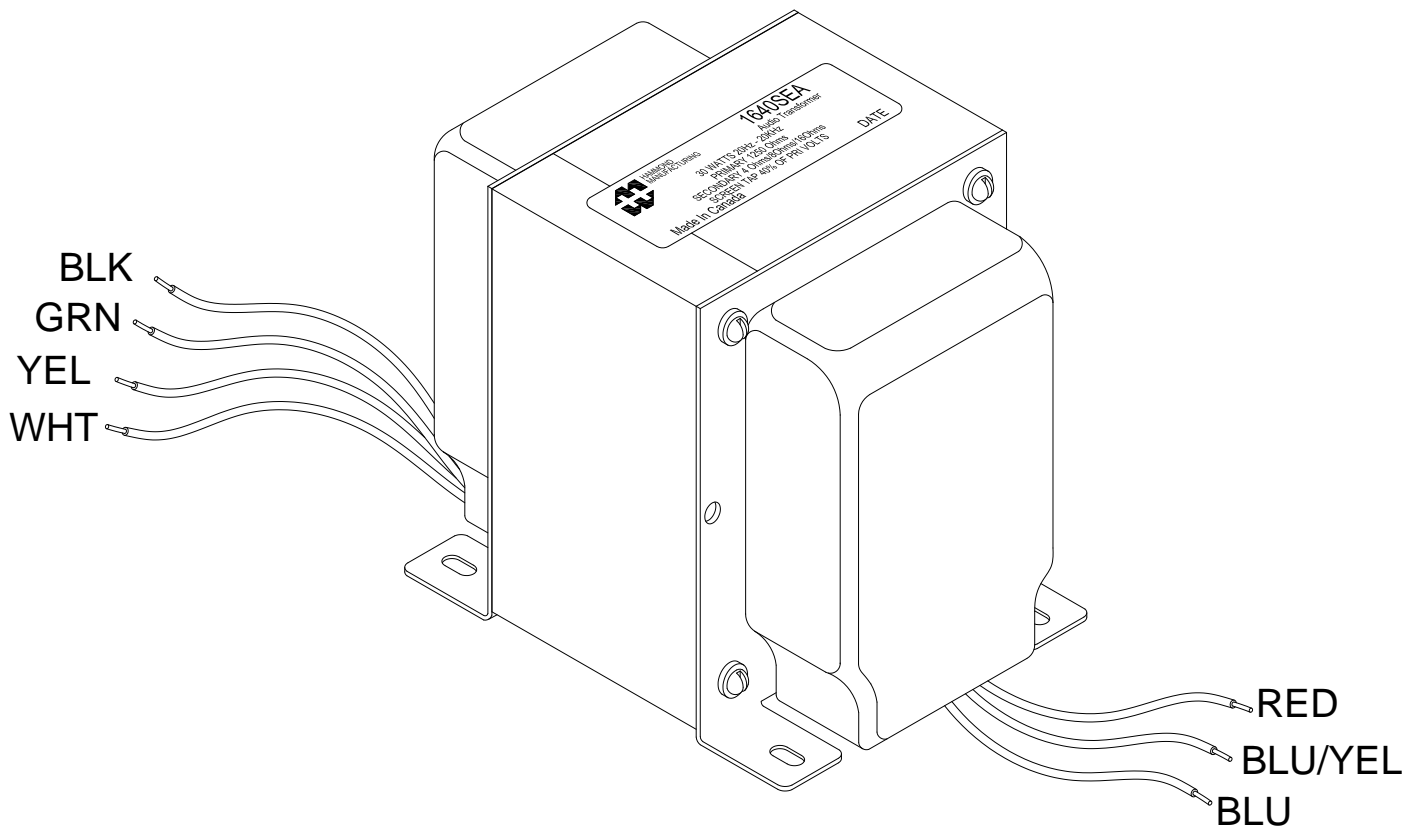




## 1640SEA

SINGLE ENDED "CLASSIC" TUBE OUTPUT TRANSFORMER – ULTRA-LINEAR

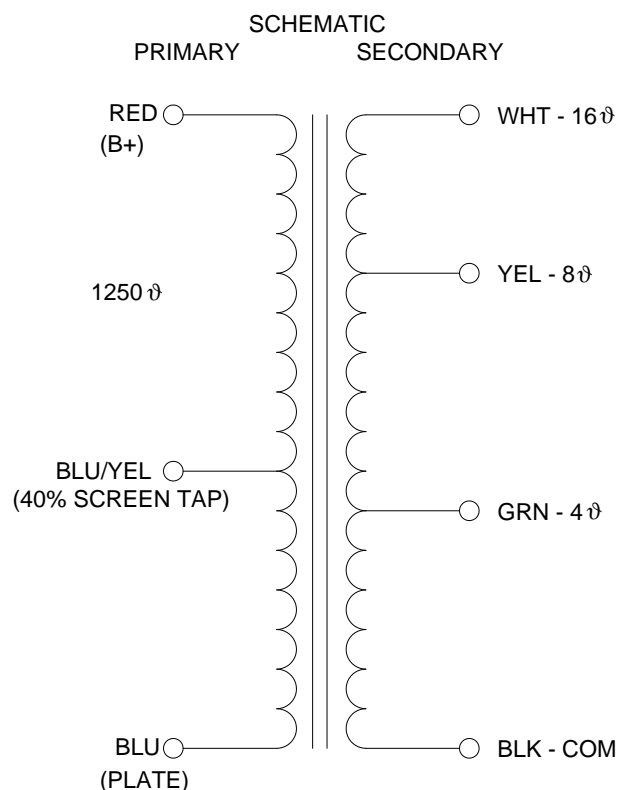
- ) Over designed" for high fidelity, single ended, Class-A, tube output circuits (triode, tetrode or pentode tubes).
- ) Enclosed (shielded), four slot, chassis Type "X" mounting.
- ) Frequency response at least 20Hz. to 20Khz. at full rated power (+/- 1db max., ref. 1Khz.)
- ) Insulated flexible leads 8" min.
- ) For maximum versatility, all units (except the 1642SE & 1638SEA) include a 40% screen tap for Ultra-Linear, tetrode/pentode operation (if desired). The 1642SE & 1638SEA do NOT include this screen tap as they were designed principally for high impedance triode tubes.
- ) High quality laminations, (M6) grain oriented silicon steel.
- ) Core is gapped to reduce core saturation in Class-A tube amplifier circuits.
- ) For general purpose or replacement use in single ended tube output circuits see our [125SE Series](#).



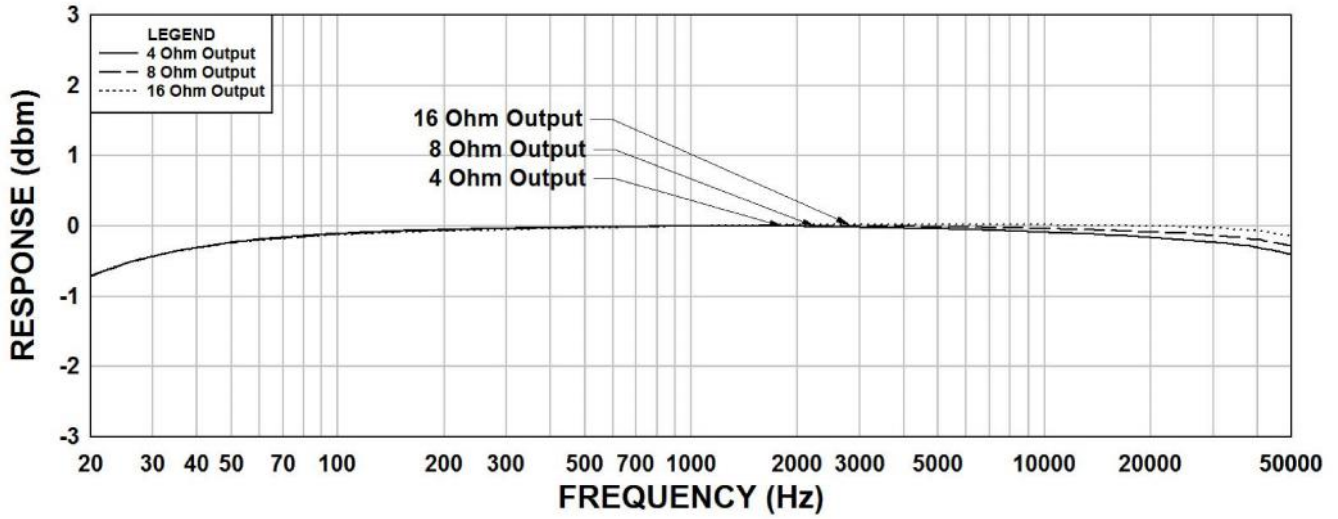
\*For Full Dimensional Details see page 4

**ELECTRICAL SPECIFICATIONS\*\*****Schematic and Hook Up Data**

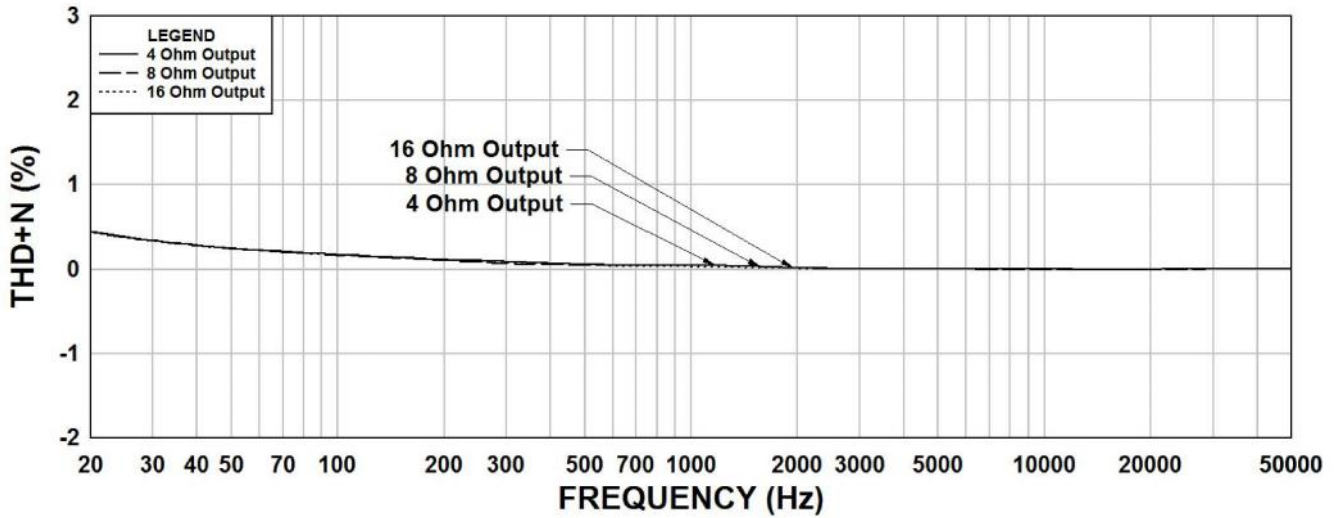
<b>Characteristic</b>	<b>Typical</b>
Input Impedance	1250 $\varnothing$
Output Impedance	4 $\varnothing$ /8 $\varnothing$ /16 $\varnothing$
Output Power	30Watts
<b>Primary - DCR</b>	
Blue – Red	28 $\varnothing$
<b>Secondary DCR</b>	
Black – Green	414m $\varnothing$
Black – Yellow	520m $\varnothing$
Black – White	728m $\varnothing$
<b>Inductance</b>	@ 1.0kHz, 1.0V OC
Primary – Blue – Red	3.2Hy
Black – Green	25.0mH
Black – Yellow	46.0mH
Black – White	82.2mH
<b>Impedance</b>	@ 1.0kHz, 1.0V OC
Primary – Blue – Red	19.95K $\varnothing$
Black – Green	143 $\varnothing$
Black – Yellow	264 $\varnothing$
Black – White	475 $\varnothing$
Frequency Response	See graphs for specific response, Typ. $\left\{ \begin{array}{l} 1.0\text{db from} \\ 20\text{Hz to } 20\text{KHz} \end{array} \right.$
Dielectric Strength	2000Vrms
Temperature Range	-40 To 105 $\varnothing$ C



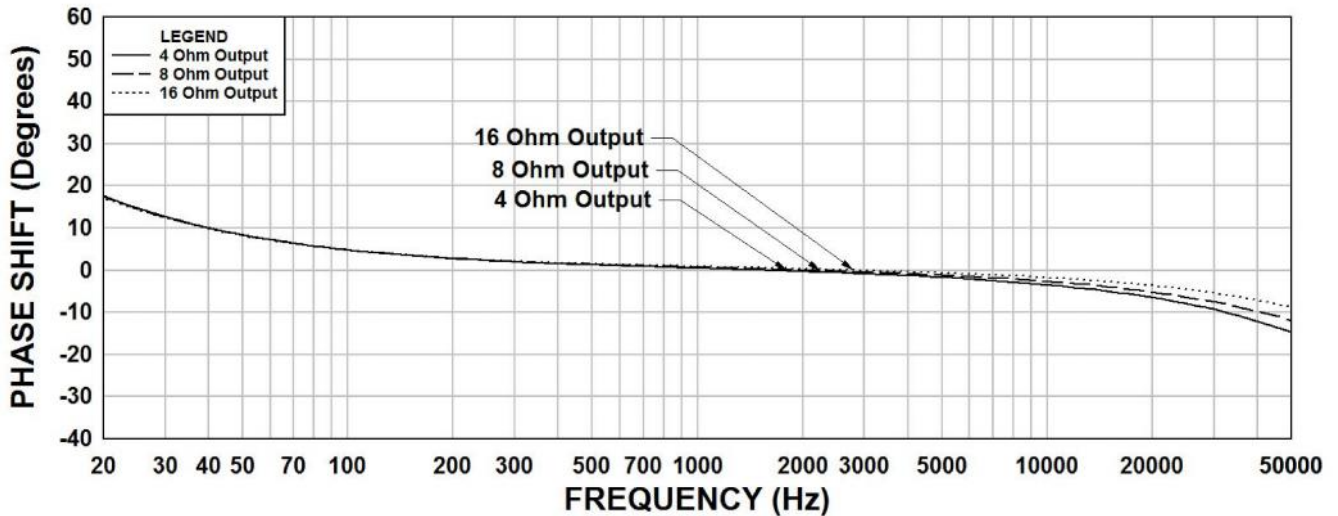
### 1640SEA Frequency Response $R_s = 1250$ Ohms



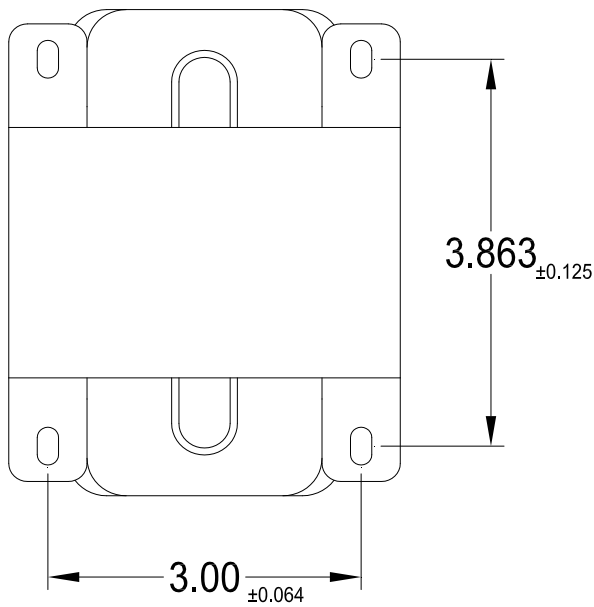
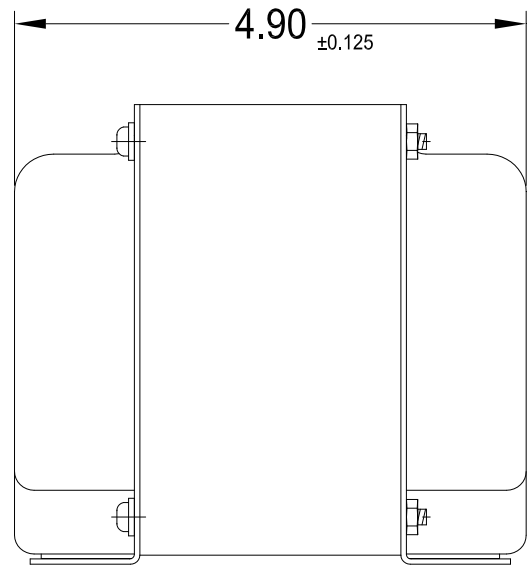
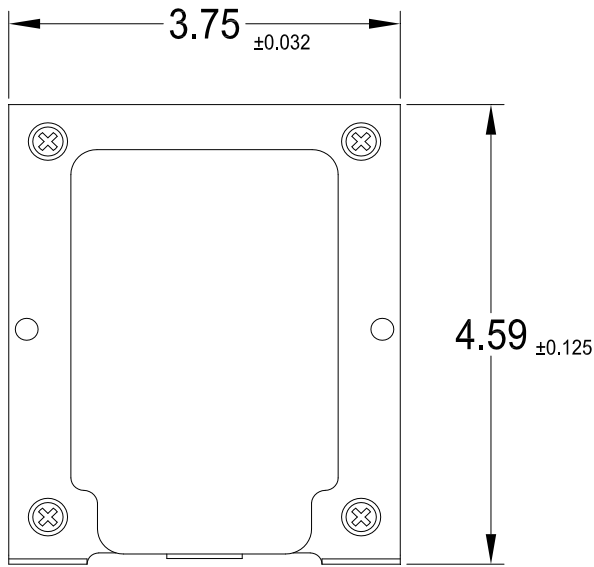
### 1640SEA THD+N $R_s = 1250$ Ohms



### 1640SEA Phase Shift $R_s = 1250$ Ohms



**Dimensional Details:**

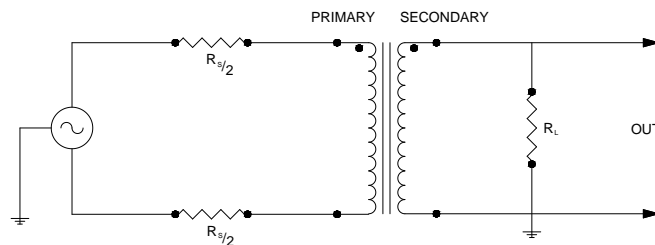


**Label:**

	HAMMOND MANUFACTURING.	<b>1640SEA</b>
		Audio Transformer
30WATTS 20 - 20KHz		
PRIMARY 1250 Ohms		
SECONDARY 4 Ohms/8Ohms/16Ohms		
SCREEN TAP 40% OF PRI VOLTS		
Made In Canada		DATE

**TYPICAL TEST CIRCUIT**

Measurement instruments  
 Hp4192a impedance analyzer  
 Hp3456a DVM  
 Keithley 2002 DVM  
 D scope series iii audio analyzer  
 Wayne Kerr 3255B with a 3265B



\* All graphs input level 20dbu.  
 \*\* The results are typical and are subject to normal manufacturing and electrical tolerances.