

# SPECIFICATIONS

Power Output: 150 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.09% THD

Total Harmonic Distortion: 0.09% at 150 watts

IM Distortion: 0.09% at 150 watts

Damping Factor: 40 at 8 ohms

Frequency Response: 5 - 100KHz  $\pm$ 1dB

Sensitivity and Impedance: 1V/50kohms

Signal to Noise Ratio: 100dB (IHFA-202 1 watt output)

**General**

Power Supply: AC120V, 60Hz

Dimensions (W x H x D): 435 x 158 x 286mm  
17-1/8" x 6-3/16" x 11-1/4"

Weight: 9.1kg, 20.1 lbs.

**Remote Control Transmitter RC-117S**

Transmitter: Infrared

Signal range: Approx. 5 meters, 16 ft

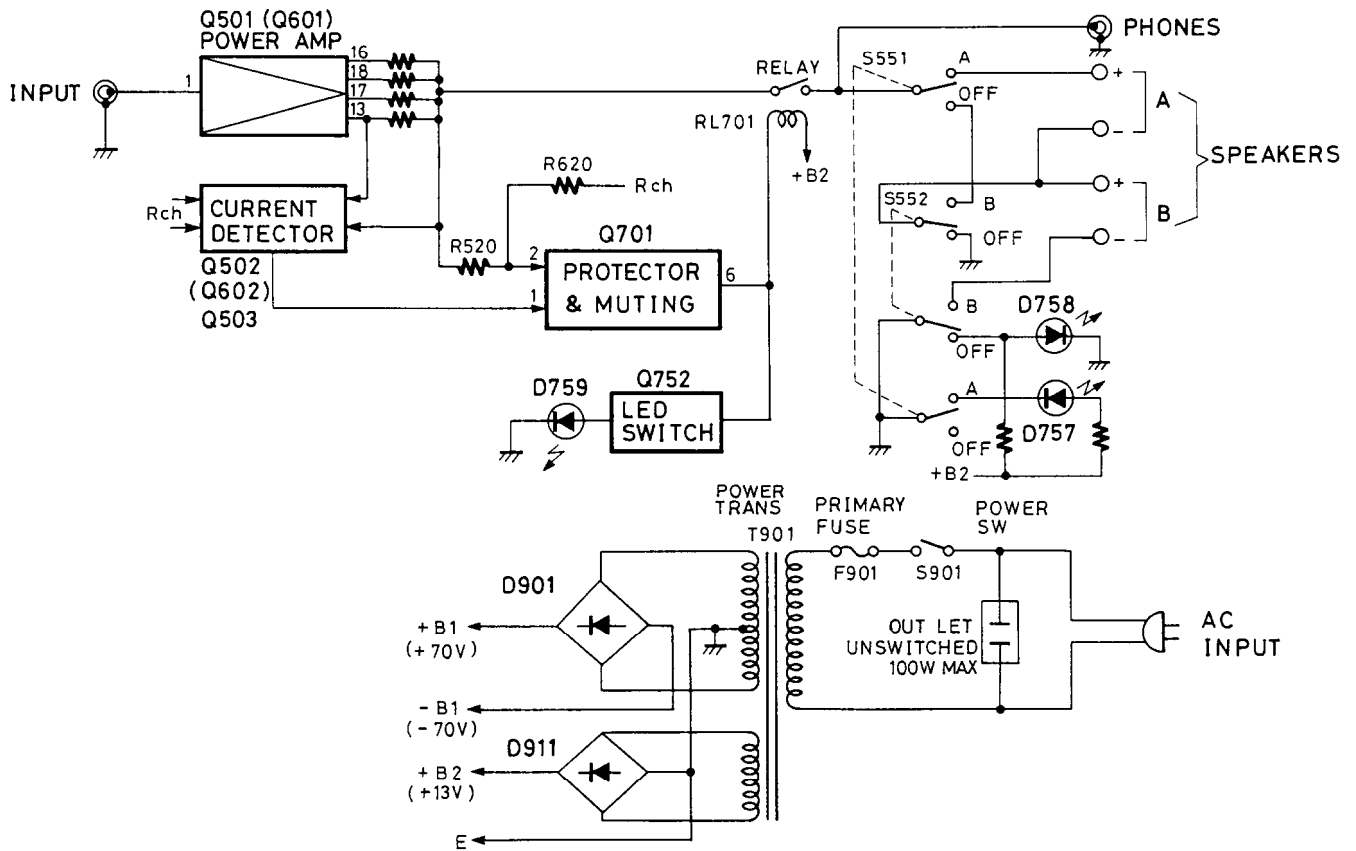
Power supply: Two "AA" batteries (1.5V x 2)

Dimensions (W x H x D): 64 x 18 x 149mm  
2-1/2" x 11/16" x 5-7/8"

Weight: 110 grams, 3.9 oz. (including batteries)

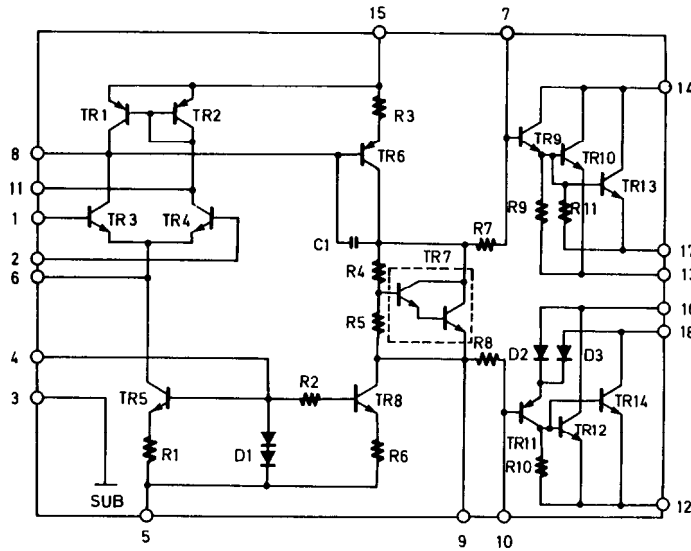
Specifications and features are subject to change without notice.

# BLOCK DIAGRAM

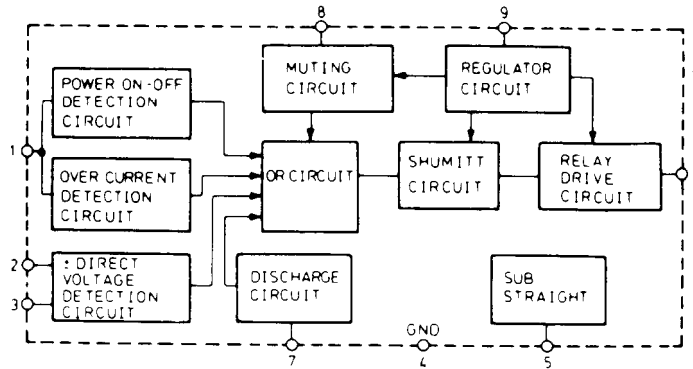


## IC BLOCK DIAGRAM

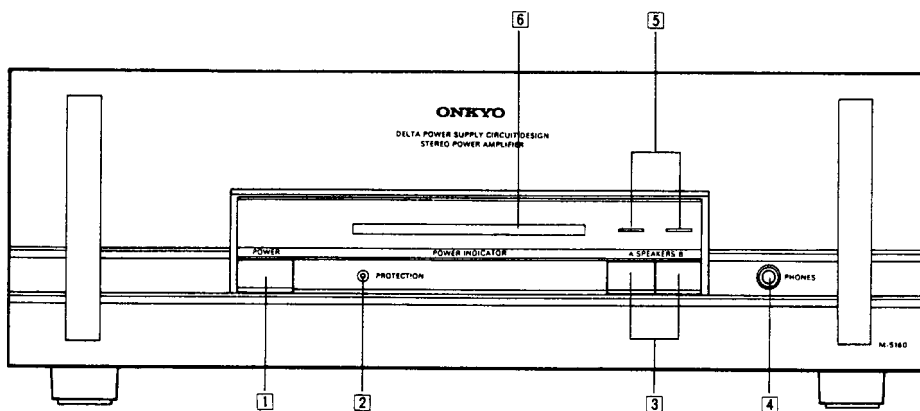
STK4048V (Power Amp.)



TA7317P (Protective Circuit)



## FRONT PANEL FACILITIES



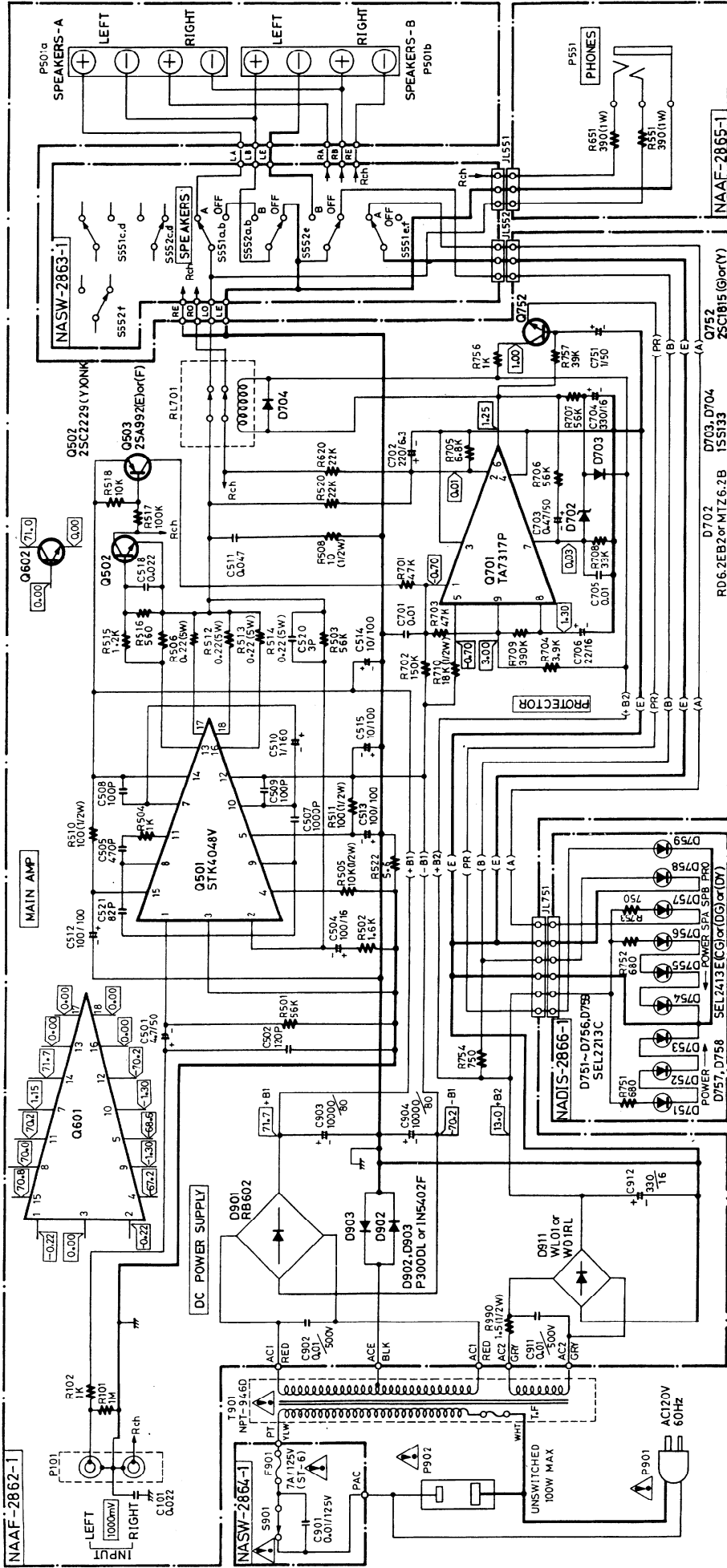
1. Power Switch (POWER)
2. Protection Indicator (PROTECTION)
3. Speaker Selector (SPEAKERS)

NOTE: In the "A+B" mode, the speakers are connected in series.

If only one pair of speakers is connected to the M-5160, no sound will be heard in this setting.

4. Headphone Jack (PHONES)
5. Speaker Indicator
6. Power Indicator (POWER INDICATOR)

SCHEMATIC DIAGRAM



NO	FUNCTION	POSITION
S901	POWER	OFF ON
S551	SPEAKERS A	OFF A
S552	SPEAKERS B	OFF B

E C B  
 25C1815  
 25C2229  
 25A992

TA7317P

STK4048V  
 12 17/16

- NOTES
- ALL RESISTORS ARE IN OHMS 1/4WATTS or 1/6WATTS UNLESS OTHERWISE NOTED.
  - ALL CAPACITORS ARE IN  $\mu$ F/50WV UNLESS OTHERWISE NOTED.
  - ELECTROLYTIC CAPACITORS (E) ARE IN  $\mu$ F/W.
  - ALL DIODES ARE 1SS133 UNLESS OTHERWISE NOTED.
  - VOLTAGE (MEASURED WITH V.T.V.-) IS DC VOLTAGE, (NO INPUT SIGNAL).
  - THE COMPONENTS IDENTIFIED BY MARK  $\Delta$  ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
  - CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

# PRINTED CIRCUIT BOARD PARTS LIST

## POWER AMP. CIRCUIT PC BOARD (NAAF-2862-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
<b>ICs</b>		
Q501, Q601	222059	STK4048V
Q701	222584	TA7317P
<b>Transistors</b>		
Q502, Q602	2211639	2SC2229Y (ONK)
Q503	2211792 or 2211793	2SA992E or 2SA992F
Q752	2211255 or 2211254	2SC1815GR or 2SC1815Y
<b>Diodes</b>		
D702	2239492 or 2243162	RD6.2EB2 or MTZ6.2B
D703, D704	223163	1SS133
D901	223898F	RB602
D902, D903	223897F or 2238003F	P300DL or 1N5402F
D911	223862 or 223890	WL01 or W01RL
<b>Capacitors</b>		
C501, C601	3500093	4.7 $\mu$ F, 50V, Elect.
C504, C604	354741019	100 $\mu$ F, 16V, Elect.
C510, C610	354700109	1 $\mu$ F, 160V, Elect.
C511, C611	371124734	0.047 $\mu$ F, 50V, Mylar
C512, C513	354791019	100 $\mu$ F, 100V, Elect.
C612, C613		
C514, C515	354791009	10 $\mu$ F, 100V, Elect.
C614, C615		
C702	354722219	220 $\mu$ F, 6.3V, Elect.
C703	354784799	0.47 $\mu$ F, 50V, Elect.
C704	354743319	330 $\mu$ F, 16V, Elect.
C706	354742209	22 $\mu$ F, 16V, Elect.
C751	354780109	1 $\mu$ F, 50V, Elect.
C903, C904	3504204	10000 $\mu$ F, 80V, Elect.
C912	354743319	330 $\mu$ F, 16V, Elect.
<b>Resistors</b>		
R505, R605	442521034F	10k $\Omega$ , 1/2W, Metal oxide film
R506, R507	4000076	0.22 $\Omega$ , 5W, Metal plate
R606, R607		
R508, R608	441521004F	10 $\Omega$ , 1/2W, Metal oxide film
R510, R511	442521014F	100 $\Omega$ , 1/2W, Metal oxide film
R610, R611		
R512~R514	4000076	0.22 $\Omega$ , 5W, Metal plate
R612~R614		
R710	442521834F	18k $\Omega$ , 1/2W, Metal oxide film
R990	442520154F	1.5 $\Omega$ , 1/2W, Metal oxide film
<b>Relay</b>		
RL701	25065275	NRL-2P5A-DC12-38
<b>Terminals</b>		
P101	25045211	NPJ-2PDBL91, Input
P501	25060093	NTM-8PDML34, Output
<b>Bracket</b>		
	27141059	Washer

## SPEAKER SWITCH CIRCUIT PC BOARD (NASW-2863-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
<b>Switches</b>		
S551, (S552)	25035549	NPS-262-L511

## POWER SWITCH CIRCUIT PC BOARD (NASW-2864-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
<b>Capacitor</b>		
C901	3500065A	0.01 $\mu$ F, AC400V/125V, IS
<b>Switch</b>		
S901	25035550	NPS-111-1512P
<b>Fuse holders</b>		
	250113	SN5051

## PHONES CIRCUIT PC BOARD (NAAF-2865-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
<b>Resistors</b>		
R551, R651	441623914	390 $\Omega$ , 1W, Metal oxide film
<b>Jack</b>		
P551	25045187	HLJ-0541-01-010

## DISPLAY CIRCUIT PC BOARD (NADIS-2866-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
<b>Diodes</b>		
D751~D756	225141	SEL2213C
D759		
D757, D758	225137CG or 225137DG or 225137DY	SEL2413ECG SEL2413EDG SEL2413EDY
<b>Holder</b>		
	27190510A	(LED)