
Service Manual

Model
NF-1
&
NF-1A

NEAR FIELD STUDIO MONITOR
SPEAKER SYSTEM

Fostex[®]

Fostex[®]

FOSTEX CORPORATION 3-2-35 Musashino, Akishima, Tokyo, Japan 196-0021
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CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightening flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

“WARNING”

“TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.”

SAFETY INSTRUCTIONS

1. Read instructions - All the safety and operating instructions should be read before the appliance is operated.

2. Retain instructions - The safety and operating instructions should be retained for future reference.

3. Heed warnings - All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow instructions - All operating and use instructions should be followed.

5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.

6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.



- An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.

12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.

14. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

16. Damage requiring Service - The appliance should be serviced by qualified service personnel when:

A. The power supply cord or the plug has been damaged; or

B. Objects have fallen, or liquid has been spilled into the appliance; or

C. The appliance has been exposed to rain; or

D. The appliance does not appear to operate normally or exhibits a marked changed in performance; or

E. The appliance has been dropped, or the enclosure damaged.

17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

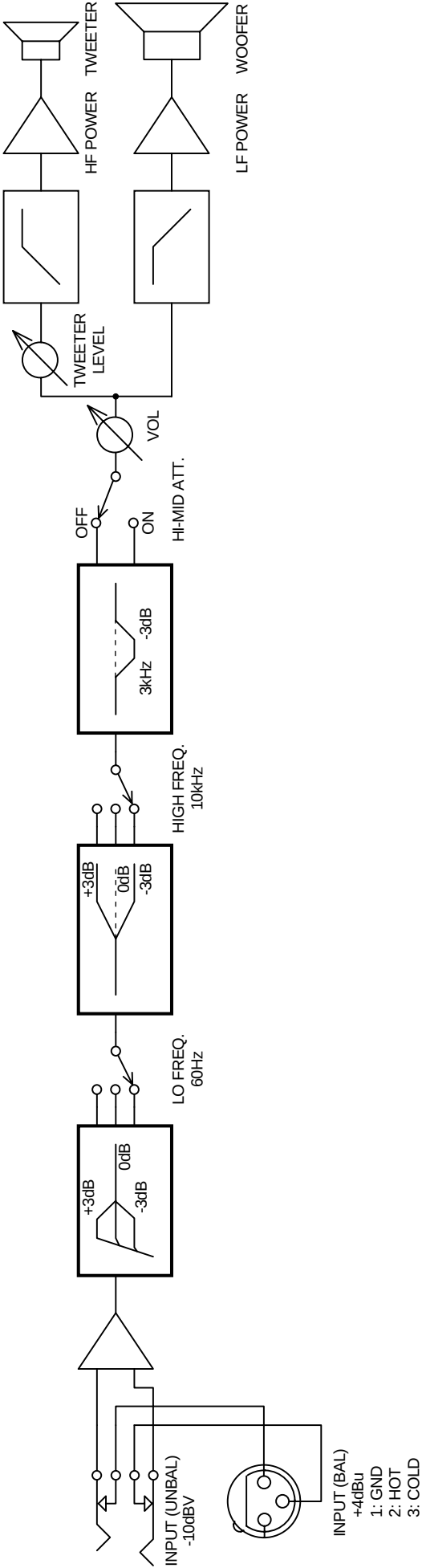
CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION:

POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

● NF-1A Block Diagram



● Input PCB

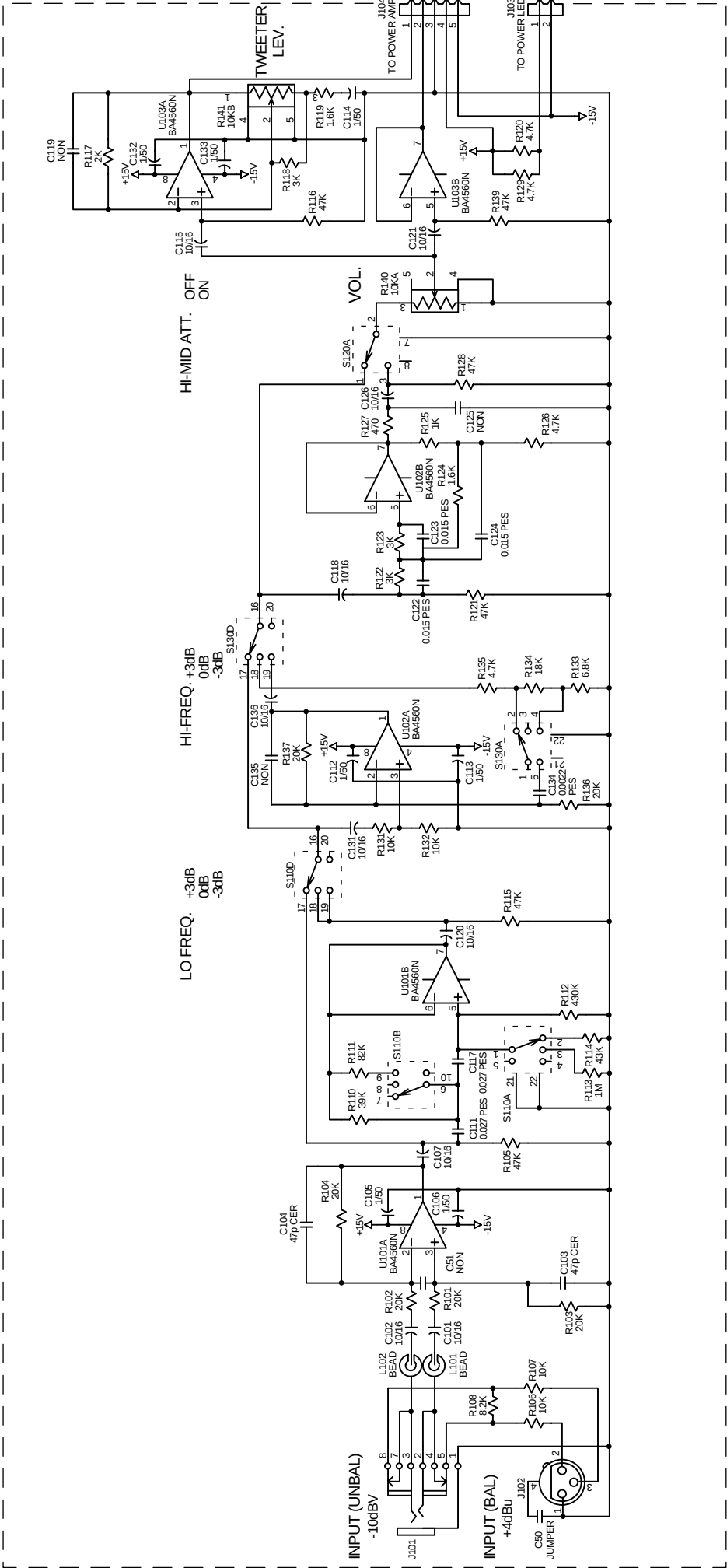


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NOTES

- * Parts List, exploded views and circuit diagrams are given in this manual to assist the service technician in maintaining the Model NF-1 & NF-1A.
- * The following accessories are supplied with NF-1 as the standard accessories.

NF-1 owner's manual	: 8288457000 (for export & domestic model)
NF-1A owner's manual	: 8288459000 (for export model)
	: 8288460000 (for domestic model)
- * Following is the packing material for the Model NF-1.

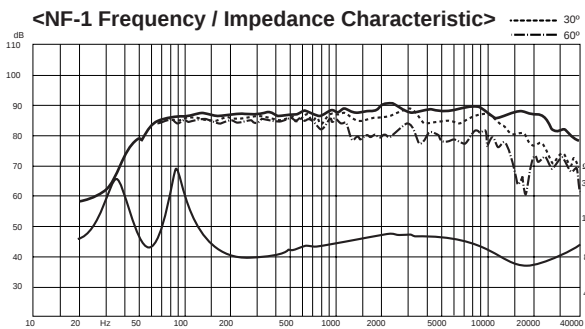
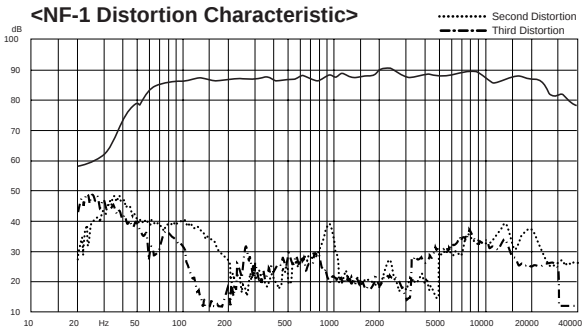
Carton, inner, 3 pads, NF-1	: 8228739000
Carton, outer, NF-1	: 8228917000
Sheet, mirror	: 8216729000
- * Following is the packing material for the Model NF-1A.

Carton, inner, NF-1A	: 8228738000
Carton, outer, NF-1A	: 8228916000
Packing, side, NF-1A	: 8228466001
Packing, front, NF-1A	: 8228466002
Sheet, mirror	: 8216729000

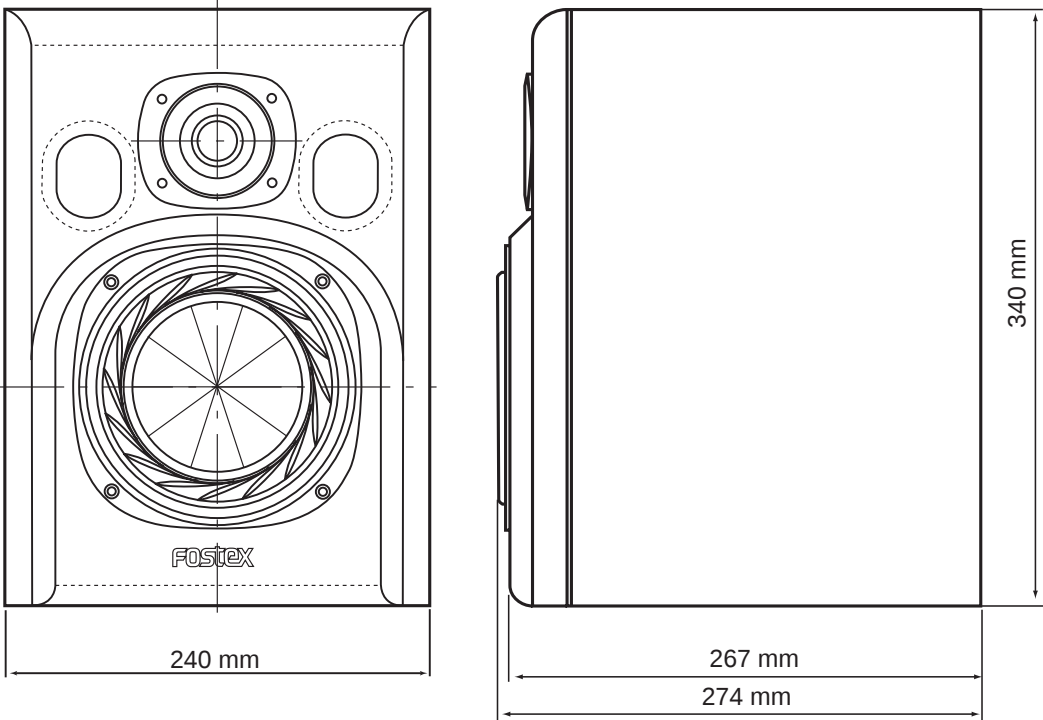
1. SPECIFICATIONS

● NF-1

Enclosure system	2-way bass-reflex system
Drivers	160 mm HP woofer x 1 (low-leakage type) 20 mm Soft-Dome tweeter x 1 (low-leakage type)
Impedance	8 Ω
Frequency Response	50 Hz ~ 40 kHz
Crossover Frequency	10 kHz
Sound Pressure Level	89 dB/W (1 m)
Input (Program)	120 W
Enclosure volume	11 liters
Weight	Approx. 9.1 kg



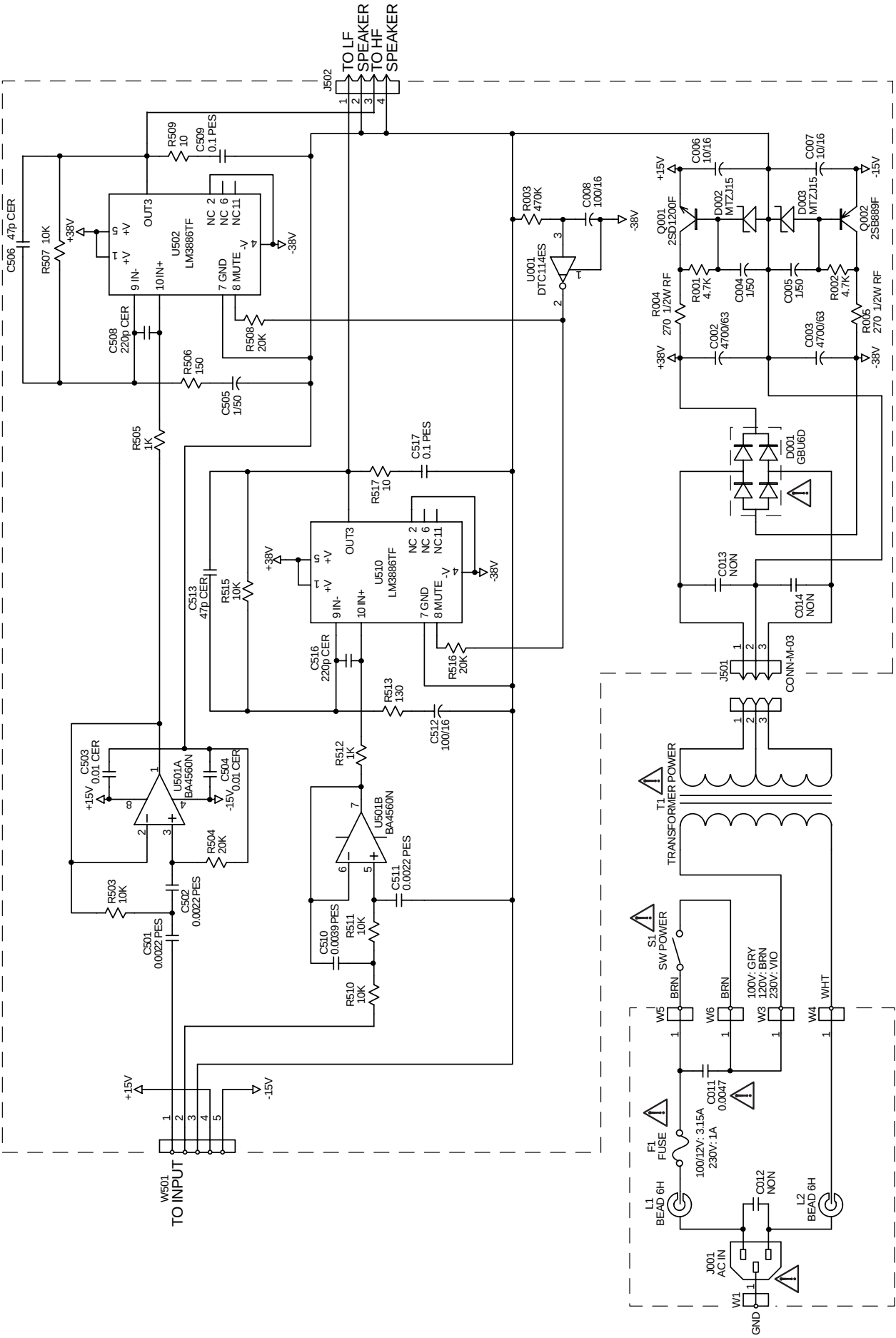
● NF-1 Dimensions



Specifications and physical appearance are subject to change without notice for product improvement.

4. CIRCUIT & BLOCK DIAGRAMS

● Power Amp & SW PCB



Ref. No.	Part No.	Description
R121	8230 1384 73	HT, Carbon, 1/4W, 47kΩ, 5%
R122, 123	8230 1383 02	HT, Carbon, 1/4W, 3kΩ, 5%
R124	8230 1381 62	HT, Carbon, 1/4W, 1.6kΩ, 5%
R125	8230 1381 02	HT, Carbon, 1/4W, 1kΩ, 5%
R126	8230 1384 72	HT, Carbon, 1/4W, 4.7kΩ, 5%
R127	8230 1384 71	HT, Carbon, 1/4W, 470Ω, 5%
R128	8230 1384 73	HT, Carbon, 1/4W, 47kΩ, 5%
R129	8230 1384 72	HT, Carbon, 1/4W, 4.7kΩ, 5%
R131, 132	8230 1381 03	HT, Carbon, 1/4W, 10kΩ, 5%
R133	8230 1386 82	HT, Carbon, 1/4W, 6.8kΩ, 5%
R134	8230 1381 83	HT, Carbon, 1/4W, 18kΩ, 5%
R135	8230 1384 72	HT, Carbon, 1/4W, 4.7kΩ, 5%
R136, 137	8230 1382 03	HT, Carbon, 1/4W, 20kΩ, 5%
R139	8230 1384 73	HT, Carbon, 1/4W, 47kΩ, 5%
R140	8240 2930 06	Pot., PI, RT9, 10kΩA, EVUE2A
R141	8240 2930 07	Pot., PI, RT9, 10kΩB, EVUE3A

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

PES = Mylar type

Ref. No.	Part No.	Description
C050, 051		N/A
C101, 102	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C103, 104	8232 8014 70	VT, CER, 50V, 47pF, 5%, SL
C105, 106	8232 1461 05	VT, ALU, 50V, 1μF, 20 %, SME-VB
C107	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C111	8232 9012 73	VT, PES, 50V, 0.027μF, 5%, AMZF
C112~114	8232 1461 05	VT, ALU, 50V, 1μF, 20 %, SME-VB
C115	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C116		N/A
C117	8232 9012 73	VT, PES, 50V, 0.027μF, 5%, AMZF
C118	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C119		N/A
C120, 121	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C122~124	8232 9011 53	VT, PES, 50V, 0.0015μF, 5%, AMZ
C125		N/A
C126	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C131	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C132, 133	8232 1461 05	VT, ALU, 50V, 1μF, 20 %, SME-VB
C134	8232 9012 22	VT, PES, 50V, 0.0022μF, 5%, AMZF
C135		N/A
C136	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB

MISCELLANEOUS

Ref. No.	Part No.	Description
E001		Wire, jumper, F5
E002		Wire, jumper, F10
J101	8245 3390 09	Connector, PI, jack, phone, YKB21-5006
J102	8245 2680 03	Connector, PI, jack, XLR, NC3FAH2-0
J103	8245 0530 02	Connector, PI, jack, 8283, 2P, WHT
J104	8245 3080 05	Connector, PI, jack, 5P, SBRK 5S-4
L101, 102	8242 1860 13	Filter, T, EMI, LEF7B-M3R2T

Ref. No.	Part No.	Description
S110	8253 6550 19	SW, PL, slide, 4-3, non-shortening, SSSFI, L06
S120	8253 6550 20	SW, PL, slide, 2-2, non-shortening, SSSFI, L06
S130	8253 6550 19	SW, PL, slide, 4-3, non-shortening, SSSFI, L06

• SW PCB assy

Ref. No.	Part No.	Description
	8274 2720 00	PCB Assy, SW, NF-1A
	8251 9930 03	Plain PCB, SW, NF-1A

Ref. No.	Part No.	Description
C011	8256 0750 05	Spark killer, 0.0047μF
C012		N/A
E001	8239 0002 00	Holder, PI, fuse, S-N5057
J001	8245 3210 00	Connector, PL, jack, AC-INLET, 3P, 0714-FR7
L001, 002	8242 1340 01	Filter, EMI, 6 hole
S001	8253 4710 03	SW, PI, rocker, power, EST15
W001	8277 1630 15	Cable assy, earth lug, SIN1.8, L150
W003, 004	8245 5430 00	Terminal, IPS-5007
W005, 006	8277 1610 10	Cable assy, SIN1.8 - wire, L100

• LED assy

Ref. No.	Part No.	Description
D001	8234 1044 00	Opt., LED, GRN, SLR-342MG3F
W001	8276 3340 20	Cable assy, 2P, WHT8263/F-8263/F, L200
Y101	8207 0051 08	Spacer, LED, 11, LH-5-11

● Abbreviation

DIP: Dual In Line

H: Horizontal mount

ZIP: Zigzag in-line package

SIP: Single in-line package

V: Vertical mount

T: Taping device

P: Penetrate mount

I: I form (straight)

L: L form (right angle)

DG: Digital

AN: Analogue

● NF-1A

Speakers

Enclosure system

Drivers

Impedance

Reproduction Frequency Response

Enclosure volume

Maximum output sound level

Amplifiers

Output power

Tweeter SPL adjustable level

Filter characteristic adjustable level

HI-FREQ (10 kHz)

LO-FREQ (60 Hz)

HI-MID ATT. (3 kHz)

Input terminals

Normal input level

Input impedance

Crossover frequency

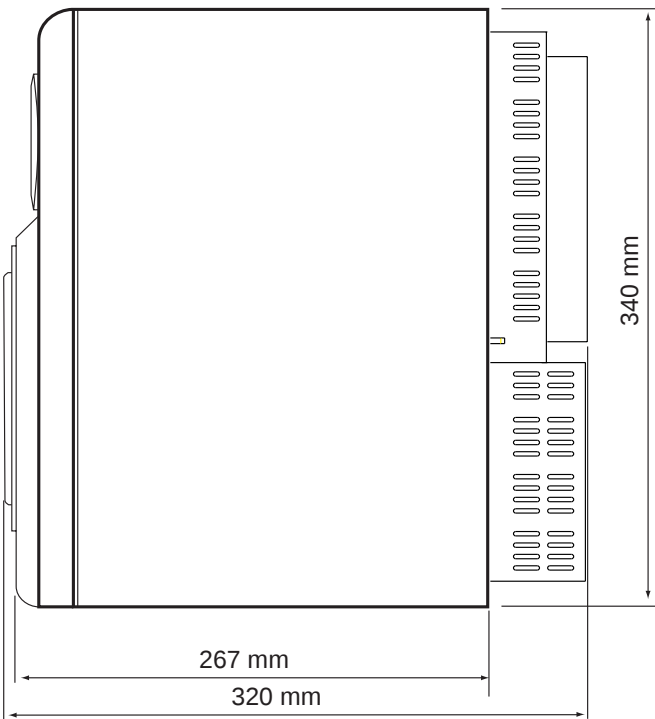
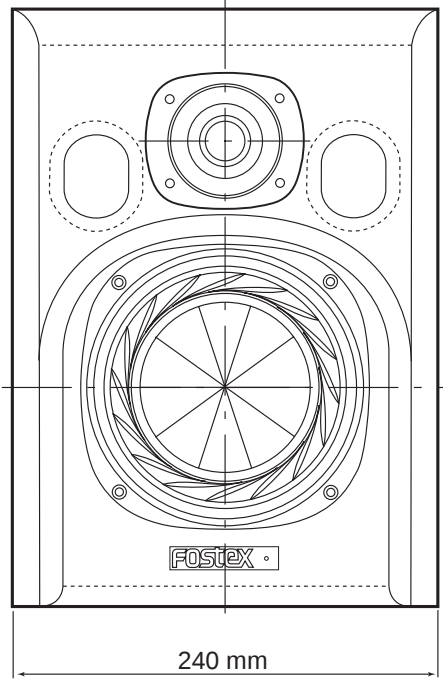
Others

Weight

Power supply

Power consumption

• NF-1A Dimensions



Specifications and physical appearance are subject to change without notice for product improvement.

2. CONTROLS, INDICATORS & CONNECTORS

● NF-1A

1. Power LED

2. Heat sink

3. Loudness control [VOL, -∞ ~ MAX (0dB)]

4. Tweeter level control [TWEETER LEVEL, -3 ~ 0dB ~ +3]

5. Hi-Mid attenuator [HI-MID ATT., ON / OFF]

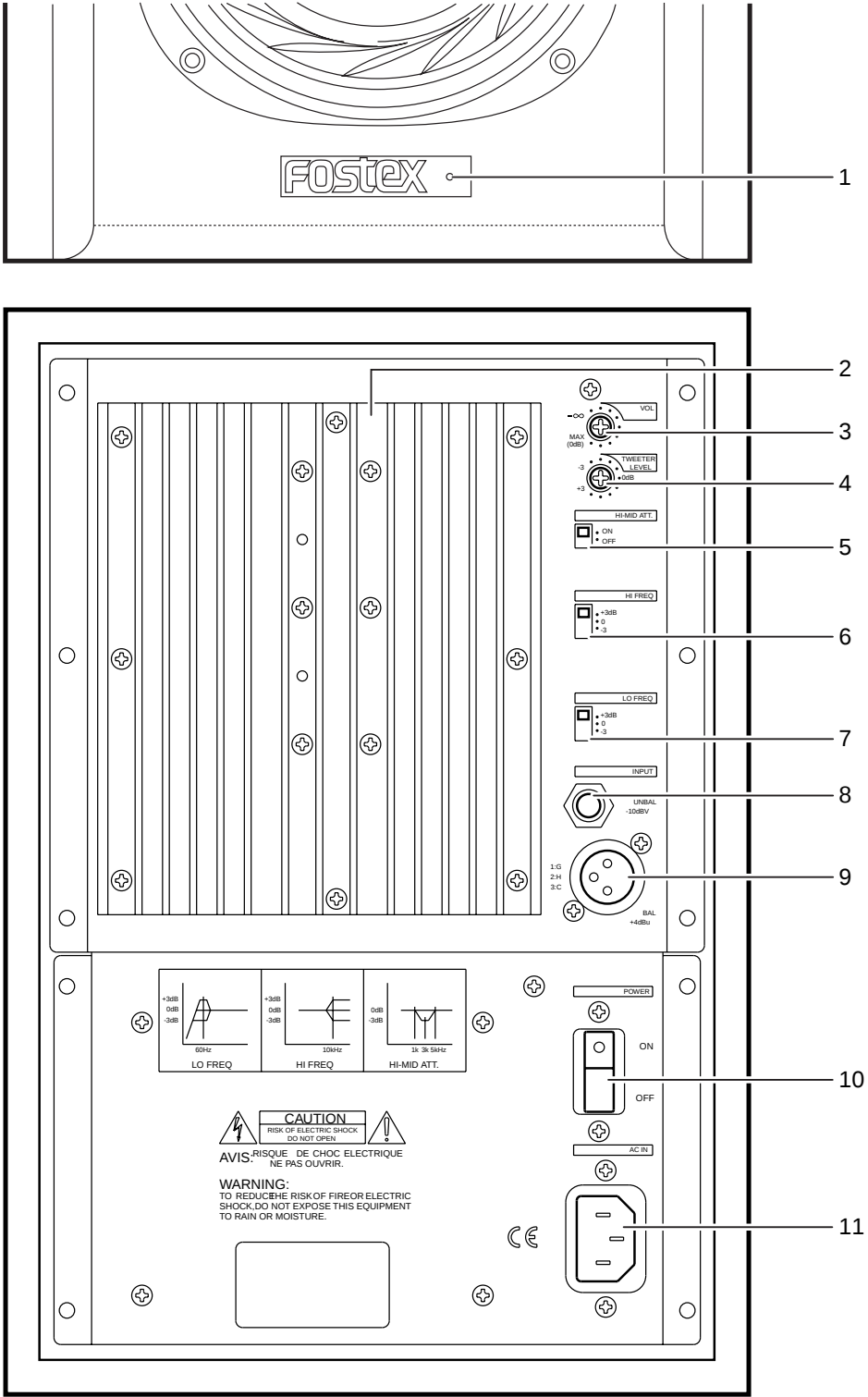
6. High-frequency filter selector [HI-FREQ, +3dB / 0 / -3]
7. Low-frequency filter selector [LO-FREQ, +3dB / 0 / -3]

8. Unbalanced input terminal [INPUT, UNBAL -10dBV (phone jack)]

9. Balanced input terminal [INPUT, BAL +4dBu (XLR)]

10. Power switch [POWER]

11. AC IN connector [AC IN]



● NF-1A PCB Assy Parts List

• POWER AMP PCB assy

Ref. No.	Part No.	Description
	8274 2700 00	PCB Assy, Power Amp, NF-1A
	8251 9930 01	Plain PCB, Power Amp, NF-1A

ICs		
Ref. No.	Part No.	Description
U001	8236 0781 01	PT, DG, driver, DTC114ES
U501	8236 0361 00	PT, SIP, AN, op amp, BA4560N
U502	8236 0466 00	HZIP, AN, power amp, LM3886TF
U510	8236 0466 00	HZIP, AN, power amp, LM3886TF

TRANSISTORS		
Ref. No.	Part No.	Description
Q001	8234 1099 00	V, NPN, 2SD1200F
Q002	8234 1100 00	V, PNP, 2SB889F

DIODES		
Ref. No.	Part No.	Description
D001	8234 1977 01	V, stack, GBU6D
D002, 003	8234 5039 59	HT, zener, 15V, MTZJ15

RESISTORS		
Ref. No.	Part No.	Description
R001, 002	8230 1384 72	HT, Carbon, 1/4W, 4.7kΩ, 5%
R003	8230 1384 74	HT, Carbon, 1/4W, 470kΩ, 5%
R004, 005	8230 1292 71	H, fuse, 1/2W, 270Ω, 5%
R501, 502		N/A
R503	8230 1381 03	HT, Carbon, 1/4W, 10kΩ, 5%
R504	8230 1382 03	HT, Carbon, 1/4W, 20kΩ, 5%
R505	8230 1381 02	HT, Carbon, 1/4W, 1kΩ, 5%
R506	8230 1381 51	HT, Carbon, 1/4W, 150Ω, 5%
R507	8230 1381 03	HT, Carbon, 1/4W, 10kΩ, 5%
R508	8230 1382 03	HT, Carbon, 1/4W, 20kΩ, 5%
R509	8230 1381 00	HT, Carbon, 1/4W, 10Ω, 5%
R510, 511	8230 1381 03	HT, Carbon, 1/4W, 10kΩ, 5%
R512	8230 1381 02	HT, Carbon, 1/4W, 1kΩ, 5%
R513	8230 1381 31	HT, Carbon, 1/4W, 130Ω, 5%
R514	8230 1384 72	HT, Carbon, 1/4W, 4.7kΩ, 5%
R515	8230 1381 03	HT, Carbon, 1/4W, 10kΩ, 5%
R516	8230 1382 03	HT, Carbon, 1/4W, 20kΩ, 5%
R517	8230 1381 00	HT, Carbon, 1/4W, 10Ω, 5%

CAPACITORS		
ALU = Electrolytic type		
CER = Ceramic type		
PES = Mylar type		
Ref. No.	Part No.	Description
C002, 003	8232 2054 78	VT, ALU, 63V, 4700μF, 20%, SMH-VNSN
C004, 005	8232 1461 05	VT, ALU, 50V, 1μF, 20 %, SME-VB
C006, 007	8232 1431 06	VT, ALU, 16V, 10μF, 20 %, SME-VB
C008	8232 1431 07	VT, ALU, 16V, 100μF, 20 %, SME-VB
C013, 014		N/A
C501, 502	8232 9012 22	VT, PES, 50V, 0.0022μF, 5%, AMZF

Ref. No.	Part No.	Description
C503, 504	8232 8031 03	VT, CER, 50V, 0.01μF, 5%, YF
C505	8232 1461 05	VT, ALU, 50V, 1μF, 20 %, SME-VB
C506	8232 8014 70	VT, CER, 50V, 47pF, 5%, SL
C507		N/A
C508	8232 8012 21	VT, CER, 50V, 220pF, 5%, SL
C509	8232 9011 04	VT, PES, 50V, 0.1μF, 5%, AMZ
C510	8232 9013 92	VT, PES, 50V, 0.0039μF, 5%, AMZF
C511	8232 9012 22	VT, PES, 50V, 0.0022μF, 5%, AMZF
C512	8232 1431 07	VT, ALU, 16V, 100μF, 20 %, SME-VB
C513	8232 8014 70	VT, CER, 50V, 47pF, 5%, SL
C514, 515		N/A
C516	8232 8012 21	VT, CER, 50V, 220pF, 5%, SL
C517	8232 9011 04	VT, PES, 50V, 0.1μF, 5%, AMZ

MISCELLANEOUS		
Ref. No.	Part No.	Description
E001		Wire, jumper, F5
E002		Wire, jumper, F10
E003	8207 0122 05	Holder, cable, 5P, 51048 (W501)
J501	8245 3050 03	Connector, PI, jack, VH, 3P, WHT
J502	8245 3050 04	Connector, PI, jack, VH, 4P, WHT
Y401	8221 3301 00	Bracket, pcb, power amp, NF-1A
W005~007	8245 5430 00	Terminal, IPS-5007
W501	8276 9185 15	Cable, flat, 5P, S-KINK, L150
W502		N/A

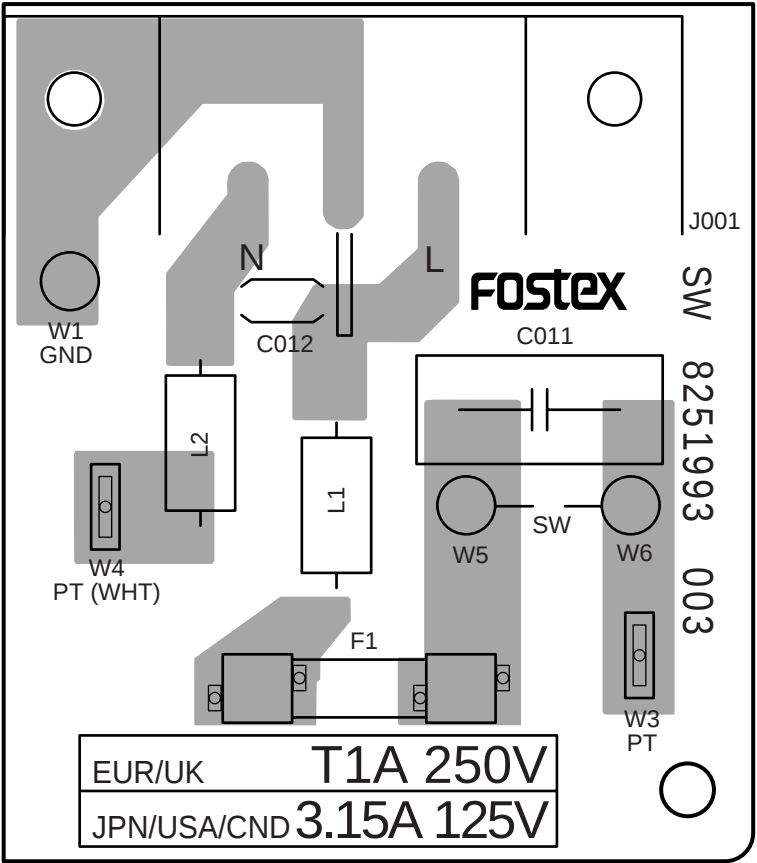
• INPUT PCB assy

Ref. No.	Part No.	Description
	8274 2710 00	PCB Assy, Input, NF-1A
	8251 9930 02	Plain PCB, Input, NF-1A

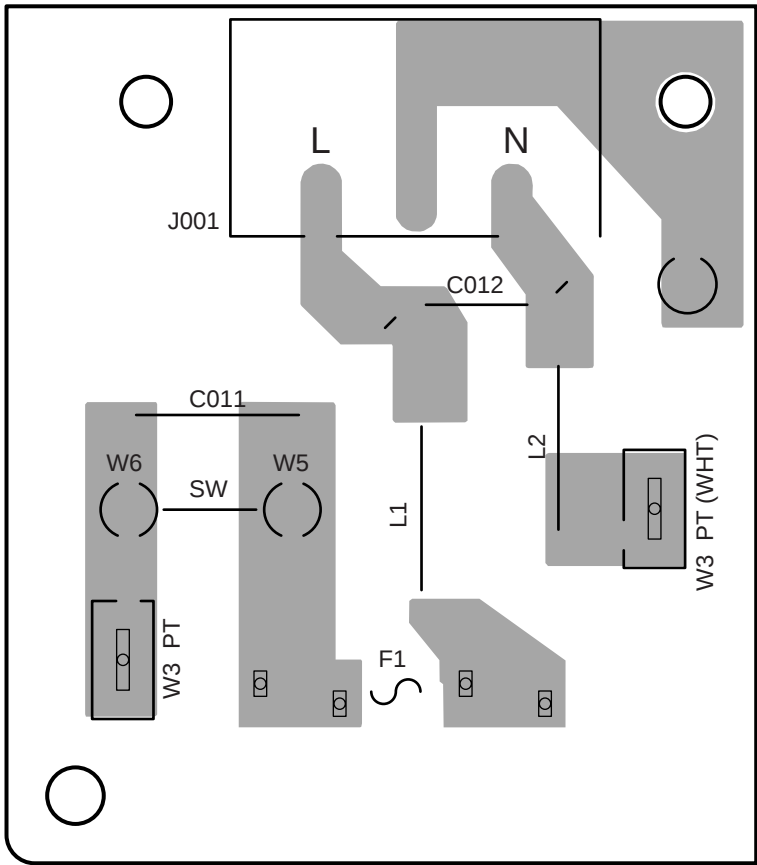
ICs		
Ref. No.	Part No.	Description
U101~103	8236 0361 00	SIP, AN, op amp, BA4560N

RESISTORS		
Ref. No.	Part No.	Description
R101, 102	8230 1382 03	HT, Carbon, 1/4W, 20kΩ, 5%
R103, 104	8230 1382 03	HT, Carbon, 1/4W, 20kΩ, 5%
R105	8230 1384 73	HT, Carbon, 1/4W, 47kΩ, 5%
R106, 107	8230 1381 03	HT, Carbon, 1/4W, 10kΩ, 5%
R108	8230 1388 22	HT, Carbon, 1/4W, 8.2kΩ, 5%
R110	8230 1383 93	HT, Carbon, 1/4W, 39kΩ, 5%
R111	8230 1388 23	HT, Carbon, 1/4W, 82kΩ, 5%
R112	8230 1384 34	HT, Carbon, 1/4W, 430kΩ, 5%
R113	8230 1381 05	HT, Carbon, 1/4W, 1MΩ, 5%
R114	8230 1384 33	HT, Carbon, 1/4W, 43kΩ, 5%
R115, 116	8230 1384 73	HT, Carbon, 1/4W, 47kΩ, 5%
R117	8230 1382 02	HT, Carbon, 1/4W, 2kΩ, 5%
R118	8230 1383 02	HT, Carbon, 1/4W, 3kΩ, 5%
R119	8230 1381 62	HT, Carbon, 1/4W, 1.6kΩ, 5%
R120	8230 1384 72	HT, Carbon, 1/4W, 4.7kΩ, 5%

• Parts side of SW PCB Assy



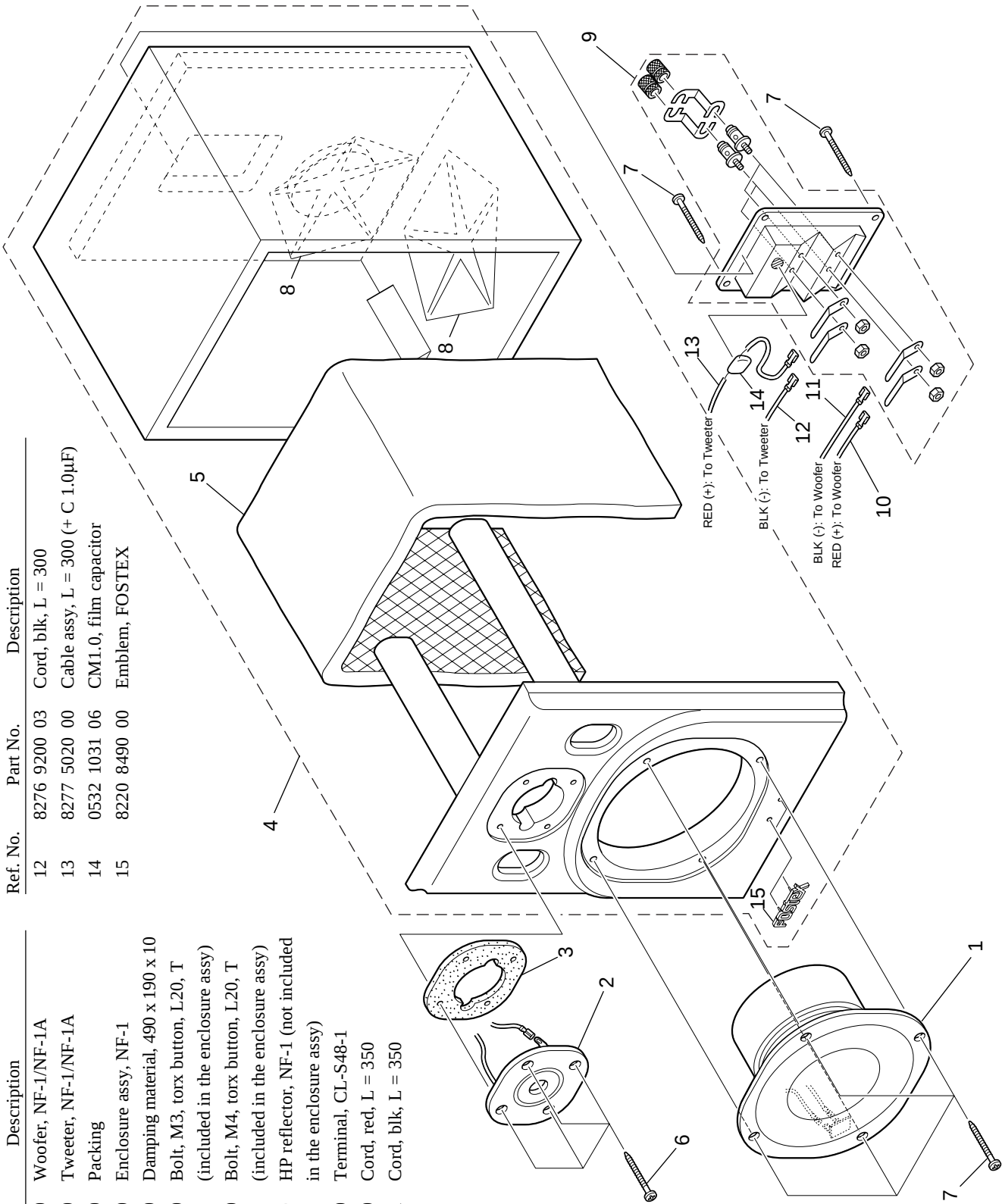
• Foil side of SW PCB Assy



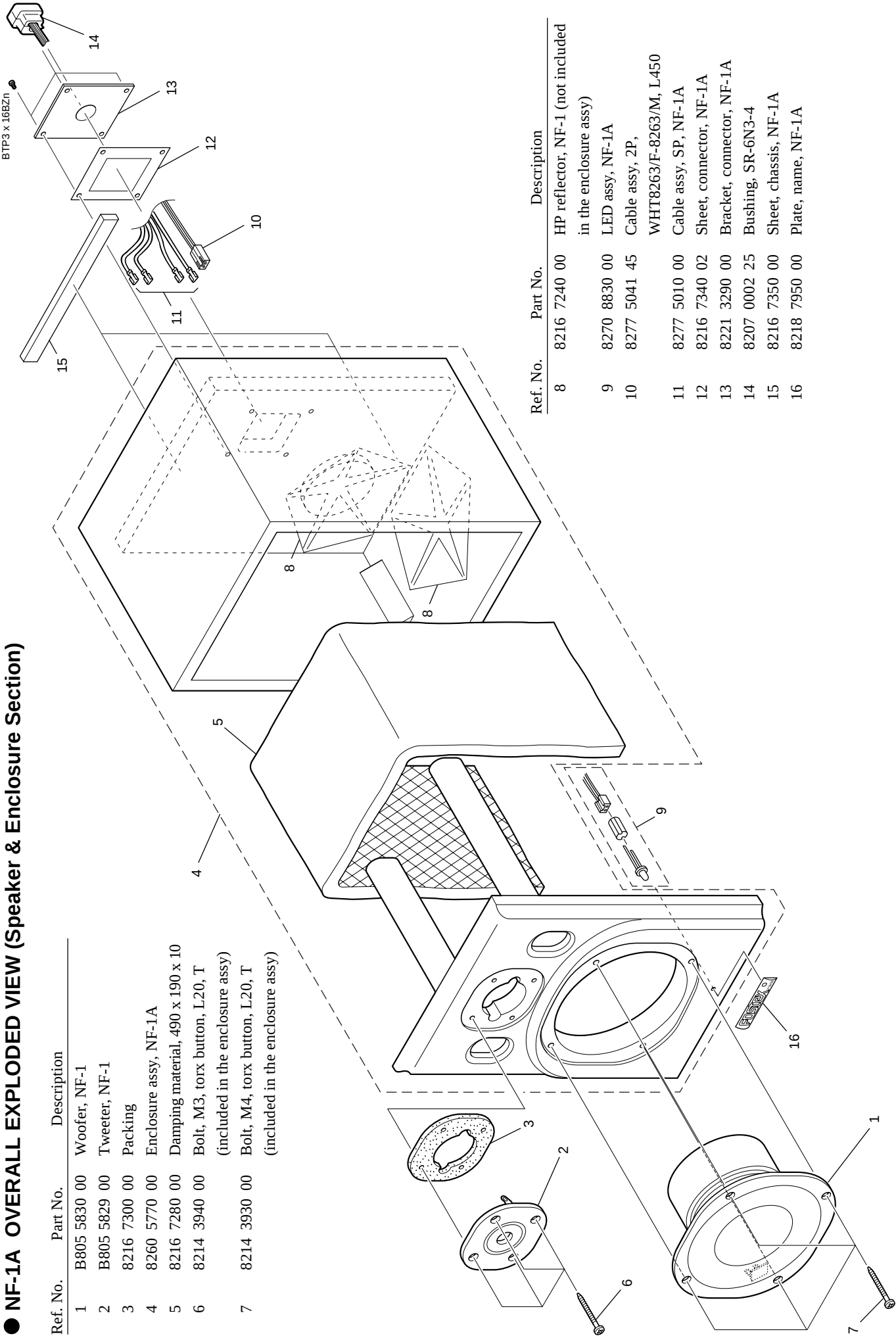
3. EXPLODED VIEW, PCB ASSEMBLY AND PARTS LIST

● NF-1 OVERALL EXPLODED VIEW & PARTS LIST

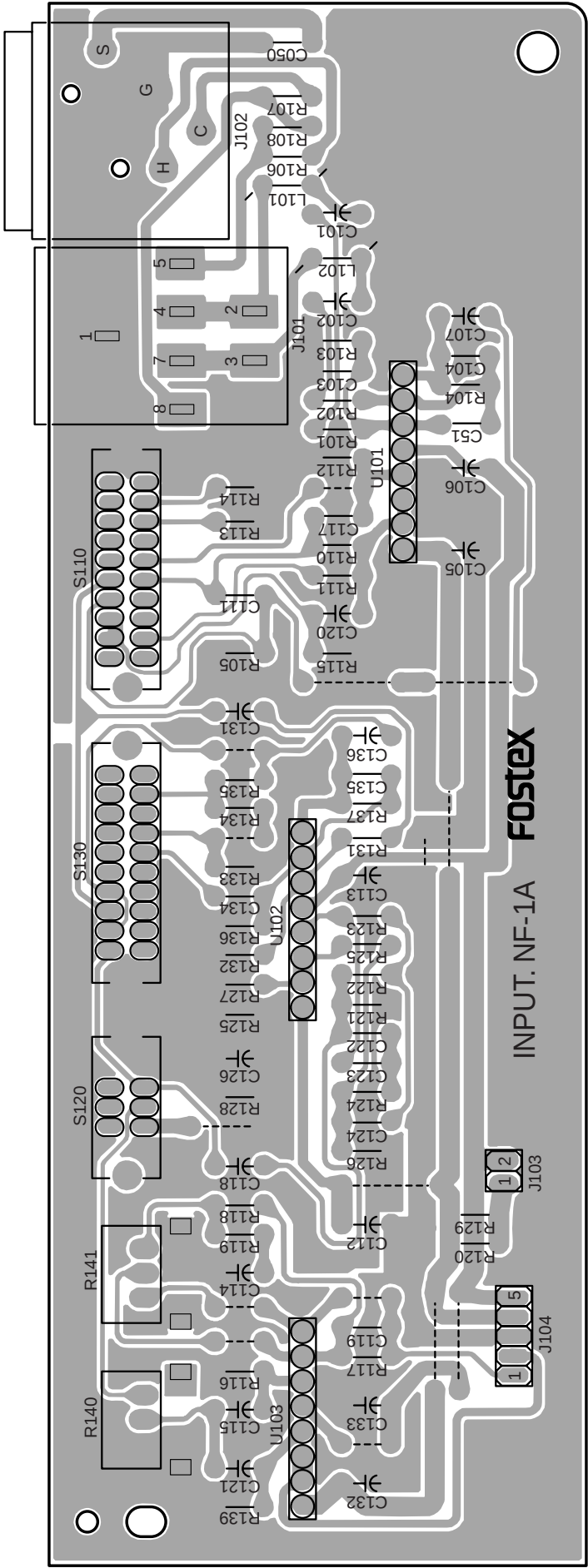
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	B805 5830 00	Woofer, NF-1/NF-1A	12	8276 9200 03	Cord, blk, L = 300
2	B805 5829 00	Tweeter, NF-1/NF-1A	13	8277 5020 00	Cable Assy, L = 300 (+ C 1.0μF)
3	8216 7300 00	Packing	14	0532 1031 06	CM1.0, film capacitor
4	8260 5760 00	Enclosure Assy, NF-1	15	8220 8490 00	Emblem, FOSTEX
5	8216 7280 00	Damping material, 490 x 190 x 10			
6	8214 3940 00	Bolt, M3, torx button, L20, T (included in the enclosure Assy)			
7	8214 3930 00	Bolt, M4, torx button, L20, T (included in the enclosure Assy)			
8	8216 7240 00	HP reflector, NF-1 (not included in the enclosure Assy)			
9	8245 3580 00	Terminal, CL-S48-1			
10	8276 9200 00	Cord, red, L = 350			
11	8276 9200 01	Cord, blk, L = 350			



● NF-1A OVERALL EXPLODED VIEW (Speaker & Enclosure Section)



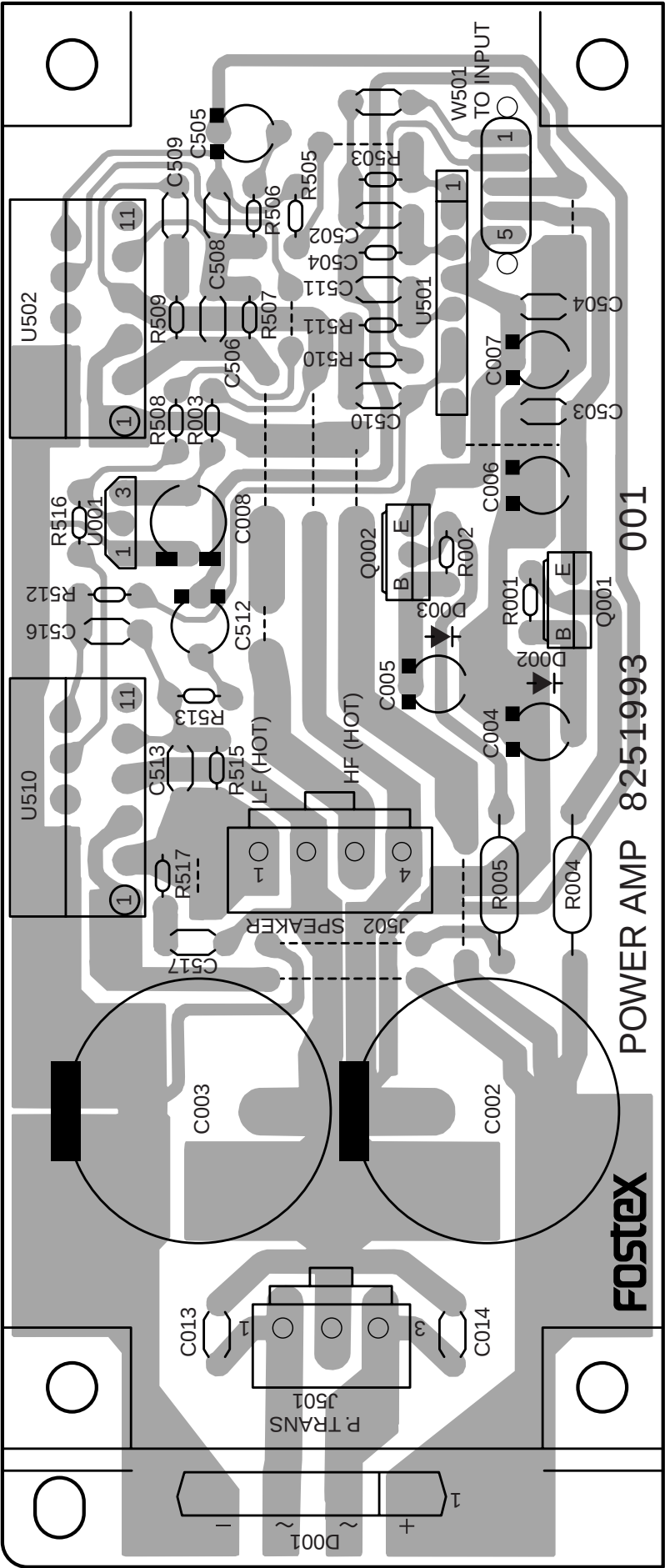
• Foil side of Input PCB Assy



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- NF-1A PCB Pattern Drawing
- Parts side of Power Amp PCB assy



- Foil side of Power Amp PCB assy

