

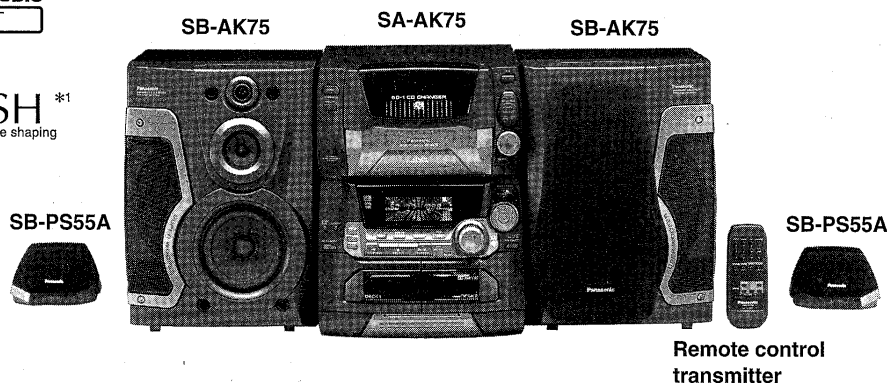
Service Manual

CD Stereo System

CD Stereo System
SA-AK75



MASH *1
multi-stage noise shaping



Colour
(K).....Black Type

Area
(P) U.S.A.
(PC) Canada.

System	SC-AK75
Main Unit	SA-AK75
Front Speakers *2	SB-AK75
Surround Speakers *2	SB-PS55A

*2 : Made in Singapore

Tape Deck : AR2 Mechanism Series
Traverse Deck : RAE0152Z Mechanism Series

Specifications

AMPLIFIER SECTION

Rated minimum sine wave
RMS power output
1.0% total harmonic distortion
1 kHz both channels driven 70 W per channel (6 Ω)
60 Hz – 12 kHz both channels driven 60 W per channel (6 Ω)
Input sensitivity
AUX 250 mV
Input impedance
AUX 10 kΩ

FM TUNER SECTION

Frequency range 87.9 – 107.9 MHz (200 kHz steps)
87.5 – 108.0 MHz (100 kHz steps)
Sensitivity 16.3 dBf (1.8 μV, IHF' 58)
Antenna terminal(s) 75 Ω (unbalanced)

AM TUNER SECTION

Frequency range 520 – 1710 kHz
Sensitivity
S/N 20 dB 500 μV/m

CASSETTE DECK SECTION

Track system 4 track, 2 channel
Heads
Record/playback Solid permalloy head
Erasure Double gap ferrite head
Motor DC servo motor
Recording system AC bias 100 kHz
Erasing system AC erase
Tape speed 4.8 cm/s (17 1/2 ips)

Frequency response (+3, –6 dB) at DECK OUT

NORMAL 35 Hz – 14 kHz
HIGH POSITION 35 Hz – 14 kHz
S/N 50 dB (A weighted)
Wow and flutter 0.18 % (WRMS)
Fast forward and rewind times
Approx. 120 seconds with C-60 cassette tape

CD SECTION

Sampling frequency 44.1 kHz
Decoding 16 bit linear
Beam source/wave length Semiconductor laser / 780 nm
Number of channels Stereo
Frequency response 20 Hz – 20 kHz (+1, –2 dB)
S/N
CD UNIT OUT 95 dB (JIS.A)
Wow and flutter Below measurable limit
Digital filter 8 fs
D/A converter MASH (1 bit DAC)

GENERAL

Power supply AC 120 V, 60 Hz
Power consumption 130 W
Dimensions (W × H × D) 270 × 350 × 398 mm
(10 5/8" × 13 25/32" × 15 21/32")
Weight 9.5 kg (21.1 lb.)

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.
Total harmonic distortion is measured by the digital spectrum analyzer.

*1 MASH is a trademark of NTT

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

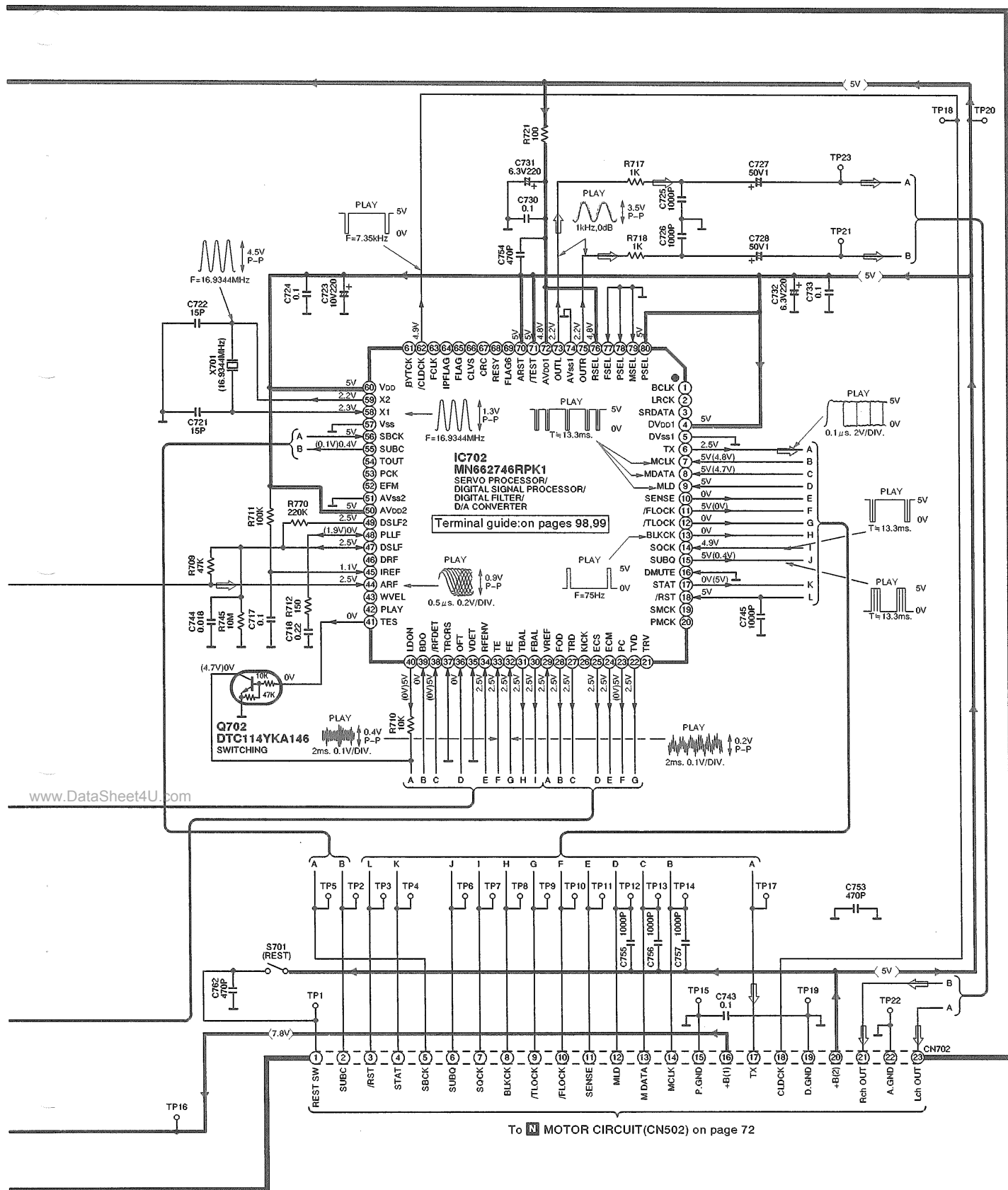
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Δ OPTICAL PICKUP

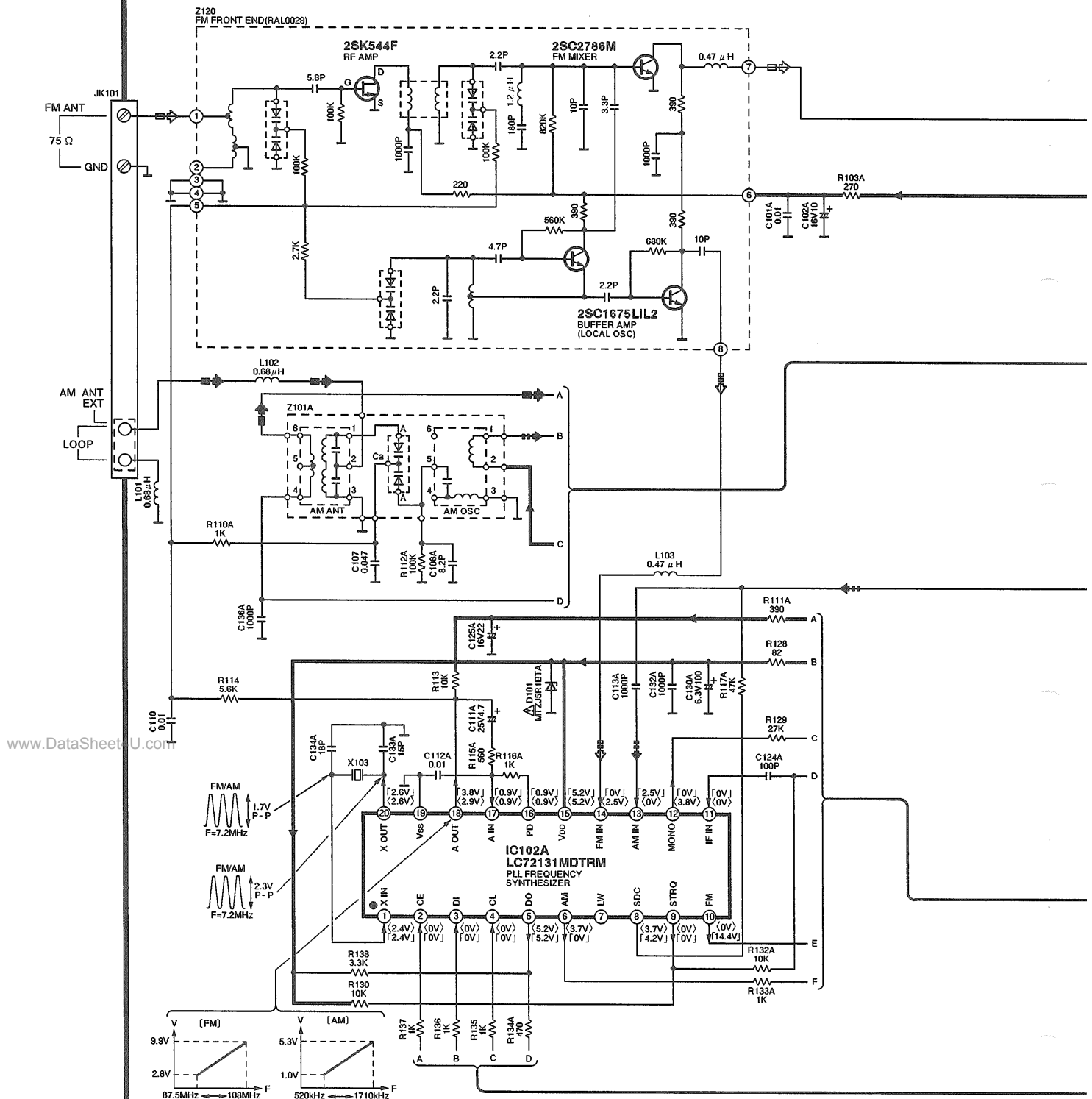


→ : CD signal line

→ : Positive voltage line



B TUNER CIRCUIT (P.C.Board: on page 81)



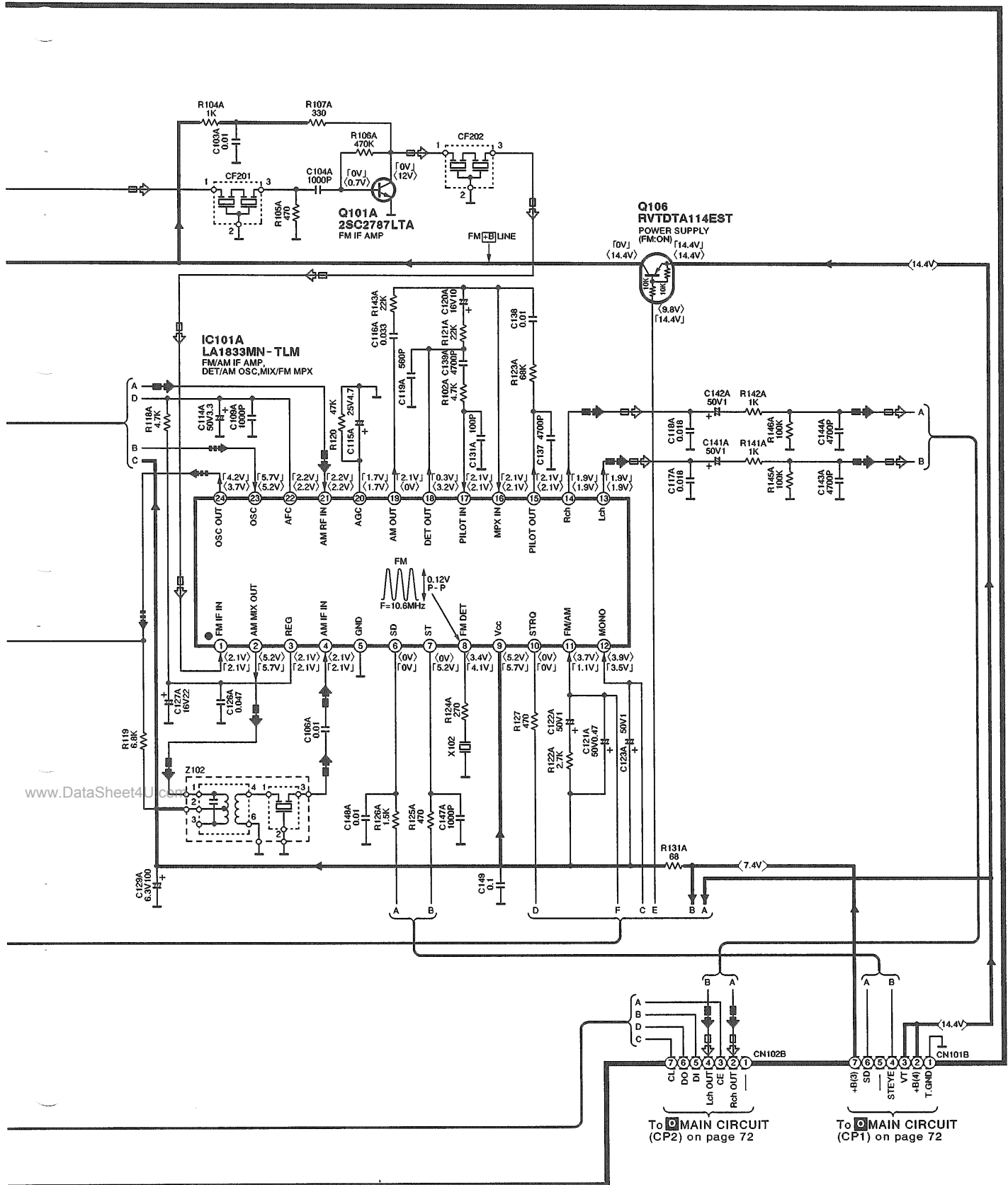
□ → : FM signal line

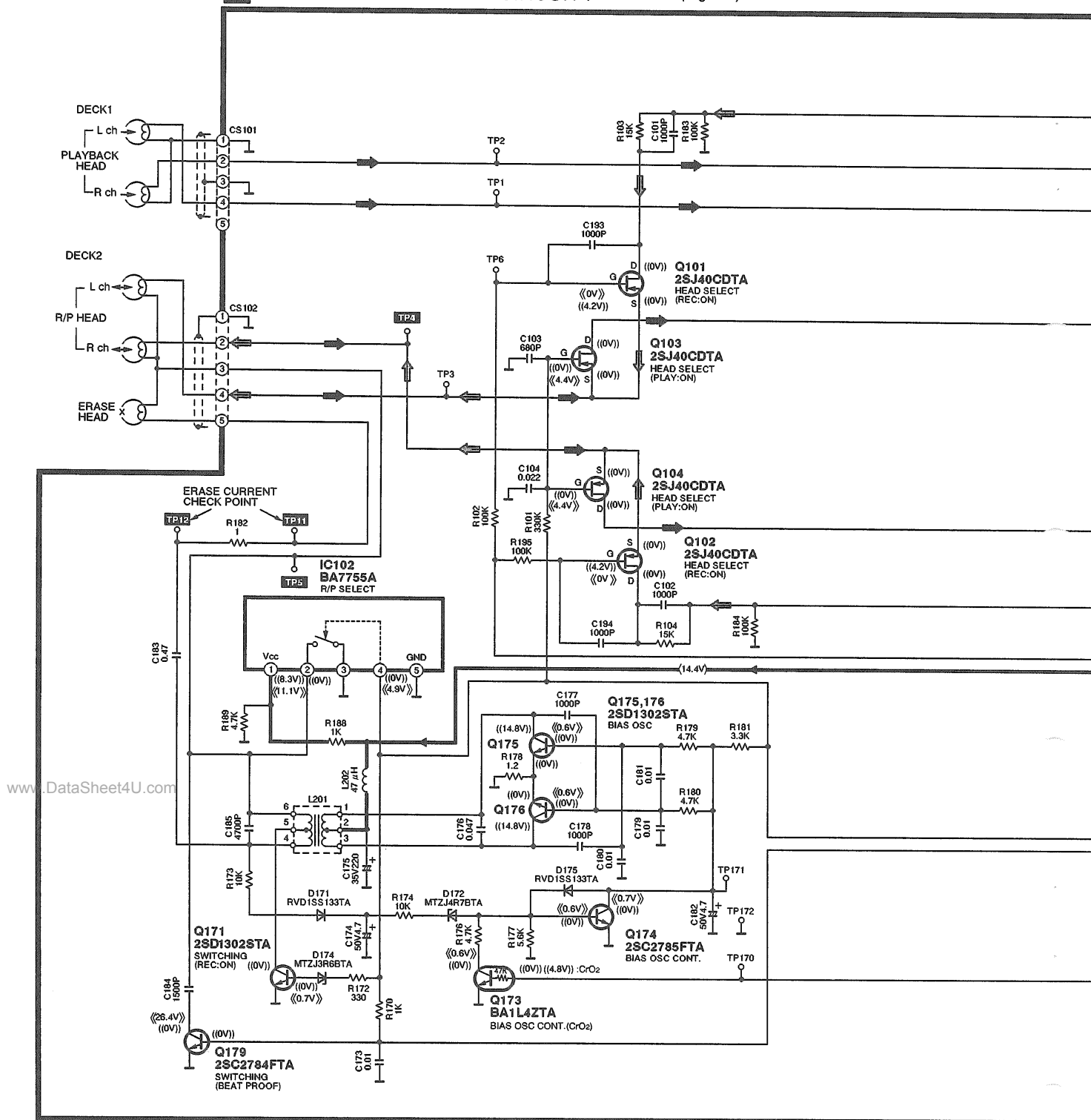
□ □ □ → : FM OSC signal line

■ → : AM signal line

■ ■ ■ → : AM OSC signal line

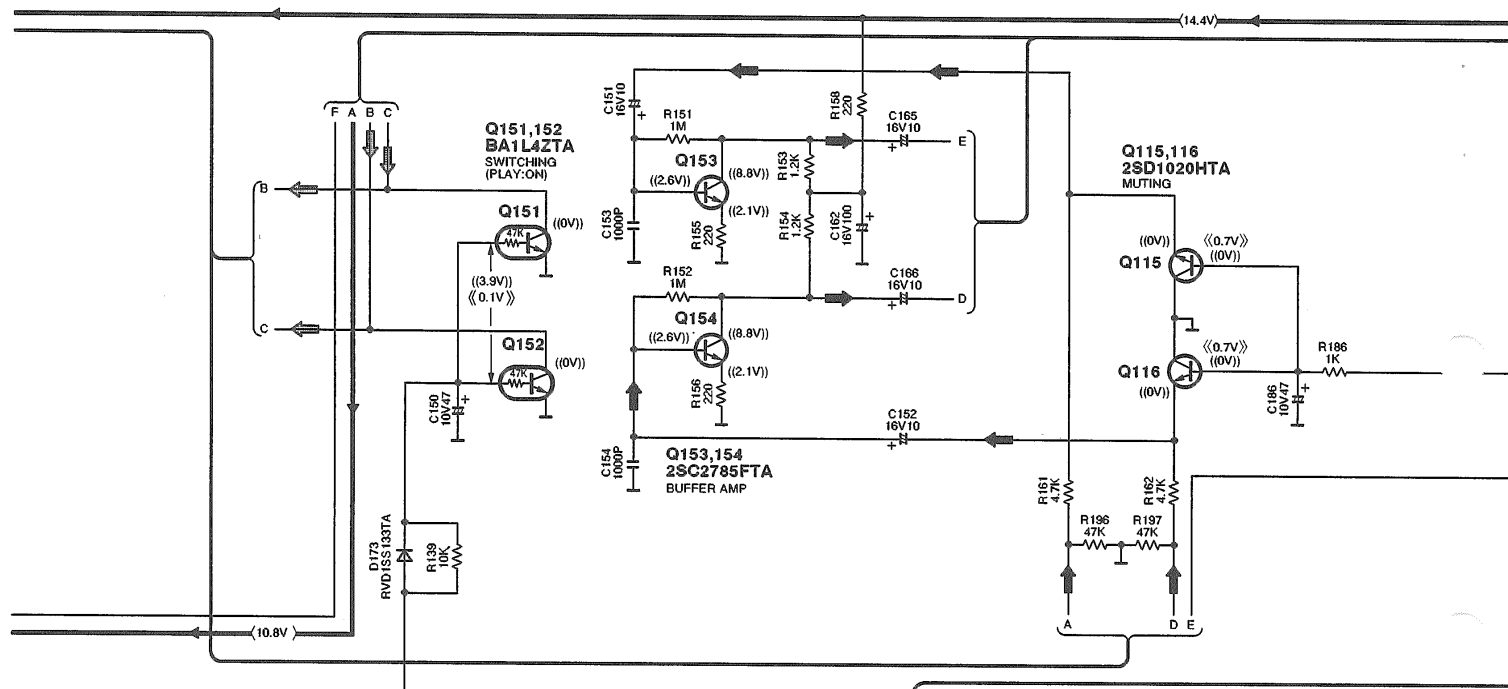
—→ : Positive voltage line



C MECHANISM CONTROL CIRCUIT (P.C.Board: on page 81)

 : Positive voltage line

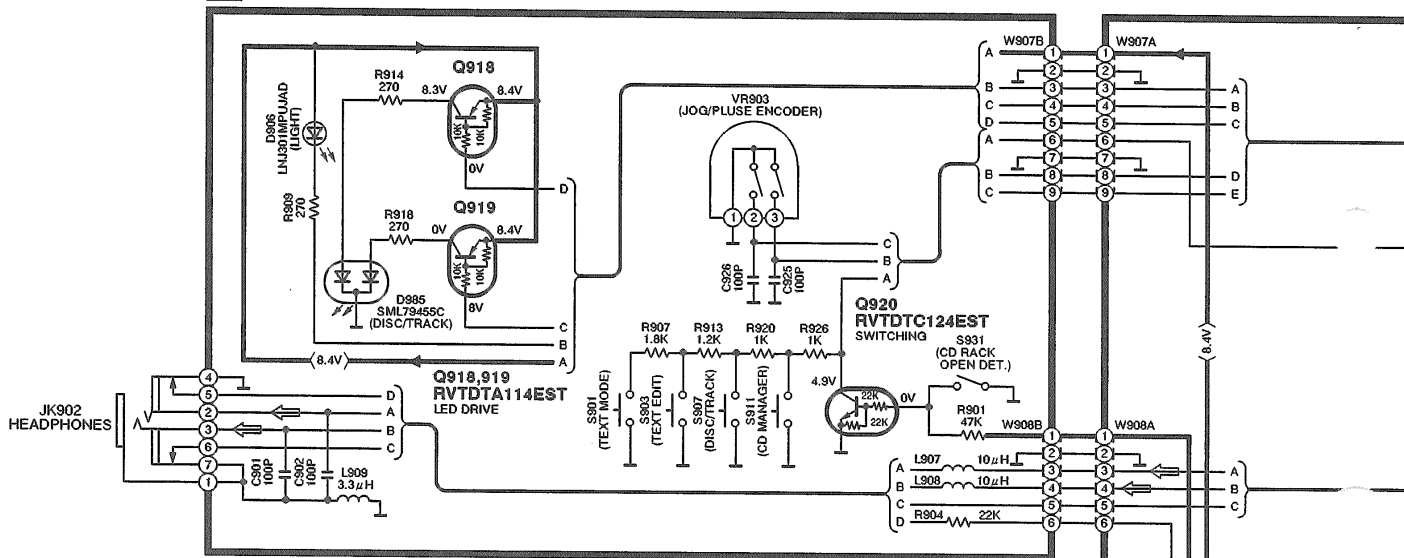


C MECHANISM CONTROL CIRCUIT (P.C.Board: on page 81)**D** MECHANISM(DECK2) CIRCUIT
(P.C.Board: on page 80)**E** MECHANISM(DECK1) CIRCUIT
(P.C.Board: on page 80)

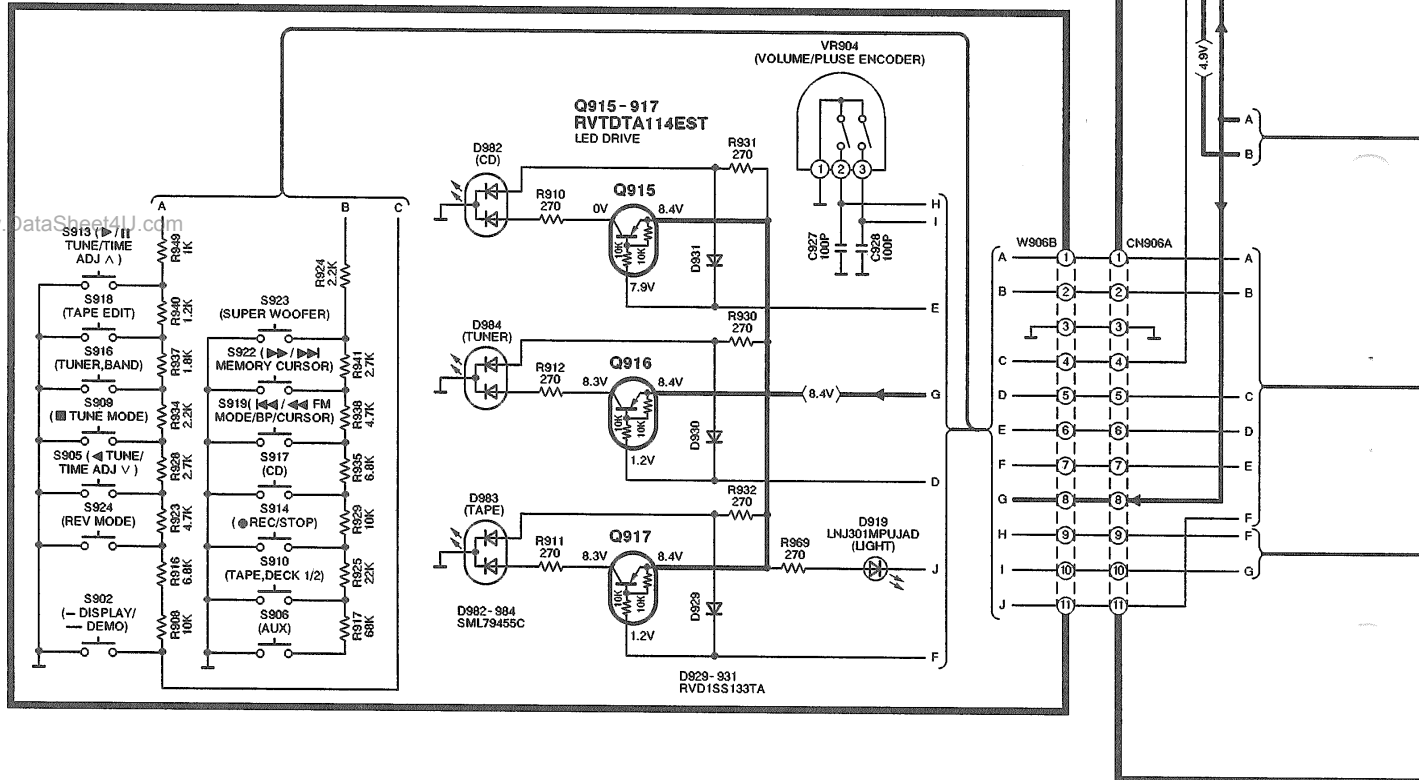
 : Positive voltage line



F OPERATION(1) CIRCUIT (P.C.Board:on page 82)



G OPERATION(3) CIRCUIT (P.C.Board:on page 85)



→ : CD signal line

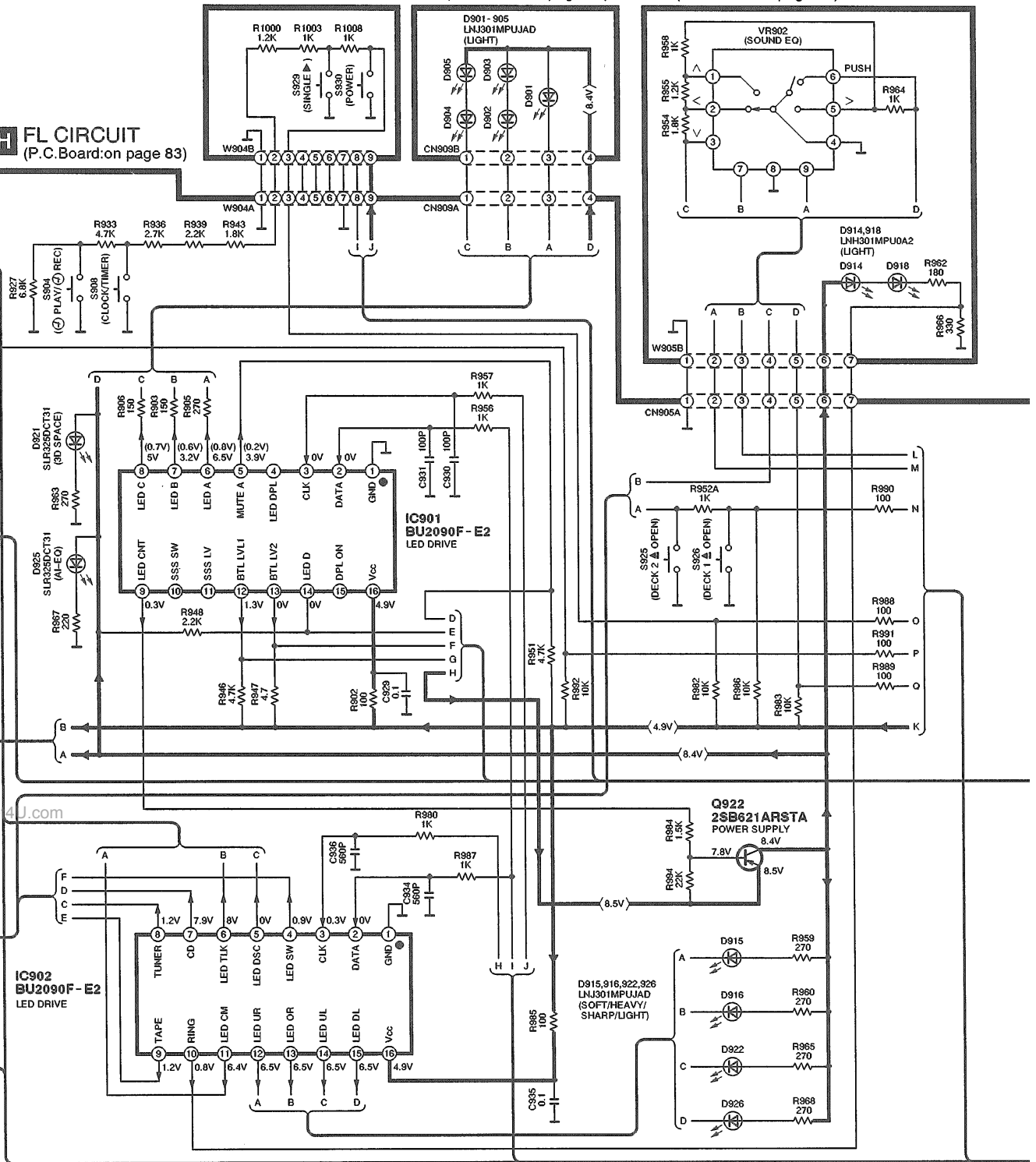
→ : Positive voltage line

I OPERATION(2) CIRCUIT (P.C. Board: on page 82)

J LED CIRCUIT (P.C. Board: on page 83)

K SOUND EQ CIRCUIT (P.C. Board: on page 83)

H FL CIRCUIT (P.C. Board: on page 83)



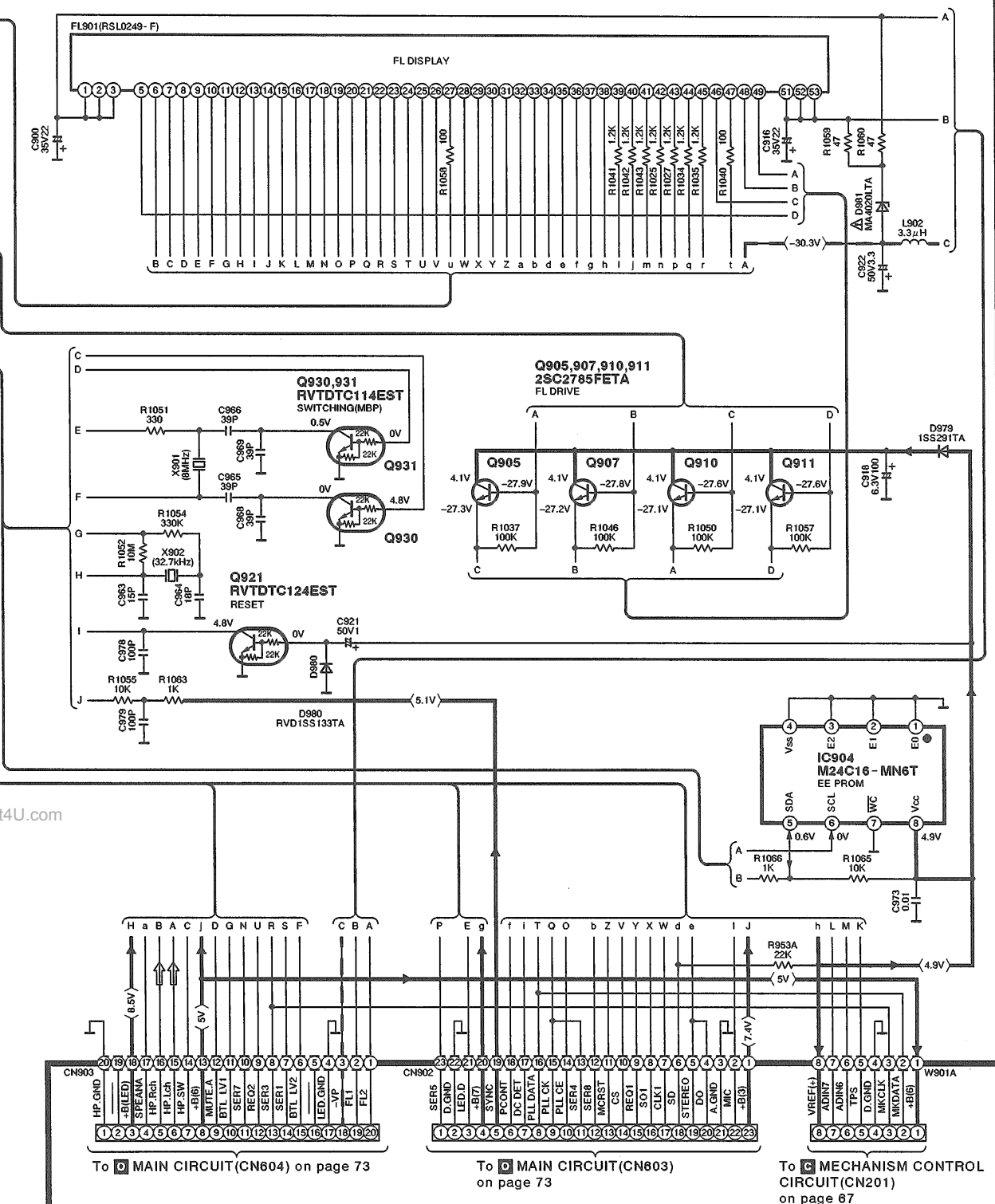


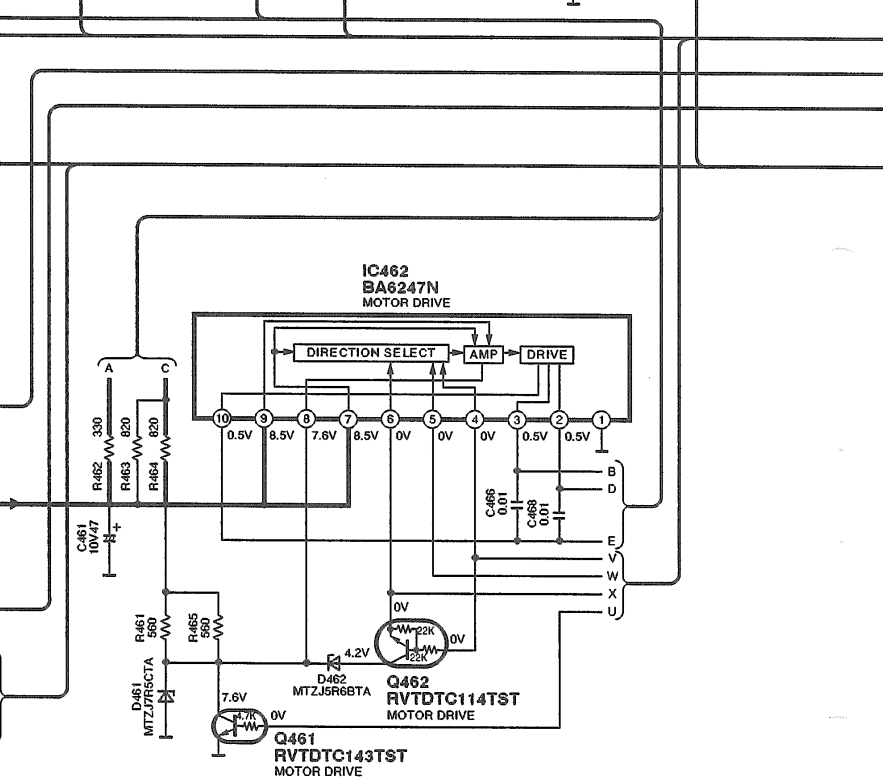
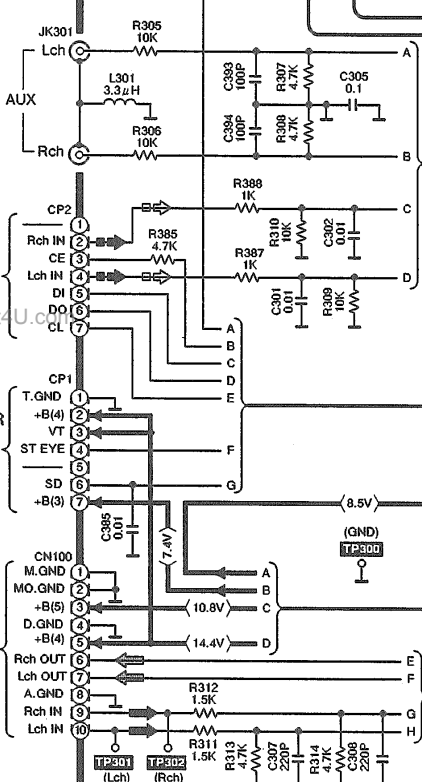
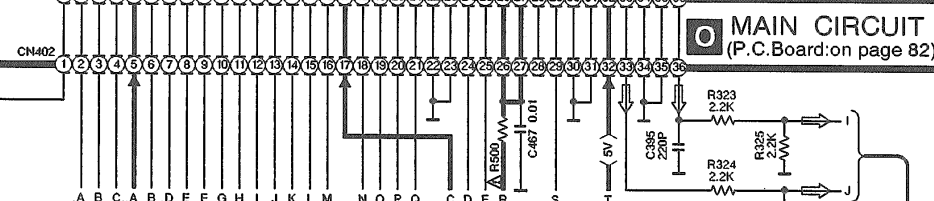
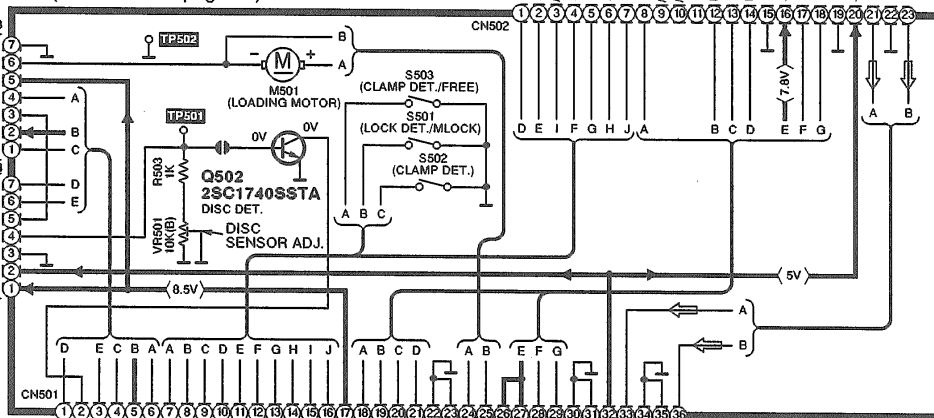
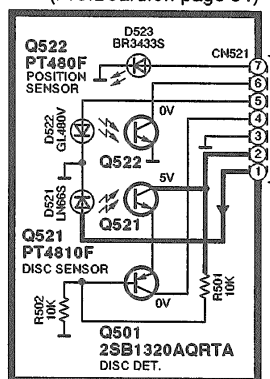
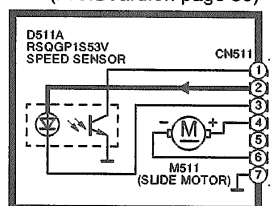
→ : CD signal line

→ : Positive voltage line

--- : Negative voltage line

H FL CIRCUIT (P.C.Board: on page 83)





 : Record signal line
 : Negative voltage line

 : Playback signal line



O

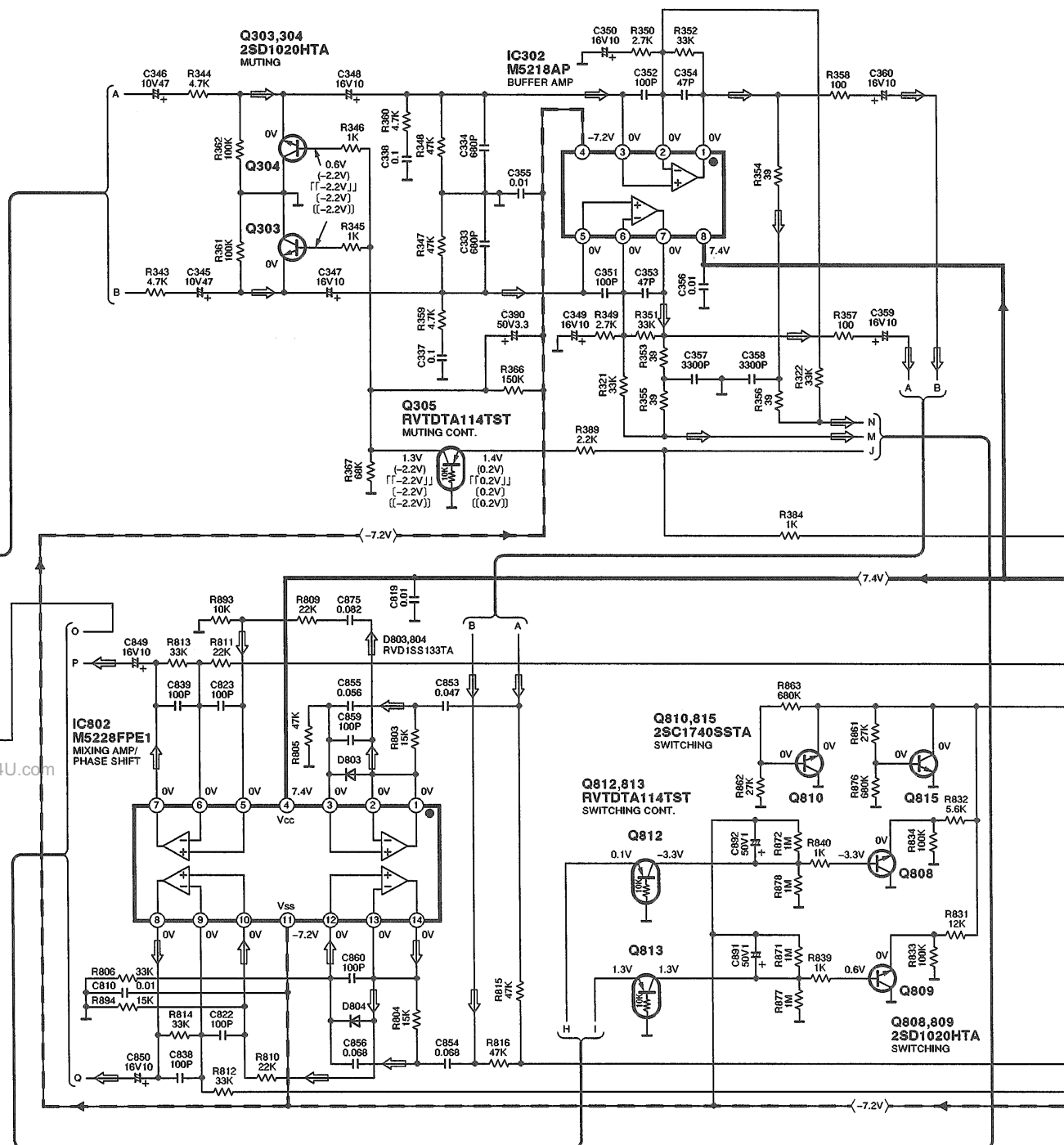


□ → : FM signal line
 □ → : CD signal line

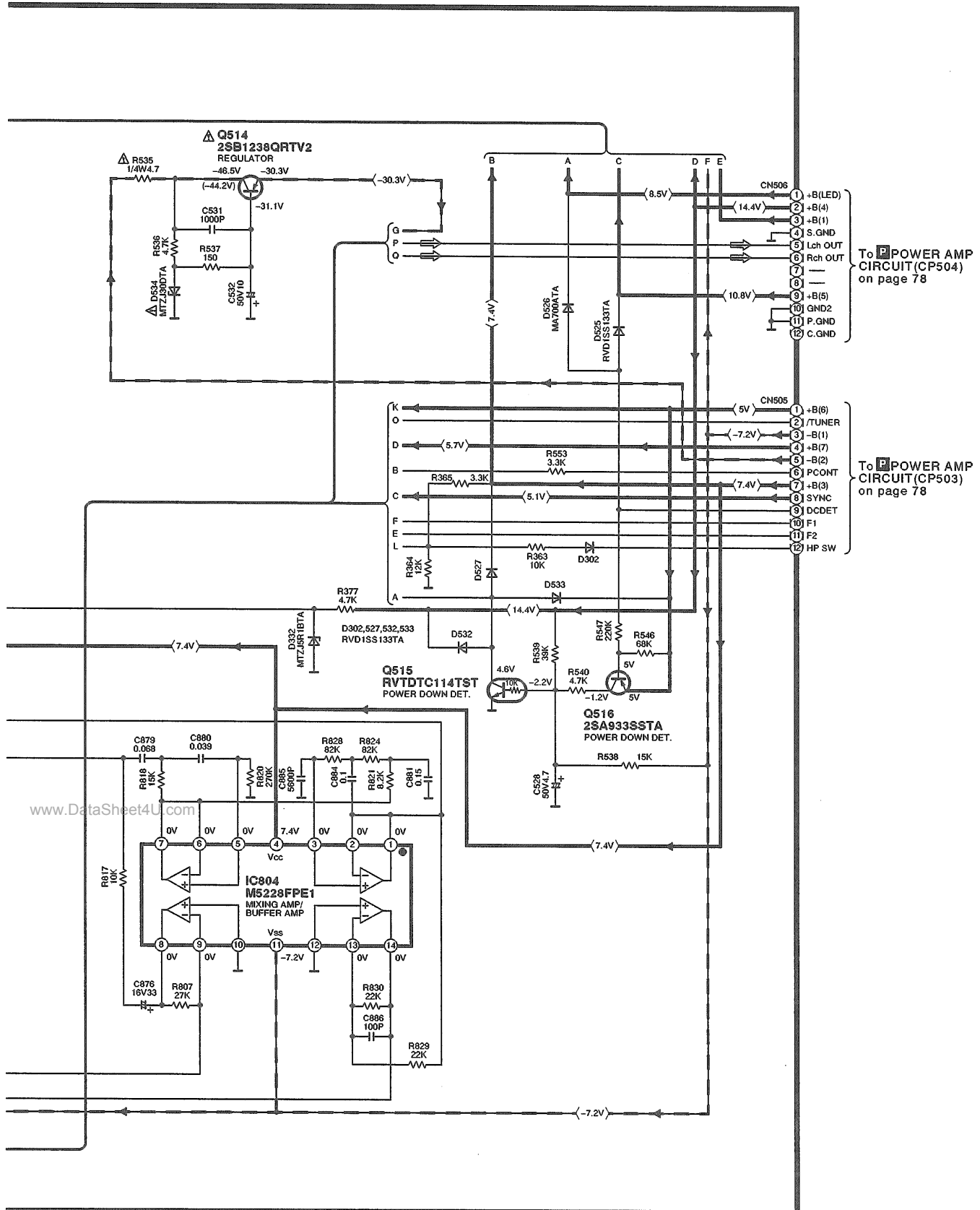
■ → : AM signal line
 —→ : Positive voltage line
 - - - - - : Negative voltage line

▨ → : Record signal line
 - - - - - : Negative voltage line

■ → : Playback signal line



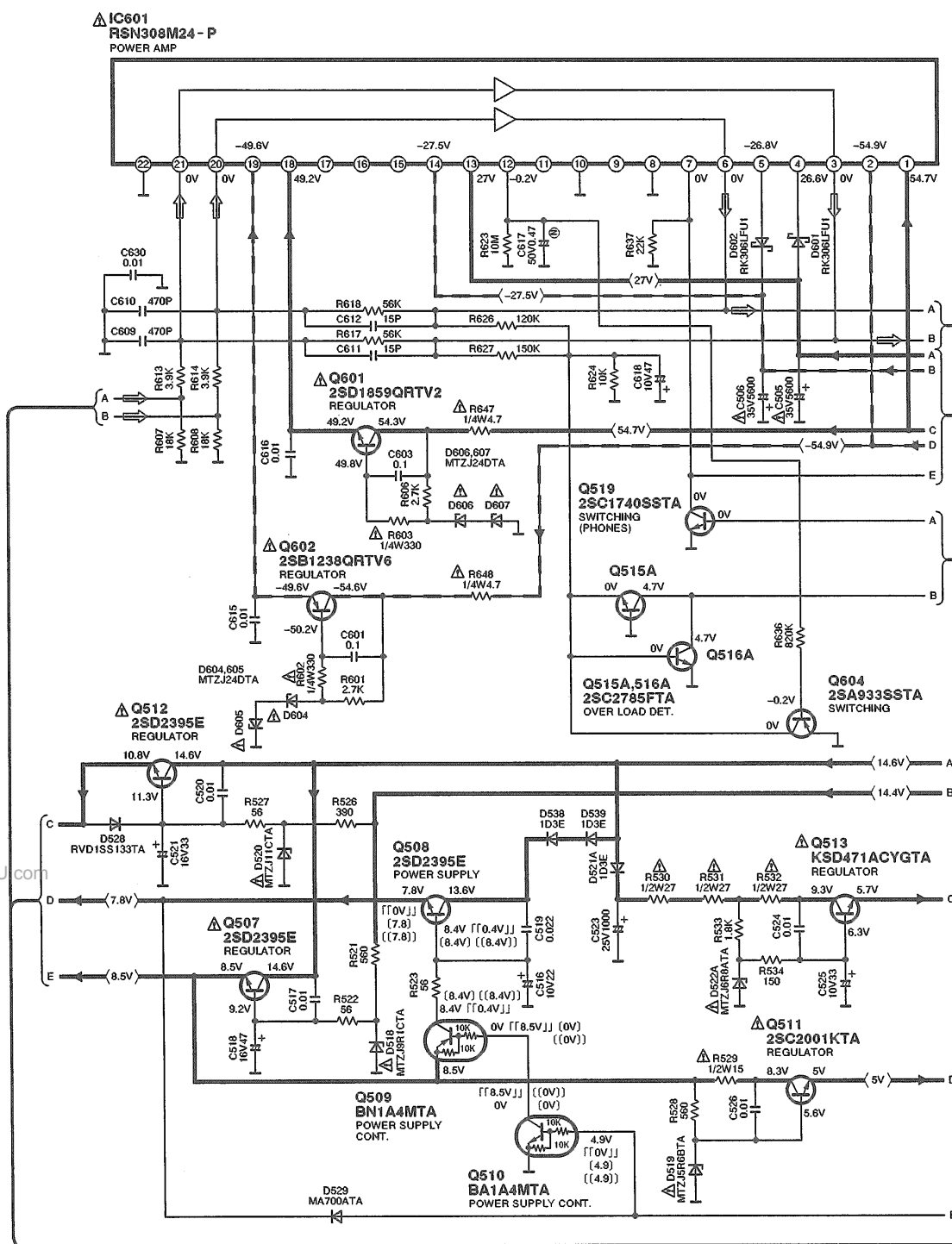
MAIN CIRCUIT (P.C.Board: on page 82)



 : CD signal line

 : Positive voltage line

 : Negative voltage line

P POWER AMP CIRCUIT (P.C.Board : on page 85)




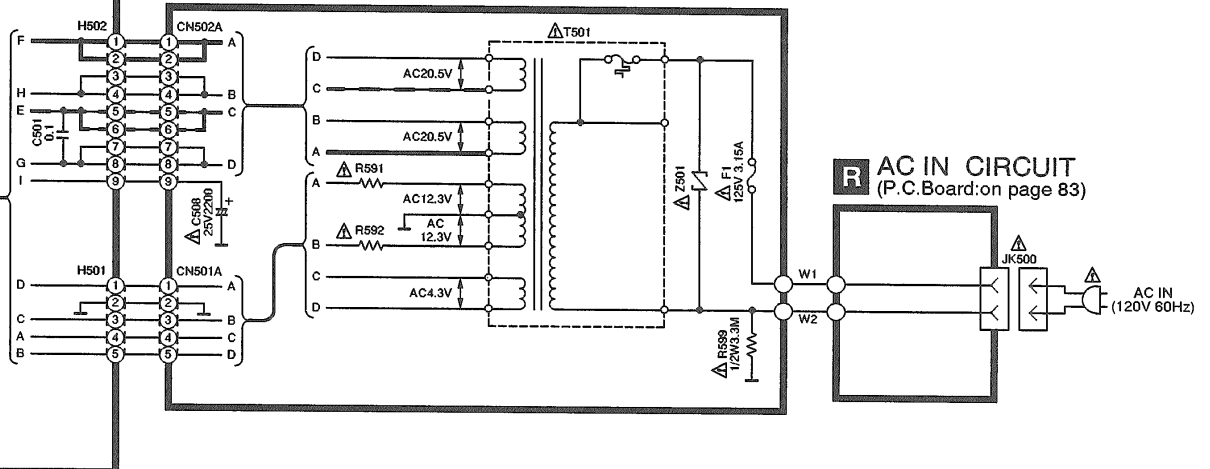
→ : CD signal line

→ : Positive voltage line

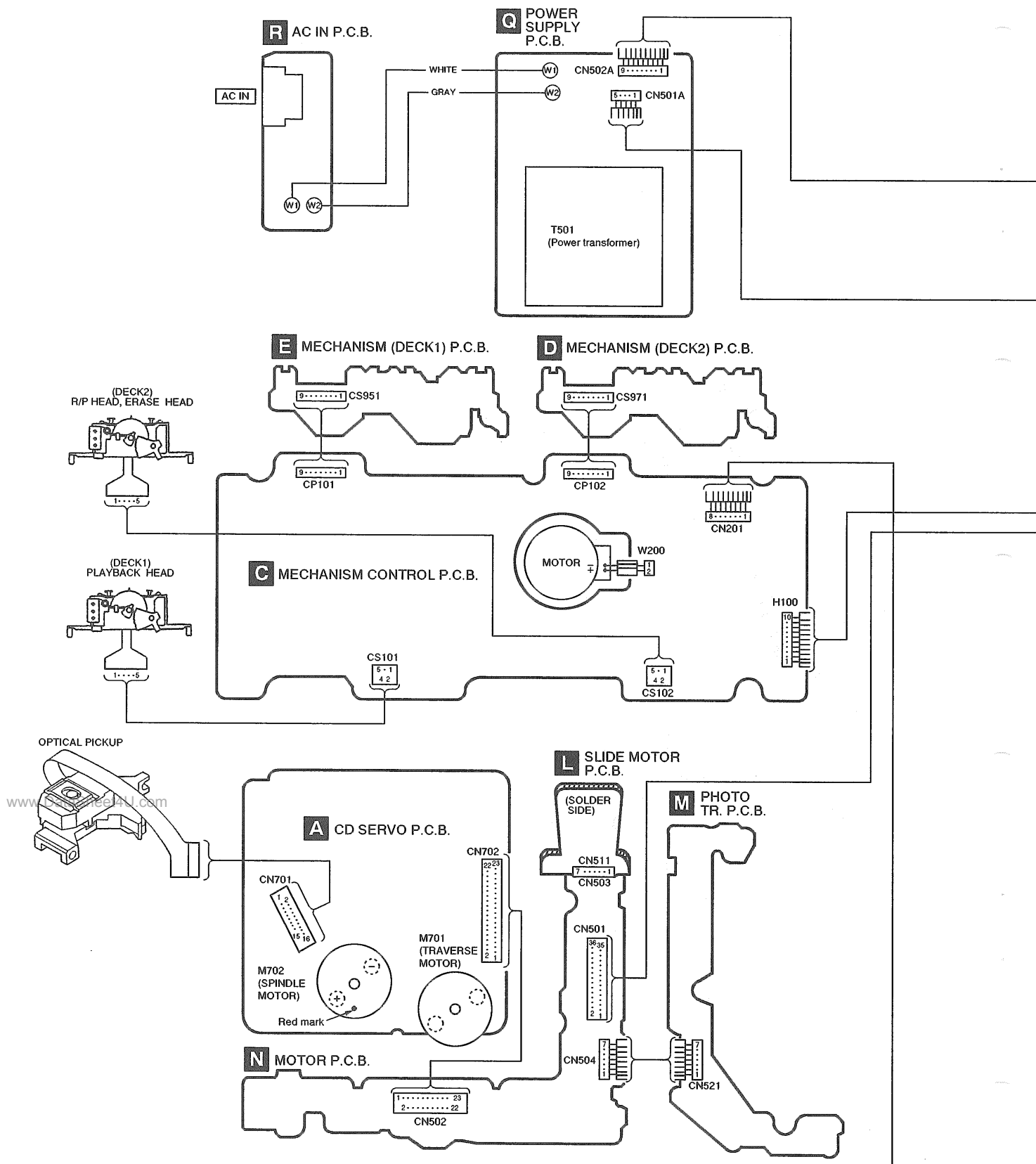
---→ : Negative voltage line

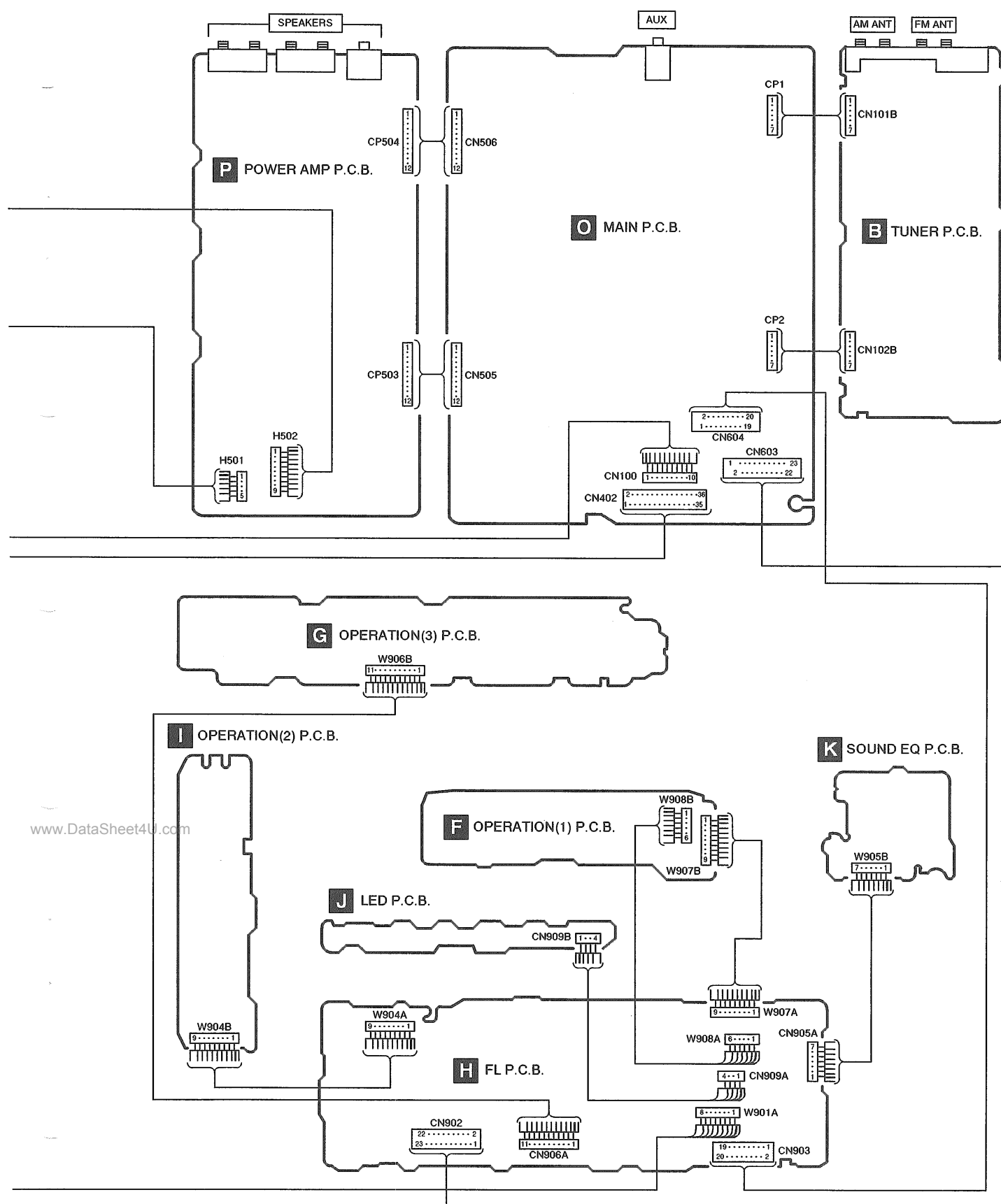
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Q POWER SUPPLY CIRCUIT (P.C.Board: on page 84)

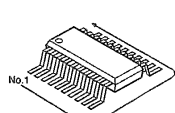
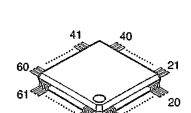
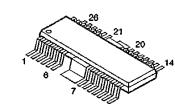
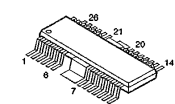
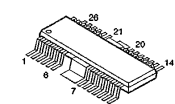
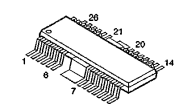
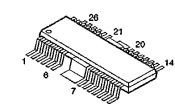
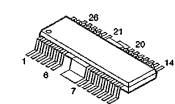
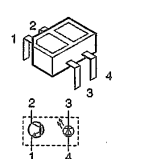
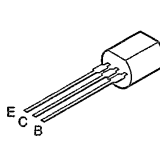
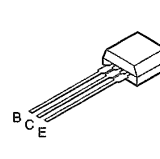
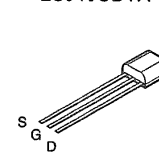
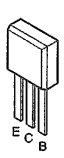
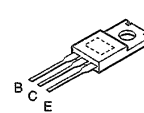
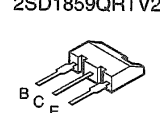
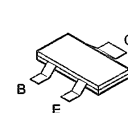
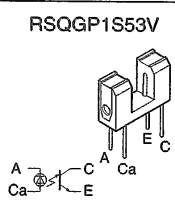
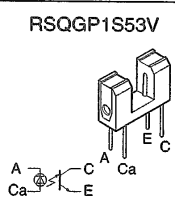
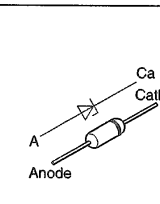
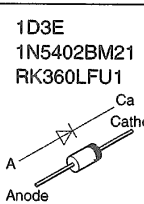
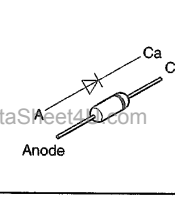
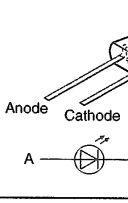
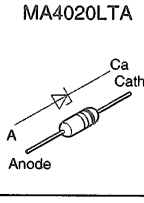
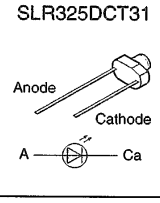
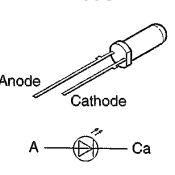
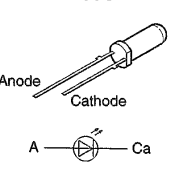
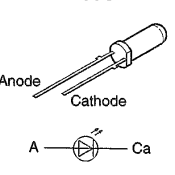


Wiring Connection Diagram



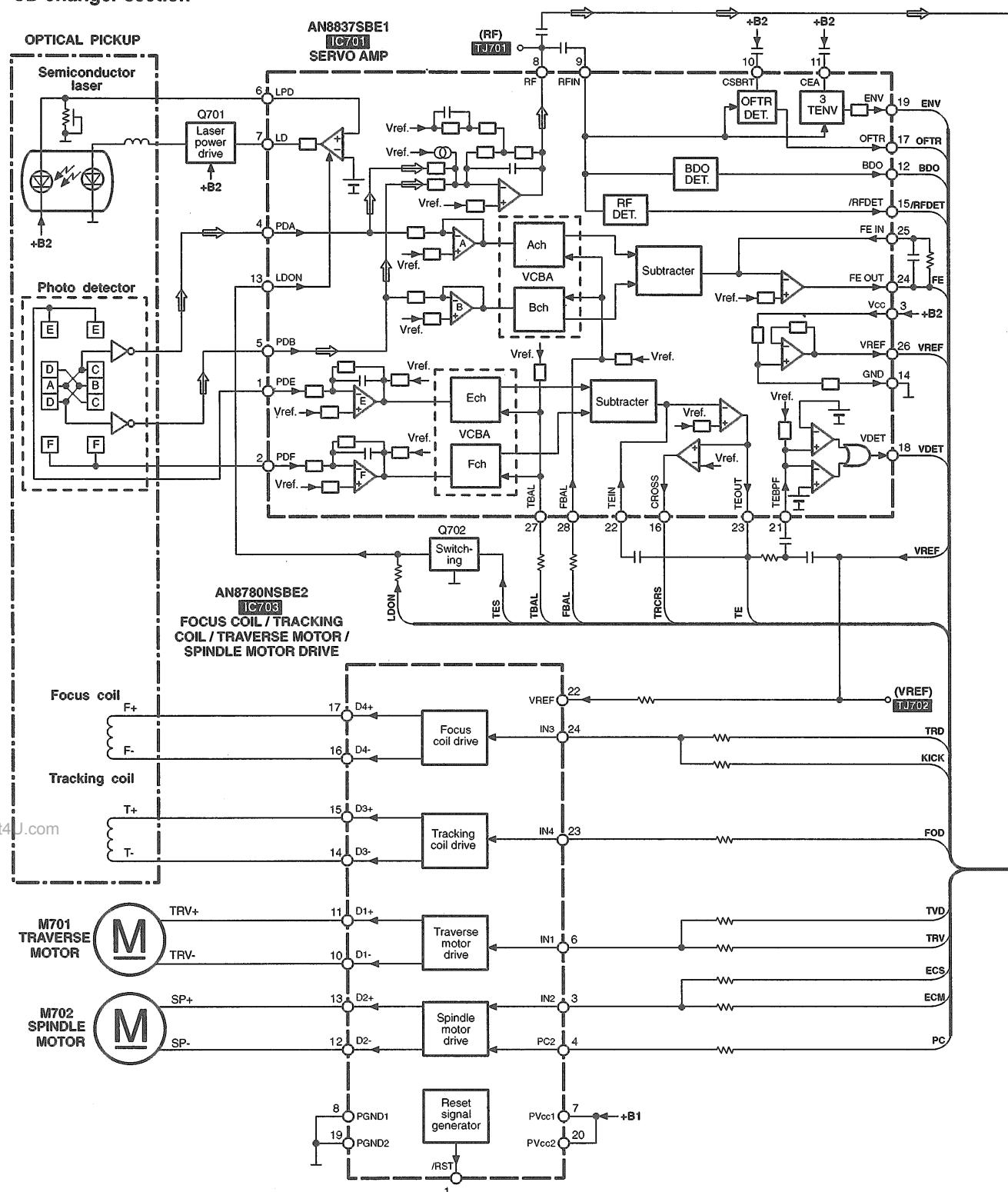


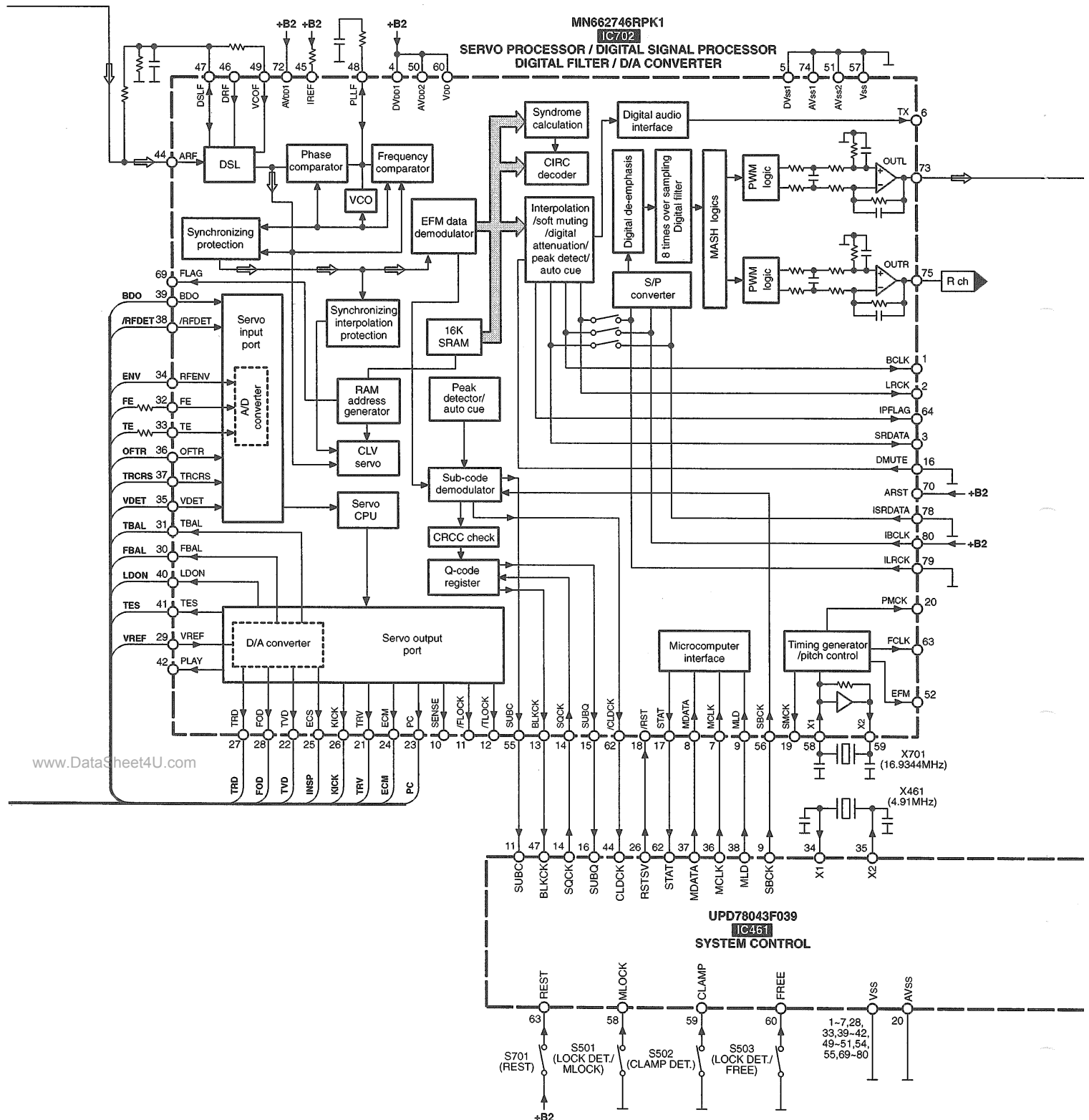
■ Type Illustration of IC's, Transistors and Diodes

	<table><tr><td>M5228FPE1</td><td>14PIN</td><td>LA1833MN-TLM</td><td>24PIN</td></tr><tr><td>BU2040F-E2</td><td>16PIN</td><td>LC72131MDTRM</td><td>20PIN</td></tr><tr><td>BU2090F-E2</td><td>16PIN</td><td>AN8837SBE1</td><td>28PIN</td></tr><tr><td>BA3835F-E2</td><td>18PIN</td><td>M51167BFP-TB</td><td>36PIN</td></tr><tr><td></td><td></td><td>M24C16-MN6T</td><td>8PIN</td></tr></table>	M5228FPE1	14PIN	LA1833MN-TLM	24PIN	BU2040F-E2	16PIN	LC72131MDTRM	20PIN	BU2090F-E2	16PIN	AN8837SBE1	28PIN	BA3835F-E2	18PIN	M51167BFP-TB	36PIN			M24C16-MN6T	8PIN	<table><tr><td>M62433AFP</td><td>80PIN</td></tr><tr><td>M38199MF072F</td><td>100PIN</td></tr><tr><td>UPD78043F039</td><td>80PIN</td></tr></table>	M62433AFP	80PIN	M38199MF072F	100PIN	UPD78043F039	80PIN	
M5228FPE1	14PIN	LA1833MN-TLM	24PIN																										
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M62433AFP	80PIN																												
M38199MF072F	100PIN																												
UPD78043F039	80PIN																												
AN8780NSBE2	M5218AP	BA7755A	BA6247N	RSN308M24-P	BA178M05T																								
																													
ON2180RLC	 																												
	2SB621ARSTA 2SB621RTA 2SC2001KTA 2SD1302STA 2SD965RTA KSD471ACYGTA		2SA933SSTA 2SC1740SSTA RVTDTA114EST RVTDTA114TST RVTDTA114TST RVTDTA114TST RVTDTA124EST RVTDTA143TST		2SJ40CDTA																								
	2SC2784FTA 2SC2785FETA 2SC2785FTA 2SC2787LTA 2SD1020HTA	BA1A4ZTA BA1L4ZTA BN1A4MTA BN1L3NTA	2SB1566E 2SD2395E	2SB1238QRTV2 2SB1320AQRTA 2SD1859QRTV2	2SA1037AKSTX DTC114YKA146																								
																													
RSQGP1S53V			1D3E 1N5402BM21 RK360LFU1																										
				MTZJ3R6BTA MTZJ4R7BTA MTZJ5R1BTA MTZJ5R1CTA MTZJ5R6BTA MTZJ6R8ATA MTZJ7R5CTA																									
				MTZJ8R2BTA MTZJ9R1CTA MTZJ11CTA MTZJ16ATA MTZJ24DTA MTZJ30DTA																									
		1SS291TA MA165TA MA700ATA RVD1SS133TA	MA4020LTA	SLR325DCT31																									
					LNJ301MPUJAD LNH301MPU0A2																								
LN66S	BR3433S	SML79455C																											
																													

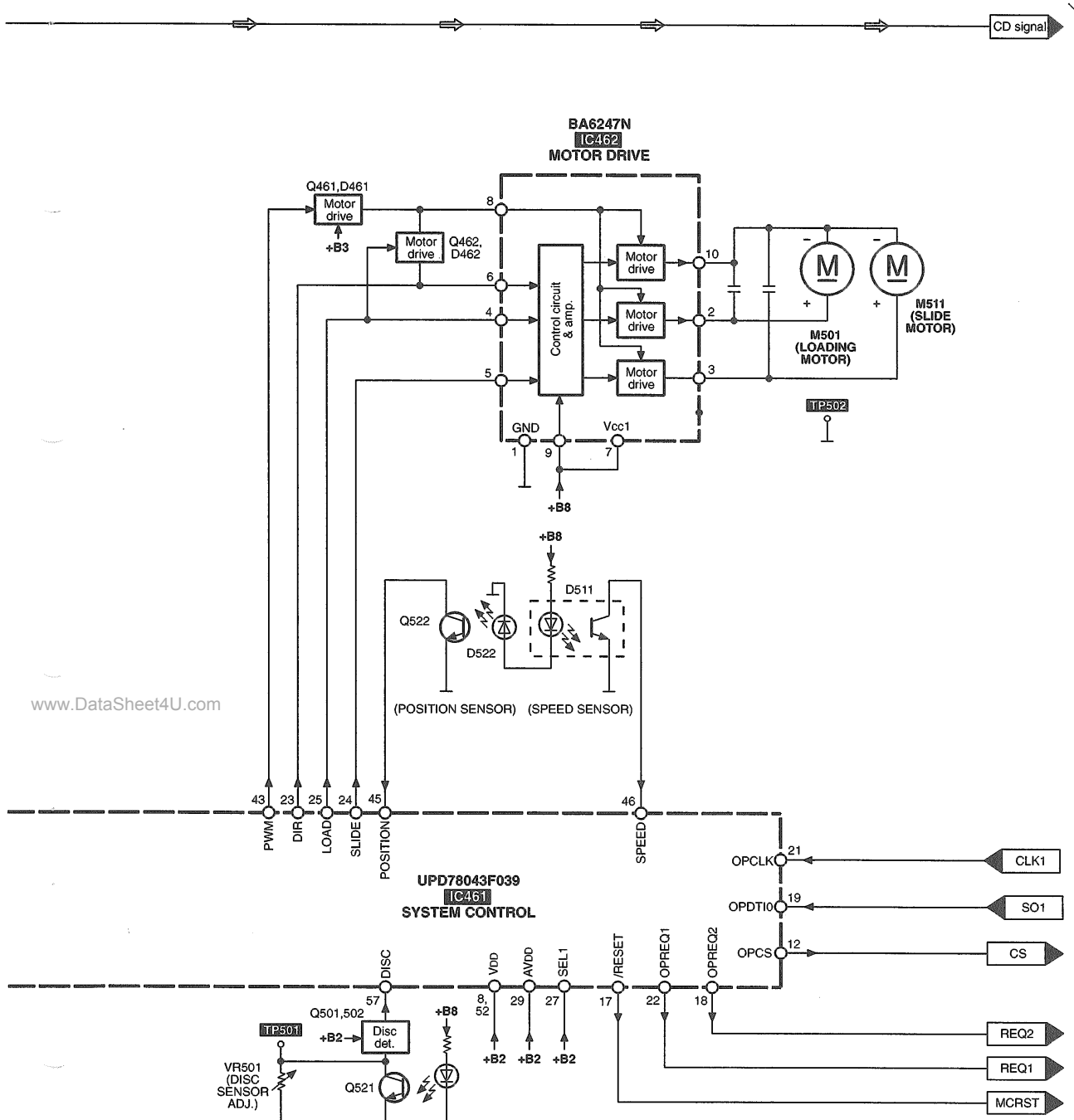
Block Diagram

• CD changer section

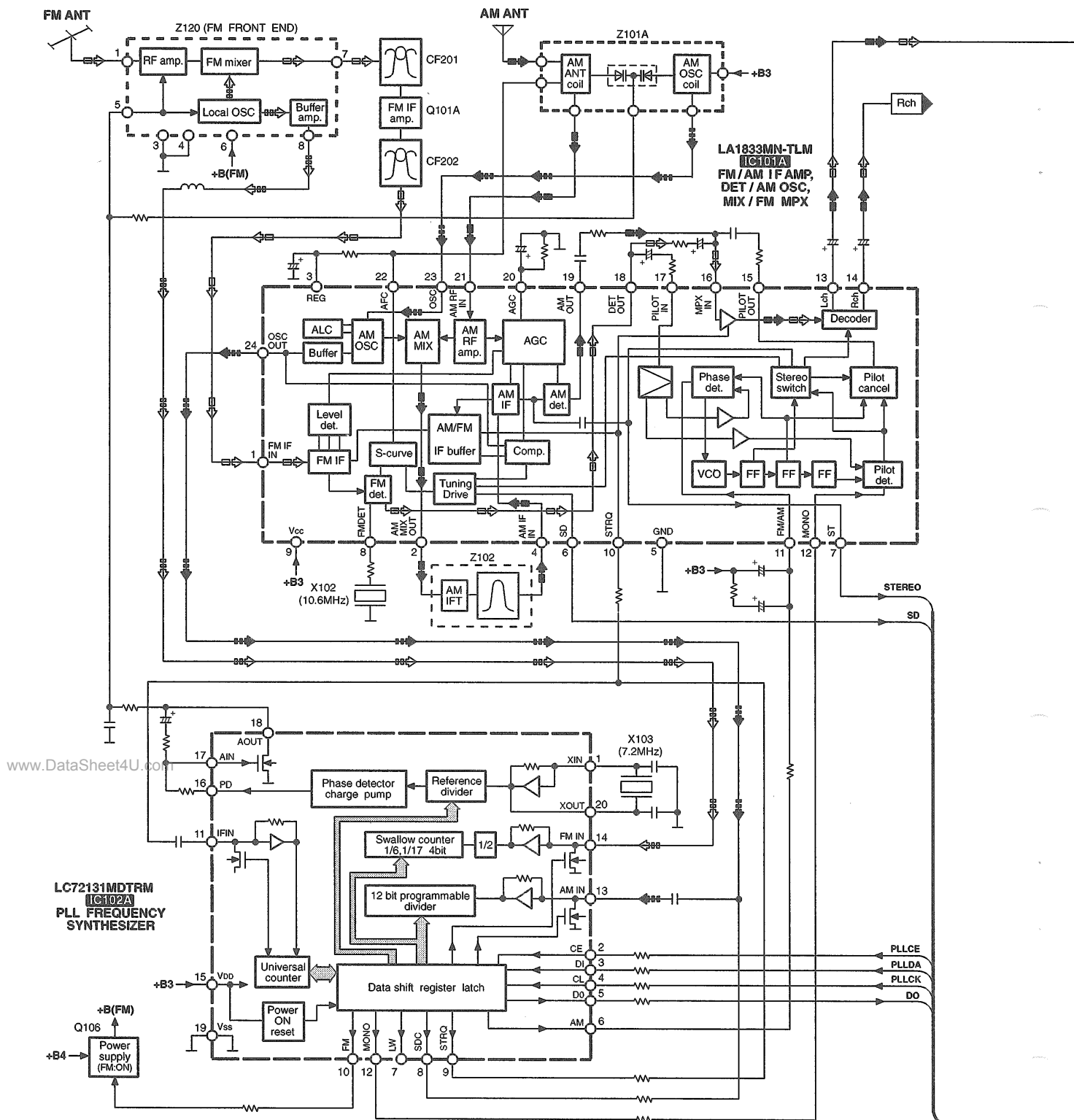


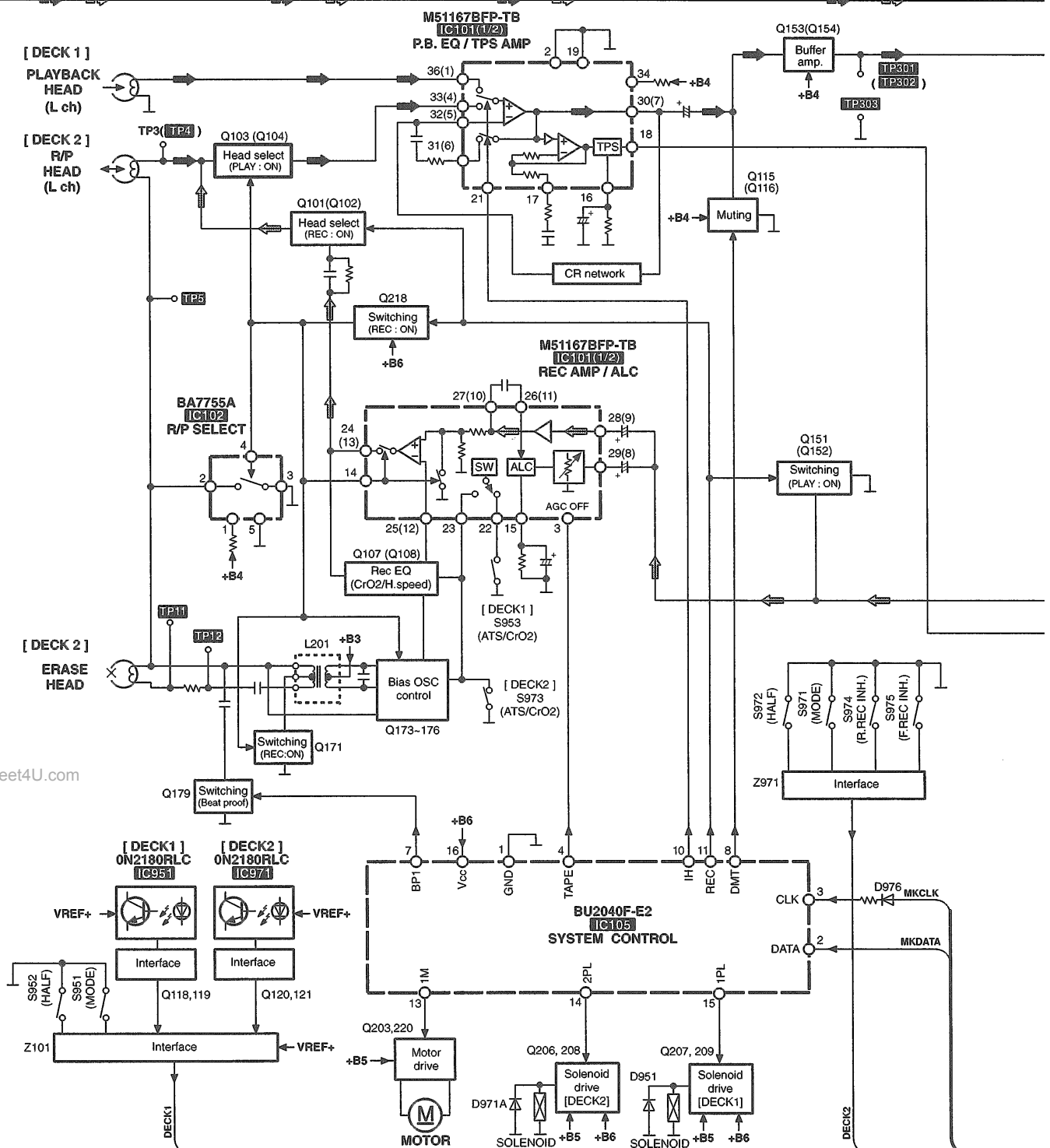


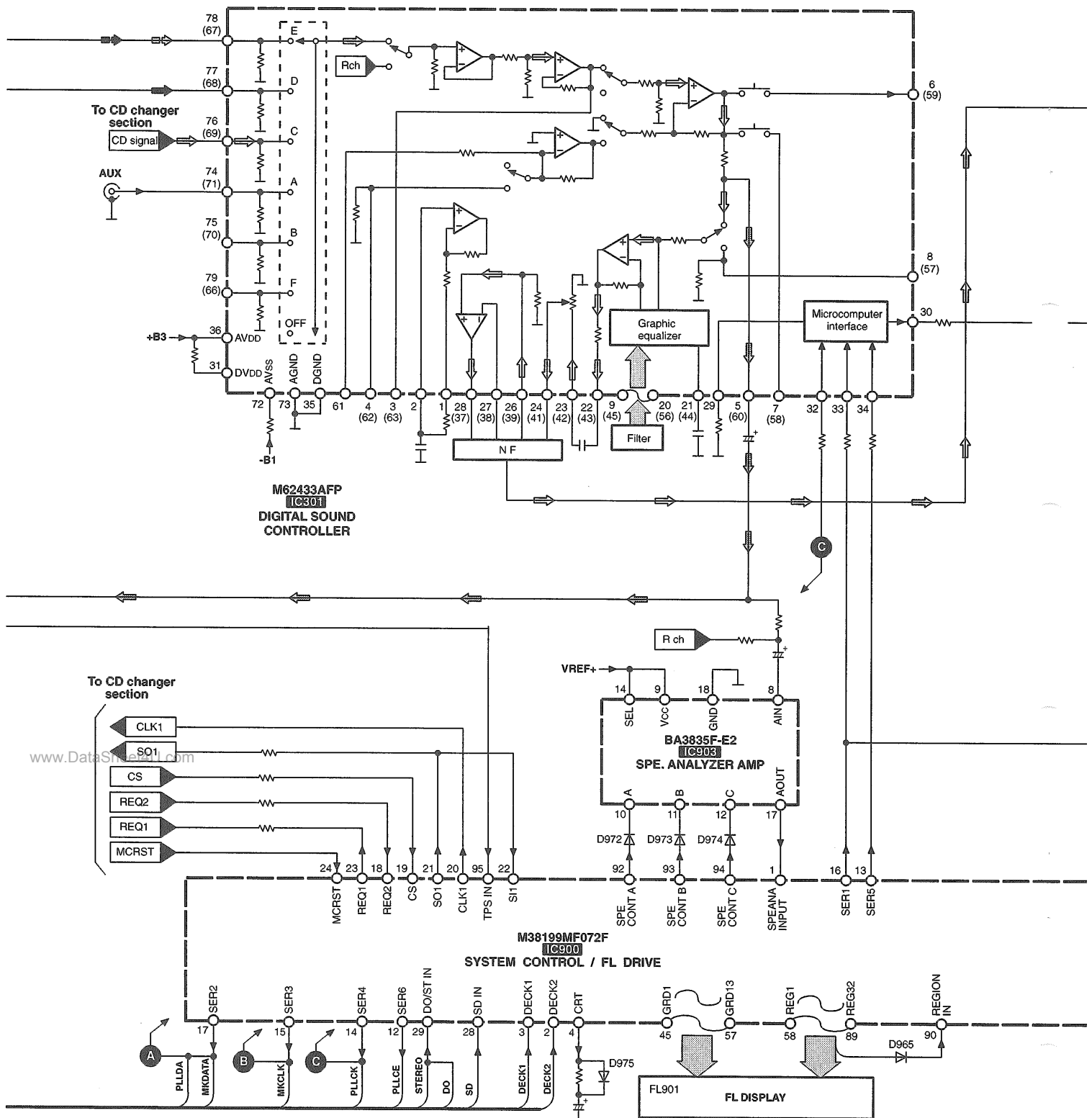
Note → : CD signal

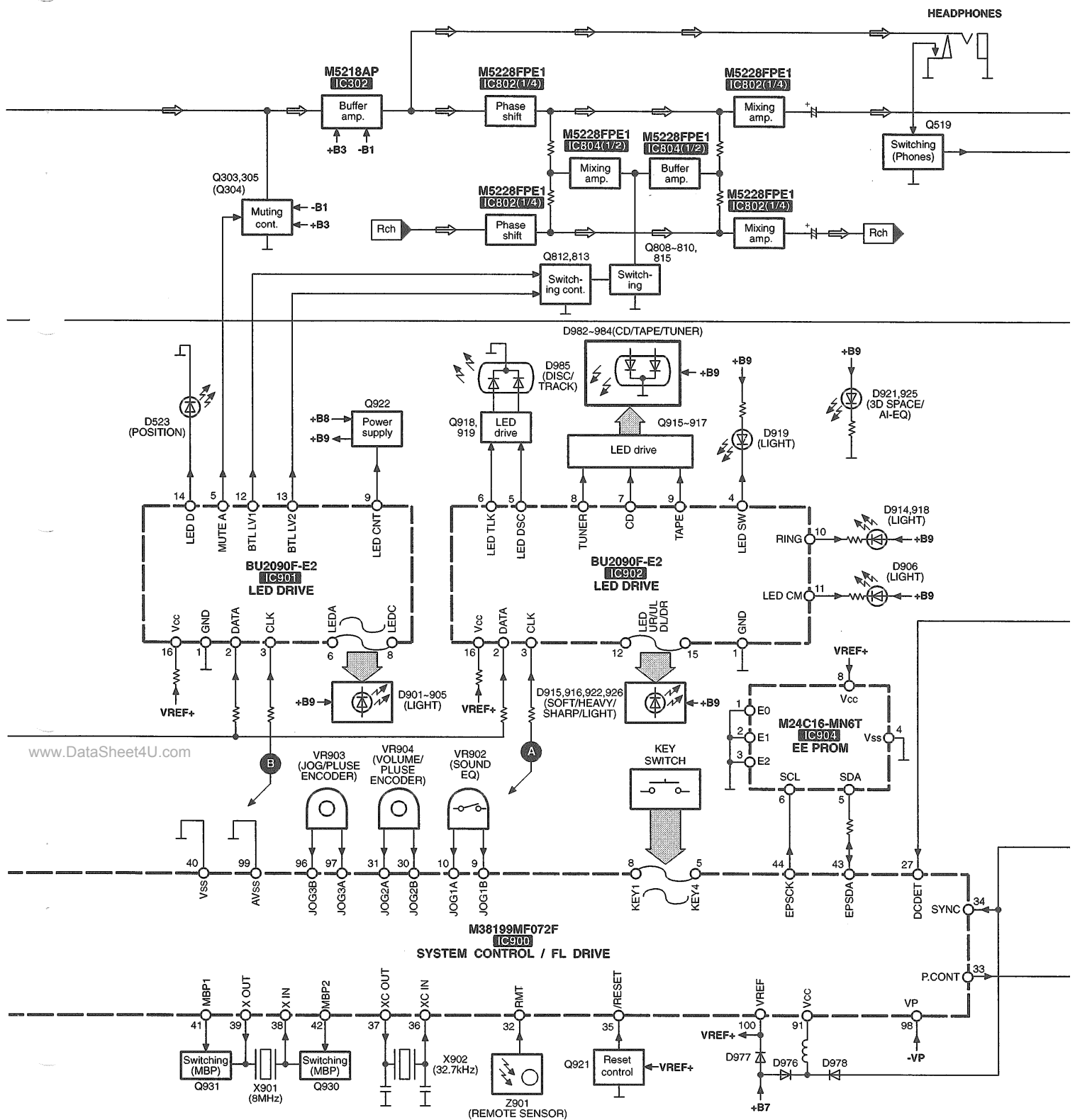


● Main section





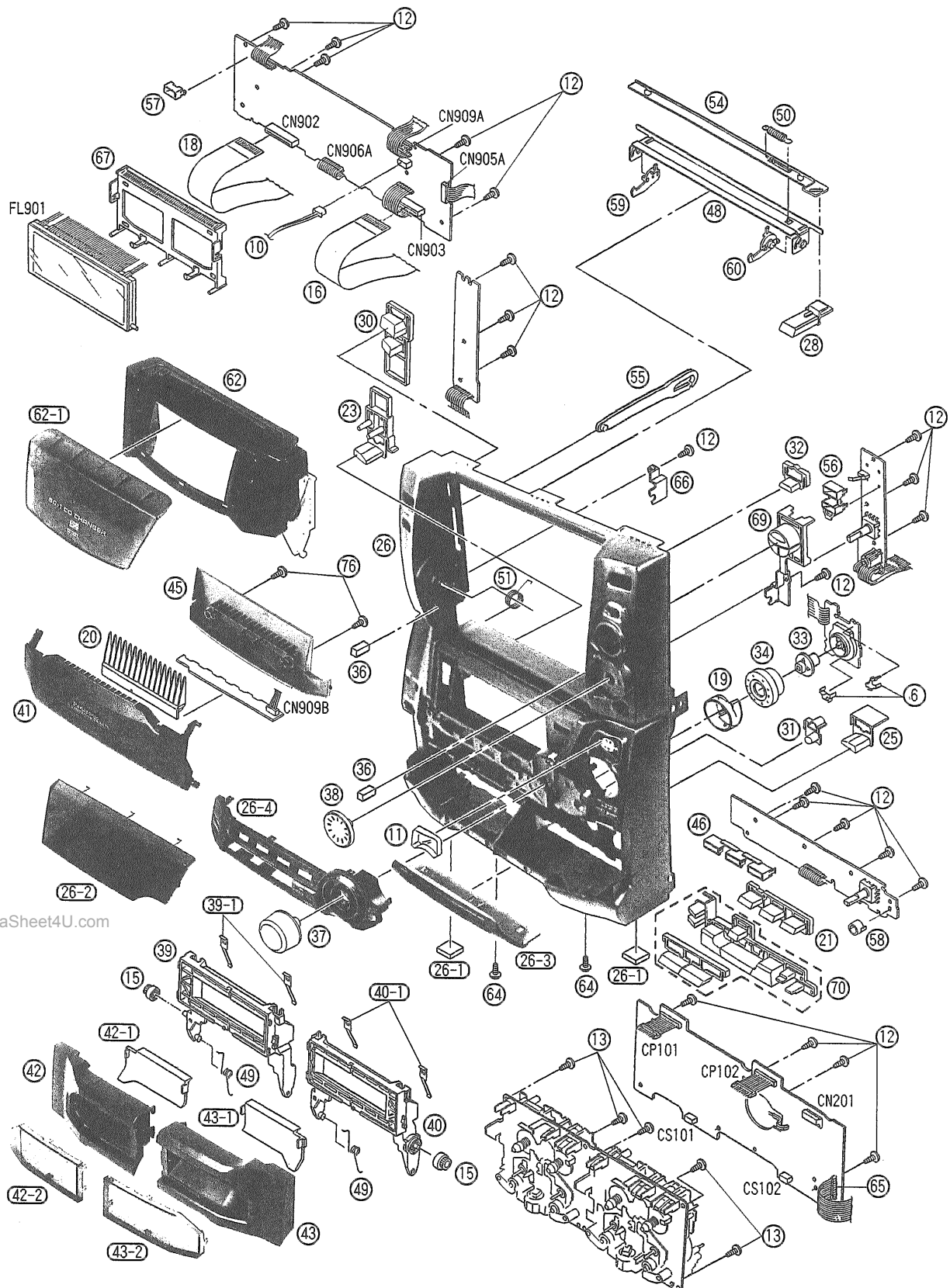


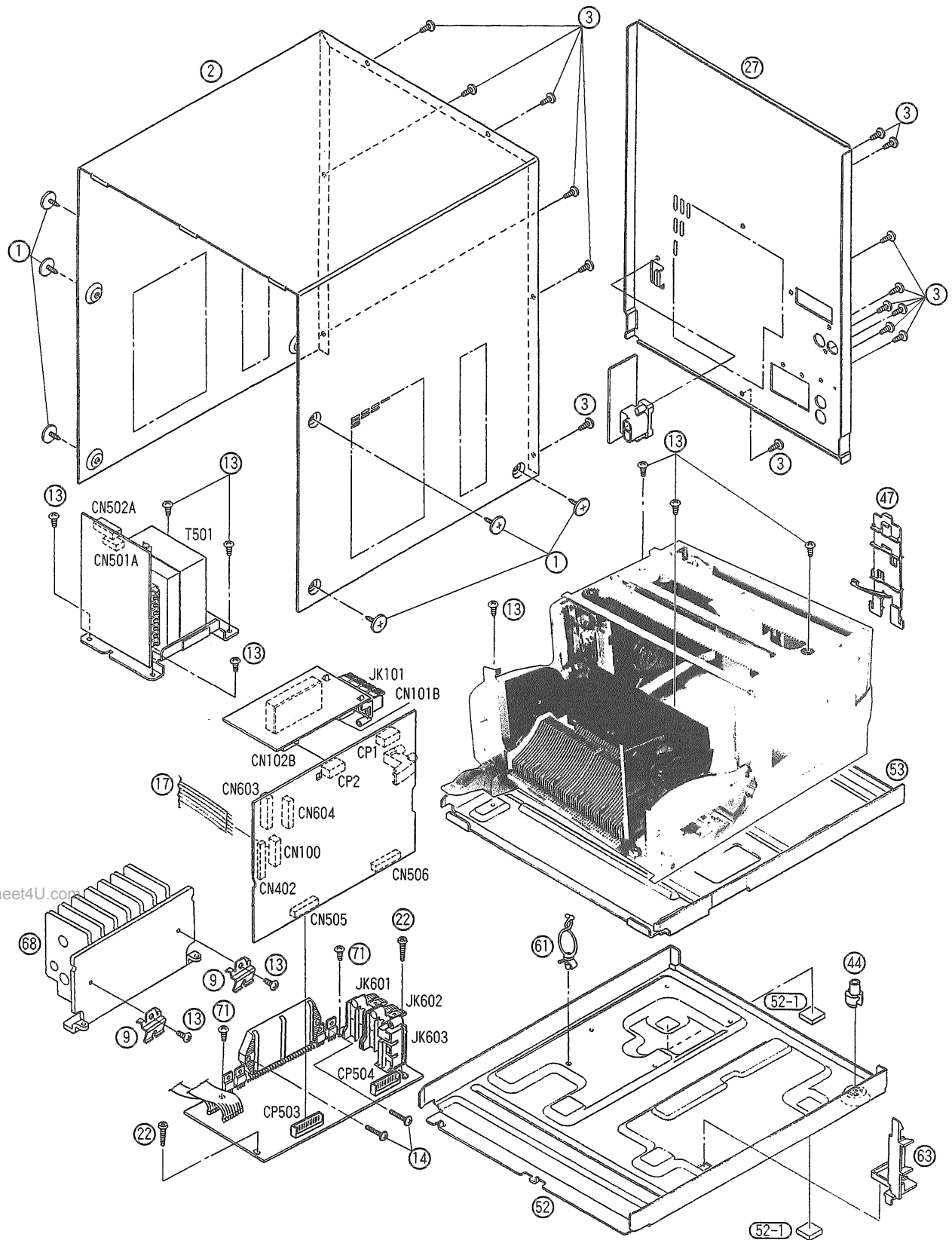




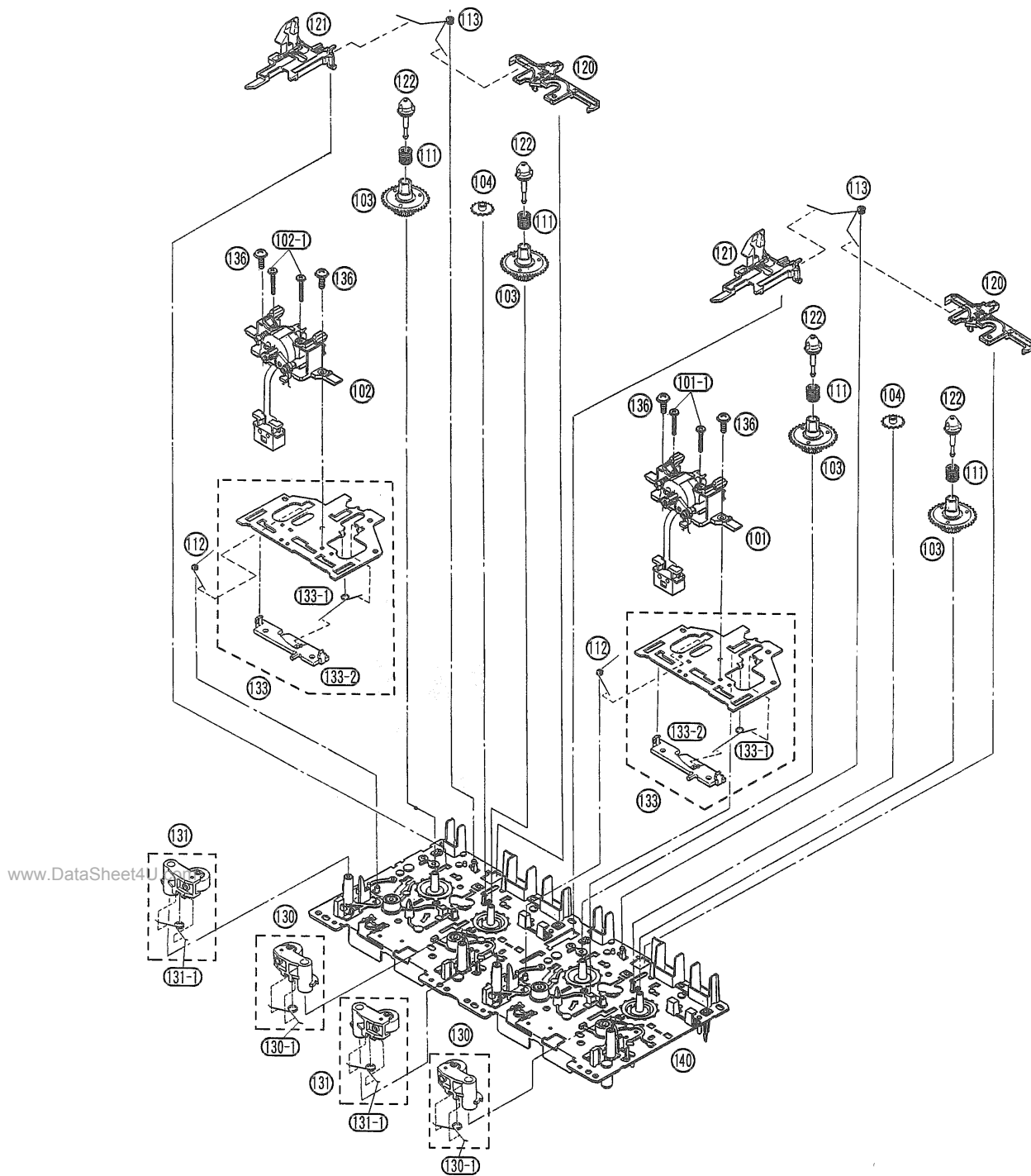
- Notes**
- 1) : CD signal : FM signal : FM OSC signal : AM signal
 : AM OSC signal : Tape playback signal : Tape recoding signal
- 2) () Indicates pin No. of right channel.

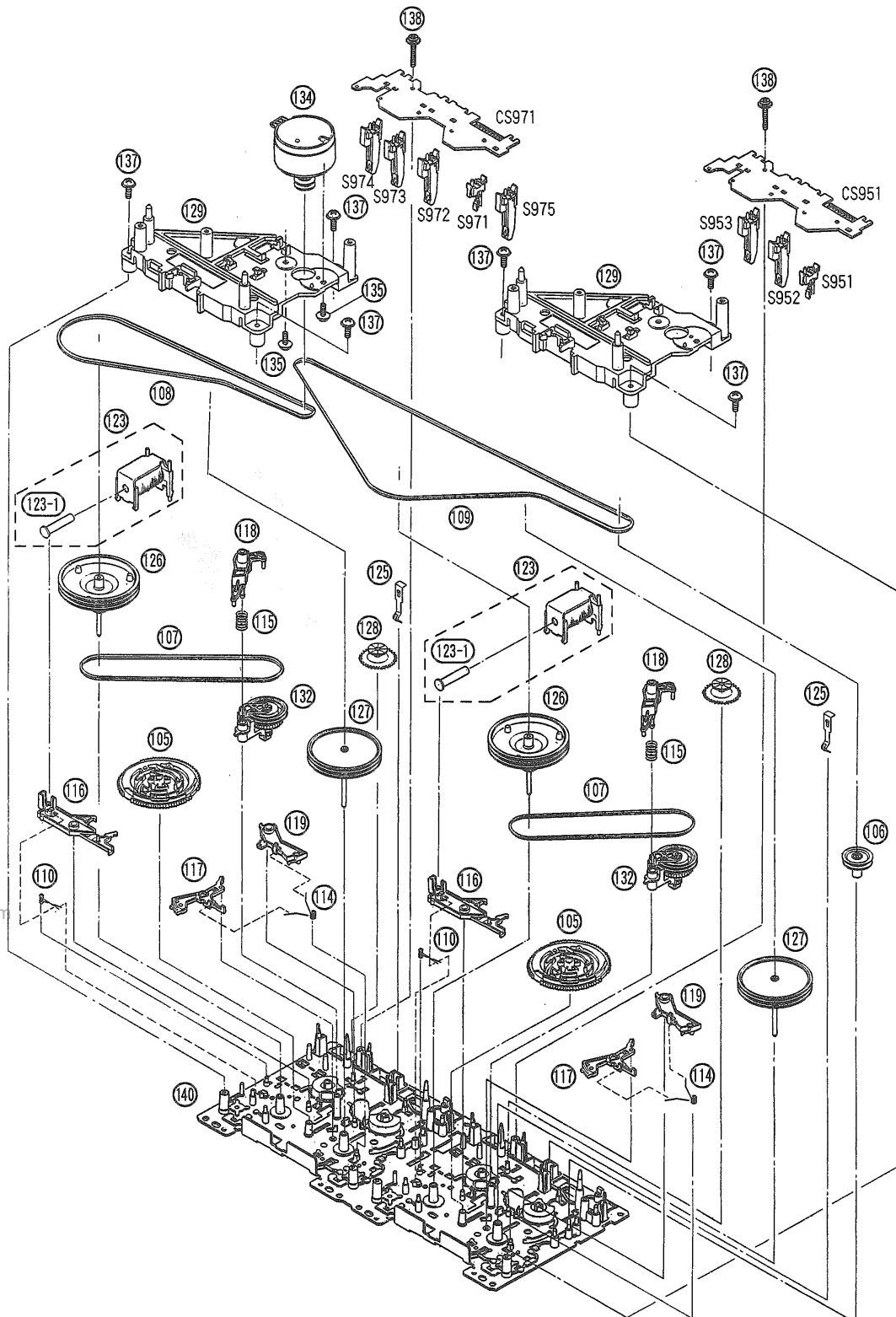
■ Cabinet Parts Location





■ Mechanisms Parts Location

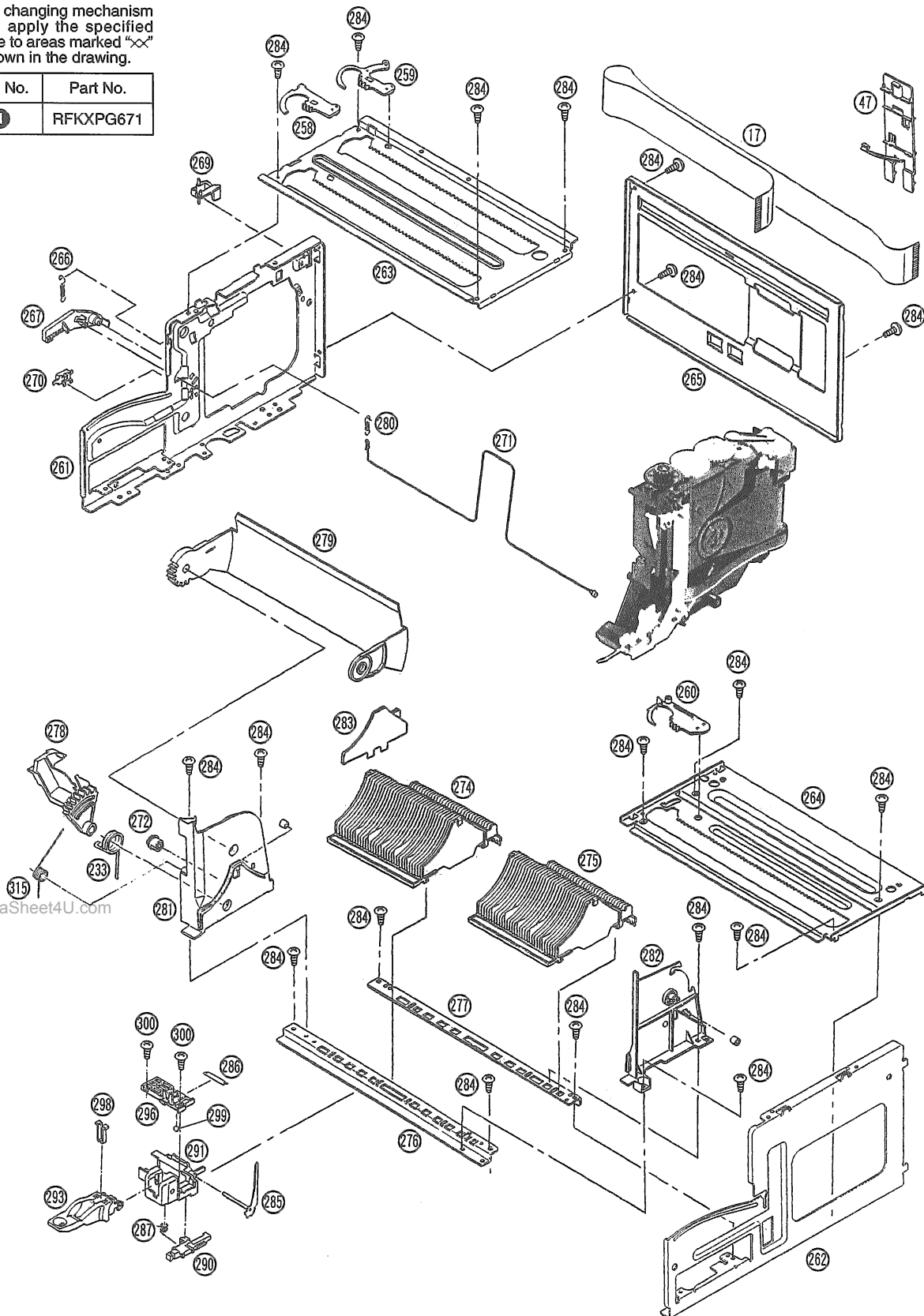


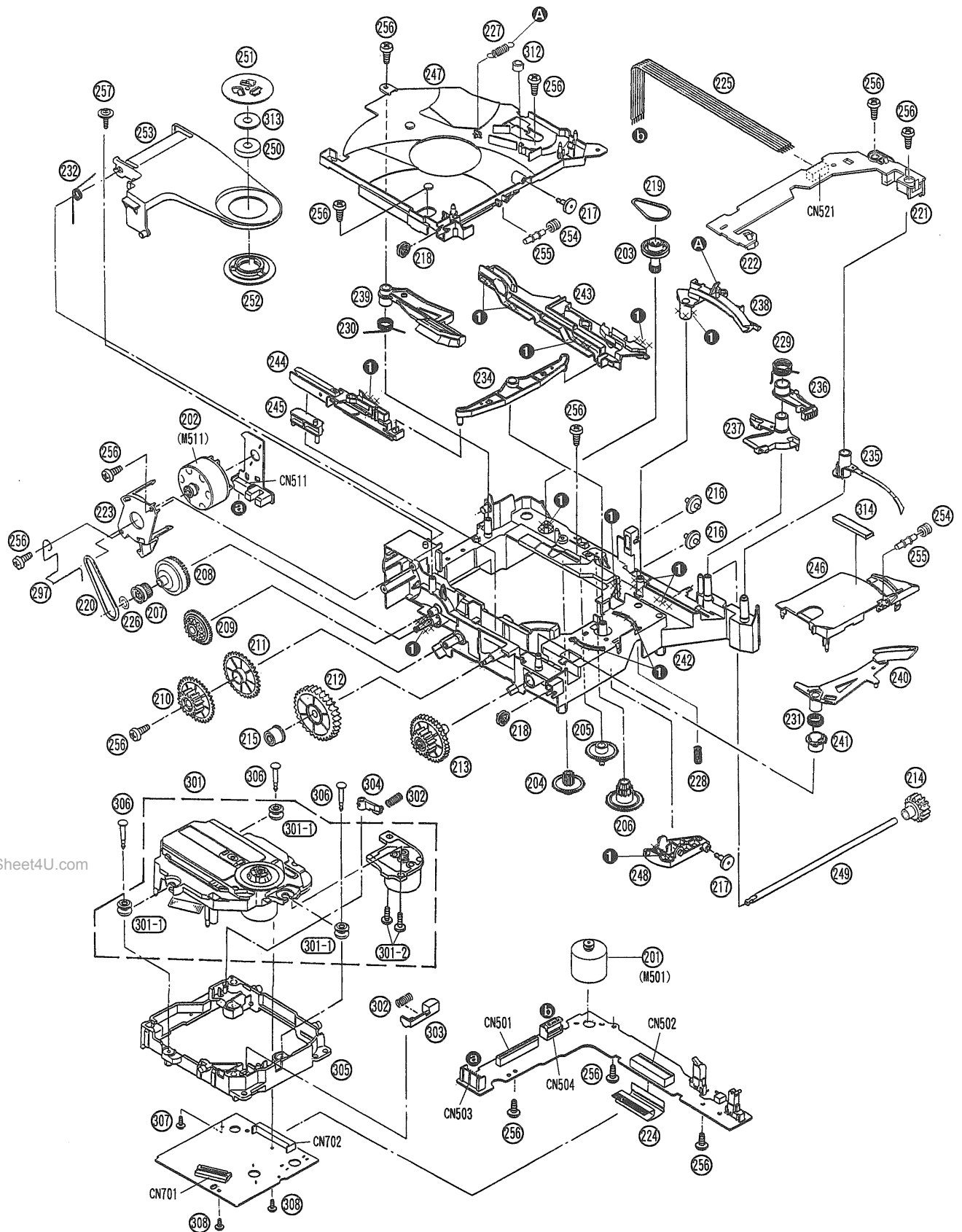


■ Loading Unit Parts Location

Note:
When changing mechanism parts, apply the specified grease to areas marked "x" as shown in the drawing.

Ref. No.	Part No.
①	RFKXPG671





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