

## Fuses Required for Selected Aragon and Acurus Components

**Fuses are specified for use on 120-volt “wall outlet” power.** If your unit uses 230/240volts, please contact Klipsch directly. If a box has an “X”, it means that data isn’t available. My thanks to Klipsch and Steve Phillips for supplying information to me. All information believed to be correct at this time, but NO GUARANTEES are offered. I am NOT an electrical engineer or electronics technician—I am a guy with a hobby. Use this table at your own risk—remember, you can always contact Klipsch directly. Please contact me if you see errors or have corrections/suggestions. Always compare the existing fuse to the replacement!

Component Name	Location <sup>1</sup>	Fuse type <sup>2</sup>	Quantity	Source <sup>3</sup> or Comments
2004 2004 MK II	Internal--rail fuses	6A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/102238/1031792.aspx#1031792">http://forums.klipsch.com/forums/p/102238/1031792.aspx#1031792</a>
	Main AC Power	12A slow blow	1	12A is verified with Klipsch—but I'd have expected ~8A.
4004 4004 MK II	Internal--rail fuses	8A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/12528/93447.aspx#93447">http://forums.klipsch.com/forums/p/12528/93447.aspx#93447</a>
	Main AC Power	12A slow blow	1	<a href="http://forums.klipsch.com/forums/p/26038/986138.aspx#986138">http://forums.klipsch.com/forums/p/26038/986138.aspx#986138</a>
8002	Internal—rail fuses	6A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/65510/641678.aspx#641678">http://forums.klipsch.com/forums/p/65510/641678.aspx#641678</a>
	Main AC Power	8A slow blow	1	
8008ST	Internal—rail fuses	8A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/77910/779419.aspx#779419">http://forums.klipsch.com/forums/p/77910/779419.aspx#779419</a>
	Main AC Power	12A slow blow	1	Chart.
8008BB 8008MK II	Internal—rail fuses	10A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/26038/1000837.aspx#1000837">http://forums.klipsch.com/forums/p/26038/1000837.aspx#1000837</a>
	Main AC Power	12A slow blow	1	
8008X3 8008X3B	Internal—rail fuses	10A fast blow	2/channel	Chart.
	Main AC Power	12A slow blow	1	Chart.
8008X5	Internal—rail fuses	10A fast blow	2/channel	Chart.
	Main AC Power	12A slow blow	1	Chart.
Palladium	Internal—rail fuses	10A fast blow	4 total	<a href="http://forums.klipsch.com/forums/p/26038/986138.aspx#986138">http://forums.klipsch.com/forums/p/26038/986138.aspx#986138</a>
	Main AC Power	12A slow blow	1	
Palladium II Palladium 1K	Internal—rail fuses	12A fast blow	4 total	<a href="http://forums.klipsch.com/forums/p/26038/986138.aspx#986138">http://forums.klipsch.com/forums/p/26038/986138.aspx#986138</a>
	Main AC Power	12A slow blow	1	
24K 24KSP	X	X	X	No fuses inside—fusing provided by external power supply.

18K Aurum D2A D2A Mk II 47K	X	X	X	Probably no fuses inside—fusing provided by external power supply. Not verified.
Standard external power supply	X	X	X	Sealed unit—not repairable/serviceable.
IPS	Internal	3/8A slow blow	2	Chart
Ingot	X	X	X	“Probably” similar to IPS—two 3/8A slow-blow—but not verified.
D2A2	X	250mA	X	Chart. Probably a slow-blow. (Compare to fuse already installed!)
28K	Internal	200mA	X	Chart. Probably a slow-blow. (Compare to fuse already installed!)
28K Mk II	Internal	3/8A slow blow	X	Chart. Can be 5mm X 20mm or ¼ X 1 1/4
4T2	External-back panel	1/4A slow blow	1	Info obtained through a Web photograph of rear panel silkscreening.
Soundstage	X	3/4A slow blow	1	Chart.
Stage One	X	3/4A slow blow	1	Chart.
2002	Internal—rail fuses	6A fast blow	2/channel	Chart. Probably 5mm X 20mm. #740-3015
	Main AC Power	8A slow blow	1	Chart.
2005	Internal—rail fuses	6A fast blow	2/channel	Chart. Probably 5mm X 20mm. #740-3015
	Main AC Power	10A slow blow	1	<a href="http://forums.klipsch.com/forums/p/59183/578395.aspx#578395">http://forums.klipsch.com/forums/p/59183/578395.aspx#578395</a>
2007	Internal--rail fuses	6A fast blow	2/channel	Chart. 5mm X 20mm. #740-3015
	Main AC Power	10A slow blow	1	Chart
3002	Internal—rail fuse	8A fast blow	2/channel	Amperage not verified--believed to be correct. 5mm X 20mm
	Main AC Power	10A slow blow	1	Chart.
3005	Internal—rail fuse	8A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/69647/680097.aspx#680097">http://forums.klipsch.com/forums/p/69647/680097.aspx#680097</a> 5mm X 20mm
	Main AC Power	10A slow blow	1	Chart.
A100	Internal—rail fuses	4A fast blow	2/channel	Chart. Radio Shack 270-1055 or equivalent
	Main AC Power	5A slow blow	1	Chart

A100X3	Internal—rail fuses	4A fast blow	2/channel	Chart. Radio Shack 270-1055 or equivalent
	Main AC Power	8A slow blow	1	Chart.
A125X5	Internal—rail fuses	5A fast blow	2/channel	Chart. Radio Shack 270-1056 or equivalent
	Main AC Power	10A slow blow	1	Chart.
A150	Internal—rail fuses	5A fast blow	2/channel	Chart. Radio Shack 270-1056 or equivalent
	X	X	X	X
A200	Internal—rail fuses	7A fast blow	2/channel	<a href="http://forums.klipsch.com/forums/p/65510/641678.aspx#641678">http://forums.klipsch.com/forums/p/65510/641678.aspx#641678</a>
	Main AC Power	8A slow blow	1	
A200X3	Internal—rail fuses	7A fast blow	2/channel	Chart. 5mm X 20mm
	Main AC Power	10A slow blow	1	Chart.
A250	Internal—rail fuses	6A fast blow	2/channel	Chart. Can be 5mm X 20mm or ¼ X 1 1/4
	X	X	X	X
DIA 100	Internal—rail fuses	3A fast blow <sup>4</sup>	2/channel	<a href="http://forums.klipsch.com/forums/p/56657/549286.aspx#549286">http://forums.klipsch.com/forums/p/56657/549286.aspx#549286</a>
	X	X	X	X
DIA 100MK II	Internal—rail fuses	4A fast blow	X	<a href="http://forums.klipsch.com/forums/p/56657/549286.aspx#549286">http://forums.klipsch.com/forums/p/56657/549286.aspx#549286</a> 5mm X 20mm
	X	X	X	X
DIA 150	Internal—rail fuses	5A fast blow	X	Chart. Radio Shack 270-1056 or equivalent
	Main AC Power	6.3A slow blow	X	Chart.
ACT 3	Internal	3/8A slow blow	1	<a href="http://forums.klipsch.com/forums/p/92351/943993.aspx#943993">http://forums.klipsch.com/forums/p/92351/943993.aspx#943993</a>
ACT 1	X	X	X	X
100X3	Internal	3.15A fast blow	X	Chart. 5mm X 20mm.
200FIVE	Internal	6A fast blow	X	Chart. 5mm X 20mm. #740-3015
L-10	X	X	X	X
	Main AC Power	1/8A slow blow	1	NOT VERIFIED
P-10	X	X	X	X
	Main AC Power	1/8A slow blow	1	Chart.

LS-11	X	X	X	X
	Main AC Power	1/8A slow blow	1	Chart.
RL-11	X	X	X	X
	Main AC Power	1/8A slow blow	1	Chart.

Note 1. Usually, but not always, the main AC power fuse is on the back panel, accessible behind a cap or plug. Power amplifiers usually have additional (rail) fuses internally, and generally two rail fuses per channel. There can be exceptions. Other devices may have fuses inside, or on the back panel, or both.

Note 2. Fuse type involves:

- 1) The amperage rating (8A vs. 10A for example);
- 2) Whether the fuse is fast- or slow-acting;
- 3) The voltage rating of the fuse (the fuse can be rated for higher voltage than the actual circuit voltage supplied to the fuse, but it can't be rated for lower voltage than the circuit provides); and
- 4) The physical size of the fuse. For example, ¼" diameter X 1 ¼ length fuses are common in older (Mondial-designed) equipment, while 5mm diameter X 20mm length fuses are common in Klipsch-era product designs.

In general, fast-acting fuses are used on the internal power rails while slow-acting fuses are used (usually at the back panel but sometimes internally) for the main power into the component. Fast-acting and slow-acting fuses **can** have the same physical size; so DON'T install the wrong "speed" of fuse for the application.

For ¼" X 1 ¼ fuses made by Bussman, <http://www.cooperbussmann.com/3/QuarterInchDiameterFerruleFuseSelectionGuide.html>

### **AGC ¼" X 1 ¼" Glass Tube Fuses**

Fast-acting fuses. Ratings from 1/20 to 30 amps. 250Vac up to 10A, 32Vac 12-30A

*Common and inexpensive. Sold everywhere—home improvement stores; automotive parts stores, etc. Not suitable for Palladium II and 1K. The problem with these is that the 12A units used in P II and P 1K have only a 32Vac rating—therefore not suitable for P II or P 1K. AGC-10 and smaller units have acceptable voltage ratings for the other components.*

### **ABC ¼" X 1 ¼" Fuses**

Fast-acting ceramic tube fuses. Ratings from ¼ to 30 amps. 250 Vac 1/4-20A (can replace AGC fuses)

*Harder to find, probably more expensive. ABC-12 required for Palladium II or Palladium 1K.*

### **GBB ¼" X 1 ¼" Fuses**

Very fast-acting ceramic tube fuses. Ratings from 1 to 30 amps. 250Vac/125Vdc

*I'd expect these would work fine—but probably excessively expensive and hard-to-find.*

### **MDL ¼" X 1 ¼" Glass Tube Fuses**

Time-delay [slow-blow] fuses. Ratings from 1/16 to 30 amps. 250VAC (1/16-8A) 32Vac (9-30A)

*Adequate voltage rating—but only up to 8 amp size. Higher capacity fuses aren't rated for 120- or 240-volt operation, so you'd have to go to the MDA series on equipment that needs more than 8 amps capacity.*

### **MDA ¼" X 1 ¼" Fuses**

Time-delay [slow-blow] ceramic tube fuses. Ratings from 2/10 to 30 amps. 250Vac, (Can replace MDL fuses)

*Required for big amplifiers that use 10 or 12 amp slow-blow fuses.*

For ¼" X 1 ¼ fuses made by Littelfuse: [http://www.littelfuse.com/data/en/Product\\_Catalogs/AA101-B.pdf](http://www.littelfuse.com/data/en/Product_Catalogs/AA101-B.pdf)

Fast acting:

*312-series (similar to AGC series above) and 314-series (similar to ABC series above) are fast acting and the same physical size. But note that there's no listing for a 312-series 12A fast acting fuse suitable for a Palladium II or 1K rail fuse. 12A fuses in the "314-series" are fast acting and 250Vac rated. 314-012 would be suitable for the P II or P 1K rail fuses, other amps could use the less-expensive and very common 312-series.*

<http://www.littelfuse.com/series/312.html>

<http://www.littelfuse.com/series/314.html>

Slow-acting (time delay):

*313-series (similar to MDL series above) and 326-series (similar to MDA series above) are slow acting and the same physical size. But note that 313-series fuses with greater than 8A capacity do not have sufficient voltage ratings. The 326-series fuses have 250V ratings up to 20A; so they'd be required if you need the 10 or 12 amp sizes. ("326-012" and "326-010" would be typical slow-blow fuses for the bigger Aragon amplifiers.)*

<http://www.littelfuse.com/series/313.html>

<http://www.littelfuse.com/series/326.html>

For 5mm X 20 mm fuses made by Bussman:

COMPARE to what came out of the component (or contact Klipsch); I have z-e-r-o experience with these, and as of 3 May 08 the website ( [bussman.com](http://bussman.com) ) is not as helpful as with the ¼ X 1 ¼ size!

### **GDA IEC 5 X 20mm Fuses**

High-break, fast-acting ceramic tube fuses. Ratings from 50mA to 6.3 amps.

### **GDB IEC 5 X 20mm Fuses**

Fast-acting glass tube fuses. Ratings from 32mA to 16 amps.

### **GDC IEC 5 X 20mm Fuses**

Time-delay, low-breaking capacity glass tube fuses. Ratings 32mA to 6.3 amps.

S506-R is the RoHS compliant version of the GDC fuse.

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**GMC UL 5 X 20mm Fuses**

Medium time-delay glass tube fuses. Ratings from 63mA to 10 amps.

**GMD UL 5 X 20mm Fuses**

Medium time-delay fuses. Ratings from 125mA to 4 amps.

Note 3. Information obtained by mining the Klipsch Forums (<http://forums.klipsch.com/forums/default.aspx?GroupID=6>) or via a fuse chart in Excel format sent to me by Steve Phillips of Klipsch—except 4T2 information derived from a photograph of the back panel which I found on eBay.

Note 4. DIA 100 came with 3A rail fuses. Can replace with 4A according to Klipsch. DIA 100Mk II came with 4A rail fuses.

For an interesting read about assessing the peak current capacity of an amplifier, please see <http://forums.klipsch.com/forums/p/55534/536853.aspx#536853>