

Parts List
DIY-81 rev 1

Capacitors

Electrolytic

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>	
C100	100	25	Axial	8 x 100uF/25V	Axial
C101	150	16	Axial	8 x 150uF/16V	Axial
C102	150	16	Axial	2 x 470uF/16V	Radial
C18	470	16	Radial		
C103	150	16	Axial		
C104	150	16	Axial		
C106	100	25	Axial		
C105	100	25	Axial		
C107	150	16	Axial		
C108	100	25	Axial		
C109	150	16	Axial		
C110	150	16	Axial		
C111	100	25	Axial		
C112	100	25	Axial		
C113	150	16	Axial		
C114	100	25	Axial		
C115	100	25	Axial		
C78	470	16	Radial		

Tantalum

C23	22	16	Radial	5 x 22uF/16V	Radial
C27	22	16	Radial		
C28	22	16	Radial		
C29	22	16	Radial		
C26	22	16	Radial		
C74	22	16	Radial		

Film 10%

C61	1.5	63	Box	1 x 1.5uF/63V	Box
-----	-----	----	-----	---------------	-----

Silver Mica

C121	22nF	250	Radial	4 x 0.022uF/250V	Radial
C116	22nF	250	Radial	3 x 0.1uF/250V	Radial
C137	0.1uF	250	Radial	1 x 0.033uF/250V	Radial
C133	33nF	250	Radial		
C132	22nF	250	Radial		
C131	22nF	250	Radial		
C146	0.1uF	250	Radial		
C141	0.1uF	250	Radial		

Parts List
DIY-81 rev 1

Capacitors

Polystyrene

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>	
C21	1200		Axial	2 x 6800pF	Axial
C17	470		Axial	2 x 1800pF	Axial
C11	1800		Axial	3 x 2200pF	Axial
C10	680		Axial	2 x 3300pF	Axial
C9	1000		Axial	3 x 2700pF	Axial
C8	1500		Axial	2 x 4700pF	Axial
C7	2200		Axial	2 x 3900pF	Axial
C37	6800		Axial	1 x 1200pF	Axial
C36	6800		Axial	1 x 470pF	Axial
C35	4700		Axial	1 x 680pF	Axial
C34	3300		Axial	1 x 1000pF	Axial
C33	3900		Axial	1 x 1500pF	Axial
C32	2700		Axial		
C31	2700		Axial		
C30	1800		Axial		
C54	4700		Axial		
C53	2700		Axial		
C52	3300		Axial		
C51	2200		Axial		
C79	3300		Axial		
C87	3300		Axial		

Ceramic

C62	0.68	250	Box	1 x 0.68uF/250V	Box
-----	------	-----	-----	-----------------	-----

Polystyrene

C124	0.01	250	Box	9 x 0.01uF/250V	Box
C123	0.01	250	Box		
C118	0.01	250	Box		
C119	0.01	250	Box		
C126	0.01	250	Box		
C128	0.01	250	Box		
C144	0.01	250	Box		
C139	0.01	250	Box		
C148	0.01	250	Box		

You might have trouble finding Box case so substitute accordingly

Parts List
DIY-81 rev 1

Capacitors

Polyester

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>	
C125	0.015	250	Box	4 x .015uF/250V	Box
C122	0.015	400	Box	3 x .015uF/400V	Box
C120	0.015	250	Box	3 x .047uF/250V	Box
C117	0.015	400	Box	3 x .068uF/250V	Box
C127	0.015	400	Box	3 x .22uF/250V	Box
C136	0.068	250	Box	5 x .15uF/250V	Box
C135	0.047	250	Box	2 x .47uF/250V	Box
C134	0.047	250	Box	3 x .33uF/250V	Box
C129	0.015	250	Box		
C130	0.015	250	Box		
C147	0.068	250	Box		
C56	0.33	250	Box		
C57	0.22	250	Box		
C145	0.47	250	Box		
C153	0.15	250	Box		
C63	0.47	250	Box		
C143	0.22	250	Box		
C65	0.33	250	Box		
C66	0.33	250	Box		
C142	0.22	250	Box		
C140	0.047	250	Box		
C138	0.068	250	Box		
C149	0.15	250	Box		
C150	0.15	250	Box		
C151	0.15	250	Box		
C152	0.15	250	Box		

Parts List
DIY-81 rev 1

Resistors

1/2 watt 10%

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
R3	6.8M			46 x 6.8M 1/2 watt 10%
R4	6.8M			
R5	6.8M			
R6	6.8M			
R7	6.8M			
R8	6.8M			
R9	6.8M			
R10	6.8M			
R11	6.8M			
R12	6.8M			
R13	6.8M			
R14	6.8M			
R38	6.8M			
R39	6.8M			
R40	6.8M			
R41	6.8M			
R42	6.8M			
R43	6.8M			
R44	6.8M			
R45	6.8M			
R46	6.8M			
R47	6.8M			
R48	6.8M			
R49	6.8M			
R50	6.8M			
R51	6.8M			
R52	6.8M			
R53	6.8M			
R54	6.8M			
R55	6.8M			
R61	6.8M			
R62	6.8M			
R63	6.8M			
R64	6.8M			
R65	6.8M			
R66	6.8M			
R67	6.8M			
R68	6.8M			
R69	6.8M			
R70	6.8M			
R71	6.8M			

Parts List
DIY-81 rev 1

Resistors

1/2 watt 5%

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
R72	6.8M			
R73	6.8M			
R15	6.8M			
R24	6.8M			

1/4 watt 2%

R20	12K			1 x 12K
R21	68K1			1 x 68K1
R100	1K5			1 x 1K5
R2	10K			5 X 10K
R1	47R			6 X 47R
R19	100R			3 x 100R
R18	1K1			2 X 1K1
R17	620R			5 X 620R
R16	15K			5 X 15K
R23	620R			2 X 3K5
R25	10K			2 X 2K
R30	15K			1 X 3K6
R29	3K5			2 X 1K3
R31	2K			1 X 1K6
R32	3K5			1 X 4K3
R26	47R			1 X 2K7
R27	47R			1 X 7K5
R28	47R			1 X 3K9
R33	10K			
R35	3K6			
R34	15K			
R36	2K			
R37	10K			
R75	47R			
R74	15K			
R59	1K3			
R58	1K6			
R57	1K3			
R56	1K1			
R60	620R			
R77	620R			
R76	10K			

Parts List
DIY-81 rev 1

Resistors

<u>1/4 watt 1%</u>				
<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
R78	10K			
R79	47R			
R80	620R			
R81	4K3			
R82	2K7			
R83	7K5			
R84	470R			
R87	15K			
R88	3K9			
R86	100R			
R85	100R			

Parts List
DIY-81 rev 1

Amp Blocks

B340 3
Transistors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>	
Q1	BC441		TO39	3 x BC441	TO39
Q2	BC441		TO39	2 x BC461	TO39
Q3	BC461		TO39	2 x BC184C	TO92
Q4	BC461		TO39	1 x BC214KC	TO92
Q5	BC441		TO39	<u>Transistor Replacements</u>	
Q6	BC184C		TO92	BC441 NTE324	BC214C NTE293
Q7	BC214KC		TO92	BC461 NTE323	BSS17 NTE323
Q8	BC184C		TO92	BC214KC NTE159	BC184C NTE123
<i>*BC184C still available</i>					

Diodes

D1	1n4148		Axial	*Replacement for AA144 = NTE109
D2	1n4148		Axial	
D3	AA 144		Axial	

Trimmer

TR1	5K3		Round
-----	-----	--	-------

Capacitors

C1	0.01uF	100 Polystyrene	1 X .01uF/100V	Axial
C2	220pF	10 Polystyrene	1 X 220pF	Axial
C3	10uF	25 Tant	1 X 10uF/25V	Radial
C4	22uF	16 Tant	1 X 22uF/16V	Radial

Resistors

R1	100K		2 X 100K	1 X 18K
R2	100K		1 X 10K	
R3	10K		3 X 560R	
R4	560R		1 X 150R	
R5	560R		1 X 2K7	
R6	150R		1 X 2K2	
R7	2K7		1 X 15K	
R8	2K2		2 X 4K7	
R9	15K		1 X 3K6	

Parts List
DIY-81 rev 1

Amp Blocks

B340 3
Resistors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
R10	560R			
R11	4K7			
R12	3K6			
R13	4K7			
R14	18K			

Parts List
DIY-81 rev 1

Amp Blocks

B338
Transistors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
Q1	BC184C		TO92	2 X BC184C
Q2	BC184C		TO92	1 X BC214C
Q3	BC214C		TO92	1 X BC441
Q4	BC441		TO39	1 X BC461
Q5	BC461		TO39	

Diodes

D1	BAX 13		Axial	*Replacement for
D2	BAX 13		Axial	BAX 13 = <i>NTE519</i>
D3	AA144		Axial	AA144 = <i>NTE109</i>

Capacitors

C1	100pF		10 Polystyrene
C2	10pF		250 Silver Mica
C3	22uF		16 Tant
C4	0.1uF		25 Tant

Resistors

R1	10K		1 X 10K
R2	560R		3 X 560R
R3	560R		2 X 47K
R4	47K		2 X 7K5
R5	7K5		1 X 2K2
R6	2K2		1 X 2K7
R7	560R		1 X 22K
R8	7K5		1 X 150R
R9	2K7		1 X 12K
R10	22K		
R11	150R		
R12	12K		
R13	47K		

Parts List
DIY-81 rev 1

Amp Blocks

B308
Transistors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
Q1	BC214C		TO92	4 X BC214C
Q2	BC184C		TO92	2 X BC184C
Q3	BC214C		TO92	
Q4	BC184C		TO92	
Q5	BC214C		TO92	
Q6	BC214C		TO92	

Capacitors

C1	10pF	250	Silver Mica
C2	10pF		Polystyrene
C3	10pF		Polystyrene

Resistors

R1	100R			2 X 100R
R2	33K			2 X 33K
R3	3K2			1 X 3K2
R4	100R			1 X 22K
R5	22K			1 X 47K
R6	33K			1 X 1M
R7	47K			
R8	1M			

Parts List
DIY-81 rev 1

Transformers & Output Connector

Resistors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>
LO2567	1K		
LO2567	100R		
Rear Con	5k7		

Capacitors

LO2567	.01uF	100V	Polyester
--------	-------	------	-----------

Transformers

T1	T1454	Mic Input	You can of course substitute with anything you want such as Lundhal, Sowter, etc... Just be sure to respect the requirements involved.
T2	T1452	Line Input	
T3	LO2567	Output	

Inductors

		Neve Part No.	Carnhill Part No.
L1	Hi Mid Range	vt22675	vtb9048
L2	Lo Mid Range	vt22674	vtb9047

Parts List
DIY-81 rev 1

Switches

Resistors

<u>Designation</u>	<u>Function</u>	<u>Value</u>	<u>Style</u>	
Gain Switch	Gain	3 Pole x 23 Position	Rotary	Non-Shorting
SW2	Treble	3 Pole x 6 Position	Rotary	Shorting
SW3	Hi-Mid	1 Pole x 11 Position	Rotary	Non-Shorting
SW6	Lo-Mid	1 Pole x 11 Position	Rotary	Non-Shorting
SW8	Bass	3 Pole x 6 Position	Rotary	Non-Shorting
SW9	Hi Filter	3 Pole x 6 Position	Rotary	Non-Shorting
SW9	Lo Filter	3 Pole x 6 Position	Rotary	Non-Shorting
	Treble Gain	10K Lin	Pot	
	Hi-Mid Gain	10K Lin	Pot	
	Lo-Mid Gain	10K Lin	Pot	
	Bass Gain	10K Lin	Pot	
	Rear Trim Pot	3k7 Log <i>5K Okay</i>	Pot	
	Output Fader	10K Log	Pot	
SW1	Shelving	SPDT		
SW4	HI-Q	SPDT		
SW5	HI-Q	SPDT		
SW10	Not Used			
SW11	Not Used			
SW12	Phase	DPDT		
SW13	Bypass	DPDT		
Hi/Lo Input	Impedence	DPDT		

Parts List
DIY-81 rev 1

Everything Else

Description **Function**

Knobs	Various knobs for control pots and rotary switches
Caps	Various caps for the knobs and switches
Rack Case	Gotta put this thing inside some sort of box
XLR	Audio inputs and output. Use separate Mic and Line connectors. ALL BALANCED.
Rear Connector	You can either solder direct to and from the mainboard or use a multi terminal connector or barrier strip.
PCB	The mainboard is large ... about 10" x 6" ... so I would suggest buying one 12" x 12" board and cut it to size. From this you will also be able to make the amp boards. It's a bit tight but if you take your time it should work out.
PCB	This smaller PCB is for the power supply. 6" x 3" will be enough.
LED	The usual assortment of lights to fancy up your unit.
IEC Inlet	The usual 3 prong power inlet to supply mains voltage.
Fuse	Fuse the mains input for protection.

The Power Supply

Capacitors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
C1	4700	50	Radial	1 x 4700uF/50V
C2	100	50	Radial	3 x 100uF/50V
C3	100	50	Radial	4 X 10uF/50V
C4	10	50	Radial	1 X 22uF/50V
C5	22	50	Radial	1 X 220uF/50V
C6	100	50	Radial	2 X 2u2/63V
C7	10	50	Radial	2 X 100nF
C8	220	100	Radial	1 X 330nF
C9	2.2	63	Radial	
C10	2.2	63	Radial	
C11	10	50	Radial	
C12	10	50	Radial	
C13	100n		Radial	
C14	330n		Radial	
C15	100n		Radial	

Resistors

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
--------------------	--------------	----------------	--------------	---------------

R1	68
R2	240
R3	4K3
R4	47
R5	330
R6	12K
R7	10K

Diodes

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
D1	BYV27			4 x BYV27
D2	BYV27			8 x 1N4007
D3	BYV27			
D4	BYV27			
D5	1N4007			
D6	1N4007			
D7	1N4007			
D8	1N4007			
D9	1N4007			
D10	1N4007			
D11	1N4007			
D12	1N4007			

Regulators

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
RG1	LM317KC		TO-220	
RG2	7806		TO-220	
RG3	TL783		TO-220	

Fuses

<u>Designation</u>	<u>Value</u>	<u>Voltage</u>	<u>Style</u>	<u>Totals</u>
F1	The fuses are at the output of the 24V so use an appropriate value vs the current			
F2	you may draw, up to 1 amp.			