



**NOTES:**

- 1. MATERIALS:  
HOUSING - BLACK ANODIZED ALUMINUM  
COMPONENT END PANELS - BLACK ANODIZED ALUMINUM  
CORNER GUARDS - PVC, BLACK  
2. LASER ETCHED WHITE TEXT AND ARTWORK.
- 3. POWER REQUIREMENTS FOR PHANTOM LIFT FEATURE:  
44-52 VOLTS (DC) PHANTOM POWER (P48)
- 4. THIS PRODUCT IS RoHS COMPLIANT.

**CONTROLS:**

**INPUT:**

1/4" (6.3mm) MONO PHONE JACK. ACCEPTS SIGNALS FROM INSTRUMENTS.

**THRU:**

1/4" (6.3mm) MONO PHONE JACK. WIRED IN PARALLEL WITH INPUT.

**-20dB PAD:**

TOGGLE SWITCH. REDUCES INPUT SIGNAL LEVEL AN ADDITIONAL 20dB FOR LINE LEVEL SIGNALS.

**MIC OUTPUT:**

3 PIN MALE XLR. PROVIDES BALANCED, LOW IMPEDANCE MIC LEVEL OUTPUT. WIRED PIN-1 GROUND, PIN-2 HOT, PIN-3 COLD.

**GROUND LIFT MODE:**

RECESSED SLIDE SWITCH. USE TO SELECT WHICH FORM OF GROUND CONTROL TO USE.

**MANUAL MODE** - ENABLES CONTROL OF THE GROUND LIFT FROM THE DI USING THE TOGGLE SWITCH.

**48V MODE** - ENABLES REMOTE CONTROL OF THE GROUND LIFT FROM THE CONSOLE USING 48 VOLT PHANTOM POWER.

PHANTOM POWER **OFF**: XLR PIN-1 GROUNDED  
PHANTOM POWER **ON**: XLR PIN-1 LIFTED

**LIFT/GND:**

TOGGLE SWITCH. FUNCTIONAL ONLY WHEN IN **MANUAL** GROUND LIFT MODE.

**LIFT PIN1**: XLR PIN-1 LIFTED  
**GND**: XLR PIN-1 GROUNDED

**LED:**

ILLUMINATES BLUE (INDICATING XLR PIN-1 IS LIFTED) WHEN PHANTOM POWER IS ENGAGED. FUNCTIONAL ONLY WHEN IN 48V MODE.

**CUSTOMER DRAWING**

UNLESS OTHERWISE SPECIFIED					THIS DRAWING DESCRIBES A DESIGN CONSIDERED PROPRIETARY IN NATURE, DEVELOPED AND MANUFACTURED BY SWITCHCRAFT INC. AND IS RELEASED ON A CONFIDENTIAL BASIS FOR IDENTIFICATION PURPOSES ONLY.					
1. ALL DIMENSIONS IN INCHES					SIZE	WIDTH	MULT	LBS/M	TEMPER	
- TWO PLACE DECIMALS ±0.02					FINISH				MATERIAL	
- THREE PLACE DECIMALS ±0.005					SPEC No.				SPEC No.	
					FIRST USED ON				SCALE	
					1:1					
					DATE DRAWN	BY	CHKD	APVD	Switchcraft®	
					12-6-10	BHM	JEB	TJK		
					11-20-12				SHEET 1 OF 3	
					NAME				PART No.	REV
					INSTRUMENT DIRECT BOX WITH PHANTOM LIFT, RoHS				SC900CT	C
REVISIONS					DO NOT SCALE DRAWING					

# SC900CT Instrument Direct Box

## Audio Specifications

# Switchcraft®

Parameter	Performance	Conditions
Frequency Response	20Hz - 20kHz	+/-0.3dB, ref 1kHz
Total Harmonic Distortion + Noise	< 0.008% < 0.3%	at 1kHz, +4dBu Input, 22kHz Bandwidth at 20Hz, +4dBu Input, 22kHz Bandwidth
Maximum Input Level	+19dBu	at 20Hz with 1% THD+Noise
Input Impedance	> 110kΩ	at 1kHz
Output Impedance	< 20Ω	at 1kHz
Common Mode Rejection Ratio (CMRR)	> 90dB > 80dB	at 60Hz, Lifted at 60Hz, Grounded
Deviation from Linear Phase	< 4° < 1° < 9°	at 20Hz at 1kHz at 20kHz
Voltage Gain	-22dB -42dB	+/-1dB +/-1dB with 20dB pad engaged
Pad Attenuation	20dB	+/-1dB

Notes: All measurements were taken with a 25Ω unbalanced source and measured from the XLR with a 1kΩ balanced load.  
Specifications subject to change without notice.

CUSTOMER DRAWING

SCALE 1:1	Switchcraft®	
DATE DRAWN 12-6-10		
DRAWN BY BHM	PART No. SC900CT	REV C

1/4" INPUT

1/4" THRU

-20dB PAD  
TOGGLE SWITCH

IMPEDANCE MATCHING  
TRANSFORMER,  
FULLY SHIELDED

XLR OUTPUT  
(LOW-Z)

RF FILTER

MANUAL MODE  
XLR PIN-1 GROUND LIFT  
TOGGLE SWITCH

GROUND LIFT MODE  
SLIDE SWITCH

MANUAL

48V

PHANTOM LIFT CIRCUIT  
FOR 48V MODE

XLR PIN-1 LIFTED FROM  
INPUT GROUND WHEN  
48 VOLT PHANTOM  
POWER IS ENGAGED.

LED ILLUMINATES WHEN  
LIFTED IN 48V MODE

PATENT PENDING

CUSTOMER DRAWING

SCALE 1:1	Switchcraft®	
DATE DRAWN 12-6-10		
DRAWN BY BHM	PART No. SC900CT	REV C

SolidWorks CAD File