

Signature Series Output Descriptions

In the lightly edited words of those who have played them

The Standard has strong tight bass, clear, slightly slow and breathy mids with moderate sparkle in the highs. Aimed at modern blues and jazz it has excellent clarity of detail and tone color. When used with a slide guitar it has that perfect character, a sweet swampy sound.

The Blues has tight punchy bass with scooped, quick, detailed mids and glistening highs. When you push it, the harder you work it the slower it responds, the more you can lean into it and the more it causes you to grin. Aimed at R & B, Hard Rock and traditional Blues it will reveal tone color superbly and is an outstanding choice for hollow body acoustics with piezo pick-ups due to it's natural, woody, character when played clean.

The Hi Def has a flat power bandwidth and is amazingly detailed. Bass is very tight with, fast, muscular definition that allows it to handle even dissonance without faltering. The mids and highs are clear, fast and very revealing without any trace of harshness. Aimed at a thoroughly modern amplifier it handles heavy distortion and heavy transients without strain. Clean channel response does not favor any particular preamp circuit but will inspire every player to experiment.

The Retro M has a unique Marshall flavor to it's open chord, bell like mids. With strong bass that never bloats and highs that never screech or fizz you can play with confidence. Aimed at Marshall amps from the plexi to modern day, it is very familiar, it grinds, it growls, it makes a cabinet sound ready to explode and then you discover just how much more you can get out of it.

The Retro F, when played through Celestions, has that even, flat, Fender character with an aggressive bass, tough clear mids and shimmering extended highs. It's sound is both familiar and entirely new. When played clean, with a Strat/DiMarzio combo, through alnico "vintage tone" speakers, there is not a sweeter, deeper, more honey rich sound on earth. It will work wonders with any Black Face tube amp and help reduce many "controversial characteristics" found in some of the later models.

The amplifier that all of the above comments were based on incorporates a Fender 5F6 Bassman circuit. The Fender Bassman style circuit was chosen because it is the basis for most modern guitar amplifiers. The circuit we used comes from page 369 of Aspen Pittman's superb reference "The Tube Amp Book" edition 4.1. A complete chassis kit, for the 5F6 reproduction, was purchased from VST Weber. The component layout was then copied from page 370 of Aspen's book and applied to the eyeleted circuit card provided in the Weber kit. Dale /Vishay RN 60D metal film resistors were used everywhere except the bias circuit. Sprague 415 "Orange Drop" capacitors were used as DC blocking / coupling capacitors. We chose to use the Dale resistor and Sprague capacitor combination because we knew they would provide the most neutral sound possible with affordable components. All of this allowed the players, whose responses created the above descriptions, to judge and comment on the output transformer characteristics, in as objective a manner as the playing of music allows.



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(425) 823-2279

Signature Series Transformer Pricing

Rating	Type	1 to 10
15 watt sets PN 10164 -----	Power	\$74.28ea
PN 10165 8.0 KZ Pri 4, 8 & 16 Ohm Sec 2 EL 84's	Standard -A Output	\$92.13ea
	Blues -B Output	\$84.06ea
	Hi def -C Output	\$111.21ea
	Retro F -F Output	\$84.06ea
	Retro M -M Output	\$84.06ea
	Retro V -V Output	\$97.54ea
30 watt sets PN 10166 -----	Power	\$100.53ea
PN 10167 4.0 KZ Pri 4, 8 & 16 Ohm Sec 4 EL 84's	Standard -A Output	\$100.42ea
	Blues -B Output	\$97.03ea
	Hi def -C Output	\$134.61ea
	Retro F -F Output	\$97.03ea
	Retro M -M Output	\$97.03ea
	Retro V -V Output	\$112.52ea

Rating	Type	1 to 10
50 watt sets PN 10168 -----	Power	\$110.15ea
PN 10169 4.4KZ Pri 4, 8 & 16 Ohm Sec 2 6L6's	Standard -A Output	\$123.80ea
	Blues -B Output	\$116.25ea
	Hi def -C Output	\$170.72
	Retro F -F Output	\$116.25ea
	Retro M -M Output	\$116.25ea
	Texas Blues -T Output	\$127.38ea
100 watt sets PN 10172 -----	Power	\$141.72ea
PN 10173 2.2KZ Pri 4, 8 & 16 Ohm Sec 4 6L6's	Standard -A Output	\$149.04ea
	Blues -B Output	\$141.39 ea
	Hi def -C Output	\$200.82
	Retro F -F Output	\$141.39ea
	Retro M -M Output	\$141.39ea
	Texas Blues -T Output	\$154.24ea

3Henry PN 10160	Inductor	\$17.45ea
5 Henry PN 10161	Inductor	\$20.72ea
10 Henry PN 10162	Inductor	\$42.15ea
20 Henry PN 10163	Inductor	\$44.55



Signature Series Power Choke and Output Transformers

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FIG. 1:

POWER XFMRRS:	L	W MAX.	H	A	B
100 WATT	4.5	5	3.75	3.75	3.32
50 WATT	4.5	4.5	3.75	3.75	2.82
30 WATT	4.125	3.80	3.44	3.44	2.13
40 WATT (VOX AC30)	4.125	3.80	3.44	3.44	2.13
15 WATT	3.75	3.60	3.13	3.13	2

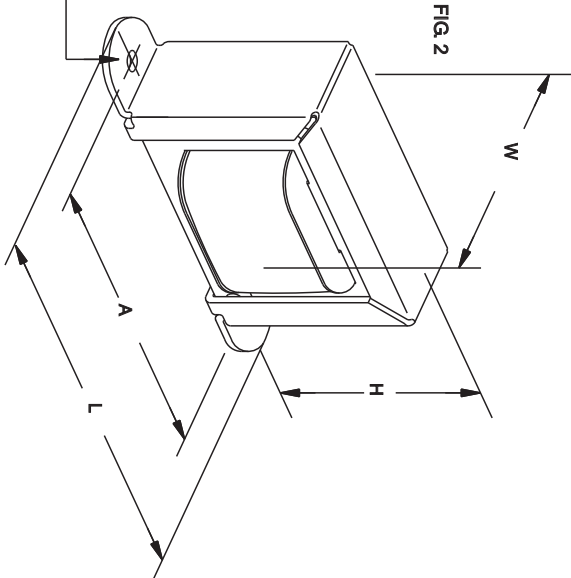
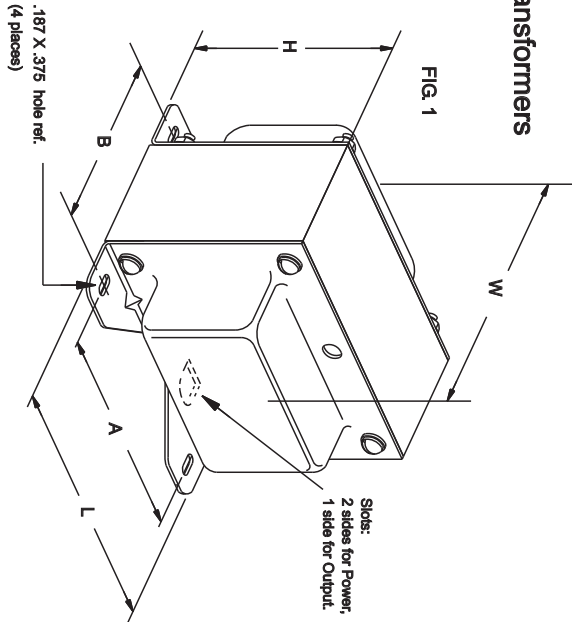
OUTPUT XFMRRS:	L	W MAX.	H	A	B
100 WATT	4.5	4.25	3.75	3.75	2.57
50 WATT	4.125	3.80	3.44	3.44	2.13
30 WATT	3.75	3.60	3.13	3.13	2
40 WATT (VOX AC30)	3.75	3.60	3.13	3.13	2
15 WATT	3.375	3.40	2.81	2.81	1.88

FIG. 2:

CHOKES:	L	W MAX.	H	A
3 H CHOKE	2.813	1.25	1.70	2.375
5 H CHOKE	3.25	1.75	1.94	2.82
10 H CHOKE	4	2	2.70	3.563
20 H CHOKE	4	2	2.70	3.563

DIMENSIONS IN INCHES ARE FOR REFERENCE ONLY.

Footprints.dwg 12/9/02

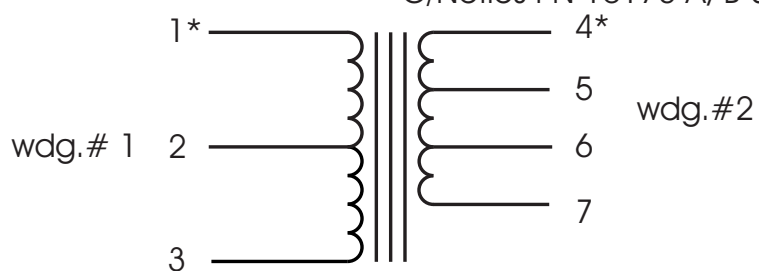




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100 Watt
Signature Series Output Transformer
Schematic Diagram

O/Netics PN 10173 A, B & C



Lead color chart

- 1* Brown
- 2 White
- 3 Blue
- 4* Black
- 5 Red
- 6 Green
- 7 Grey

Input:

Primary Impedance;

Leads 1* to 3: 2.2K Ω Ohms

(208 vac from Brown to White)

Output:

Secondary impedance;

Leads 4* to 5: 4 Ohms (17.7 vac no load)

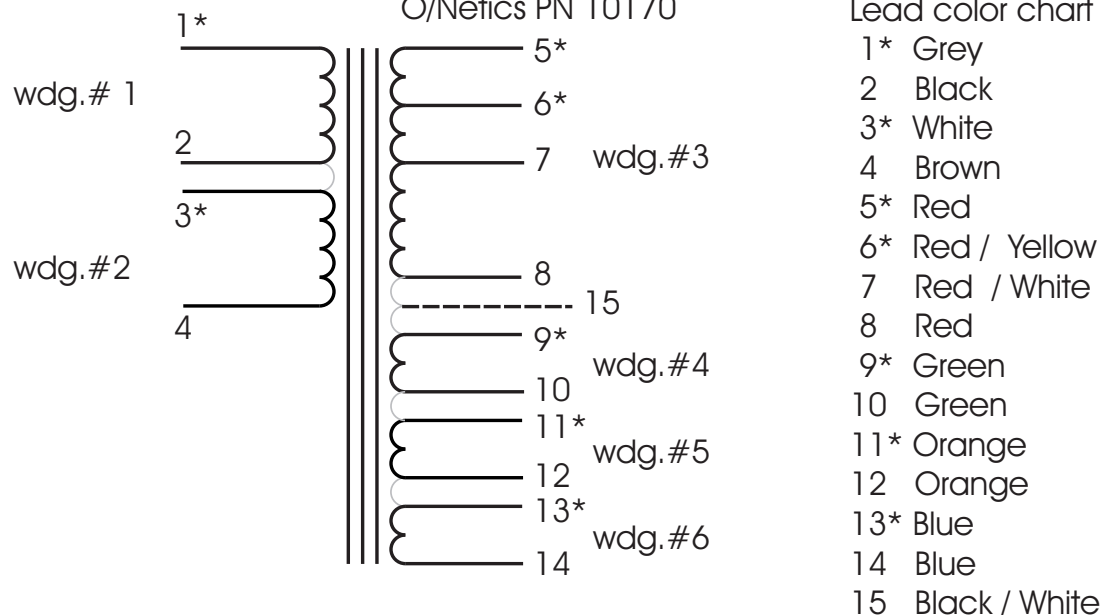
Leads 4* to 6: 8 Ohms (24.9 vac no load)

Leads 4* to 7: 16 Ohms (35.4 vac no load)



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100 Watt
Signature Series Power Transformer
Schematic Diagram
O/Netics PN 10170



Input:

120 volt 50 / 60 hz

combine leads 1* & 3* and leads 2 & 4, apply voltage across 1/3 to 2/4

240 volt 50 / 60 hz

combine leads 2 & 3*, apply voltage across 1* to 4

Output:

Leads 5* to 8: 700 VAC (CT at 7) @ 400 ma AC (720 vac no load)

Leads 6* to 7: 100 VAC @ 20 ma AC (102.2 vac no load)

Leads 9* to 10: 6.3 VAC @ 10 Amp AC (6.6 vac no load)

Leads 11* to 12: 5.0 VAC @ 6 Amp AC (5.2 vac no load)

Leads 13* to 14: 15.3 VAC @ 500 ma AC (15.1 vac no load)

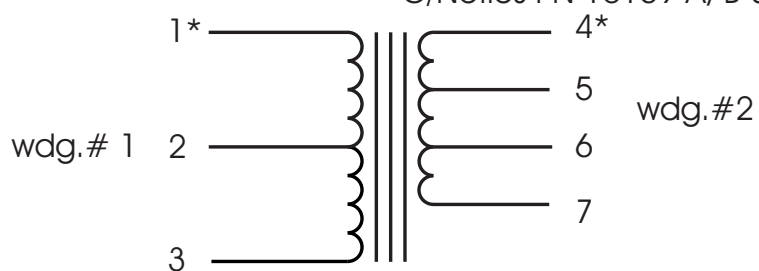
Lead 15 : copper foil ground / noise screen



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50 Watt
Signature Series Output Transformer
Schematic Diagram

O/Netics PN 10169 A, B & C



Lead color chart

- 1* Brown
- 2 White
- 3 Blue
- 4* Black
- 5 Red
- 6 Green
- 7 Grey

Input:

Primary Impedance;

Leads 1* to 3: 4.4K Ω Ohms

(206 vac from Brown to White)

Output:

Secondary impedance;

Leads 4* to 5: 4 Ohms (12.4 vac no load)

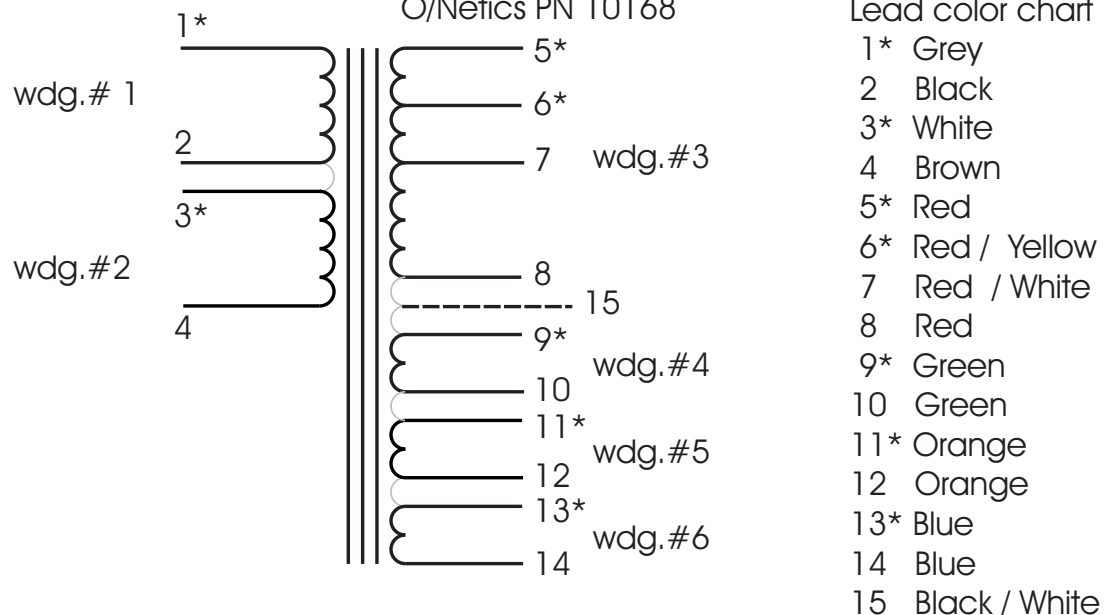
Leads 4* to 6: 8 Ohms (17.6 vac no load)

Leads 4* to 7: 16 Ohms (24.8 vac no load)



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50 Watt
Signature Series Power Transformer
Schematic Diagram
O/Netics PN 10168



Input:

120 volt 50 / 60 hz:

combine leads 1* & 3* and leads 2 & 4, apply voltage across 1/3 to 2/4

240 volt 50 / 60 hz:

combine leads 2 & 3*, apply voltage across 1* to 4

Output:

Leads 5* to 8: 700 VAC (CT at 7) @ 200 ma AC (715.5 vac no load)

Leads 6* to 7: 100 VAC @ 20 ma AC (102.7 vac no load)

Leads 9* to 10: 6.3 VAC @ 6 Amp AC (6.70 vac no load)

Leads 11* to 12: 5.0 VAC @ 3 Amp AC (5.6 vac no load)

Leads 13* to 14: 15.3 VAC @ 500 ma AC (15.6 vac no load)

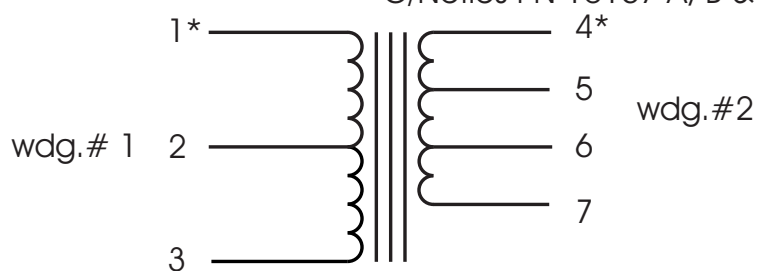
Lead 15 : copper foil ground / noise screen



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40 Watt Vox AC 30
Signature Series Output Transformer
Schematic Diagram

O/Netics PN 10167 A, B & C



Lead color chart

1* Brown
2 White
3 Blue
4* Black
5 Red
6 Green
7 Grey

Input:

Primary Impedance;

Leads 1* to 3: 4.0K Z Ohms

(172 vac from Brown to White)

Output:

Secondary impedance;

Leads 4* to 5: 4 Ohms (10 .8 vac no load)

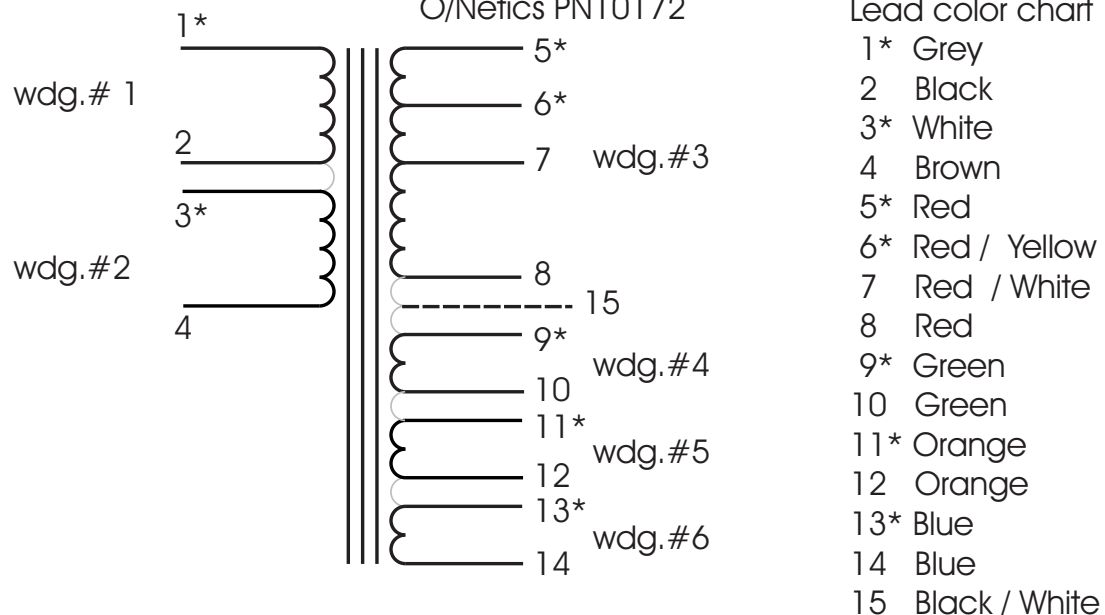
Leads 4* to 6: 8 Ohms (15.5 vac no load)

Leads 4* to 7: 16 Ohms (21.7 vac no load)



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40 Watt Vox AC 30
Signature Series Power Transformer
Schematic Diagram
O/Netics PN10172



Input:

120 volt 50 / 60 hz

combine leads 1* & 3* and leads 2 & 4, apply voltage across 1/3 to 2/4

240 volt 50 / 60 hz

combine leads 2 & 3*, apply voltage across 1* to 4

Output:

Leads 5* to 8: 560 VAC (CT at 7) @ 200 ma AC (584.2 vac no load)

Leads 6* to 7: 100 VAC @ 20 ma AC (102.7 vac no load)

Leads 9* to 10: 6.3 VAC @ 6 Amp AC (6.75 vac no load)

Leads 11* to 12: 5.4 VAC @ 3 Amp AC (5.6 vac no load)

Leads 13* to 14: 15.3 VAC @ 500 ma AC (16.1 vac no load)

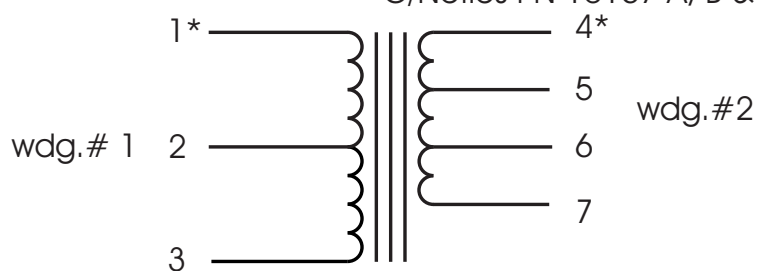
Lead 15 : copper foil ground / noise screen



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30 Watt
Signature Series Output Transformer
Schematic Diagram

O/Netics PN 10167 A, B & C



Lead color chart

1* Brown
2 White
3 Blue
4* Black
5 Red
6 Green
7 Grey

Input:

Primary Impedance;

Leads 1* to 3: 4.0K Z Ohms

(172 vac from Brown to White)

Output:

Secondary impedance;

Leads 4* to 5: 4 Ohms (10 .8 vac no load)

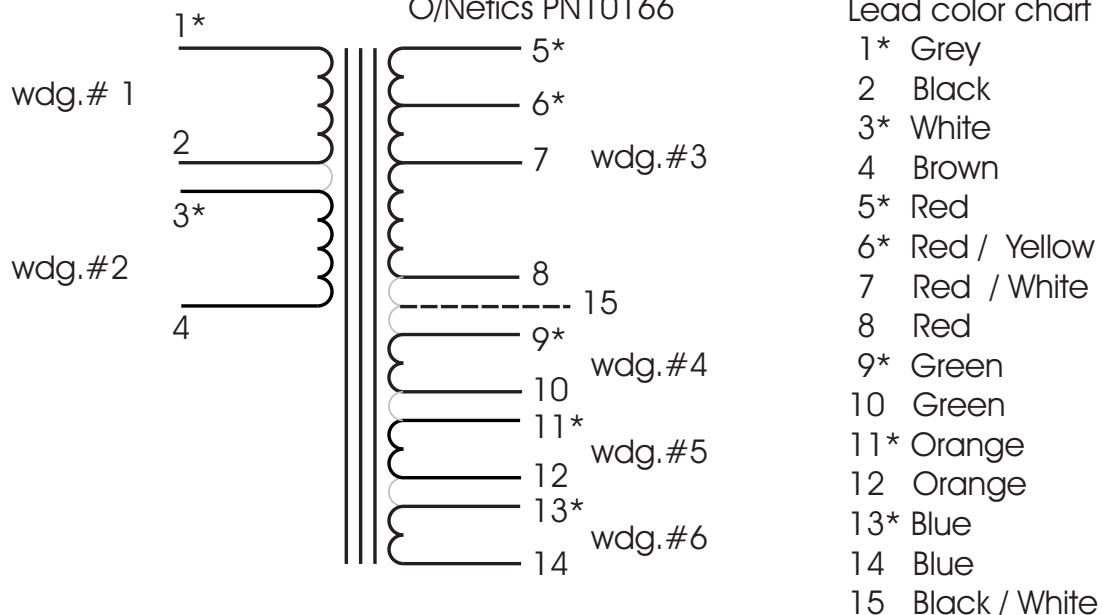
Leads 4* to 6: 8 Ohms (15.5 vac no load)

Leads 4* to 7: 16 Ohms (21.7 vac no load)



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30 Watt Signature Series Power Transformer Schematic Diagram O/Netics PN10166



Input:

120 volt 50 / 60 hz

combine leads 1* & 3* and leads 2 & 4, apply voltage across 1/3 to 2/4

240 volt 50 / 60 hz

combine leads 2 & 3*, apply voltage across 1* to 4

Output:

Leads 5* to 8: 600 VAC (CT at 7) @ 200 ma AC (629.2 vac no load)

Leads 6* to 7: 100 VAC @ 20 ma AC (102.7 vac no load)

Leads 9* to 10: 6.3 VAC @ 6 Amp AC (6.75 vac no load)

Leads 11* to 12: 5.4 VAC @ 3 Amp AC (5.6 vac no load)

Leads 13* to 14: 15.3 VAC @ 500 ma AC (15.7 vac no load)

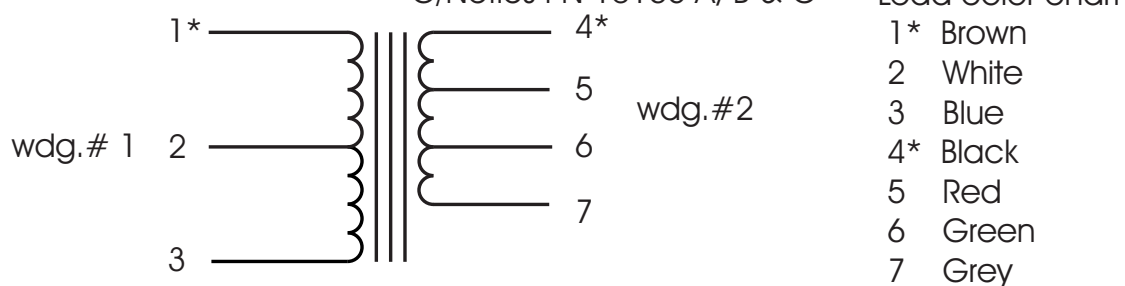
Lead 15 : copper foil ground / noise screen



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15 Watt
Signature Series Output Transformer
Schematic Diagram

O/Netics PN 10165 A, B & C



Input:

Primary Impedance;

Leads 1* to 3: 8.0K Z Ohms

(178 vac@40hz from brown to white)

Output:

Secondary impedance;

Leads 4* to 5: 4 Ohms (7.7 vac no load)

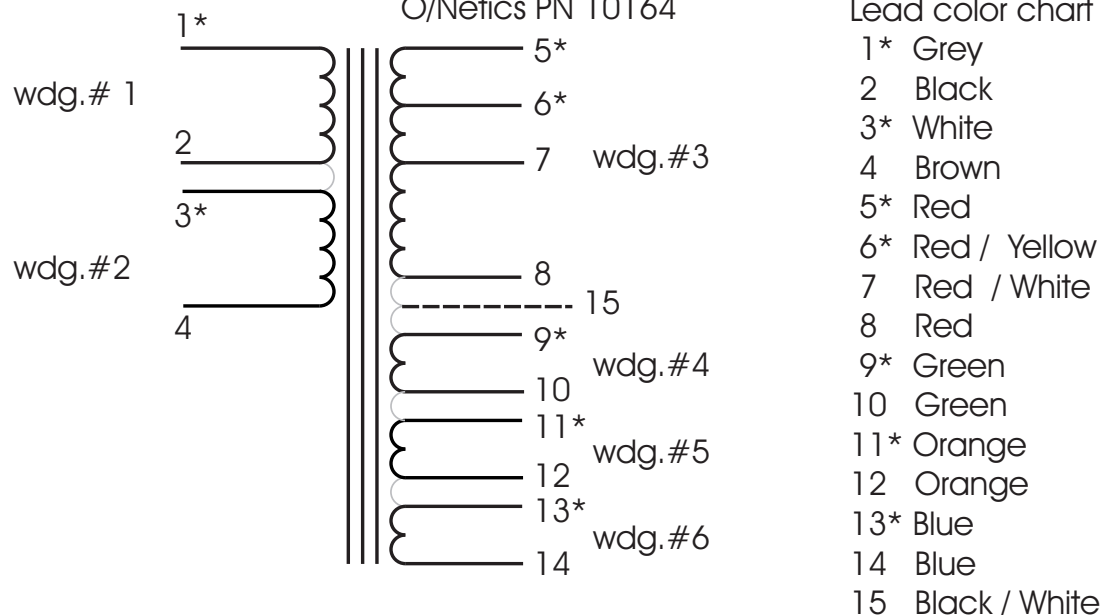
Leads 4* to 6: 8 Ohms (11.1 vac no load)

Leads 4* to 7: 16 Ohms (15.5 vac no load)



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15 Watt
Signature Series Power Transformer
Schematic Diagram
O/Netics PN 10164



Input:

120 volt 50 / 60 hz:

combine leads 1* & 3* and leads 2 & 4, apply voltage across 1/3 to 2/4

240 volt 50 / 60 hz:

combine leads 2 & 3*, apply voltage across 1* to 4

Output:

Leads 5* to 8: 600 VAC (CT at 7) @ 200 ma AC (627 vac no load)

Leads 6* to 7: 100 VAC @ 20 ma AC (102.4 vac no load)

Leads 9* to 10: 6.3 VAC @ 4.5 Amp AC (6.75 vac no load)

Leads 11* to 12: 5.0 VAC @ 3 Amp AC (5.9 vac no load)

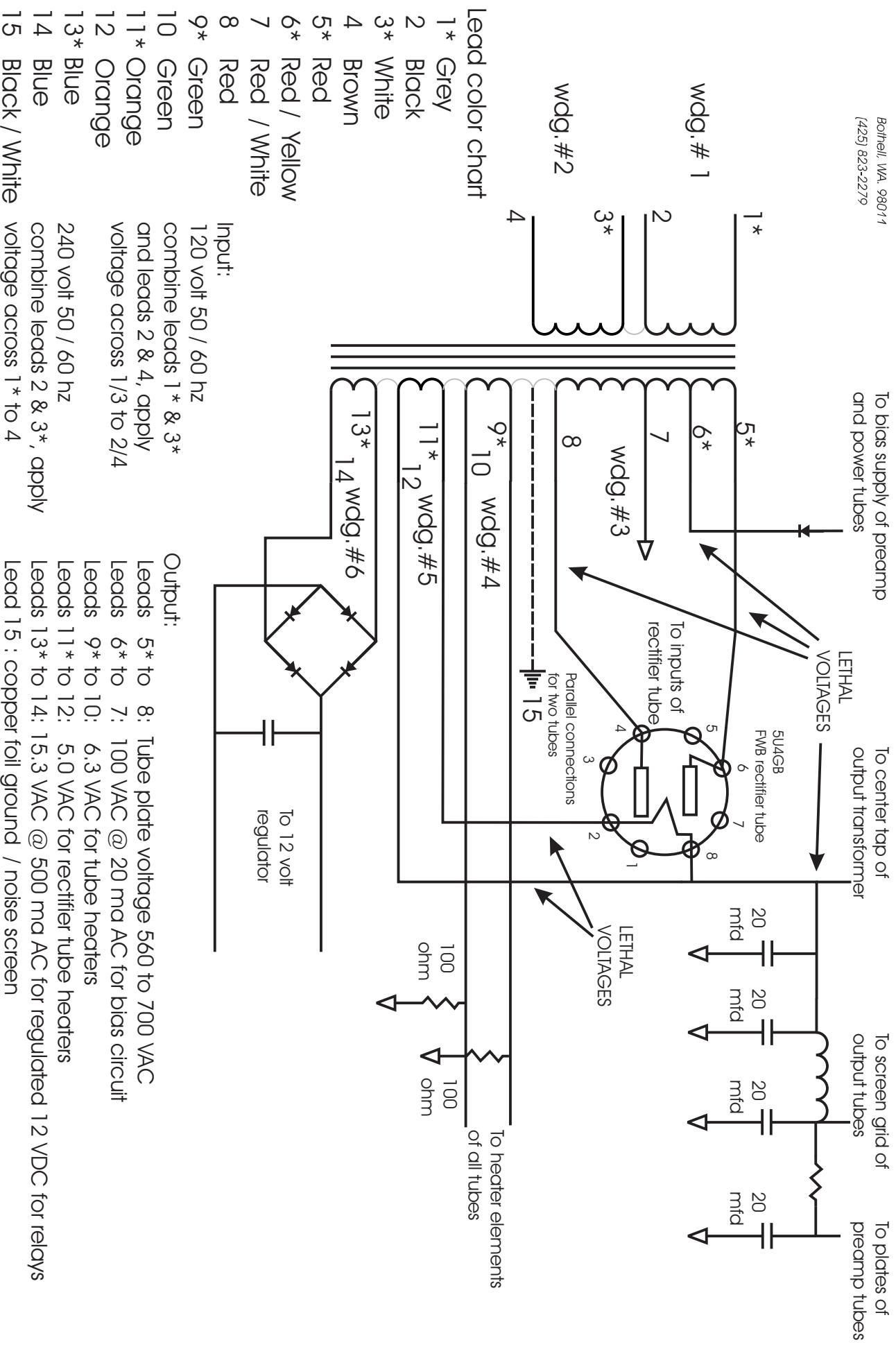
Leads 13* to 14: 15.3 VAC @ 500 ma AC (16.4 vac no load)

Lead 15 : copper foil ground / noise screen



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(425) 823-2279

Signature Series power transformer power supply schematic diagram for rectifier tube B+ supply



To bias supply of preamp
and power tubes

To center tap of
output transformer

To screen grid of
output tubes

To plates of
preamp tubes



1 *	Grey
2	Black
3 *	White
4	Brown
5 *	Red
6 *	Red / Yellow
7	Red / White
8	Red
9 *	Green
10	Green
11 *	Orange
12	Orange
13 *	Blue
14	Blue
15	Black / White



120 volt 50 / 60 hz
combine leads 1 * & 3*
and leads 2 & 4, apply
voltage across 1/3 to 2/4

240 volt 50 / 60 hz
combine leads 2 & 3*, apply
voltage across 1* to 4

Leads 5* to 8: Tube plate voltage 560 to 700 VAC
 Leads 6* to 7: 100 VAC @ 20 ma AC for bias circuit
 Leads 9* to 10: 6.3 VAC for tube heaters
 Leads 11* to 12: 5.0 VAC for rectifier tube heaters
 Leads 13* to 14: 15.3 VAC @ 500 ma AC for regulated 12 VDC for relays
 Lead 15 : copper foil ground / noise screen