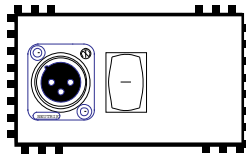
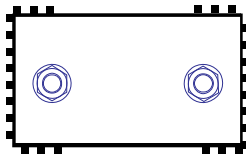


# StageMASTER™ SERIES MODEL CB-1



BACK OF UNIT



FRONT OF UNIT

## CB-1 DIRECT BOX FEATURES

- High Input Impedance Minimizes Loading for Maximum Sound
- Floating Transformer-Balanced XLR Output for Maximum Isolation
- GND/LIFT Switch Eliminates Hum and Buzz
- Handles Line-Level Inputs to +20 dBv at 20 Hz
- Rugged “Uni-box™” Construction for Super-Strength and Shielding
- Recessed Switches and Connectors Resist Damage
- Passive Design Requires No Batteries or Phantom Power

## DESCRIPTION

The Pro Co Stagemaster CB-1 is a simple passive direct box that offers clean, reliable performance with nearly any instrument or signal source, including electric bass, acoustic guitar pickups, keyboards, drum machines, preamps and mixer outputs.

Using the CB-1 is a convenient, low-cost alternative to mic'ing speakers. It reduces distortion and coloration and eliminates “bleed” and leakage from other instruments. The signal delivered to the P.A. or studio mixer is crisp, clean and full - a vital element in retaining the awesome bass and brilliant sound of such current high-tech equipment as FM synthesizers and digital-sampling drum machines.

The CB-1 shares the heavy-duty “Uni-box™” construction with Pro Co's premium Monoface DB-1 Direct Box. The rugged 16-gauge steel and aluminum box is finished in black with a bold blue Lexan® overlay emblazoned with high-visibility control and connector identification graphics. The uniquely slotted side channels allow for stacking on top or strapping side-to-side of virtually any number of Pro Co Monoface devices using the Uni-box™ construction.

## CONTROLS

**INPUT:**  
1/4" (6.3mm) phone accept signals from instrument or other source. Input impedance-greater than 180 kohm. Handles signals of up to +20 dBv at 20 Hz.

### OUTPUT:

1/4" (6.3mm) phone jack provides “loop-through” (parallel) connection from input jack. Used when inserting CB-1 between instrument and amplifier.

### LO-Z OUTPUT:

Male 3-pin XLR-type connector provides balanced floating low-impedance output (pin 2 hot). Connect to mixing board microphone channel input. Recommended load impedance: 1.0 kohm.

### GND/LIFT:

GND position connects INPUT and LO-Z OUTPUT grounds together. LIFT position “floats” LO-Z OUTPUT. Used to reduce hum and buzz by eliminating ground loops and providing proper grounding for various conditions.

NOT RECOMMENDED FOR  
SPEAKER-LEVEL USE.



# StageMASTER MODEL CB-1 DIRECT BOX

## TYPICAL PERFORMANCE

All measurements made with 20 kohm source feeding INPUT and 1.0 kohm load on LO-Z OUTPUT to simulate typical "real world" instrument pick-up and mic preamp. 0 dBv ref. = .775 volt.

### FREQUENCY RESPONSE:

20 Hz-20 kHz, +/- 1.0 dB @ -15 dBv output.  
-3 dB @ approximately 57 kHz.

### TOTAL HARMONIC DISTORTION:

Less than .1% 20 Hz-20 kHz @ -30 dBv output.  
Less than .5% 30 Hz-20 kHz @ -15 dBv output.  
Less than 1.0% 20 Hz-20 kHz @ -15 dBv output.

### PHASE RESPONSE:

Less than -25 degrees @ 20 kHz (ref. 1.0 kHz).

### RISE TIME:

Less than 6.0 microseconds (2.0 kHz square wave, 10%-90%).

### INPUT IMPEDANCE:

Greater than 185 kohm @ 1.0 kHz.  
Greater than 140 kohm @ 10 kHz.  
Nominal source impedance is 20 kohm.

### OUTPUT IMPEDANCE:

Less than 130 ohm @ 1.0 kHz.  
Less than 155 ohm @ 10 kHz.  
Nominal load impedance is 1.0 kohm.

### VOLTAGE STEPDOWN:

Less than 23 dB @ 1.0 kHz.

### MAXIMUM INPUT LEVEL FOR 1% THD:

+20 dBv @ 20 Hz.  
+26 dBv @ 30 Hz.  
+32 dBv @ 50 Hz.

## ENGINEERING SPECIFICATIONS

The signal splitting/impedance matching unit shall be suitable for interfacing one (1) unbalanced high- or low-impedance source to one (1) balanced or floating low-impedance (1.0 kohm nominal) microphone preamplifier input. There shall be two (2) 1/4" 2-conductor phone jacks wired in parallel to provide input and loop-through output for the source. There shall be a transformer-isolated low-impedance output from a 3-pin male XLR-type connector. The transformer shall be a Pro Co CBT-1 Direct Box Transformer. There shall be a ground-lift switch to allow the source ground and pin 1 of the output XLR to be connected together or isolated as required. The XLR output connector shall be wired with pin 2 "hot" or "in-phase" with respect to the input, and pin 3 "cold" or "anti-phase".

The enclosure shall be constructed in the Pro Co "Uni-box™" design with 16-gauge steel black zinc finish top and bottom plates, 16-gauge black texture powder coated steel end plates and black anodized aluminum side channels. Control functions shall be identified by a printed Lexan® top panel overlay. Switches shall be of the miniature "rocker" type and shall be recessed. The enclosure shall be provided with two (2) miniature handles at each end (front and back) and four (4) non-conductive feet. The dimensions of the unit shall be 4.875" D x 4.375" W x 1.75" H (123.8mm D x 111.1mm W x 44.4mm H).

The signal splitting/impedance matching unit shall be a Pro Co Stagemaster CB-1 Direct Box.

## THE PRO CO CBT-1 TRANSFORMER

The CBT-1 is a carefully designed, custom-built impedance-matching transformer whose characteristics are optimized for use with high-impedance sources such as electric bass guitars. It is also very applicable to other unbalanced sources such as keyboard instruments.

Special winding techniques and a high-permeability (50% nickel) core lamination preserve full frequency response while minimizing signal losses and other "loading" effects. The source impedance of the CBT-1 is very similar to that of a low-impedance microphone to ensure proper matching to the input circuitry of the mixer. The result is clean transient response (no overshoot or ringing) and low distortion even at low frequencies and high input levels.

