

# 120A Subharmonic Synthesizer

**dbx**<sup>®</sup>  
PROFESSIONAL PRODUCTS

## VISIONARY DESIGN

Why just rock the house when you can rattle the foundation loose. The wildly popular beat of "House Music" is likely to be driven by the throbbing, low-end bass of dbx Subharmonic Synthesizers in clubs around the world. For decades, the patented dbx Subharmonic Synthesis has been the secret weapon used by mobile DJ's and film and sound professionals to produce an impact unavailable from any other device—unique because the dbx process actually produces a new, Waveform Modeled™ bass note, exactly an octave below the bass in the original audio.

The dbx 120A Subharmonic Synthesizer with Modeled Waveform Synthesis™ has been specially optimized by dbx engineers for the needs of audio professionals. Its two separate bands of bass synthesis provide the best combination of smoothness and control, and the independent Low Frequency Boost circuit is designed to get the most out of high-performance low frequency speaker systems.

Flexible system interfacing is achieved by providing both 1/4" and RCA input connectors, along with main outputs which can be full range (including synthesis) or high frequency only, along with a separate subwoofer output with its own level control.

The 120A's patented subharmonic synthesis process actually builds the synthesized waveform using the waveshape of the original bass material. Unlike other attempts at bass synthesis, the dbx process produces smooth, musical low frequencies that don't interfere with mid and high-band information, even when maximum synthesis and boost are applied. The result is a low-end punch that people really feel, even at system levels that won't destroy sound equipment or damage hearing.

## FEATURES

- **Individual control for two ranges of subharmonic frequencies**
  - **Separate Low Frequency Boost circuit**
  - **Separate Subwoofer Output**
  - **1/4" Balanced Inputs and Outputs**
  - **RCA Input Connectors**
  - **Front panel LEDs that show crossover status and synthesis activity**
  - **Patented circuitry ensures that mid and high frequencies are not affected**
  - **Built-in crossover with choice of 80Hz or 120Hz crossover point**
- Enhance bass audio material for use in a variety of professional applications such as:**
- **Nightclub and dance mixing**
  - **DJ mixing**
  - **Theater and Film sound**
  - **Music Recording**
  - **Live Music Performance**
  - **Broadcasting**

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## SPECIFICATIONS

<b>Frequency Response:</b>	20Hz-20kHz $\pm 0.5$ dB, (no synthesis, full-range mode) 15Hz-90kHz +0, -3dB	<b>Synthesis Frequency Range:</b>	26-56Hz (from 54-110Hz input signal)
<b>Input Impedance:</b>	$\geq 40k\Omega$ Balanced or $20k\Omega$ unbalanced (1/4") 20k $\Omega$ (RCA)	<b>Crossover:</b>	12dB/octave high pass (-3dB @ 80 Hz or 120Hz); 6dB/octave derived low pass. Phase-coherent (unity-sum)
<b>Maximum Input Level:</b>	+22dBu (1/4") +8.5dBV (RCA)	<b>Power Requirements:</b>	100-120VAC; 50/60Hz DO Version, 220-240VAC; 50/60Hz EU Version
<b>Output Impedance:</b>	100 $\Omega$ , Impedance balanced	<b>Dimensions:</b>	1.75"x19"x6.2" (4.5cm x 48.3cm x 15.75cm)
<b>Maximum Output Level:</b>	+22dBu into 600 $\Omega$	<b>Rack Space:</b>	1 Rack Unit
<b>Connector Type:</b>	1/4" TRS Jacks (Inputs and Outputs) RCA (Inputs)	<b>Weight: Net/Shipping:</b>	4.75 lbs/8 lbs, 2.2kg/3.7kg
<b>THD:</b>	0.05% (no synthesis, either output)		
<b>Output noise:</b>	-88dBu, controls@max., 22Hz > 22kHz unweighted (full range output)		
<b>Front Panel Controls:</b>	26-36Hz and 36-56Hz Band Synthesis Level, Subharmonics, Low Frequency Boost, Subwoofer Output Crossover Frequency, Select, Crossover in/out		
<b>Indicators:</b>	Power, Crossover, Bypass		
<b>Metering:</b>	Synthesis activity (3 LEDs per band)		
<b>Dynamic Range:</b>	112dB		

dbx engineers are constantly working to improve the quality of our products. Specifications are, therefore subject to change without notice.

### FOR MORE INFORMATION CONTACT:

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