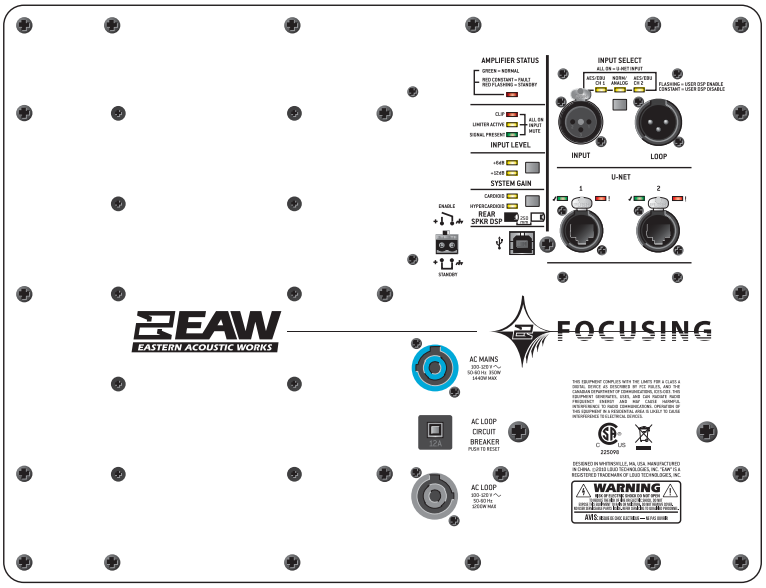
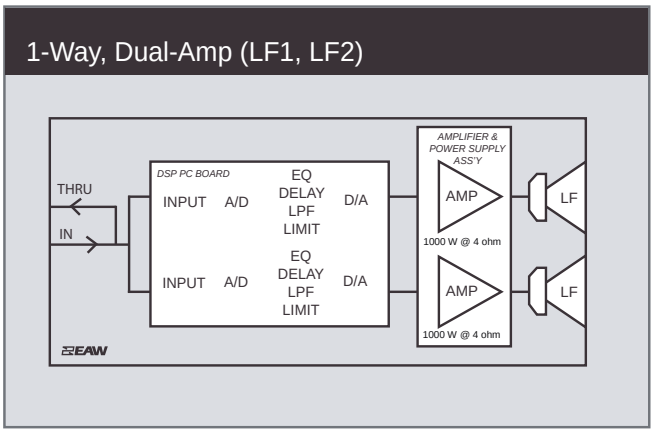
INPUT PANEL



SIGNAL DIAGRAM



LEGEND

DSP/EQ: Integral Digital Signal Processor.
HPF: High Pass Filter for crossover.
LPF: Low Pass Filter for crossover.
LF/MF/HF: Low Frequency / Mid Frequency / High Frequency.
AMP: Power Amplifier.

NOTES

TABULAR DATA

1. **Measurement/Data Processing Systems:** Primary - FChart: proprietary EAW software; Secondary - Brüel & Kjær 2012.
2. **Microphone Systems:** Earthworks M30; Brüel & Kjær 4133
3. **Measurements:** Dual channel FFT; length: 32 768 samples; sample rate: 48 kHz; logarithmic sine wave sweep.
4. **Measurement System Qualification** (includes all uncertainties)**:** SPL: accuracy +/-0.2 dB @ 1 kHz, precision +/-0.5 dB 20 Hz to 20 kHz, resolution 0.05 dB; Frequency: accuracy +/-1 %, precision +/-0.1 Hz, resolution the larger of 1.5 Hz or 1/48 octave; Time: accuracy +/-10.4 µs, precision +/-0.5 µs, resolution 10.4 µs; Angular: accuracy +/-1°, precision +/-0.5°, resolution 0.5°.
5. **Environment:** Measurements time-windowed and processed to eliminate room effects, approximating an anechoic environment. Data processed as anechoic or fractional space, as noted.
6. **Measurement Distance:** 7.46 m. Acoustic responses represent complex summation of the subsystems at 20 m. SPL is referenced to other distances using the Inverse Square Law.
7. **Enclosure Orientation:** For beamwidth and polar specifications, as shown in Mechanical Specification drawing.
8. **Volts:** Measured rms value of the test signal.
9. **Watts:** Per audio industry practice, "loudspeaker watts" are calculated as voltage squared divided by rated nominal impedance. Thus, these are not True Watt units of energy as defined by International Standard.
10. **SPL:** (Sound Pressure Level) Equivalent to the average level of a signal referenced to 0 dB SPL = 20 microPascals.
11. **Subsystem:** This lists the transducer(s) and their acoustic loading for each passband. Sub = Subwoofer, LF = Low Frequency, MF = Mid Frequency, HF = High Frequency.
12. **Operating Mode:** User selectable configurations. Between system elements, a comma (,) = separate amplifier channels; a slash (/) = single amplifier channel. DSP = Digital Signal Processor. IMPORTANT: To achieve the specified performance, the listed external signal processing must be used with EAW-provided settings.
13. **Operating Range:** Range where the processed Frequency Response stays within -10 dB SPL of the power averaged SPL within this range; measured on the geometric axis. Narrow band dips are excepted.
14. **Nominal Beamwidth:** Design angle for the -6 dB SPL points, referenced to 0 dB SPL as the highest level.
15. **Axial Sensitivity:** Power averaged SPL over the Operating Range with an input voltage that would produce 1 W at the nominal impedance; measured with no external processing on the geometric axis, referenced to 1 m.
16. **Nominal Impedance:** Selected 4, 8, or 16 ohm resistance such that the minimum impedance point is no more than 20% below this resistance over the Operating Range.
17. **Accelerated Life Test:** Maximum test input voltage applied with an EIA-426B defined spectrum; measured with recommended signal processing and Recommended Protection Filter.
18. **Calculated Axial Output Limit:** Highest average and peak SPLs possible during the Accelerated Life Test. The Peak SPL represents the 2:1 (6 dB) crest factor of the Life Test signal.
19. **High Pass Filter:** This helps protect the loudspeaker from excessive input signal levels at frequencies below the Operating Range.

GRAPHIC DATA

1. **Resolution:** To remove insignificant fine details, 1/12 octave cepstral smoothing was applied to acoustic frequency responses and 1/3 octave cepstral smoothing was applied to the beamwidth and impedance data. Other graphs are plotted using raw data.
2. **Frequency Responses:** Variation in acoustic output level with frequency for a constant input signal. Processed: normalized to 0 dB SPL. Unprocessed inputs: 2 V (4 ohm nominal impedance), 2.83 V (8 ohm nominal impedance), or 4 V (16 ohm nominal impedance) referenced to a distance of 1 m.
3. **Processor Response:** The variation in output level with frequency for a constant input signal of 0.775 V = 0 dB reference.
4. **Beamwidth:** Average angle for each 1/3 octave frequency band where, starting from the rear of the loudspeaker, the output first reaches -6 dB SPL referenced to 0 dB SPL as the highest level. This method means the output may drop below -6 dB SPL within the beamwidth angle.
5. **Impedance:** Variation in impedance magnitude, in ohms, with frequency without regard to voltage/current phase. This means the impedance values may not be used to calculate True Watts (see 9 above).
6. **Polar Data:** Horizontal and vertical polar responses for each 1/3 octave frequency band 100 Hz to 16 kHz or Operating Range.

SYSTEM SPECIFICATION STANDARD