

Service *Manual*

MODEL: MS8MA / MS10MA / MS12MA

Version 1.0

 **LTO**[®]
www.altoproaudio.com

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1. INTRODUCTION

Thank you very much for expressing your confidence in ▲LTO products by purchasing MS series powered monitor speaker system. The MS series monitor are specifically designed for using in hi-quality performance site and the precise sound commercial place. It includes three small and compact stage monitor models (MS8MA, MS10MA, MS12MA) This series uses trapezium configuration which greatly decreases the resonance of the standing wave in the cabinet. These cabinets uses hi-density matrix spray-paint technics and the bottom bracket design which make mounting quickly and flexibly. HF compression driver and vented LF for fully professional performance.

The MS powered monitor speaker cabinets include some exclusive innovations such as switch mode power supply and digital power circuitry (in selected modes) that make them the lightest powered cabinets of this kind ever made. The MS full range models include another Alto innovation: The MODELLER. Thanks to this circuitry user can select 16 different tastes and applications.

Enjoy your MS powered Monitor speaker and make sure to read this Manual carefully before operation!

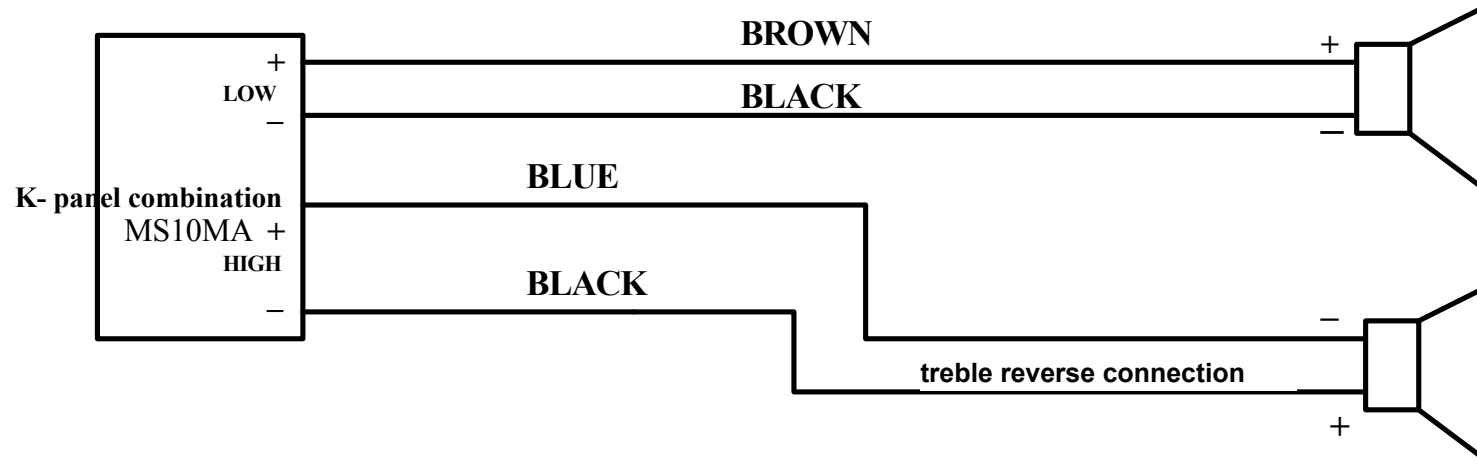
7. TECHNICAL SPECIFICATION

Model Item	MS8MA
Active System Type	Full Range with MODELLER
Output Power	100 Watt
Peak Power	150 Watt EIAJ
Max SPL 1mt	114 dB SPL Nominal/116 dB Peak
Frequency Response	MODELLER Presets Setting
Protection Low - High	Analog Limiter
Input Impedance	30 k Ω Balanced/15 k Ω Unbalanced
Input Sensitivity	Line +4 dB
Low Frequency Device	8" Dual Cone/1.5" Voice Coil
High Frequency Device	1" Neodymium Driver/1" Voice Coil
Coverage(H' x V')	70° H x 70° V
Connectors	Input with Combo/Link with XLR
Cabinet	Trapezoidal Shape/Multi-layer Plywood/Handle/Black Paint Finishing
External Control	MODELLER with 16 Presets/Line Volume/Clipping LED indicator /Ground Switch
Dimensions(H x W x D)	210 x 300 x 356 (mm)
Net Weight (lbs/kg)	16.98 lbs/7.7 kg

Model Item	MS10MA
Active System Type	2-way Bi-Amp. With MODELLER
Low Output Power	350 Watt EIAJ
High output Power	65 Watt EIAJ
Max SPL 1mt	120 dB SPL Calculated EIAJ
Frequency Response	MODELLER Presets Setting
Protection Low - High	Analog Limiter
Input Impedance	30 k Ω Balanced/15 k Ω Unbalanced
Input Sensitivity	Line +4 dB
Low Frequency Device	10" Coax/2" Voice Coil
High Frequency Device	1" Neodymium Driver/1" Voice Coil
Coverage(H' x V')	70° H x 70° V Spherical Horn
Connectors	Input With Combo/Link With XLR
Cabinet	Trapezoidal Shape/Multi-layer Plywood/Handle/Black Paint Finishing
External Control	MODELLER with 16 Preset/Line Volume/Clipping LED indicator /Ground Switch
Dimensions(H x W x D)	273 x 362 x 454 (mm)
Net Weight (lbs/kg)	22.75 lbs/10.32 kg

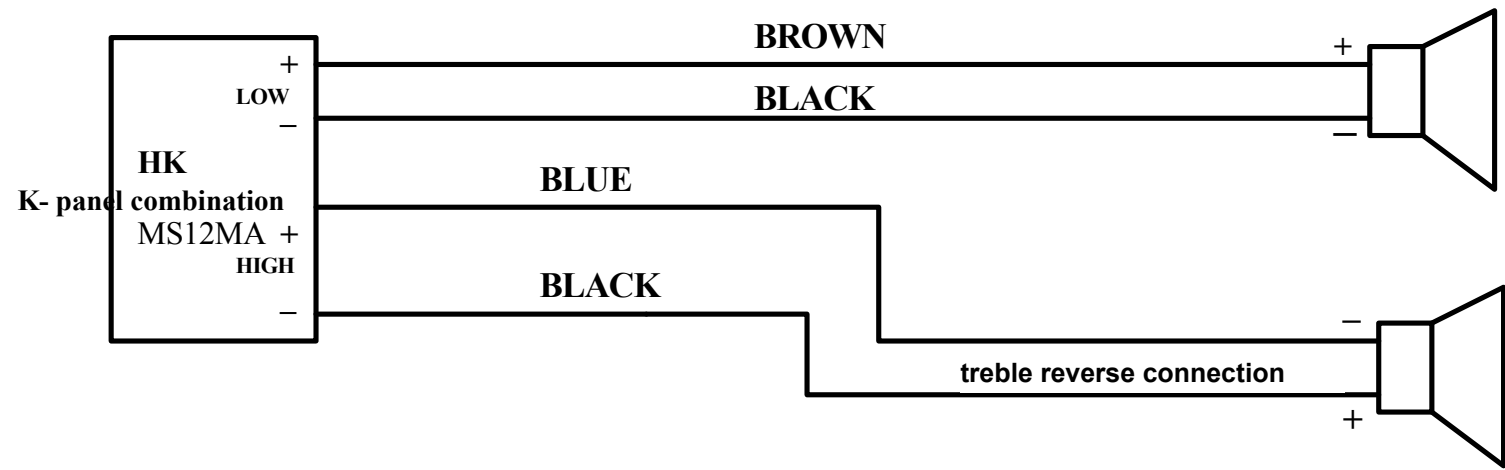
Model Item	MS12MA
Active System Type	2-Way Bi-Amp. with MODELLER
Low Output Power	350 Watt EIAJ
High output Power	65 Watt EIAJ
Max SPL 1mt	121 dB SPL Calculated EIAJ
Frequency Response	MODELLER Presets Setting
Protection Low - High	Analog Limiter
Input Impedance	30 k Ω Balanced/15 k Ω Unbalanced
Input Sensitivity	Line +4 dB
Low Frequency Device	12" Coax/2" Voice Coil
High Frequency Device	1" Neodymium Driver/1" Voice Coil
Coverage(H' x V')	70° H x 70° V Spherical Horn
Connectors	Input with Combo/Link with XLR
Cabinet	Trapezoidal Shape/Multi-layer Plywood/Handle/Black Paint Finishing
External Control	MODELLER with 16 Presets/Line Volume/Clipping LED Indicator /Ground Switch
Dimensions(H x W x D)	313 x 393 x 513 (mm)
Net Weight (lbs / kg)	26.12 lbs/11.85 kg

MS10MA BLOCK DIAGRAM



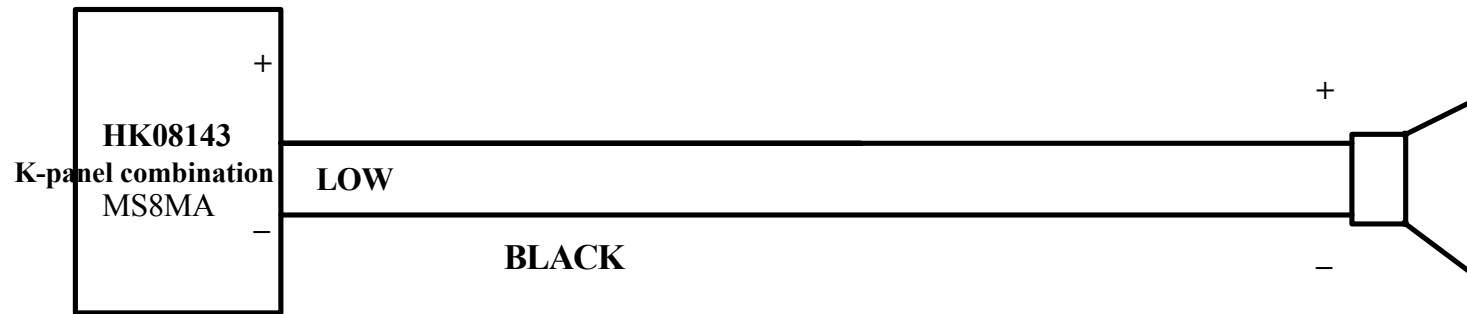
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Size	Model No:	Revision	
A4	MS10MA	VER061216	
Date:	16-DEC-2006	Sheet 1	of 1
File:		Drawn By:	KAIMINGLIU

MS12MA BLOCK DIAGRAM

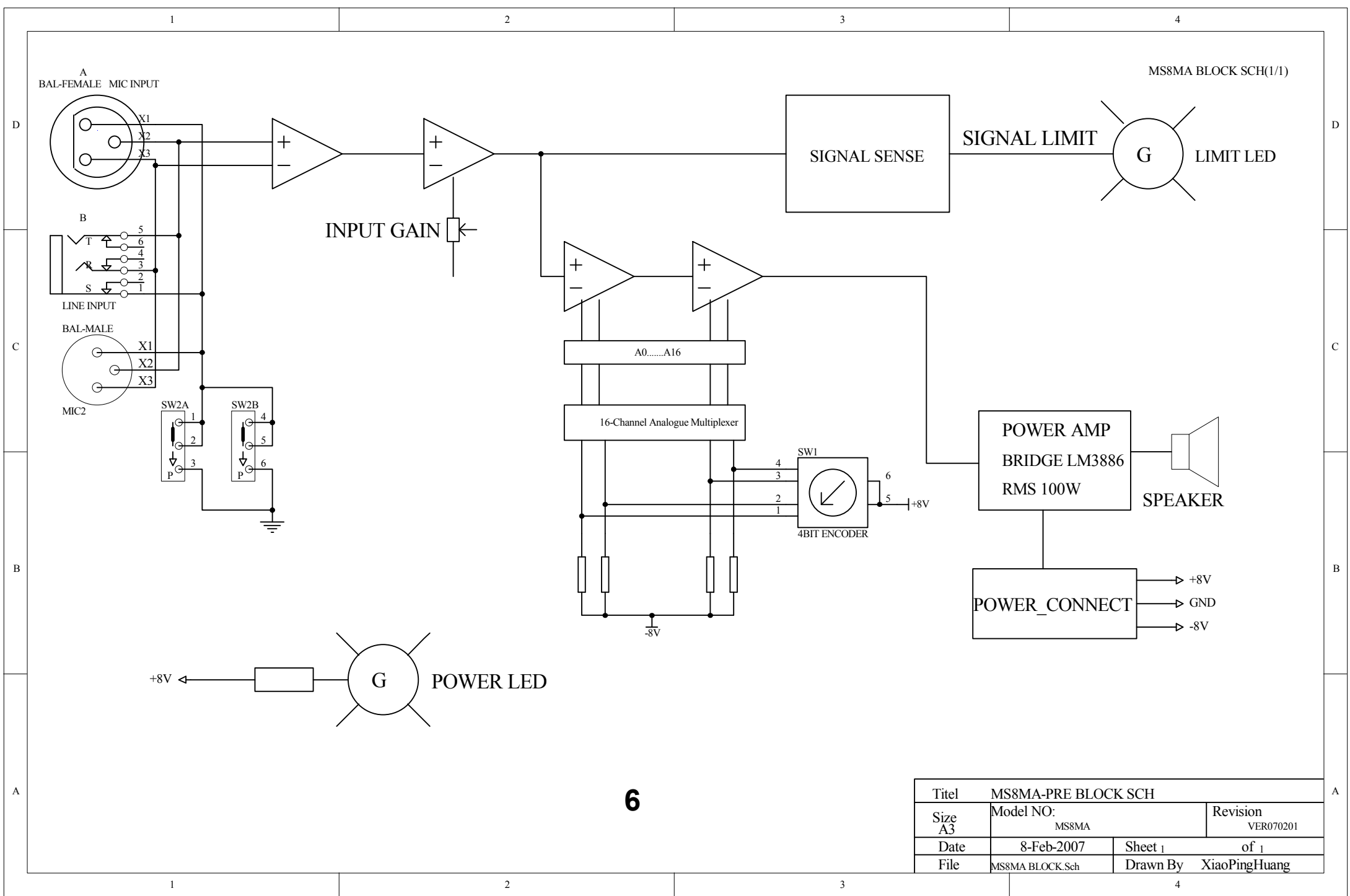


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Size	Model No:	Revision	
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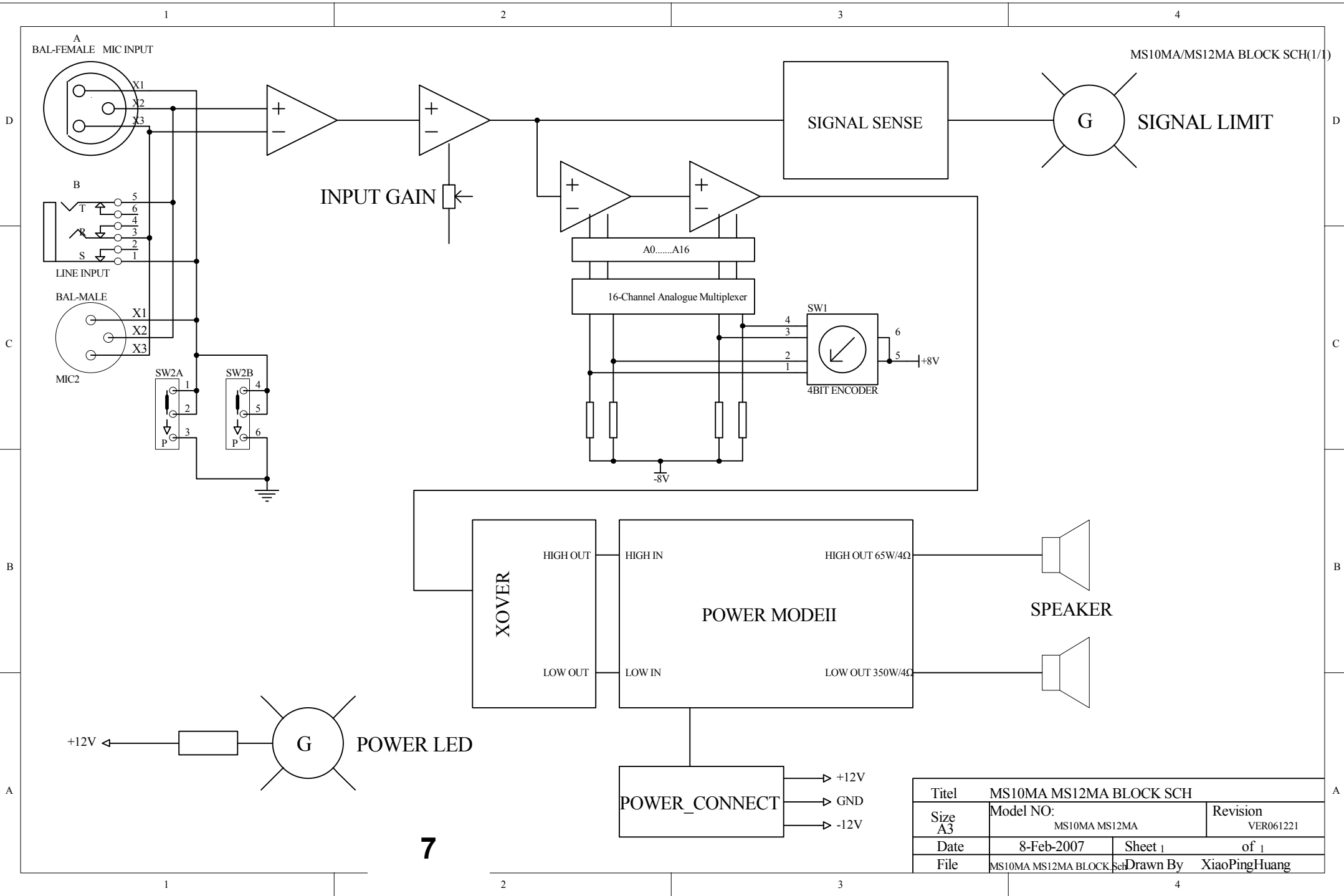
MS8MA BLOCK DIAGRAM



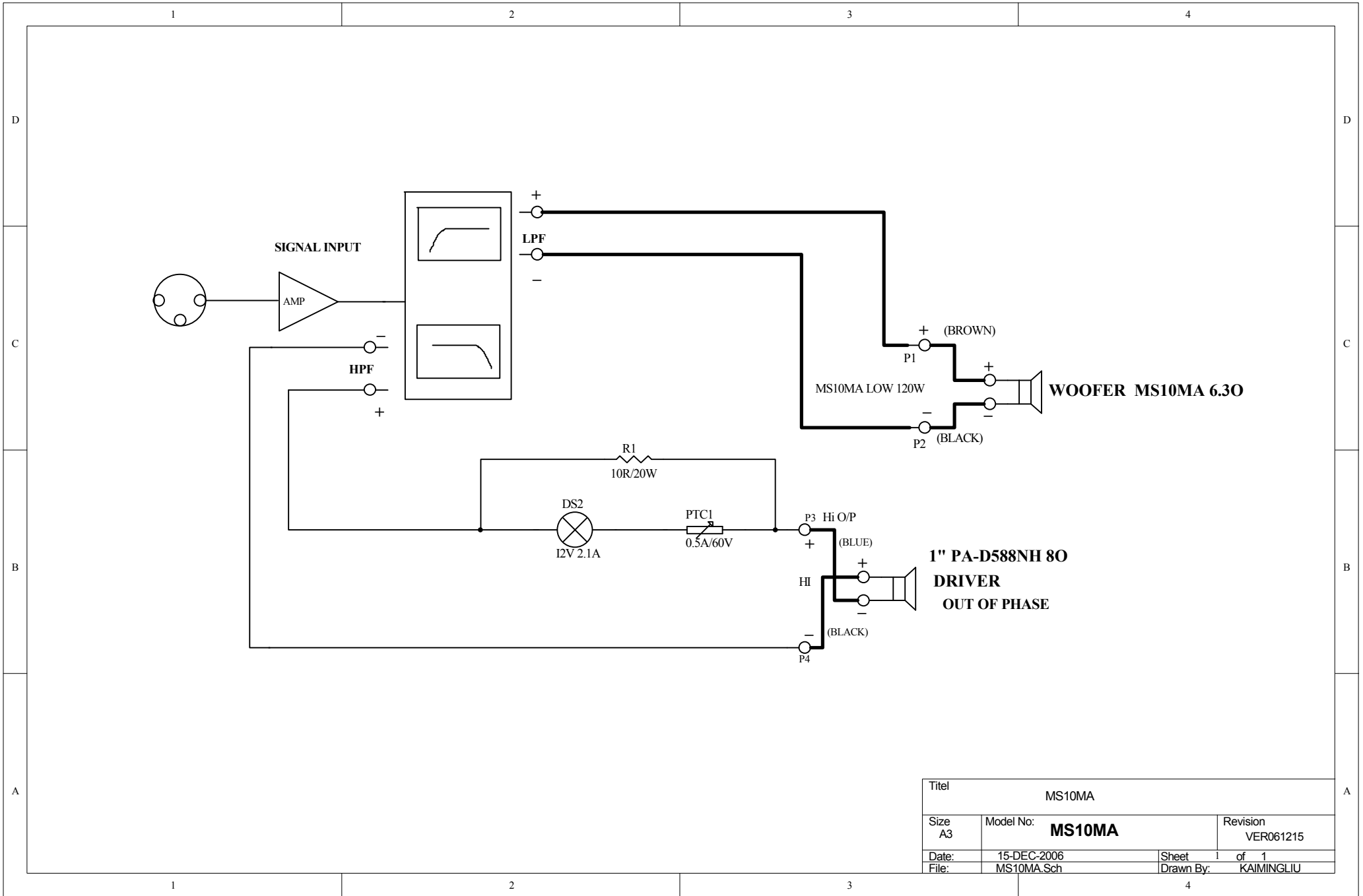
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Date: 16-DEC-2006	Sheet 1 of 1	Drawn By: KAIMINGLIU	
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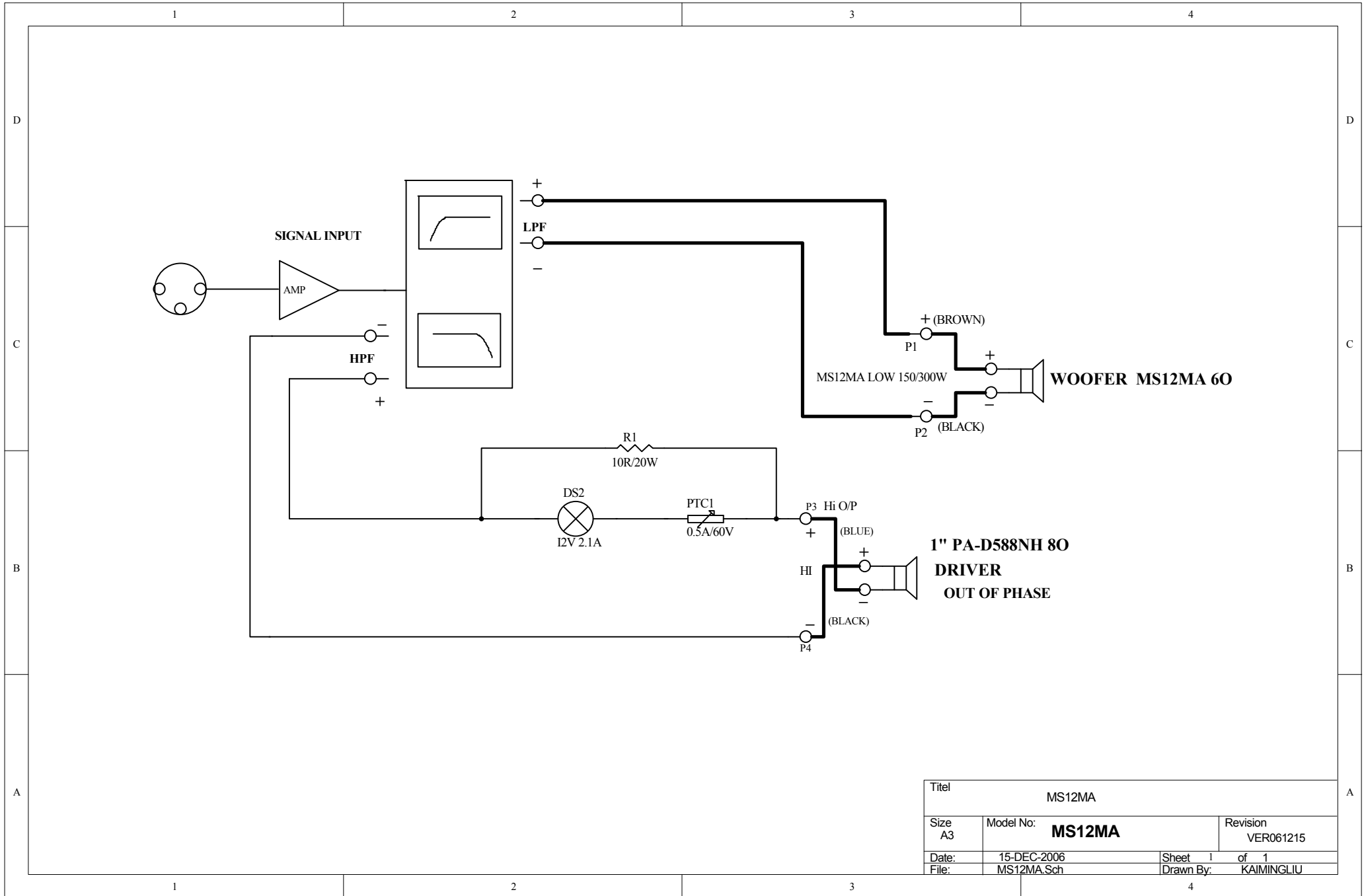
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Date	8-Feb-2007	Sheet 1	of 1
File	MS8MA BLOCK.Sch	Drawn By	XiaoPingHuang



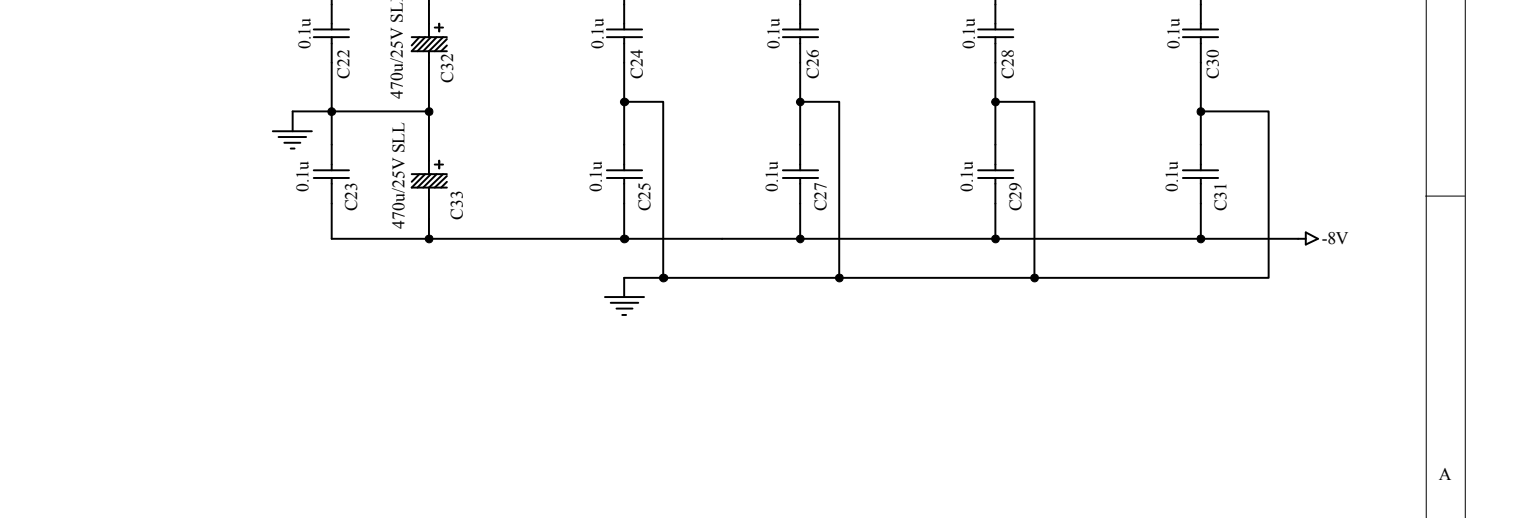
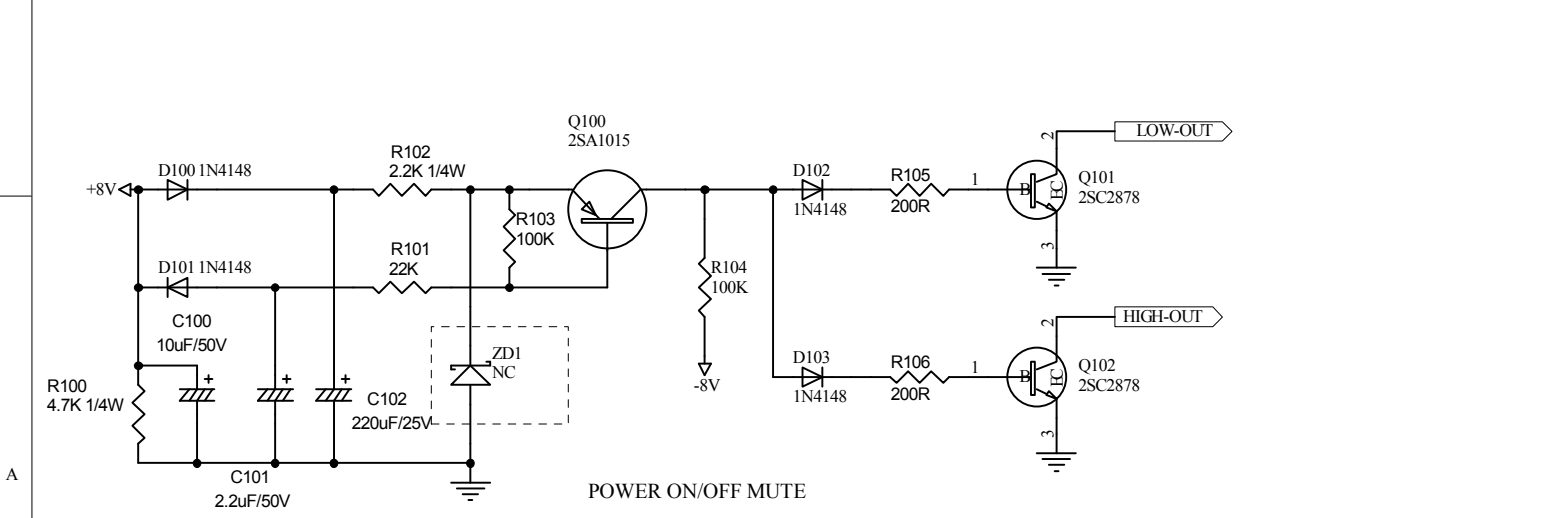
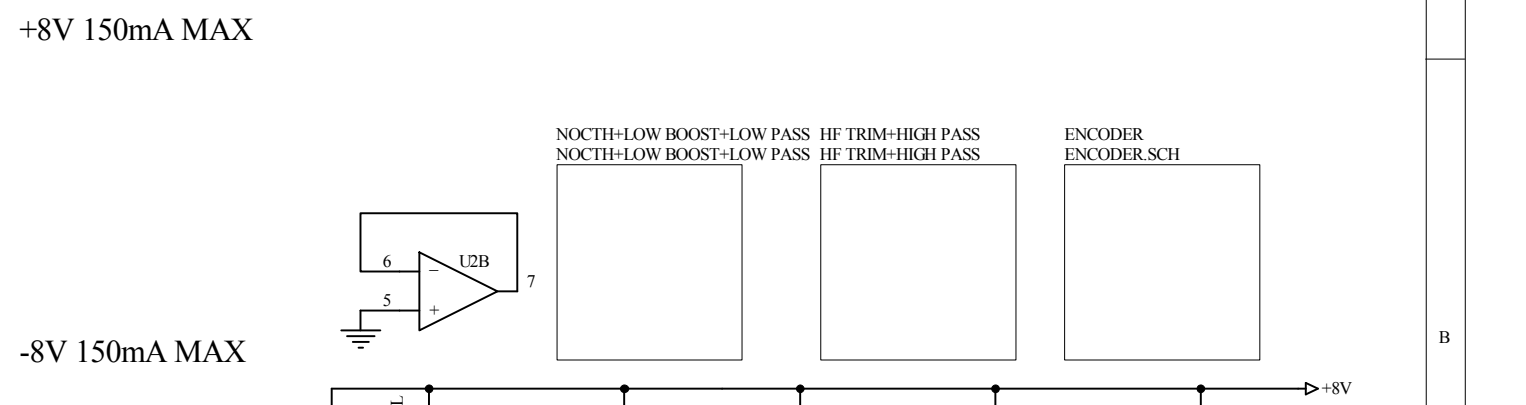
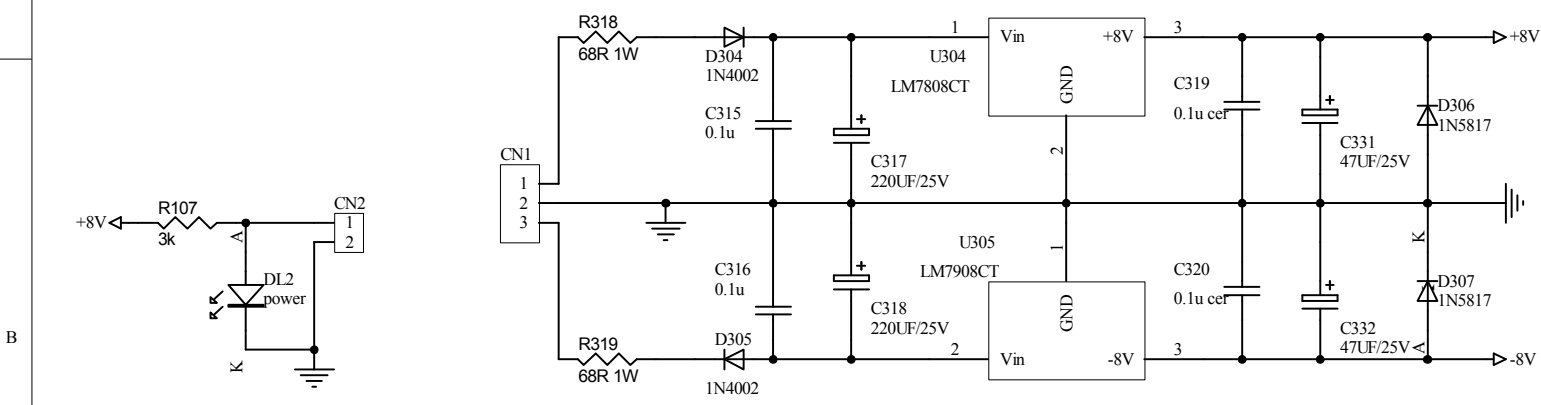
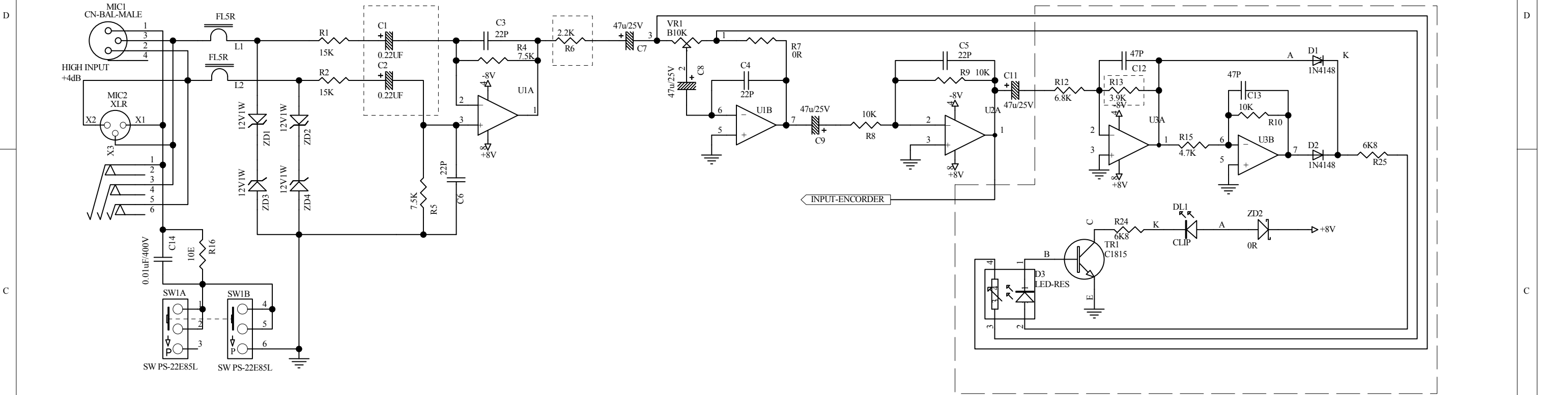
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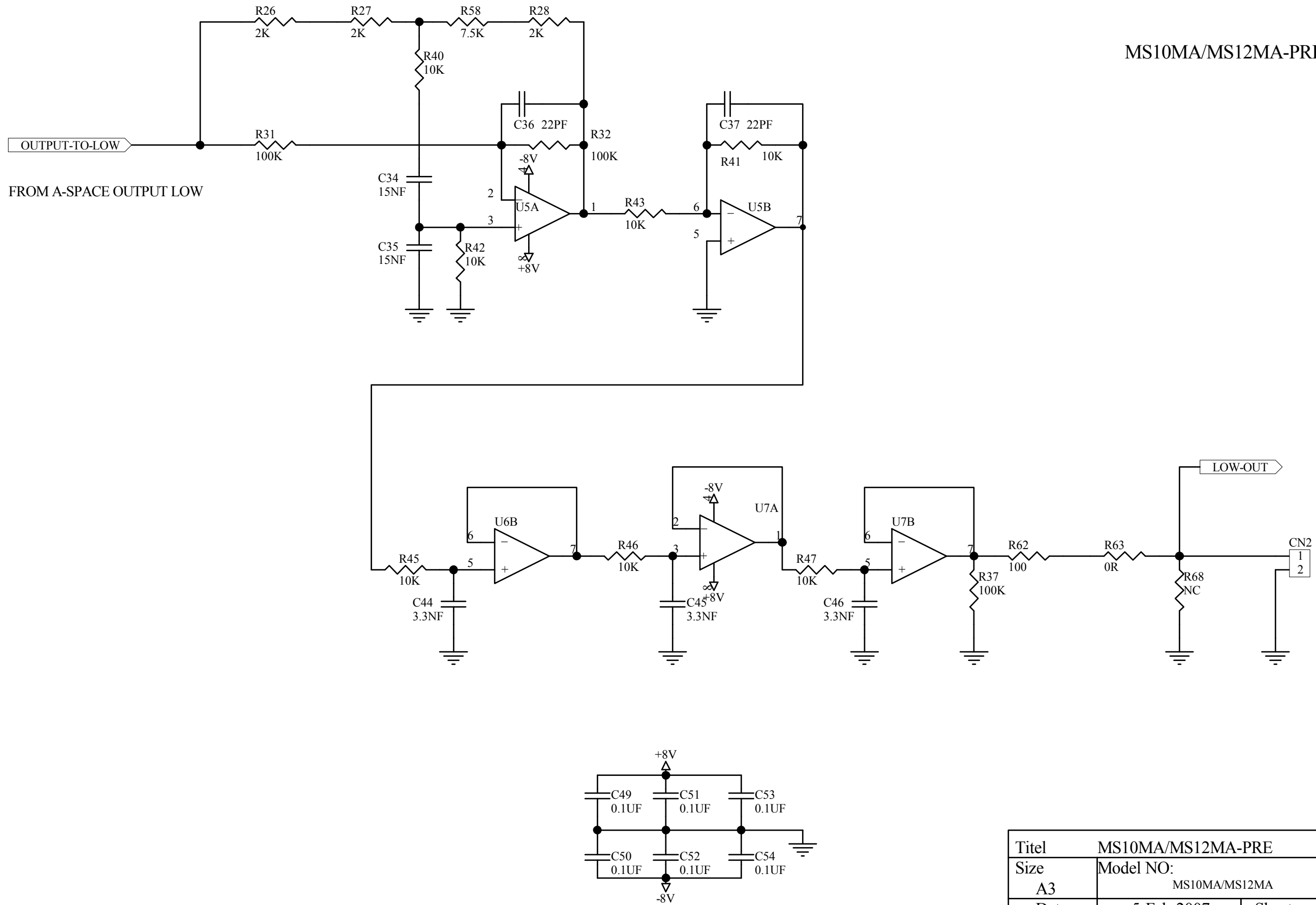


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Size A3	Model No: MS12MA	Revision VER061215	
Date:	15-DEC-2006	Sheet 1	of 1
File:	MS12MA.Sch	Drawn By:	KAIMINGLIU



Titel	MS10MA/MS12MA-PRE	
Size	Model NO:	Revision
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Date	5-Feb-2007	Sheet 1 of 4
File	MS12MA.sch	Drawn By XiaoPingHuang

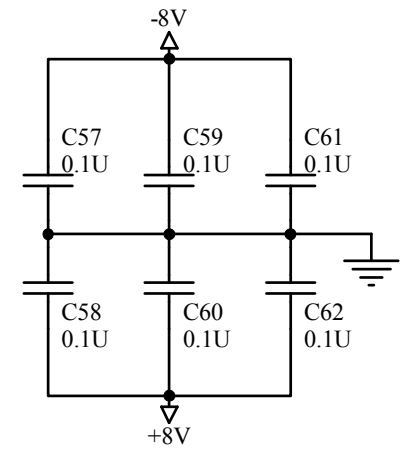
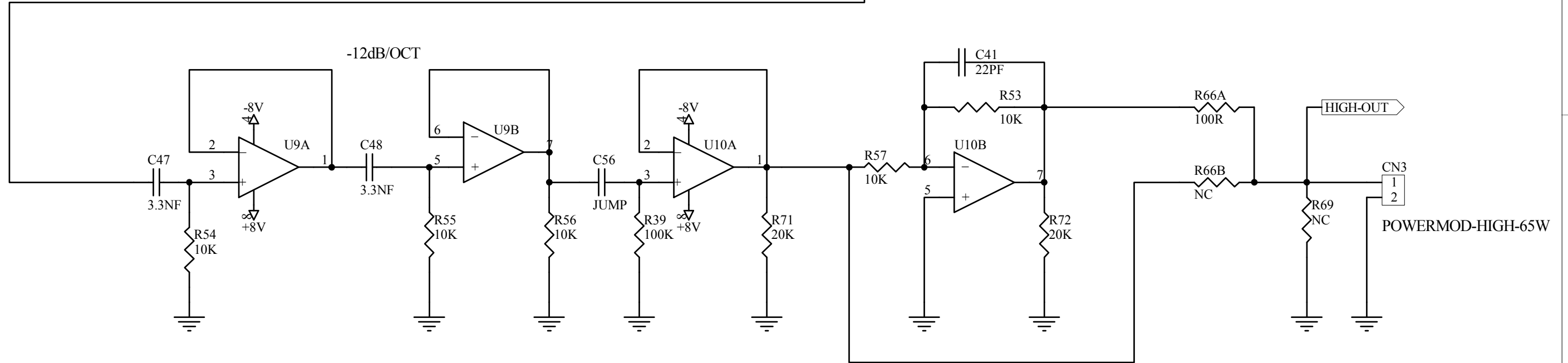
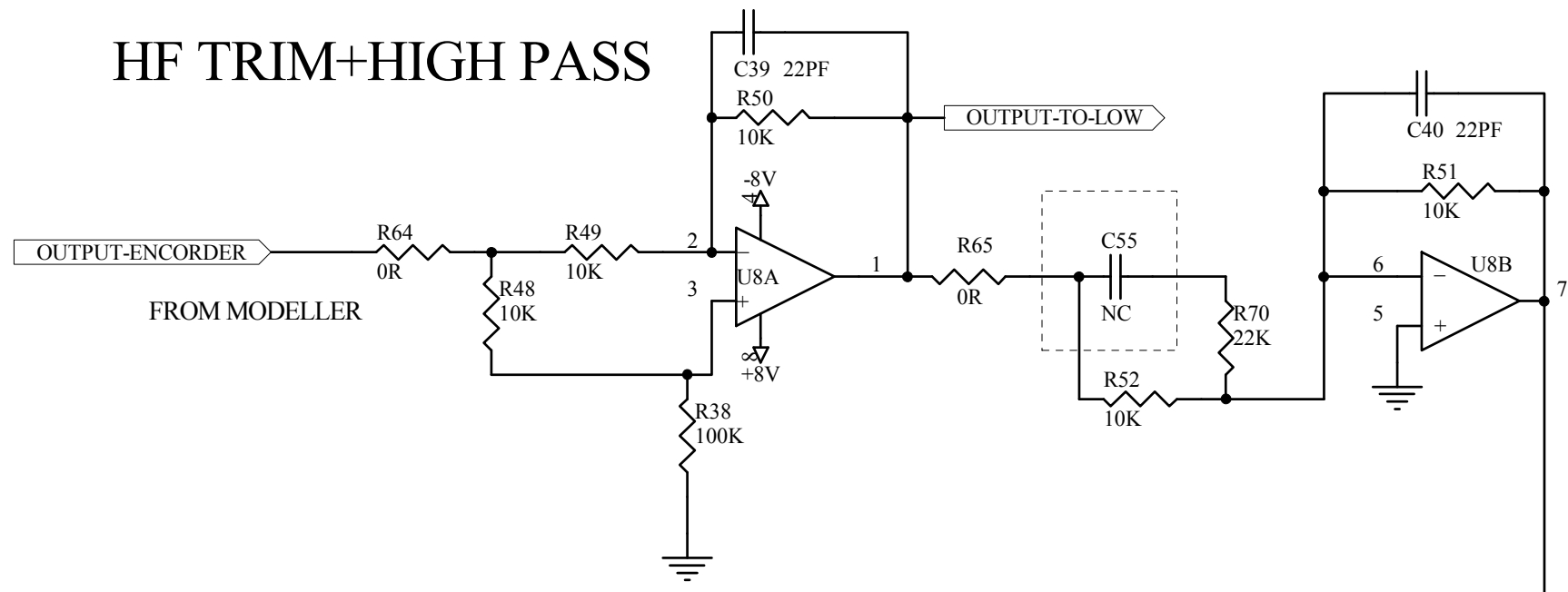
MS10MA/MS12MA-PRE(2/4)



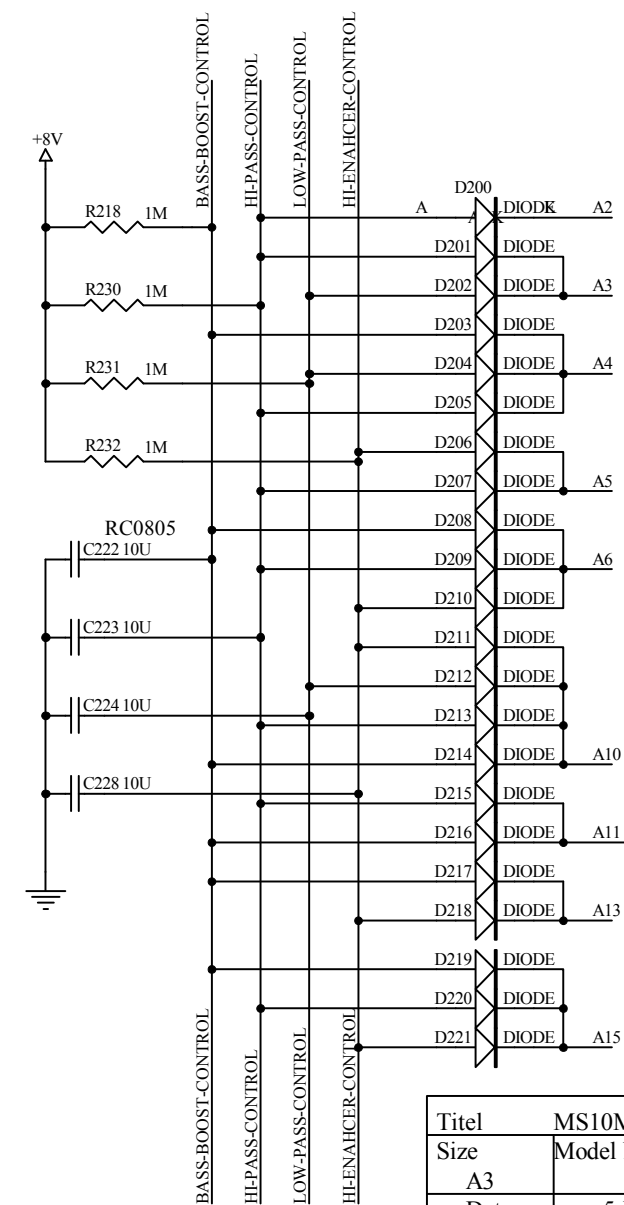
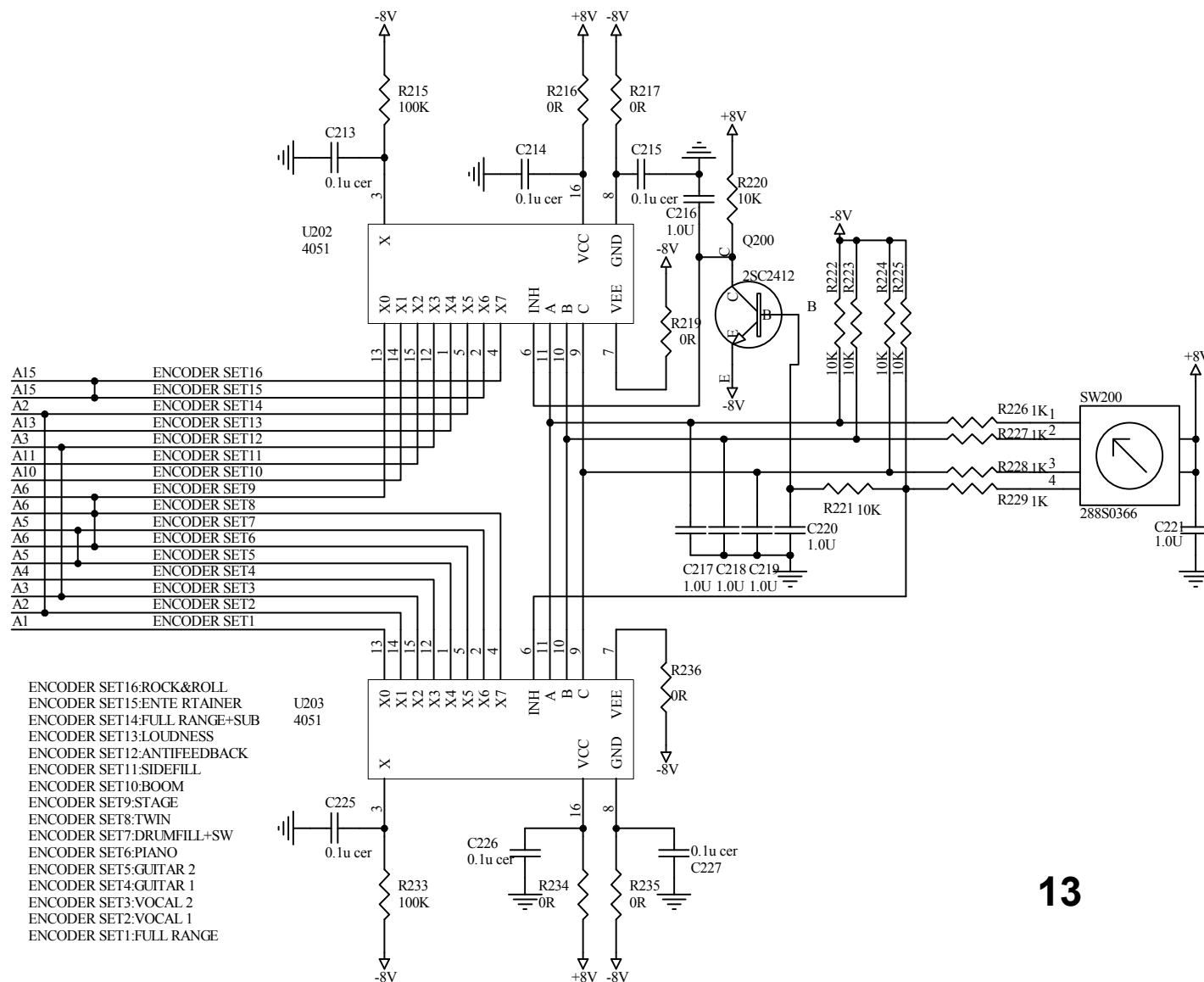
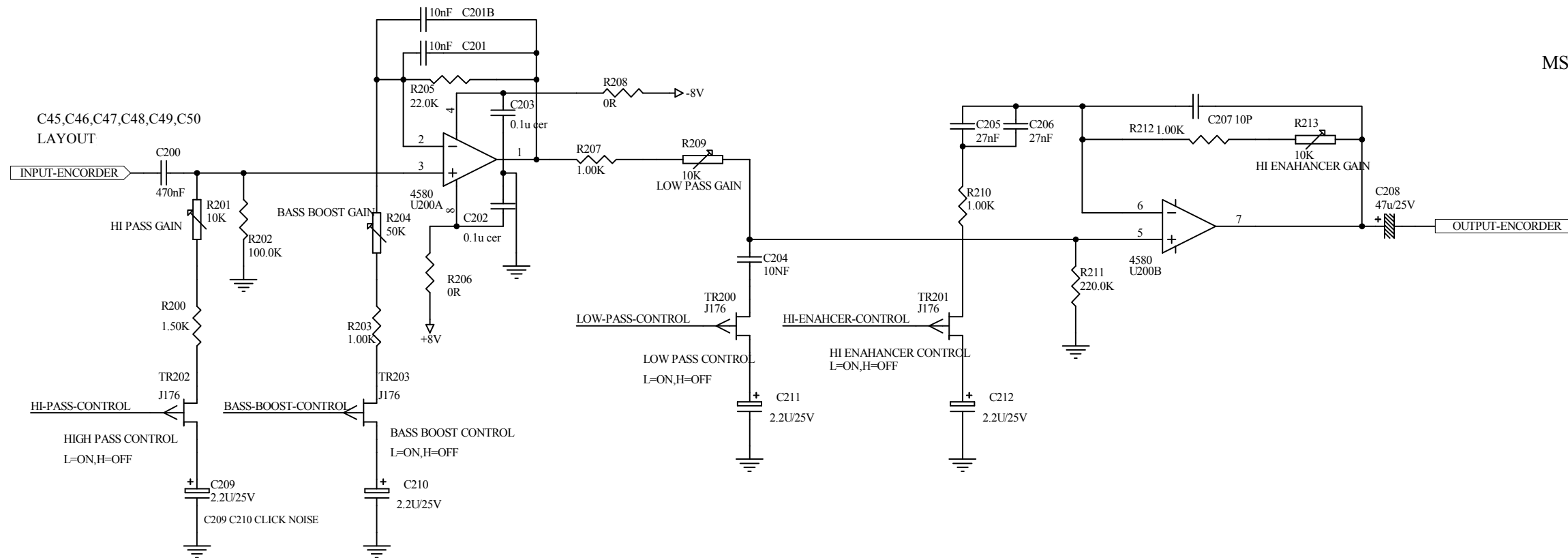
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Date	5-Feb-2007	Sheet 2	of 4
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HF TRIM+HIGH PASS

MS10MA/MS12MA-PRE(3/4)

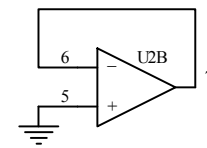
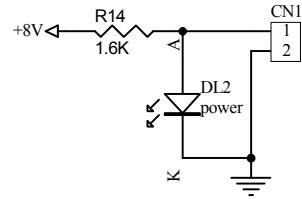
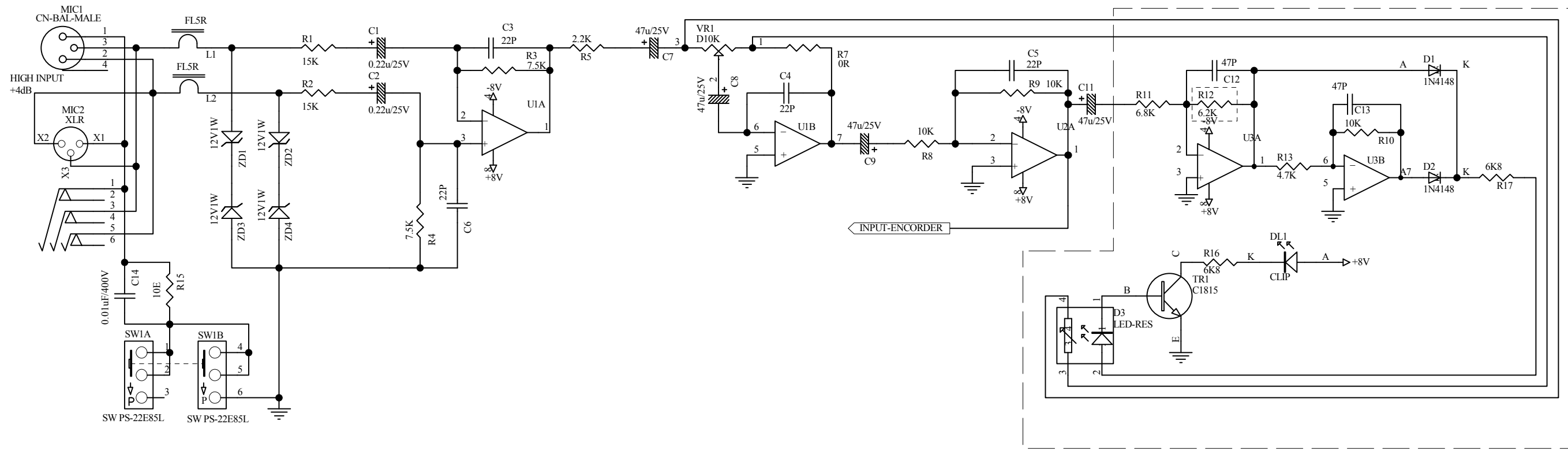


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Size A3	Model NO: MS10MA/MS12MA		Revision VER061212
Date 5-Feb-2007	Sheet 3	of 4	
File HF TRIM+HIGH PASS	Drawn By	XiaoPingHuang	

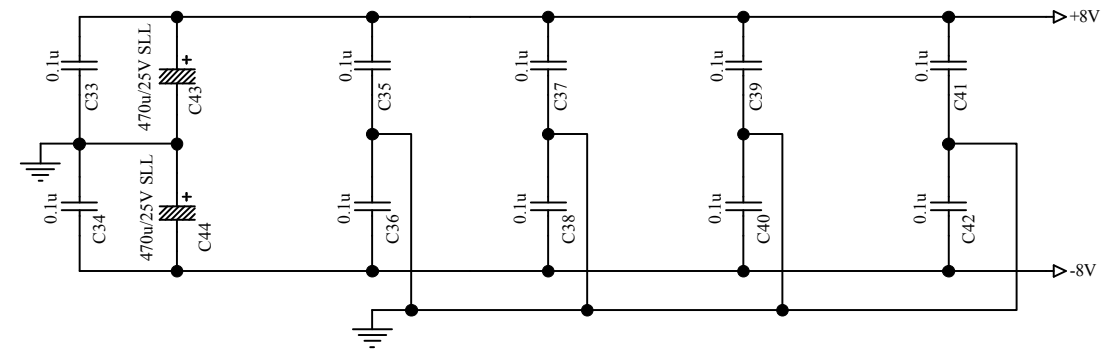
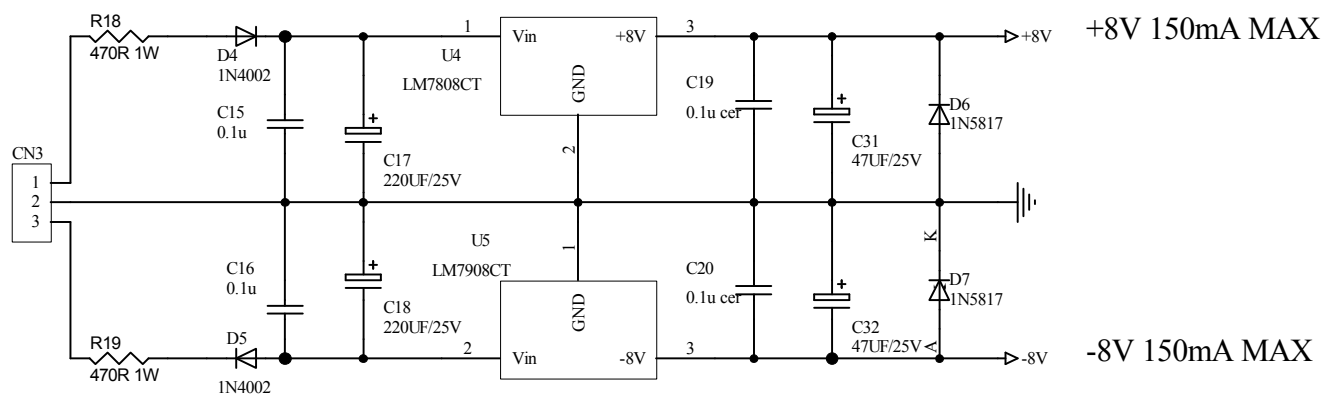


- ENCODER SET16:ROCK&ROLL
- ENCODER SET15:ENTE RTAINER
- ENCODER SET14:FULL RANGE+SUB
- ENCODER SET13:LOUDNESS
- ENCODER SET12:ANTIFEEDBACK
- ENCODER SET11:SIDEFILL
- ENCODER SET10:BOOM
- ENCODER SET9:STAGE
- ENCODER SET8:TWIN
- ENCODER SET7:DRUMFILL+SW
- ENCODER SET6:PIANO
- ENCODER SET5:GUITAR 2
- ENCODER SET4:GUITAR 1
- ENCODER SET3:VOCAL 2
- ENCODER SET2:VOCAL 1
- ENCODER SET1:FULL RANGE

Titel		MS10MA/MS12MA-PRE	
Size	A3	Model NO:	MS10MA/MS12MA
Date	5-Feb-2007	Revision	VER061212
File	ENCODER.SCH	Sheet 4	of 4
		Drawn By	XiaoPingHuang



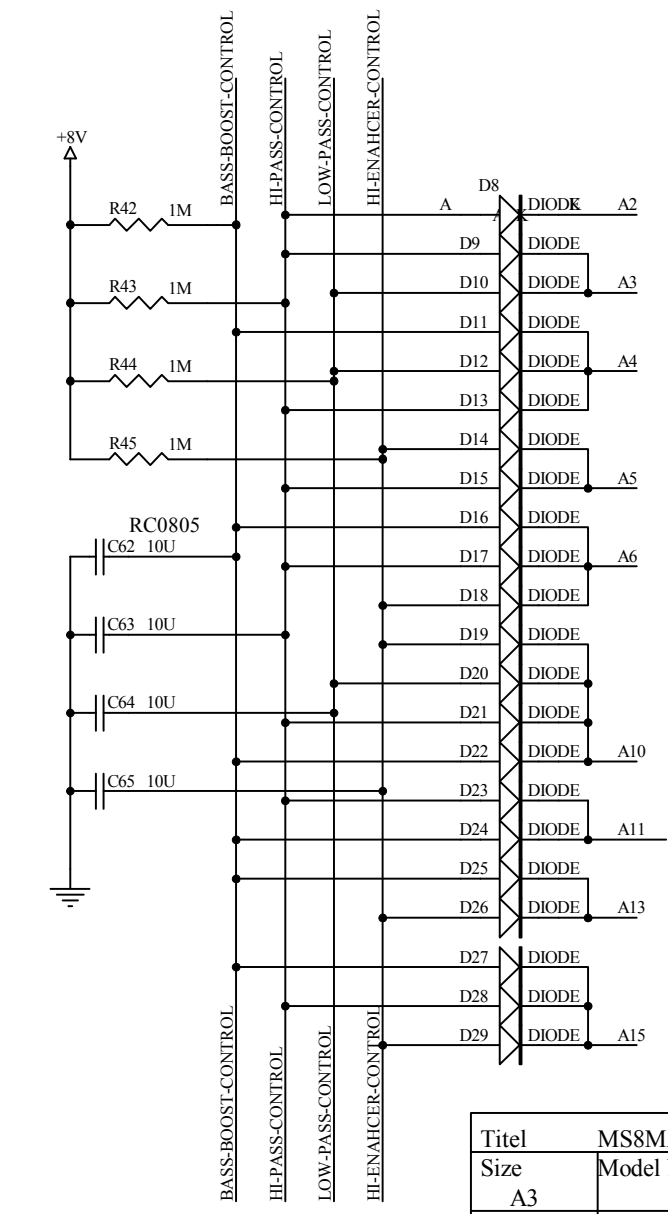
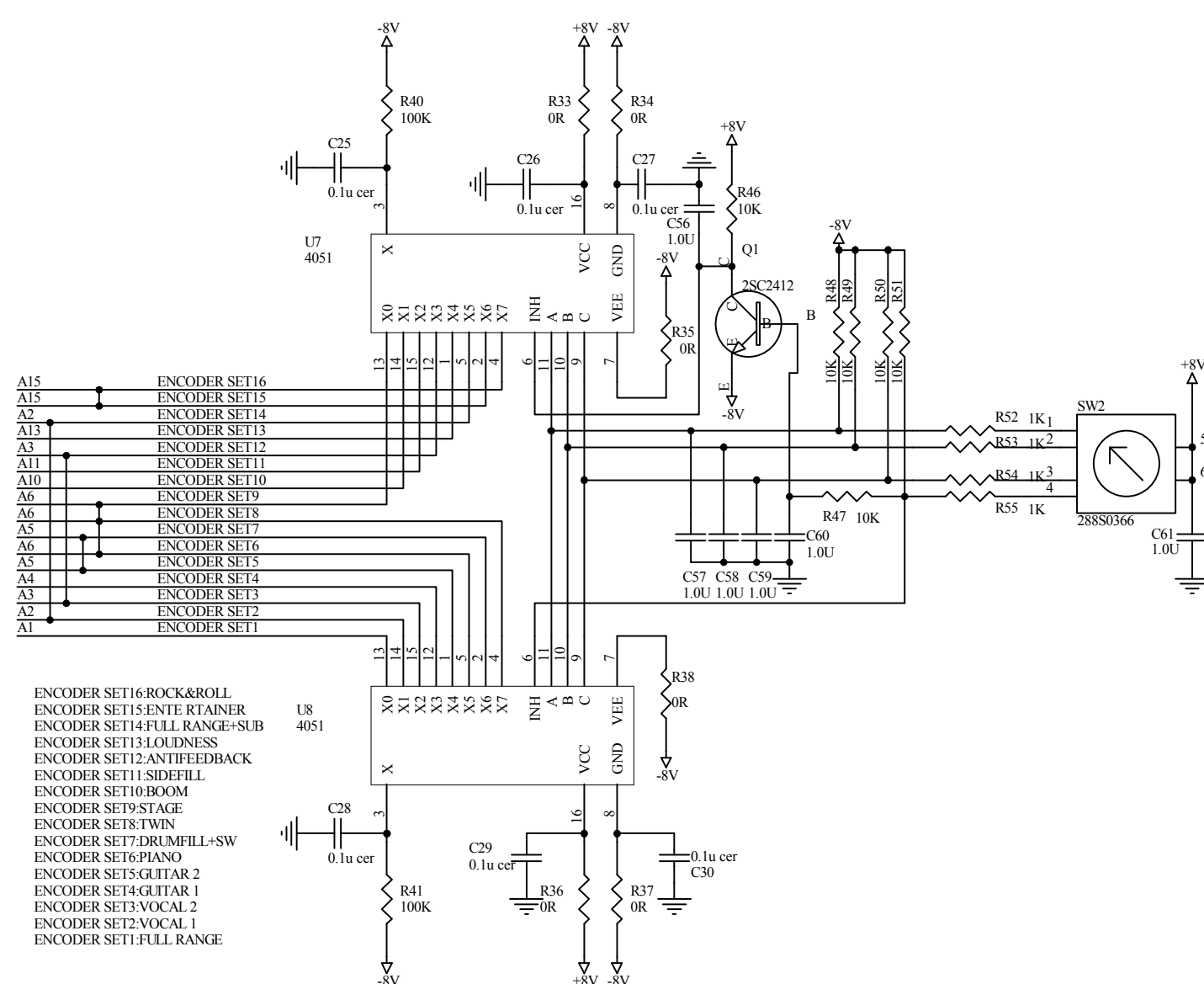
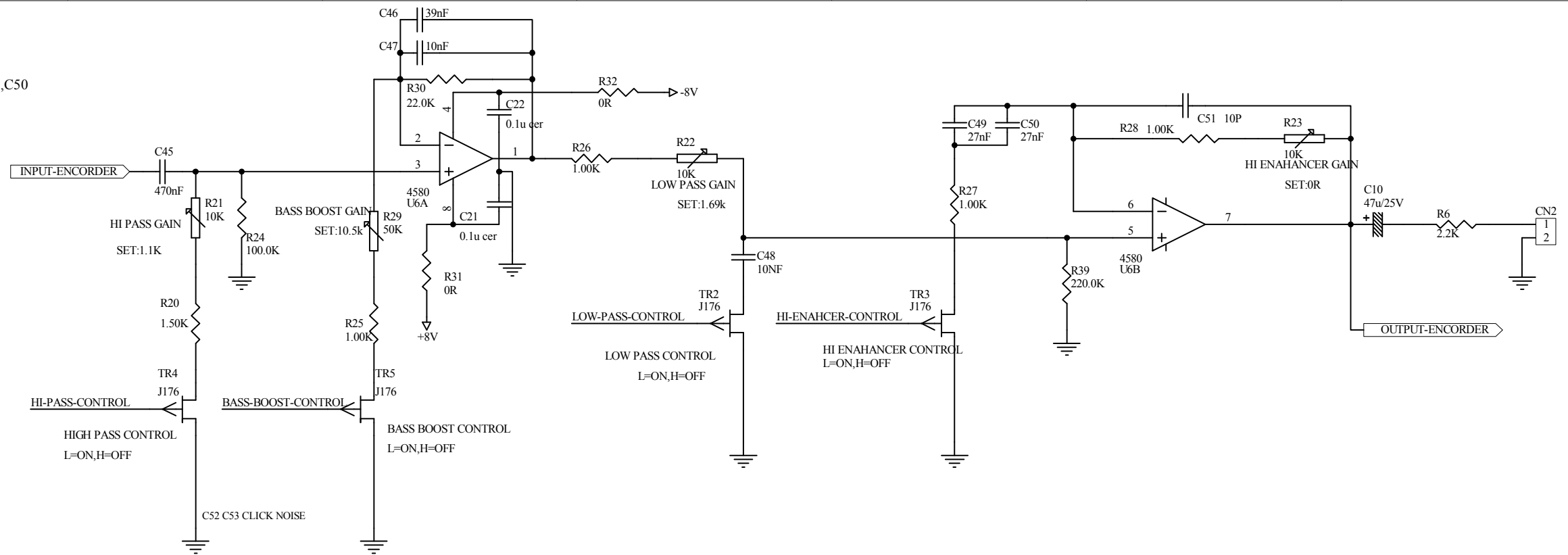
ENCORDER
ENCORDER.SCH



Titel	MS8MA-PRE	
Size	Model NO:	Revision
A3	MS8MA	VER070201
Date	4-Feb-2007	Sheet 1 of 2
File	MS8MA.sch	Drawn By XiaoPingHuang

C45,C46,C47,C48,C49,C50
LAYOUT

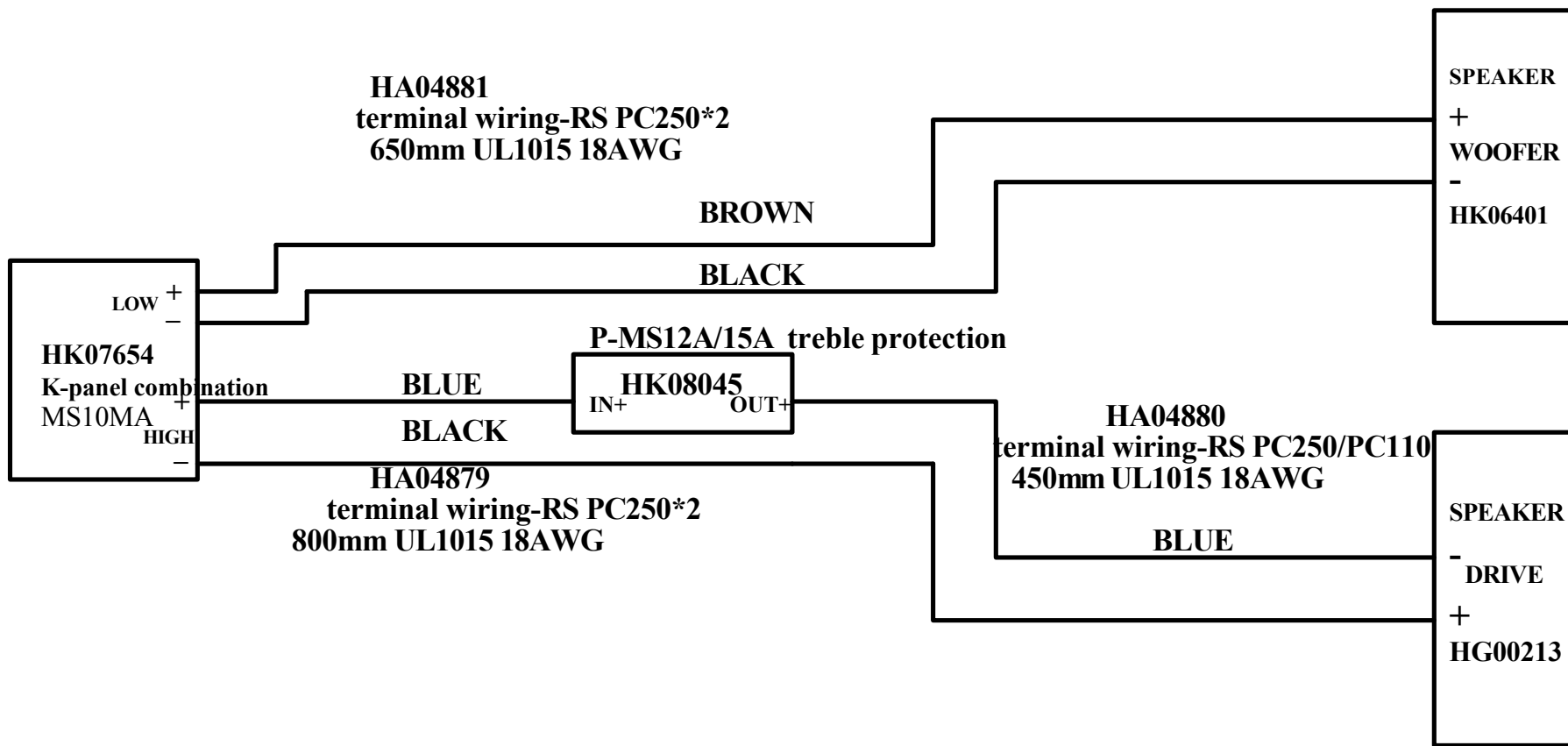
MS8MA-PRE(2/2)



- ENCODER SET16:ROCK&ROLL
- ENCODER SET15:ENTE RTAINER
- ENCODER SET14:FULL RANGE+SUB
- ENCODER SET13:LOUDNESS
- ENCODER SET12:ANTIFEEBACK
- ENCODER SET11:SIDEFILL
- ENCODER SET10:BOOM
- ENCODER SET9:STAGE
- ENCODER SET8:TWIN
- ENCODER SET7:DRUMFILL+SW
- ENCODER SET6:PIANO
- ENCODER SET5:GUITAR 2
- ENCODER SET4:GUITAR 1
- ENCODER SET3:VOCAL 2
- ENCODER SET2:VOCAL 1
- ENCODER SET1:FULL RANGE

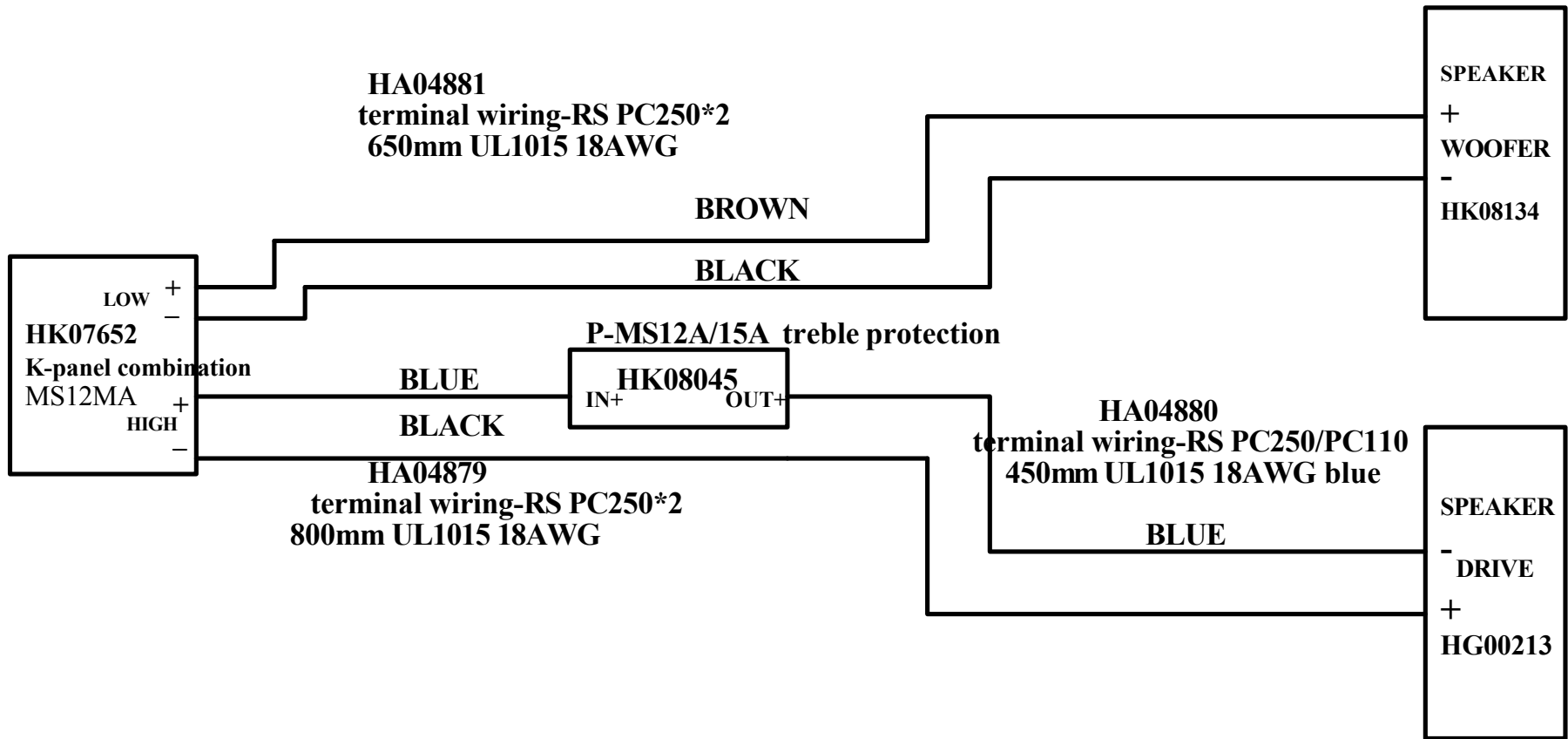
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Size A3	Model NO: MS8MA	VER070201	
Date 4-Feb-2007	Sheet 2	of 2	
File ENCODER.SCH	Drawn By	XiaoPingHuang	

MS10MA Wiring Diagram



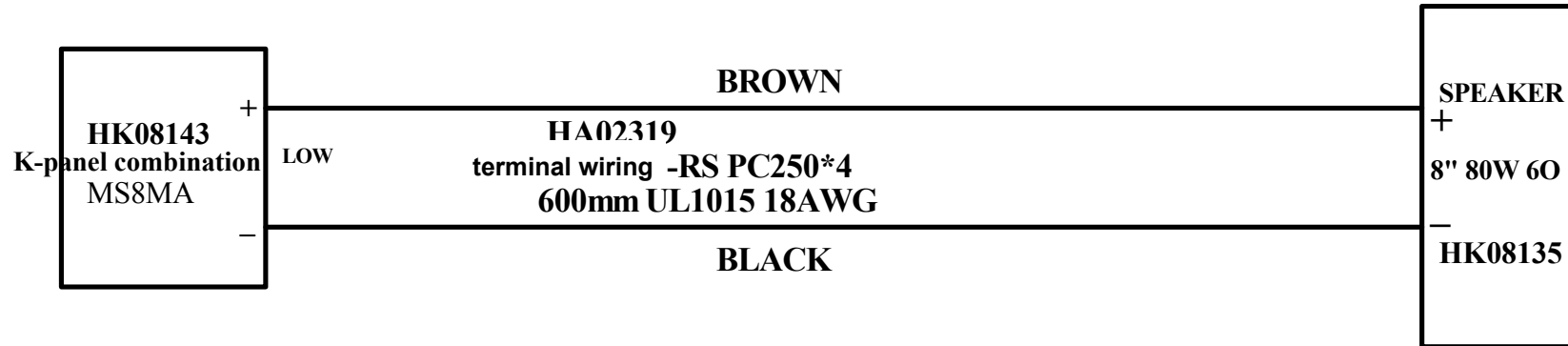
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Size A4	Model No: MS10MA	Revision VER061216	
Date: 16-DEC-2006	Sheet 1	of 1	
File:	Drawn By: KAIMINGLIU		

MS12MA



Titel MS12MA			
Size A4	Model No: MS12MA	Revision VER061216	
Date: 16-DEC-2006	Sheet 1	of 1	
File:	Drawn By:	KAIMINGLIU	

MS8MA wiring diagram



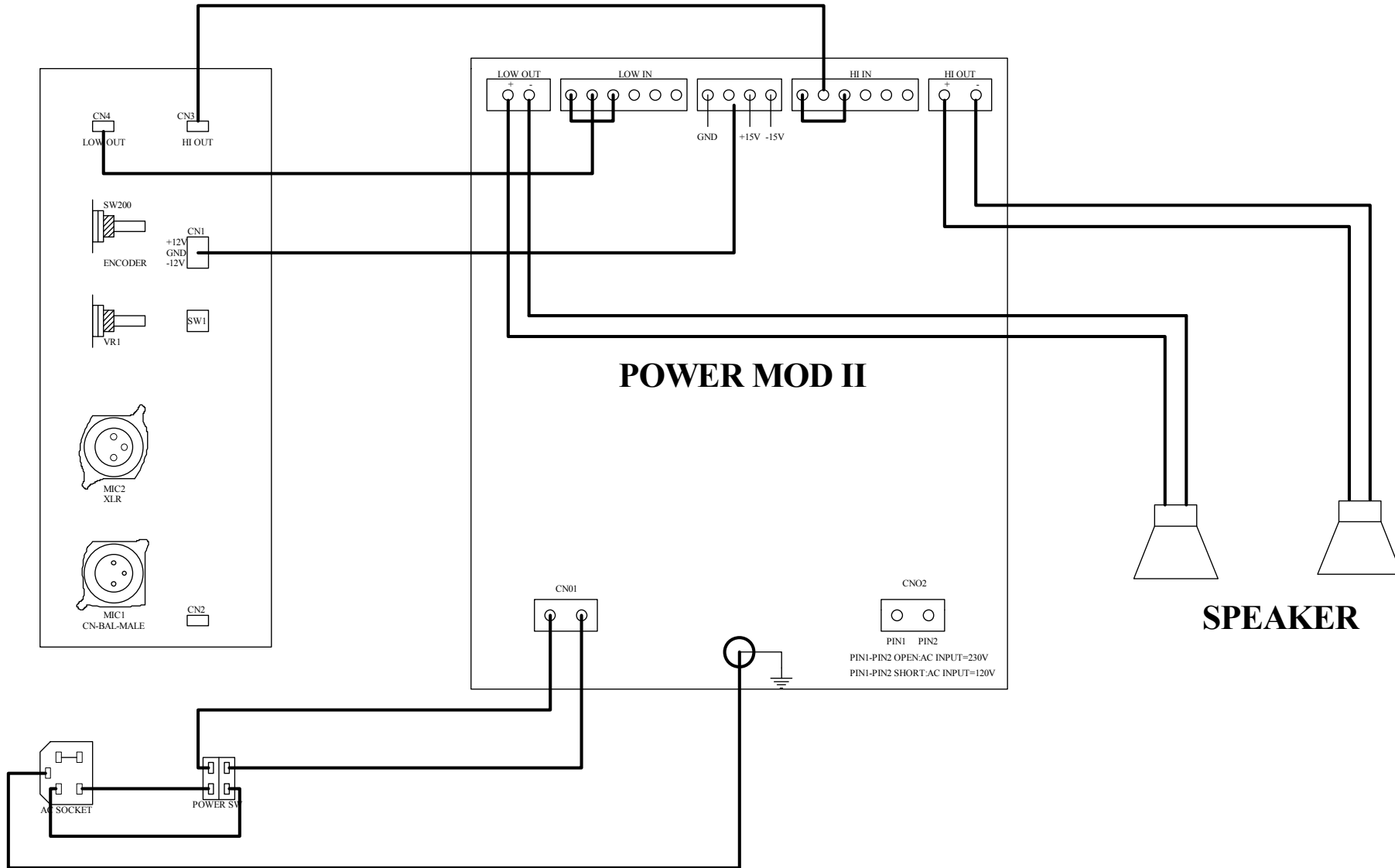
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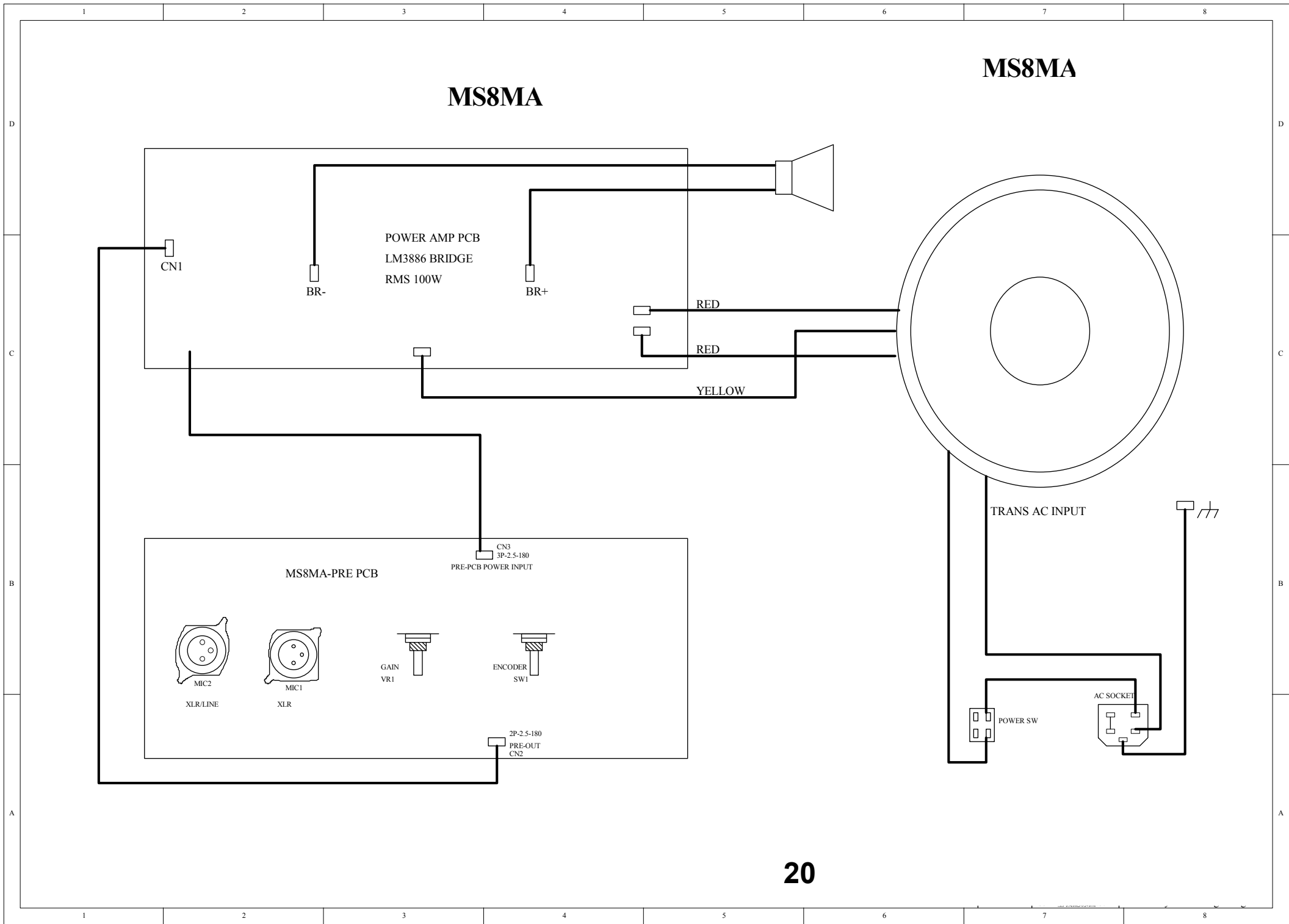
MS10MA MS12MA

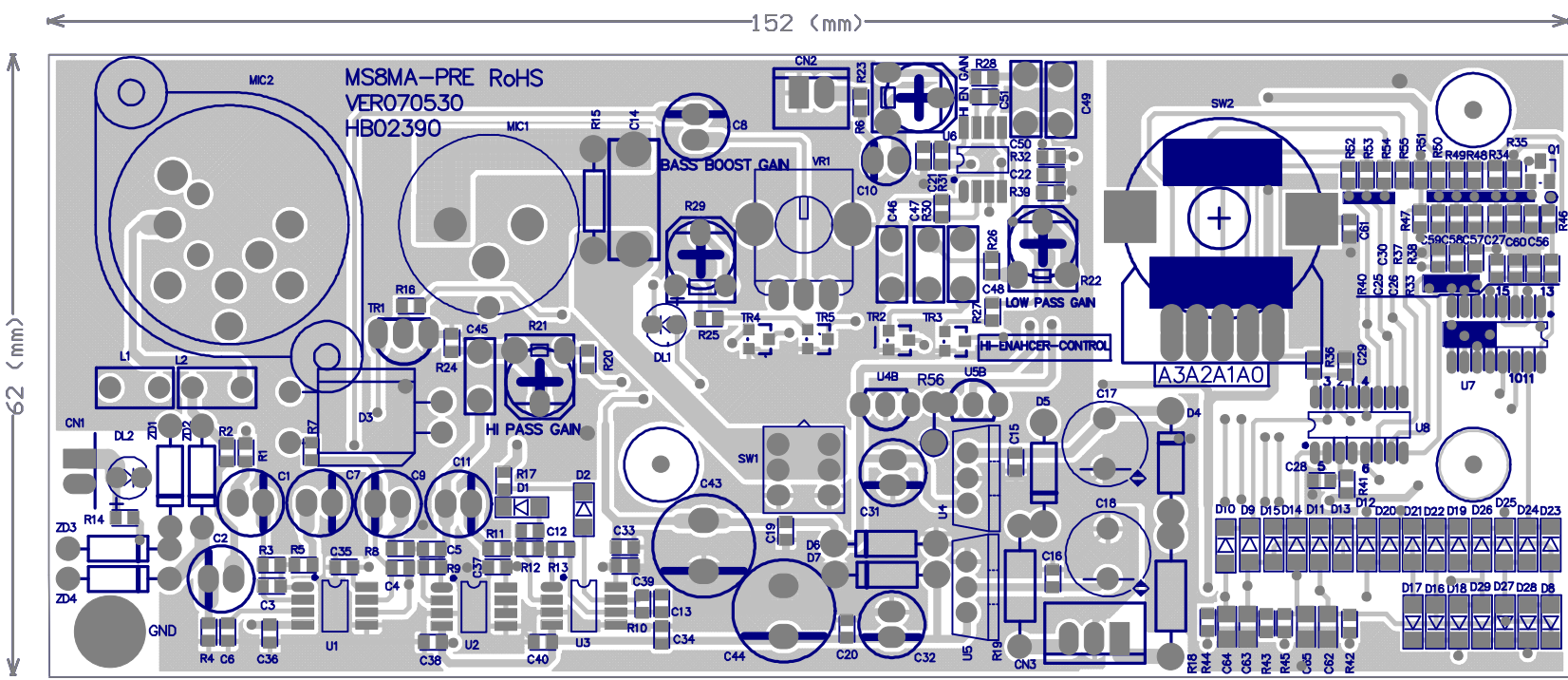
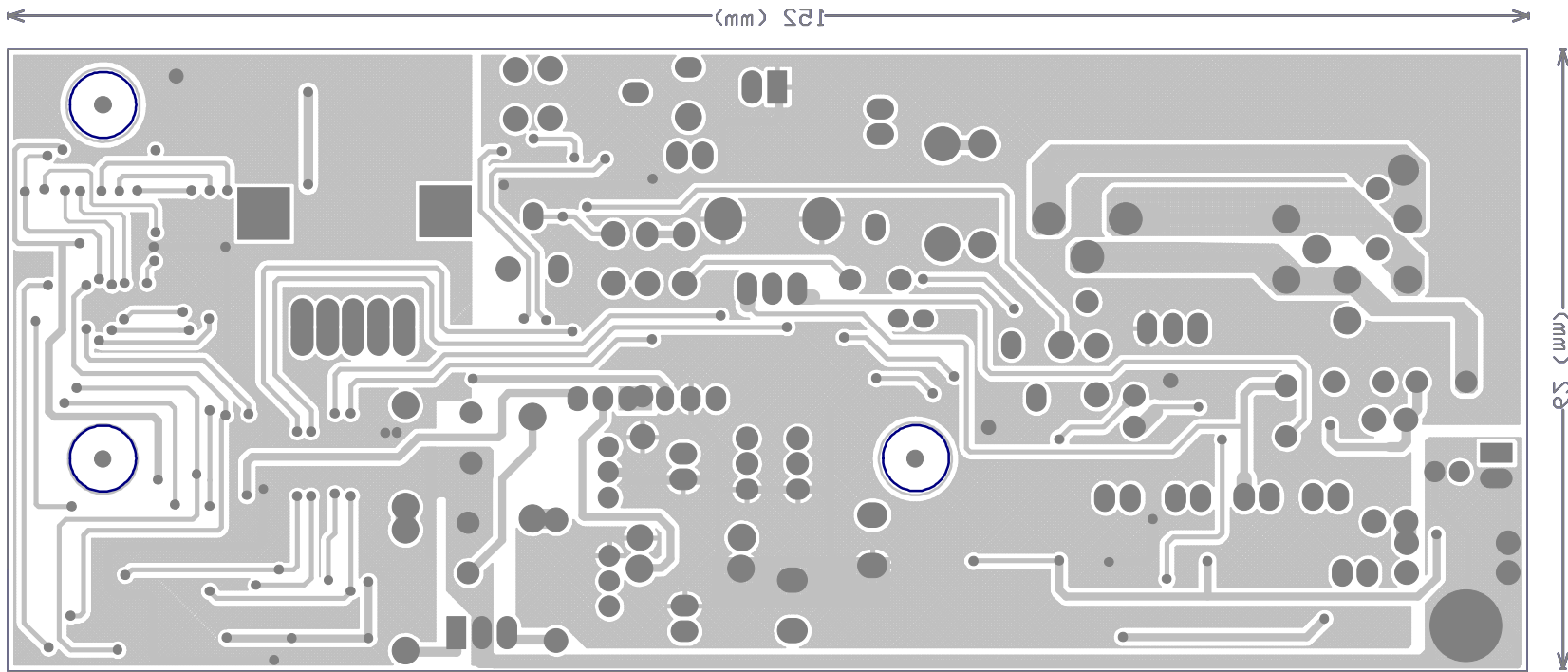
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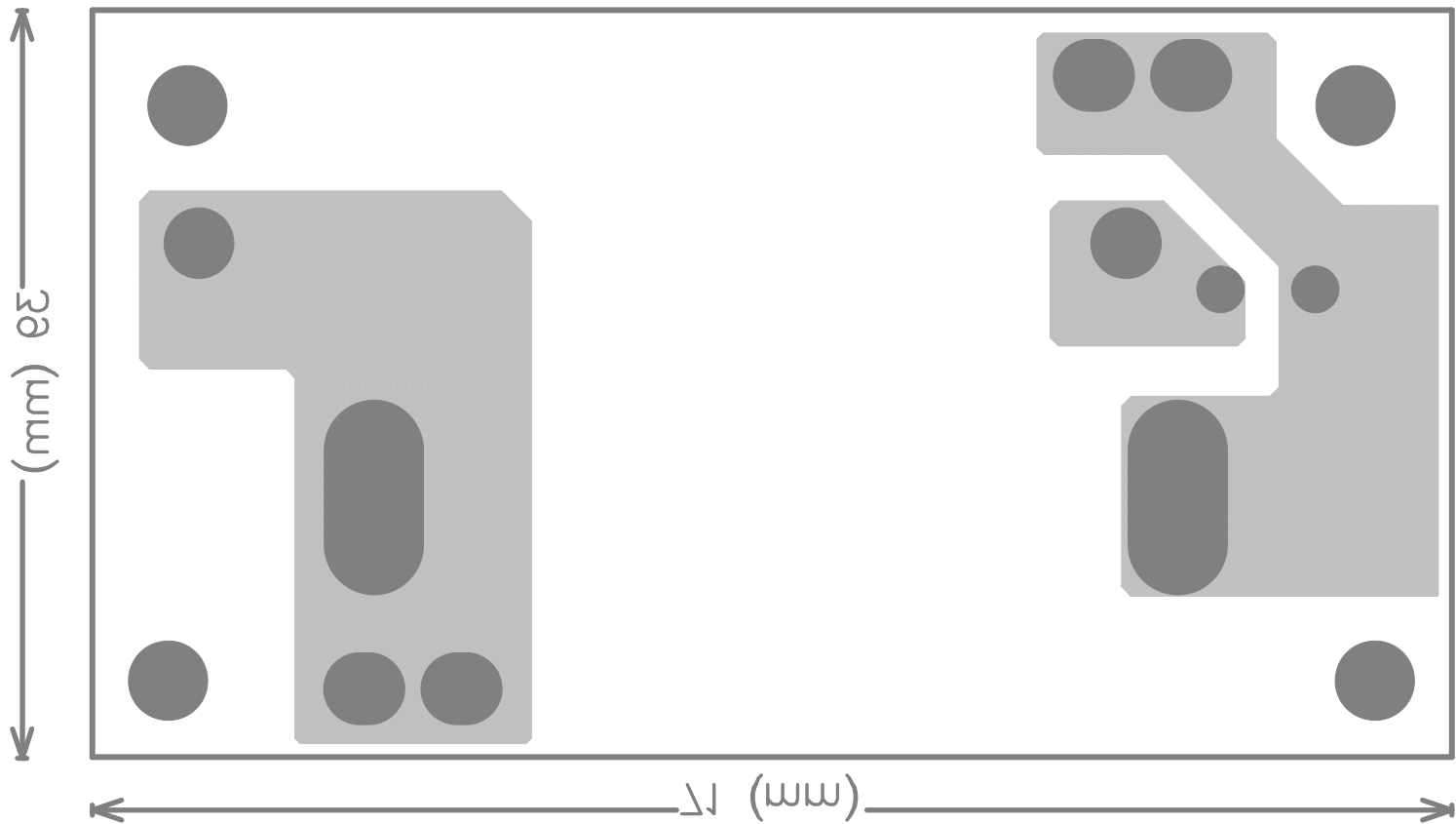
POWER MOD II

SPEAKER









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