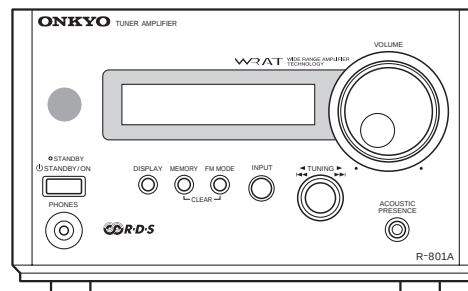


# ONKYO® SERVICE MANUAL

## FM STEREO/AM TUNER AMPLIFIER MODEL R-801A



European models front panel shown.

|         |                   |
|---------|-------------------|
| MPP     | 230-240V AC, 50Hz |
| MDT     | 120V AC, 50/60Hz  |
| MGT,MGR | 220-230V,50/60Hz  |

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

## SPECIFICATIONS

### Amplifier Section

#### Power output

17 watts per channel, min RMS, at 4 ohms, both channels driven 1 kHz, with no more than 0.8% THD  
 13 watt per channel, min RMS, at 8 ohms, both channels driven 1 kHz, with no more than 0.8% THD  
 2 X 17 watts at 4 ohms, 1 kHz, DIN  
 2 X 15 watts at 6 ohms, 1 kHz, DIN  
 2 X 13 watts at 8 ohms, 1 kHz, DIN  
 2 X 24 watts at 4 ohms, 1 kHz, EIAJ

#### Dynamic power output

2 X 21 watts at 4 ohms  
 2 X 14 watts at 8 ohms

#### Total harmonic distortion

0.8% at rated power

#### IM distortion

0.8% at rated power

#### Damping factor

20 at 8 ohms

#### Input Sensitivity and Impedance

TAPE, MD, CD/DVD, CDR/PC:  
 150 mV, 50 kohms

#### Frequency and response

10 to 100 kHz  $\pm 3$  dB

#### Tone control

ACOUSTIC PRESENCE 1  
 +4.5 dB at 41 Hz  
 ACOUSTIC PRESENCE 2  
 +5.5 dB at 82 Hz  
 ACOUSTIC PRESENCE 3  
 +6 dB at 41 Hz, + 6 dB at 82 Hz  
 ACOUSTIC PRESENCE 4  
 +6 dB at 41 Hz, + 6 dB at 82 Hz,  
 +5 dB at 10 Hz

#### Signal to noise ratio

TAPE: 100 dB (IHF-A)

#### Muting

– 50 dB

### Tuner Section

#### Tuning range

FM: 87.9 to 107.9 MHz (200 kHz steps)  
 (U.S. & Canadian models)  
 87.5 to 108.00 MHz (50 kHz steps)  
 (Other area models)  
 AM: 530 to 1710 kHz (10 kHz steps)  
 (U.S. & Canadian models)  
 522 to 1611 kHz (9 kHz steps)  
 (Other area models)

#### Usable sensitivity

FM: Mono 11.2 dBf,  
 1.0  $\mu$ V (75 ohms IHF)  
 0.9  $\mu$ V (75 ohms DIN)  
 Stereo 17.2 dBf,  
 2.0  $\mu$ V (75 ohms IHF)  
 23.0  $\mu$ V (75 ohms DIN)

AM: 30  $\mu$ V

#### 50 dB Quieting sensitivity

FM: Mono 17.2 dBf, 2.0  $\mu$ V (75 ohms)  
 Stereo 37.2 dBf, 20.0  $\mu$ V (75 ohms)

#### Capture ratio

FM: 2.0 dB

#### Image rejection ratio

FM: 40 dB (U.S. & Canadian models)  
 85 dB (Other area models)  
 AM: 40 dB

#### IF rejection ratio

FM: 90 dB  
 AM: 40 dB

#### Signal to noise ratio

FM: Mono 73 dB, IHF  
 Stereo 67 dB, IHF  
 AM: 40 dB

#### Selectivity

FM: 50 dB DIN  
 ( $\pm 300$  kHz at 40 kHz Devi.)

#### AM Suppression Ratio

50 dB

#### Harmonic distortion

FM: Mono 0.2%  
 Stereo 0.3%  
 AM: 0.7 %

#### Frequency response

FM: 30 to 15,000 Hz ( $\pm 1.5$  dB)

#### Stereo separation

FM: 45 dB at 1,000 Hz  
 30 dB at 100 to 10,000 Hz

#### Stereo threshold

FM: 17.2 dBf, 2.0  $\mu$ V (75 ohms)

### General

#### Clock precision

monthly error:  $\pm 30$  seconds  
 (at 25 degrees Celsius)

#### Power supply

AC 120 V, 60 Hz  
 AC 230-240 V, 50 Hz  
 AC 220-230 V, 50 Hz/60 Hz

#### Power consumption

44 W

#### Dimensions (W X H X D)

155 X 94 X 285 mm  
 6-1/8" X 3-1/16" X 11-1/4"

#### Weight

2.9 kg, 6.4 lbs

Specifications and external appearance are subject to change without notice as a result of product improvement.

## SERVICE PROCEDURES

### 1. Replacing the fuses



This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.



Ce symbole indique que le fusible utilise est a rapide. Pour une protection permanente, n'utiliser que fusibles de meme type. Ce dernier est la qu le present symbol est appse.

| CIRCUIT NO. | PART NO.                        | DESCRIPTION                 |
|-------------|---------------------------------|-----------------------------|
| F901        | 252082 or                       | 0.315A-EAWK,Fuse <PP,GT,GR> |
|             | 252232 or                       | 315MA-SE-TL250V,Fuse        |
|             | 252266                          | 315MA-SE-TL350V,Fuse        |
|             | 252156 or                       | 1A-UL/T-237,Fuse<DT>        |
|             | 252250                          | 1A-T/UL-ST2,Fuse            |
|             | Note: <PP>: 230-240V model only |                             |
|             | <DT>: 220V model only           |                             |
|             | <GT>: 120V model only           |                             |
|             | <GR>: 220-230V model only       |                             |

### 2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a result, please follow the procedure below.

1. Press and hold down the MEMORY button, then press the DISPLAY button.
2. Press the STANDBY/ON button.

After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting.

### 3. Safety-check out

(120V model only)

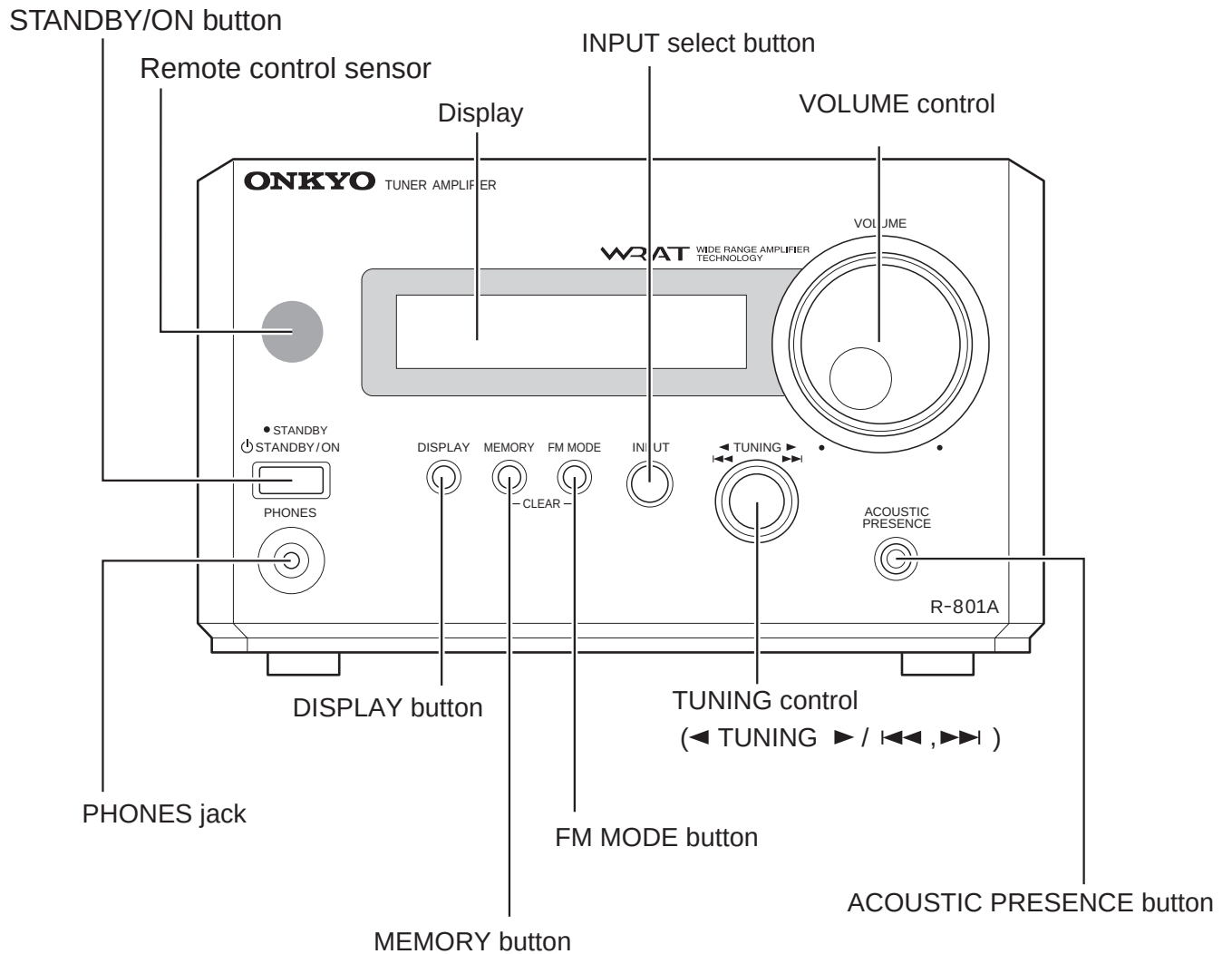
After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel. Specifications: 3.3Mohm+/-10% at 500V.

### 4. Memory Preservation

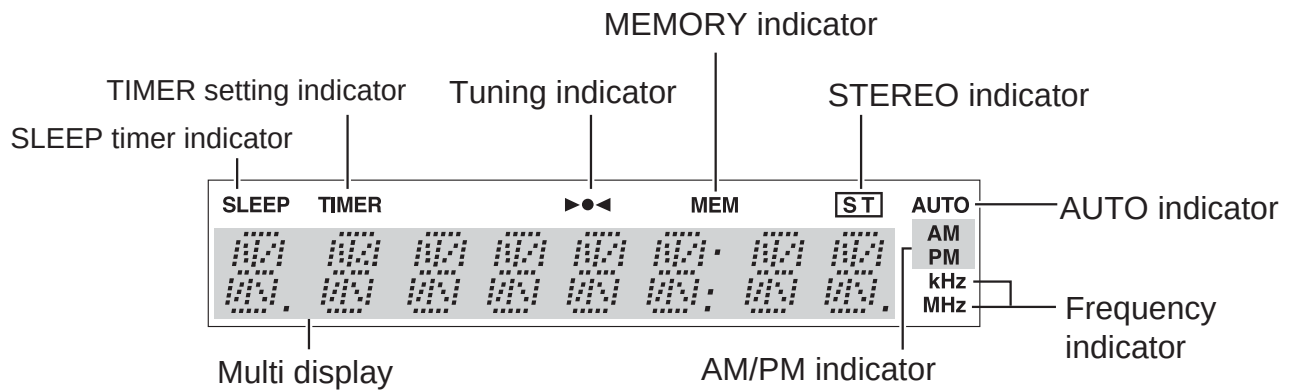
This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in order to charge the back-up system.

The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

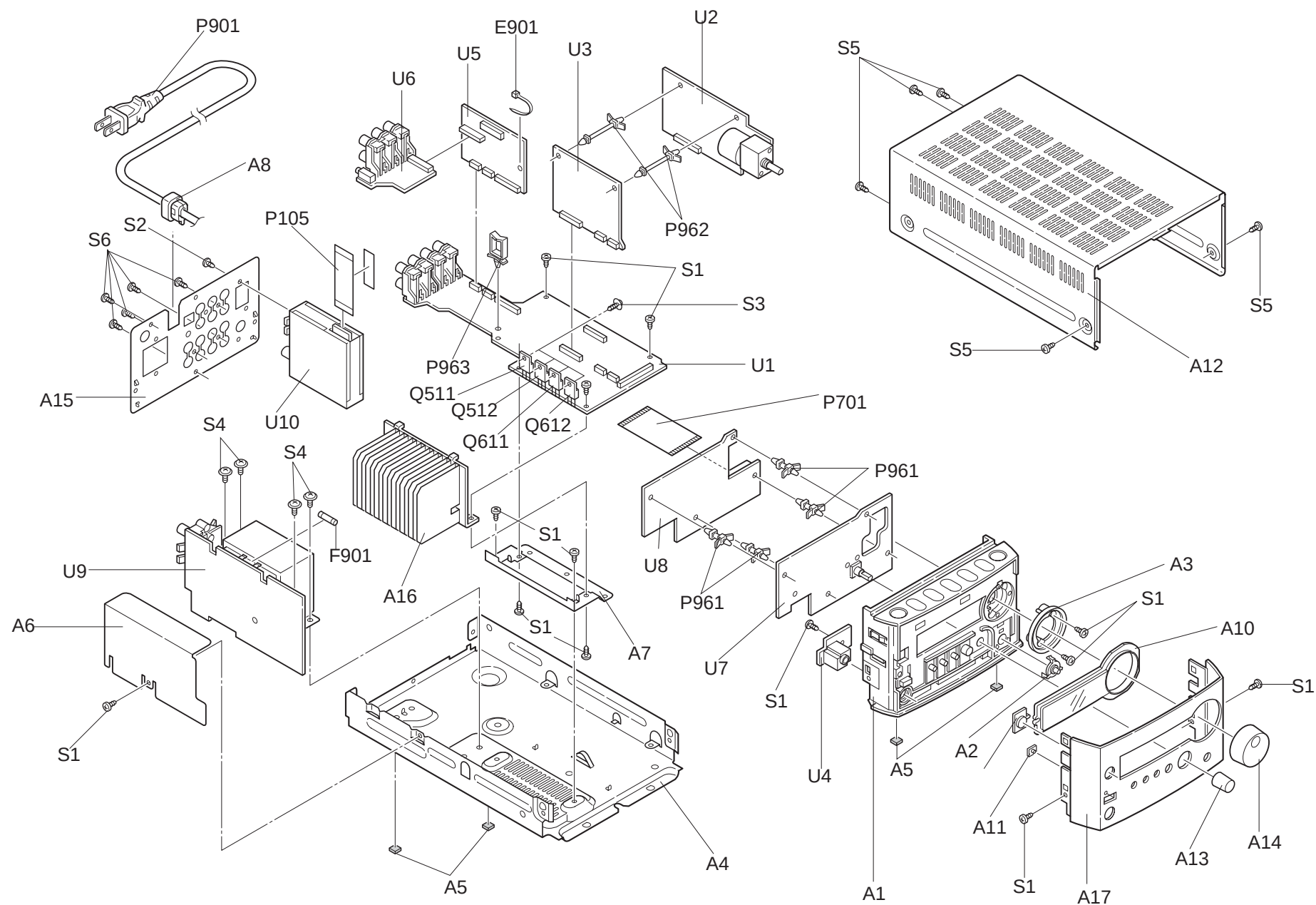
## PANEL VIEW FRONT PANEL



## Display section



## EXPLODED VIEW



# PARTS LIST

## EXPLODED VIEW SECTION

| REF. NO.  | PART NO.     | DESCRIPTION                           | REF. NO. | PART NO.    | DESCRIPTION                               |
|-----------|--------------|---------------------------------------|----------|-------------|-------------------------------------------|
| A1        | 27111247     | Front bracket                         | U1       | 1A916536-1B | NAAF-7336-1B,Main PC board <PP>           |
| A2        | 28325974A    | Acoustic presence ass'y,Knob          |          | 1A916536-1C | NAAF-7336-1C,Main PC board <DT>           |
| A3        | 27268056     | Volume,Guide                          |          | 1A916536-1D | NAAF-7336-1D,Main PC board <GR>           |
| A4        | 27100410     | Chassis                               |          | 1A916536-1E | NAAF-7336-1E,Main PC board <GT>           |
| A5        | 28141489     | Cushion                               | U2       | 1A916537-1B | NAAF-7337-1B,Acoustic PC board <PP>       |
| A6        | 28175276     | Insulation plate                      |          | 1A916537-1C | NAAF-7337-1C,Acoustic PC board <DT>       |
| A7        | 27130872     | HT,Bracket                            |          | 1A916537-1D | NAAF-7337-1D,Acoustic PC board <GR>       |
| A8        | 27300750     | ▲ #2271,Bushing                       |          | 1A916537-1E | NAAF-7337-1E,Acoustic PC board <GT>       |
| A10       | 28191953     | Clear plate <PP>                      | U3       | 1A916538-1B | NAAF-7338-1B,Driver PC board <PP>         |
|           | 28191940     | Clear plate <DT,GR,GT>                |          | 1A916538-1C | NAAF-7338-1C,Driver PC board <DT>         |
| A11       | 28198938     | Facet                                 |          | 1A916538-1D | NAAF-7338-1D,Driver PC board <GR>         |
| A12       | 28184824     | Cover                                 |          | 1A916538-1E | NAAF-7338-1E,Driver PC board <GT>         |
| A13       | 28325962     | Tuner,Knob                            | U4       | 1A916539-1B | NAETC-7339-1B,Headphone PC board <PP>     |
| A14       | 28325963     | Volume ass'y,Knob                     |          | 1A916539-1C | NAETC-7339-1C,Headphone PC board <DT>     |
| A15       | 27122905     | Rear panel                            |          | 1A916539-1D | NAETC-7339-1D,Headphone PC board <GR>     |
| A16       | 27160478     | RAD-147,Heat sink                     |          | 1A916539-1E | NAETC-7339-1E,Headphone PC board <GT>     |
| A17       | 27212348     | Front panel <PP>                      | U5       | 1A916540-1B | NAETC-7340-1B,Connection PC board <PP>    |
|           | 27212347     | Front panel <DT,GR,GT>                |          | 1A916540-1C | NAETC-7340-1C,Connection PC board <DT>    |
| F901      | 252082 or    | ▲ 0.315A-SE-EAWK,Fuse <PP,GR,GT>      |          | 1A916540-1D | NAETC-7340-1D,Connection PC board <GR>    |
|           | 252232 or    | ▲ 315MA-SE-TL250V,Fuse <PP,GR,GT>     |          | 1A916540-1E | NAETC-7340-1E,Connection PC board <GT>    |
|           | 252266       | ▲ 315MA-SE-TL250V,Fuse <PP,GR,GT>     | U6       | 1A916541-1B | NAETC-7341-1B,Input/Output PC board <PP>  |
|           | 252156 or    | ▲ 1A-UL/T-237,Fuse <DT>               |          | 1A916541-1C | NAETC-7341-1C,Input/Output PC board <DT>  |
|           | 252250       | ▲ 1A-T/U/L-ST2,Fuse <DT>              |          | 1A916541-1D | NAETC-7341-1D,Input/Output PC board <GR>  |
| P901      | 253332HIT or | ▲ AS-UC-2,Power supply cord <DT>      |          | 1A916541-1E | NAETC-7341-1E,Input/Output PC board <GT>  |
|           | 253333VOL    | ▲ AS-UC-2,Power supply cord <DT>      | U7       | 1A916542-1B | NADIS-7342-1B,Display PC board <PP>       |
|           | 253335HIT or | ▲ AS-CEE,Power supply cord <PP,GT>    |          | 1A916542-1C | NADIS-7342-1C,Display PC board <DT>       |
|           | 253336VOL    | ▲ AS-CEE,Power supply cord <PP,GT>    |          | 1A916542-1D | NADIS-7342-1D,Display PC board <GR>       |
|           | 253337HIT or | ▲ AS-CCEE,Power supply cord <GR>      |          | 1A916542-1E | NADIS-7342-1E,Display PC board <GT>       |
|           | 253338VOL    | ▲ AS-CCEE,Power supply cord <GR>      | U8       | 1A916543-1B | NADG-7343-1B,Microprocessor PC board <PP> |
| Q511,Q611 | 2203595 or   | ● KTC2026-GR,Transistor               |          | 1A916543-1C | NADG-7343-1C,Microprocessor PC board <DT> |
|           | 2203383 or   | ● 2SC3851-O,Transistor                |          | 1A916543-1D | NADG-7343-1D,Microprocessor PC board <GR> |
|           | 2203384 or   | ● 2SC3851-Y,Transistor                |          | 1A916543-1E | NADG-7343-1E,Microprocessor PC board <GT> |
|           | 2203385 or   | ● 2SC3851-G,Transistor                | U9       | 1A916544-1B | NAPS-7344-1B,Power supply PC board <PP>   |
|           | 2203594      | ● KTC2026-Y,Transistor                |          | 1A916544-1C | NAPS-7344-1C,Power supply PC board <DT>   |
| Q512,Q612 | 2203615 or   | ● KTA1046-GR,Transistor               |          | 1A916544-1D | NAPS-7344-1D,Power supply PC board <GR>   |
|           | 2203393 or   | ● 2SA1488-O,Transistor                |          | 1A916544-1E | NAPS-7344-1E,Power supply PC board <GT>   |
|           | 2203394 or   | ● 2SA1488-Y,Transistor                | U10      | 240135 or   | TFCE1E512A                                |
|           | 2203395 or   | ● 2SA1488-G,Transistor                |          | 240139A     | ENG07501QR                                |
|           | 2203614      | ● KTA1046-Y,Transistor                |          |             |                                           |
| S1        | 838130088    | 3TTB+8B,Self tapping screw            |          |             |                                           |
| S2        | 838430068    | 3TTB+6B(BC),Self tapping screw        |          |             |                                           |
| S3        | 801433       | 3SMS8W.SW+14B(BC),Self tapping screw  |          |             |                                           |
| S4        | 830440069    | 4TTC+6C(BC),Self tapping screw        |          |             |                                           |
| S5        | 838930088    | 3TTB+8B(UN),Self tapping screw        |          |             |                                           |
| T901      | 2301558      | ▲ NPT-1427P,Power transformer <PP>    |          |             |                                           |
|           | 2301557      | ▲ NPT-1427D,Power transformer <DT>    |          |             |                                           |
|           | 2301559      | ▲ NPT-1427G,Power transformer <GR,GT> |          |             |                                           |
| E901      | 260208       | BINDER(CLAMPER)UL                     |          |             |                                           |
| P105      | 2047150512   | NCFC7-150512,FFC                      |          |             |                                           |
| P701      | 2047270512   | NCFC7-270512,FFC                      |          |             |                                           |
| P961      | 27190011     | KGLS-6S,Holder                        |          |             |                                           |
| P962      | 27190470     | HOLDER KGLS-18S,Holder                |          |             |                                           |

### CAUTION:

Replacement for transistor of mark●, if necessary must be made from the same beta group (hFE) as the original type.

|                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|
| Note                                                                                                                          |
| <PP>.....European model only                                                                                                  |
| <DT>.....120V model only                                                                                                      |
| <GT,GR>...220-230V model only                                                                                                 |
| THE COMPONENTS IDENTIFIED BY MARK▲ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED. |

SCHEMATIC DIAGRAM 3

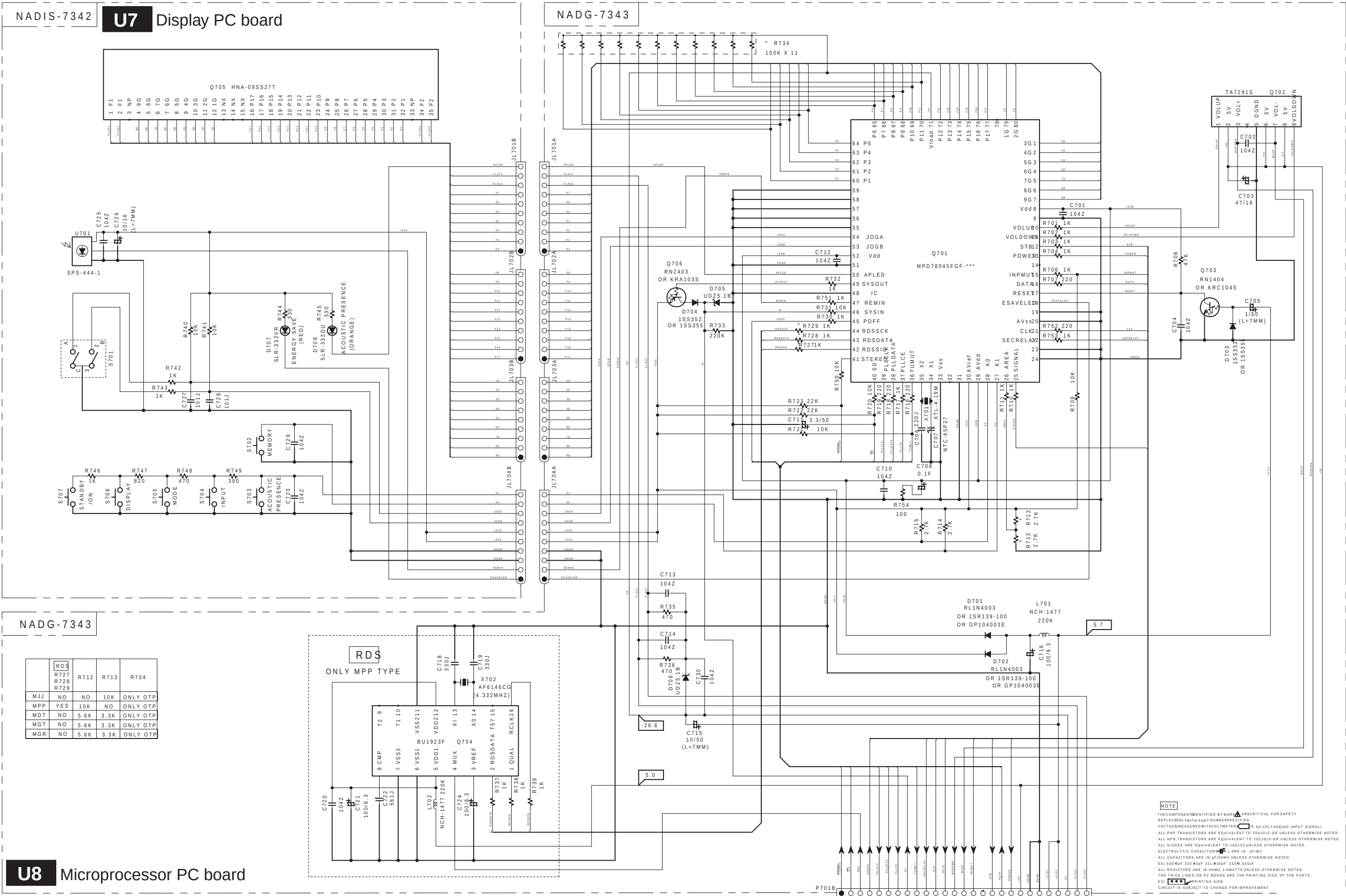
1

2

3

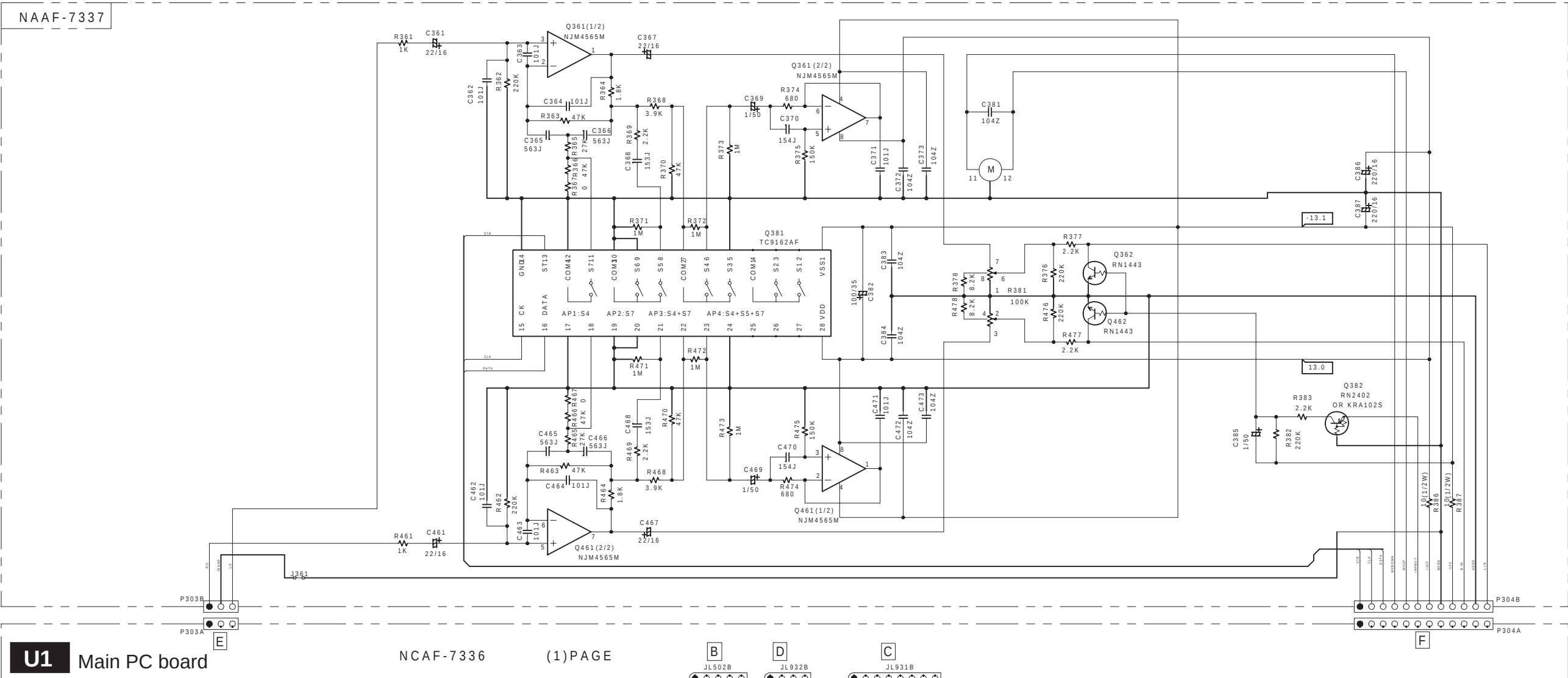
4

5



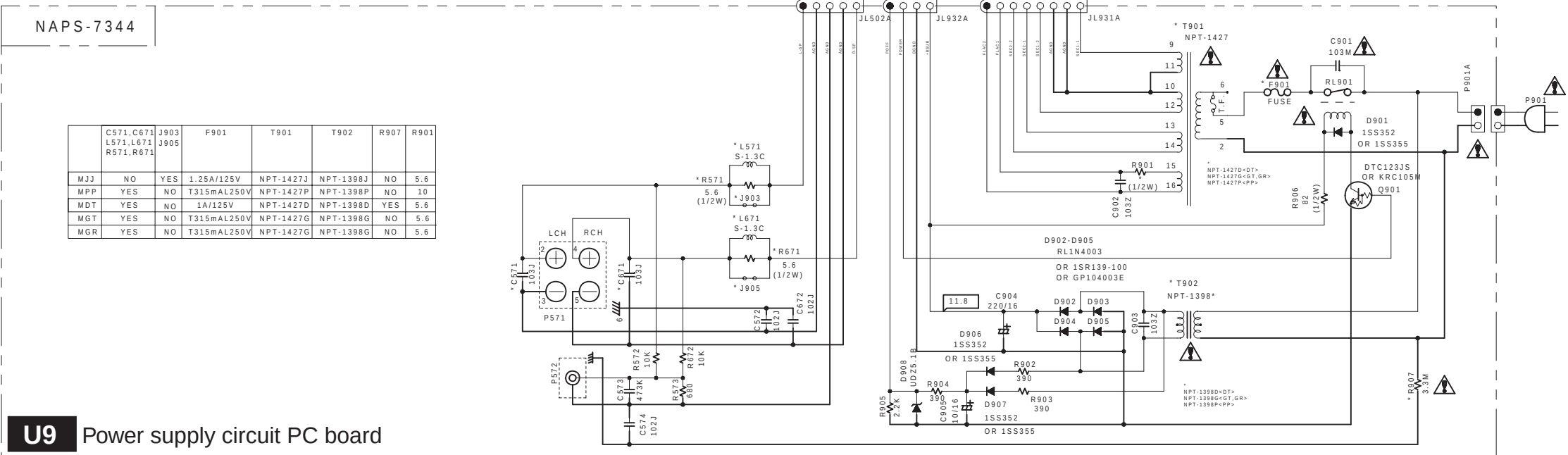
## SCHEMATIC DIAGRAM 2

## U2 Acoustic PC board



**U1** Main PC board

NCAF-7336 (1)PAGE



|     | C571, C671<br>L571, L671<br>R571, R671 | J905 | F901        | T901      | T902      | R907 | R901 |
|-----|----------------------------------------|------|-------------|-----------|-----------|------|------|
| MJJ | NO                                     | YES  | 1.25A/125V  | NPT-1427J | NPT-1398J | NO   | 5.6  |
| MPP | YES                                    | NO   | T315mAL250V | NPT-1427P | NPT-1398P | NO   | 10   |
| MDT | YES                                    | NO   | 1A/125V     | NPT-1427D | NPT-1398D | YES  | 5.6  |
| MGJ | YES                                    | NO   | T315mAL250V | NPT-1427G | NPT-1398G | NO   | 5.6  |
| MGR | YES                                    | NO   | T315mAL250V | NPT-1427G | NPT-1398G | NO   | 5.6  |

**NOTE**

THE COMPONENTS IDENTIFIED BY MARK  ARE CRITICAL FOR SAFETY  
REPLACE ONLY WITH PART NUMBER SPECIFIED.

VOLTAGE (MEASURED WITH VOLT METER ) IS DC VOLTAGE (NO INPUT SIGNAL)

ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.

ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.

ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.

ELECTROLYTIC CAPACITORS  ARE IN  $\mu$ F/VV.

ALL CAPACITORS ARE IN pF/50VW UNLESS OTHERWISE NOTED.

EX) 030-0pF 330-83pF 331-830pF 333-0.033uF

ALL RESISTORS ARE IN OHMS 1/4WATT UNLESS OTHERWISE NOTED.

THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.

EX)  PRINTING SIDE

CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

## SCHEMATIC DIAGRAM 1

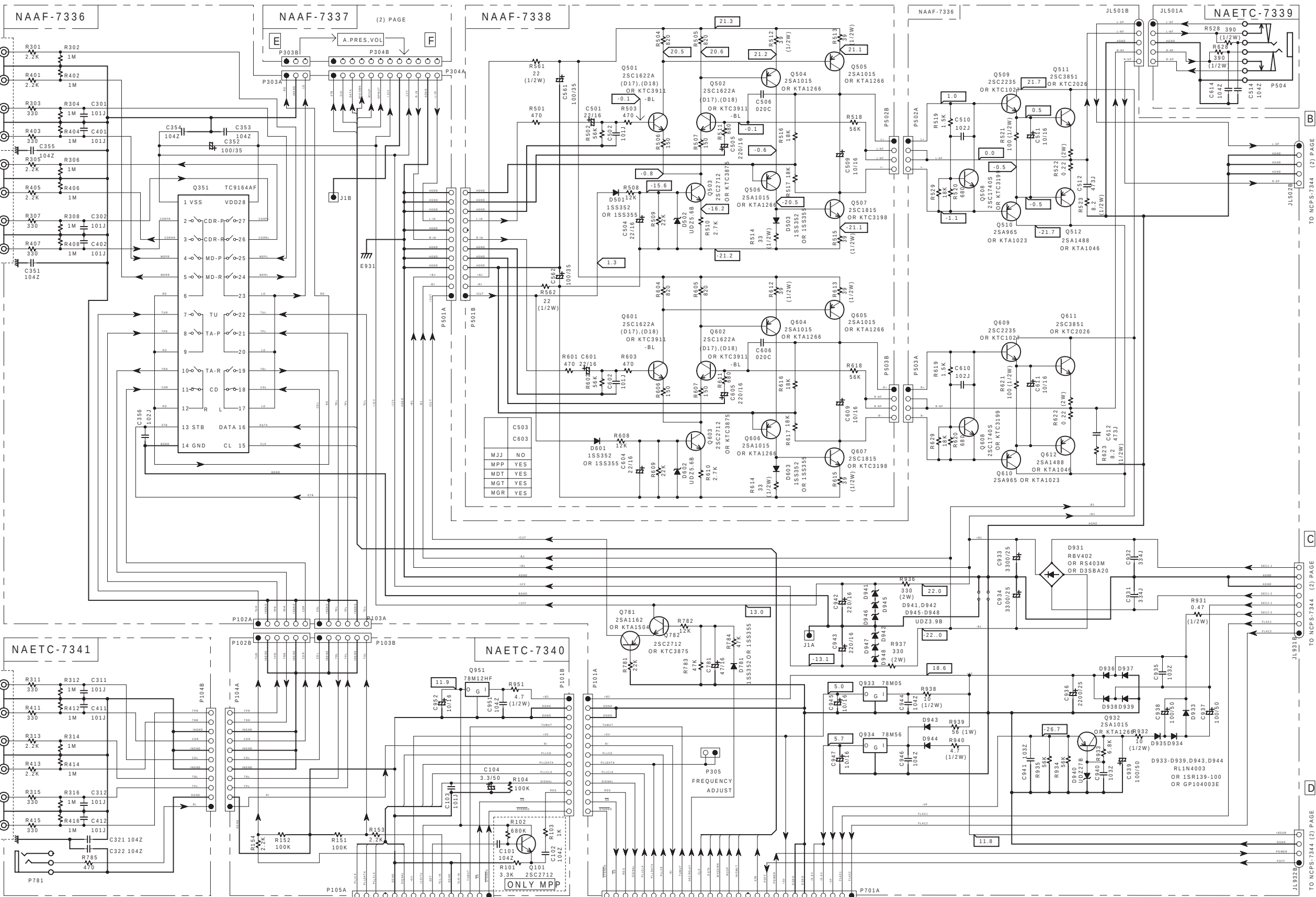
U2 Acoustic PC board

U3 Driver PC board

U4 Headphone PC board

U1

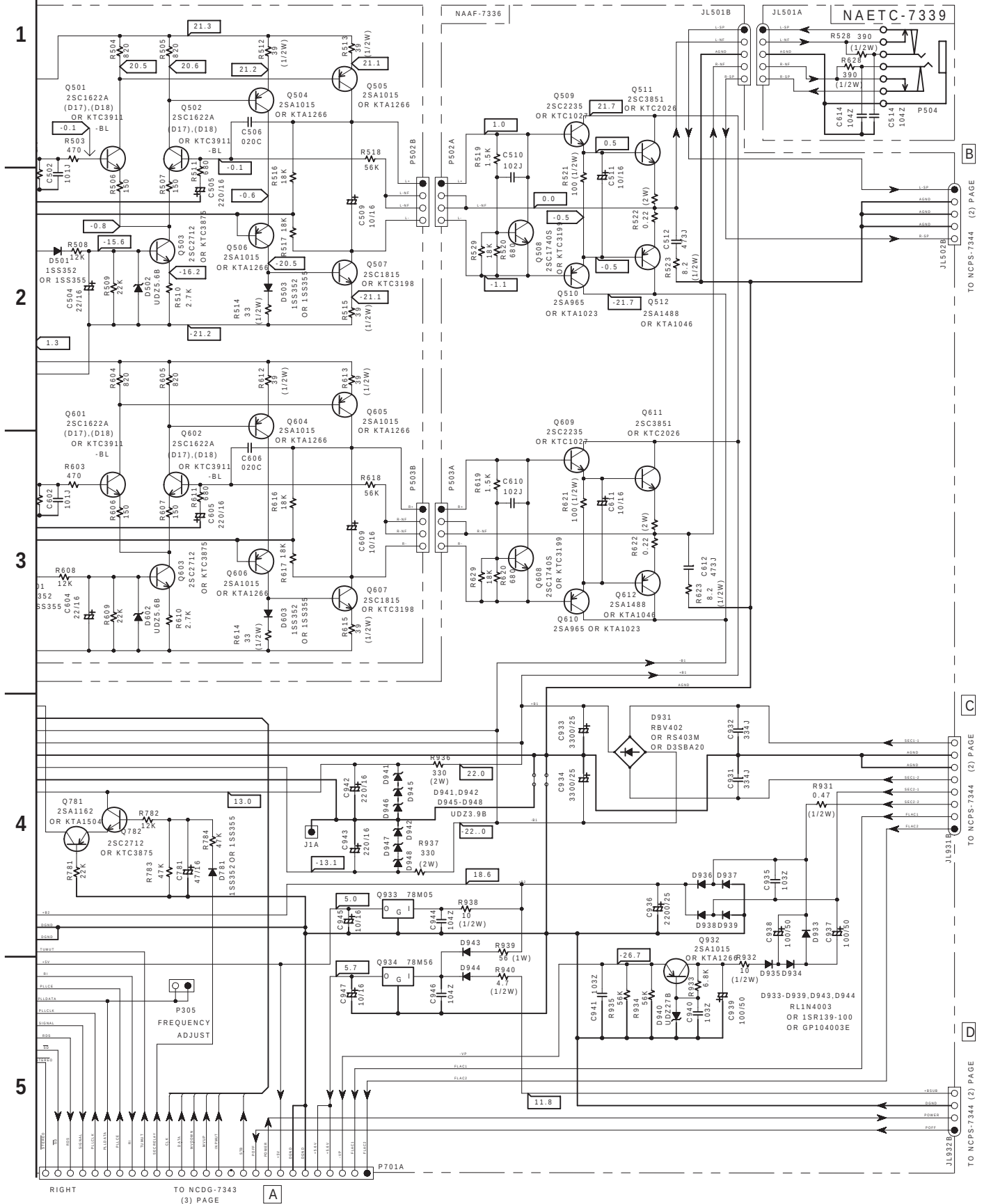
Main PC board



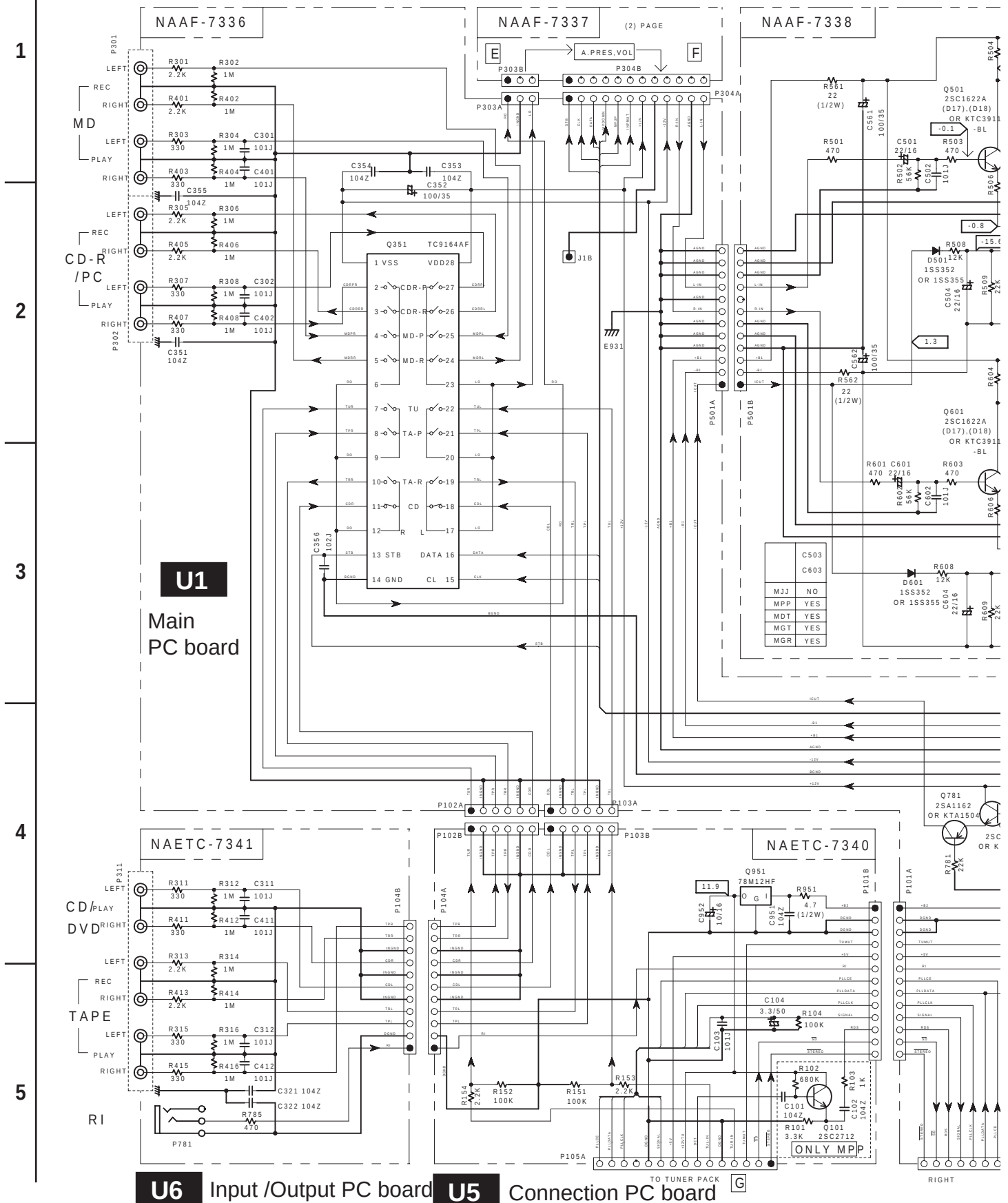
### U3 Driver PC board

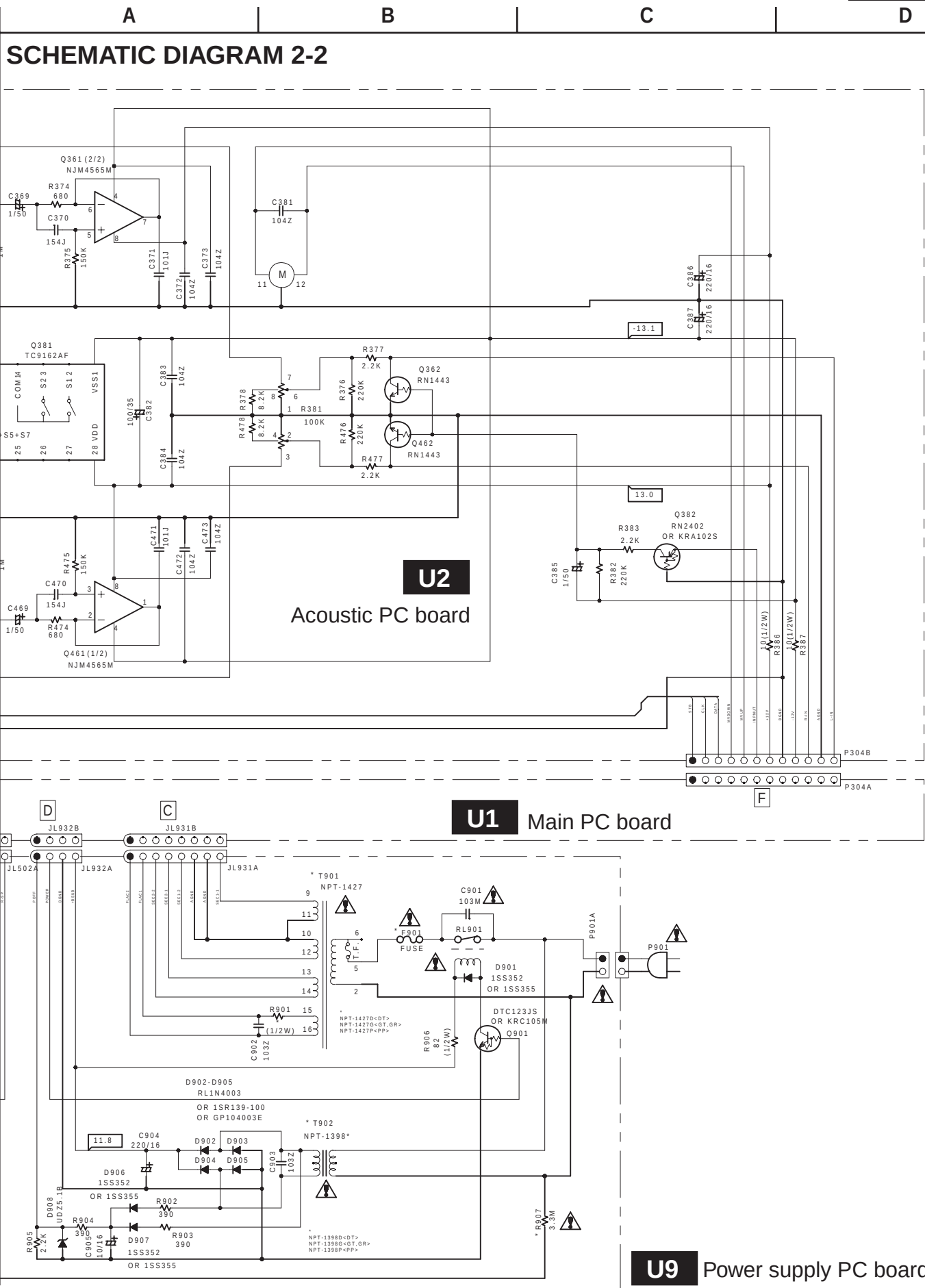
**U1** Main PC board

#### U4 Headphone PC board



Driver PC board

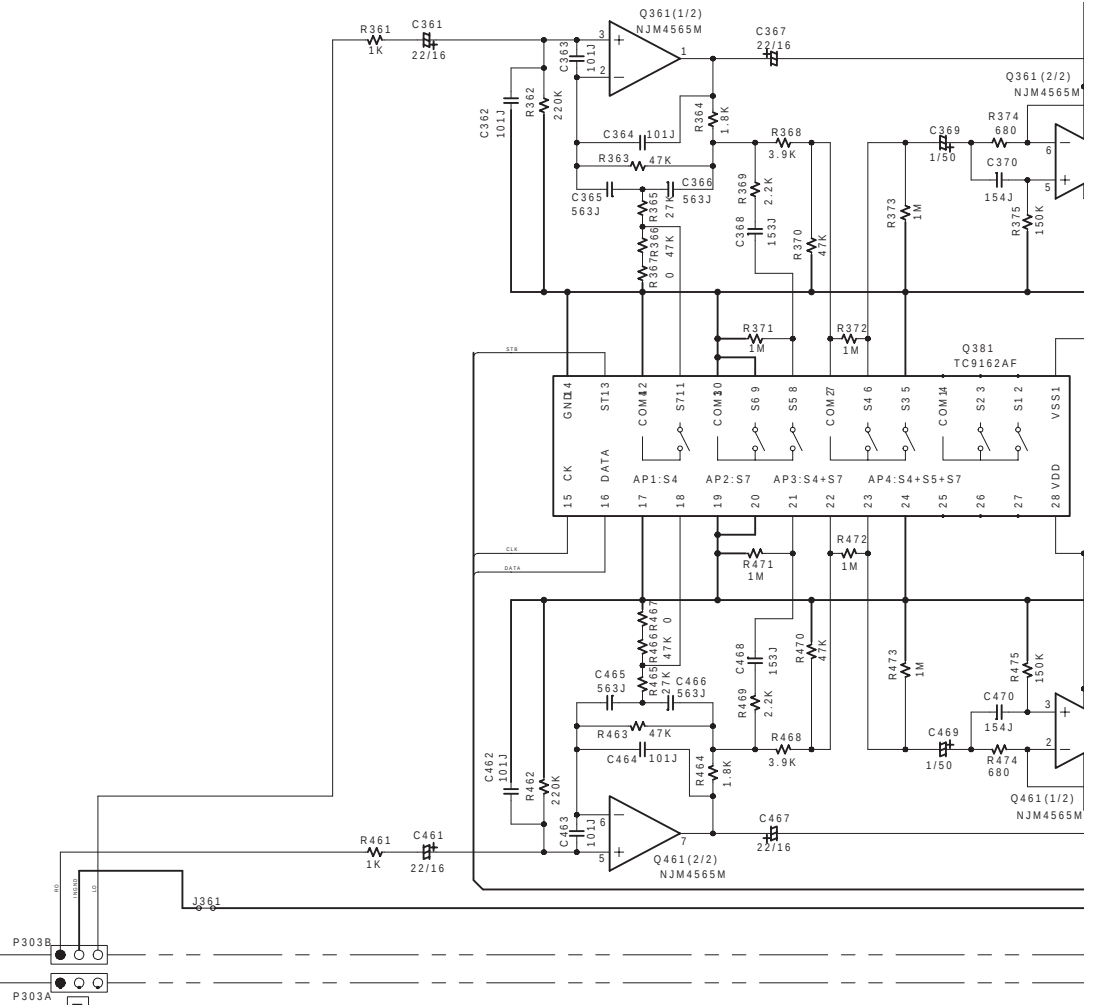




## SCHEMATIC DIAGRAM 2-1

**U2** Acoustic PC board

NAAF-7337

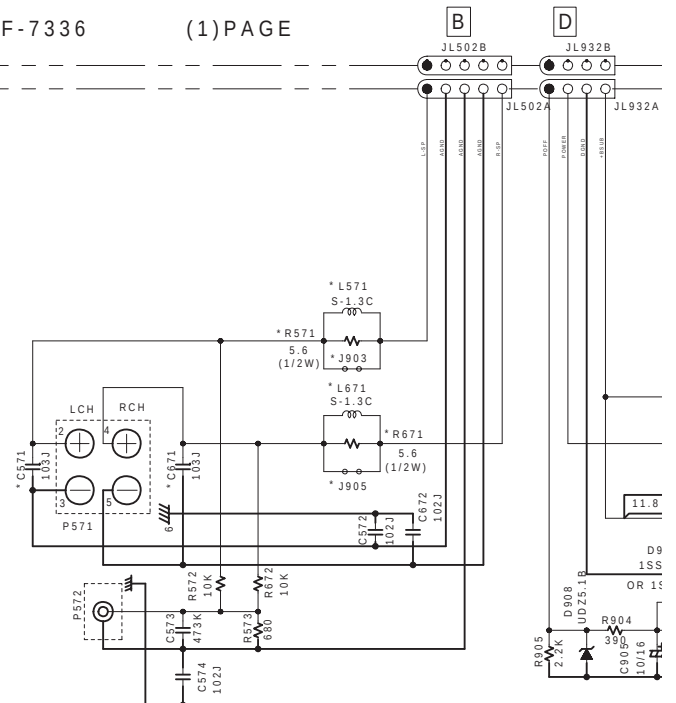
**U1** Main PC board

NCAF-7336

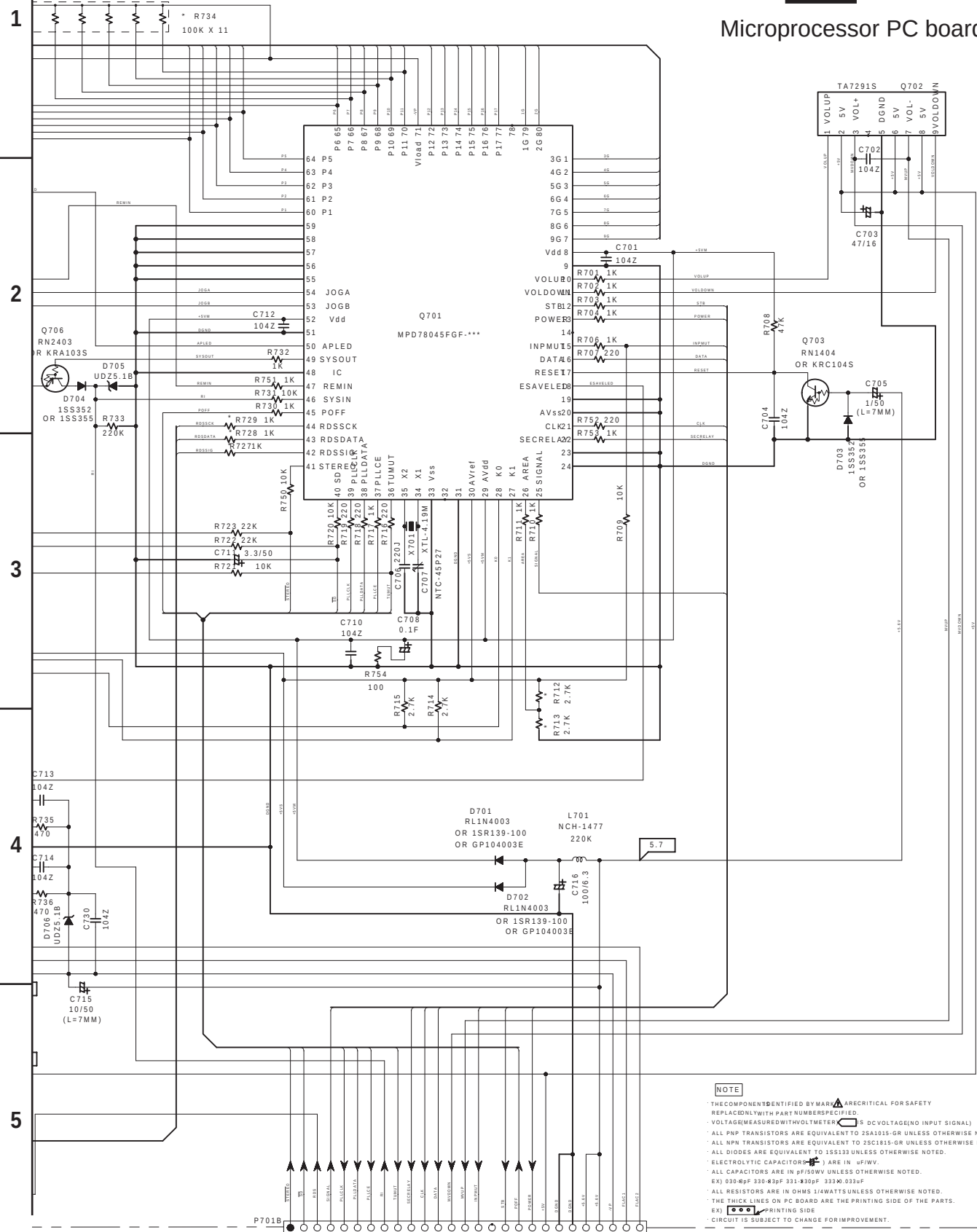
(1)PAGE

NAPS-7344

|     | C571, C671<br>L571, L671<br>R571, R671 | J903<br>J905 | F901        | T901      | T902      | R907 | R901 |
|-----|----------------------------------------|--------------|-------------|-----------|-----------|------|------|
| MJJ | NO                                     | YES          | 1.25A/125V  | NPT-1427J | NPT-1398J | NO   | 5.6  |
| MPP | YES                                    | NO           | T315mAL250V | NPT-1427P | NPT-1398P | NO   | 10   |
| MDT | YES                                    | NO           | 1A/125V     | NPT-1427D | NPT-1398D | YES  | 5.6  |
| MGT | YES                                    | NO           | T315mAL250V | NPT-1427G | NPT-1398G | NO   | 5.6  |
| MGR | YES                                    | NO           | T315mAL250V | NPT-1427G | NPT-1398G | NO   | 5.6  |

**U9** Power supply PC board

### SCHEMATIC DIAGRAM 3-2



**NOTE**

THE COMPONENTS IDENTIFIED BY MARKING ARE CRITICAL FOR SAFETY  
REPLACEMENT WITH PART NUMBERS SPECIFIED.

VOLTAGE MEASURED WITH WOLVOMETER ( ) IS DC VOLTAGE (NO INPUT SIGNAL)

\* ALL PN TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.

\* ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.

\* ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.

ELECTROLYTIC CAPACITORS ( ) ARE IN  $\mu$ F/WV.

\* ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.

EX) 100 805R ARE IN OHMS /J34200 33200 33200 33200

\* THE THICK LINES ON THE BOARD ARE THE PRINTING SIZE OF THE PARTS.

EX)  PRINTING SIZE

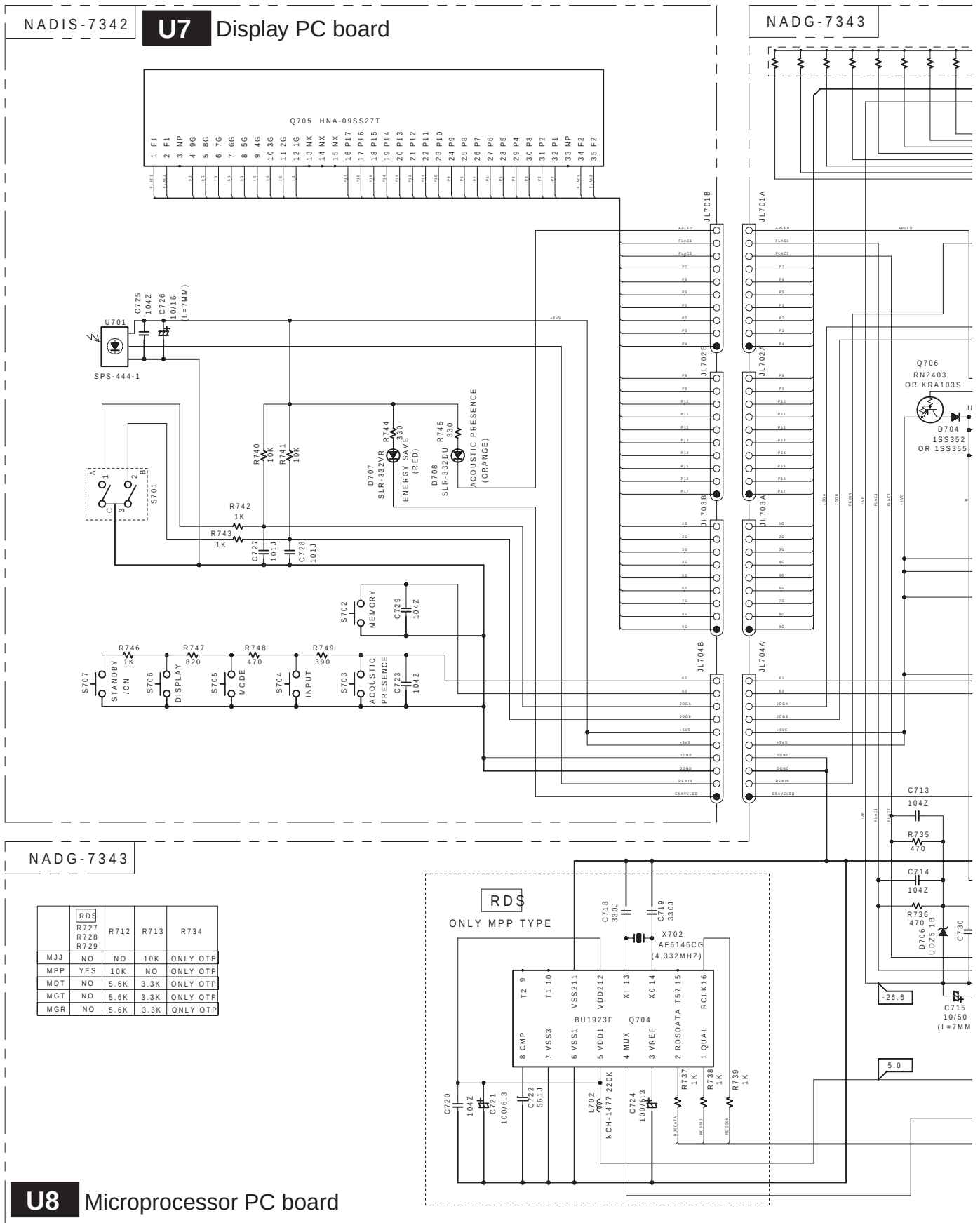
CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

# SCHEMATIC DIAGRAM 3-1

NADIS-7342

**U7** Display PC board

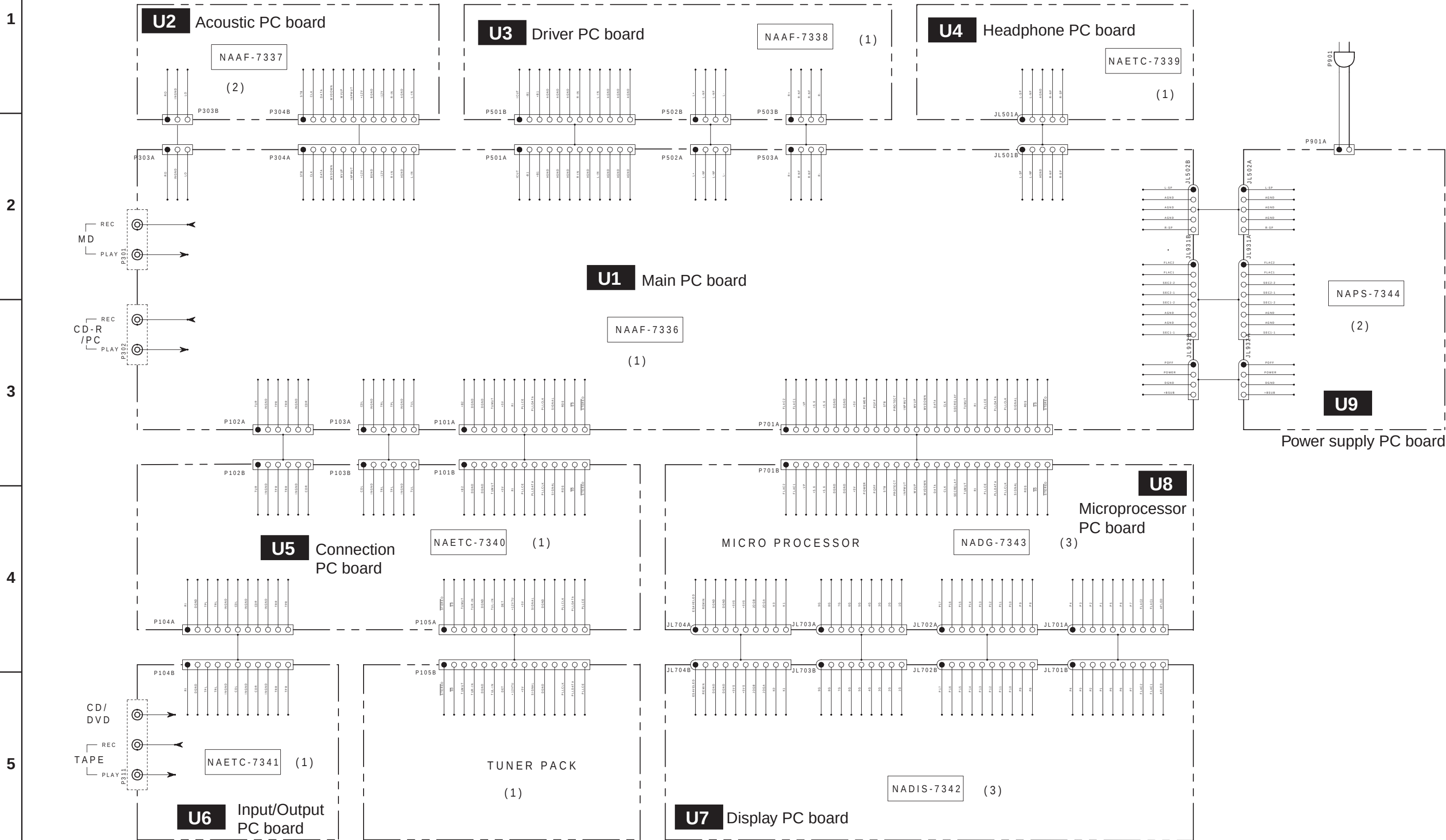
NADG-7343



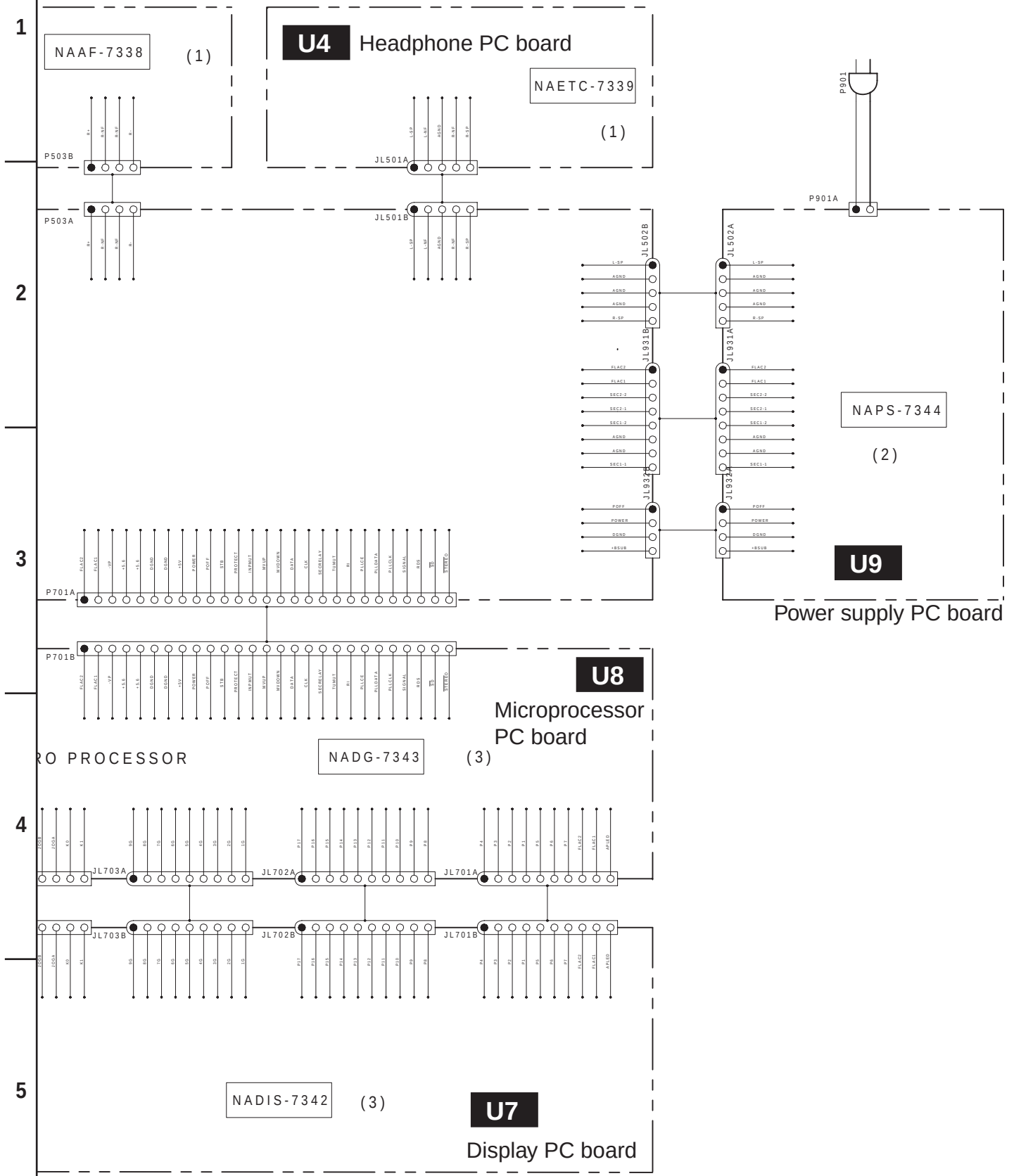
## A

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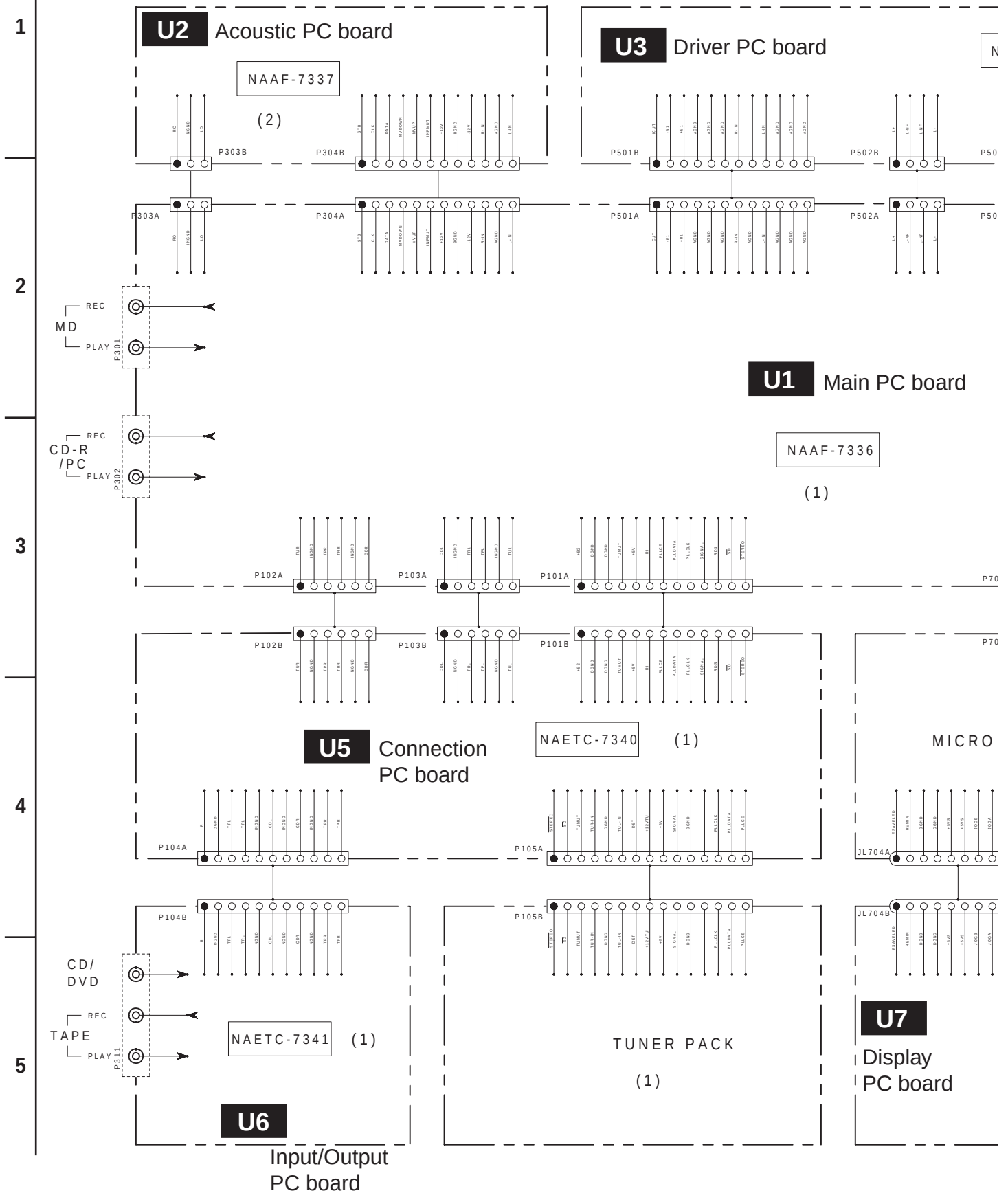
## WIRING DIAGRAM



## WIRING DIAGRAM 2



## WIRING DIAGRAM 1



Soldering side

## PRINTED CIRCUIT BOARD FROM SOLDERING SIDE 1-1

**U1** Main PC board  
NAAF-7336

Soldering side

Component side

D

## PRINTED CIRCUIT BOARD FROM SOLDERING SIDE 2-2

U8

Microprocessor  
PC board  
NADG-7343

Soldering  
side

## Component side

U9

Power supply  
PC board  
NAPS-7344

## Component side

Soldering  
side

FLAC2  
FLAC1  
SEC2-2  
SEC2-1  
SEC1-2  
AGND  
AGND  
SEC1-1

R904  
D906  
K  
D908  
R905

DGND  
+BSUS  
POWER  
POFF

Diagram illustrating the connection PC board (NAETC-7340) showing the component side and soldering side.

**Component side:** Shows the board populated with components. Key components include:

- Resistors: J101, J105, J107, J110, J115, J116, J117, J118, J119, J120, J121, J122, J123, J124, J125, J126, J127, J128, J129, J130, J131, J132, J133, J134, J135, J136, J137, J138, J139, J140, J141, J142, J143, J144, J145, J146, J147, J148, J149, J150, J151, J152, J153, J154, J155, J156, J157, J158, J159, J160, J161, J162, J163, J164, J165, J166, J167, J168, J169, J170, J171, J172, J173, J174, J175, J176, J177, J178, J179, J180, J181, J182, J183, J184, J185, J186, J187, J188, J189, J190, J191, J192, J193, J194, J195, J196, J197, J198, J199, J200, J201, J202, J203, J204, J205, J206, J207, J208, J209, J210, J211, J212, J213, J214, J215, J216, J217, J218, J219, J220, J221, J222, J223, J224, J225, J226, J227, J228, J229, J230, J231, J232, J233, J234, J235, J236, J237, J238, J239, J240, J241, J242, J243, J244, J245, J246, J247, J248, J249, J250, J251, J252, J253, J254, J255, J256, J257, J258, J259, J260, J261, J262, J263, J264, J265, J266, J267, J268, J269, J270, J271, J272, J273, J274, J275, J276, J277, J278, J279, J280, J281, J282, J283, J284, J285, J286, J287, J288, J289, J290, J291, J292, J293, J294, J295, J296, J297, J298, J299, J300, J301, J302, J303, J304, J305, J306, J307, J308, J309, J310, J311, J312, J313, J314, J315, J316, J317, J318, J319, J320, J321, J322, J323, J324, J325, J326, J327, J328, J329, J330, J331, J332, J333, J334, J335, J336, J337, J338, J339, J340, J341, J342, J343, J344, J345, J346, J347, J348, J349, J350, J351, J352, J353, J354, J355, J356, J357, J358, J359, J360, J361, J362, J363, J364, J365, J366, J367, J368, J369, J370, J371, J372, J373, J374, J375, J376, J377, J378, J379, J380, J381, J382, J383, J384, J385, J386, J387, J388, J389, J390, J391, J392, J393, J394, J395, J396, J397, J398, J399, J400, J401, J402, J403, J404, J405, J406, J407, J408, J409, J410, J411, J412, J413, J414, J415, J416, J417, J418, J419, J420, J421, J422, J423, J424, J425, J426, J427, J428, J429, J430, J431, J432, J433, J434, J435, J436, J437, J438, J439, J440, J441, J442, J443, J444, J445, J446, J447, J448, J449, J450, J451, J452, J453, J454, J455, J456, J457, J458, J459, J460, J461, J462, J463, J464, J465, J466, J467, J468, J469, J470, J471, J472, J473, J474, J475, J476, J477, J478, J479, J480, J481, J482, J483, J484, J485, J486, J487, J488, J489, J490, J491, J492, J493, J494, J495, J496, J497, J498, J499, J500, J501, J502, J503, J504, J505, J506, J507, J508, J509, J510, J511, J512, J513, J514, J515, J516, J517, J518, J519, J520, J521, J522, J523, J524, J525, J526, J527, J528, J529, J530, J531, J532, J533, J534, J535, J536, J537, J538, J539, J540, J541, J542, J543, J544, J545, J546, J547, J548, J549, J550, J551, J552, J553, J554, J555, J556, J557, J558, J559, J560, J561, J562, J563, J564, J565, J566, J567, J568, J569, J570, J571, J572, J573, J574, J575, J576, J577, J578, J579, J580, J581, J582, J583, J584, J585, J586, J587, J588, J589, J590, J591, J592, J593, J594, J595, J596, J597, J598, J599, J600, J601, J602, J603, J604, J605, J606, J607, J608, J609, J610, J611, J612, J613, J614, J615, J616, J617, J618, J619, J620, J621, J622, J623, J624, J625, J626, J627, J628, J629, J630, J631, J632, J633, J634, J635, J636, J637, J638, J639, J640, J641, J642, J643, J644, J645, J646, J647, J648, J649, J650, J651, J652, J653, J654, J655, J656, J657, J658, J659, J660, J661, J662, J663, J664, J665, J666, J667, J668, J669, J670, J671, J672, J673, J674, J675, J676, J677, J678, J679, J680, J681, J682, J683, J684, J685, J686, J687, J688, J689, J690, J691, J692, J693, J694, J695, J696, J697, J698, J699, J700, J701, J702, J703, J704, J705, J706, J707, J708, J709, J710, J711, J712, J713, J714, J715, J716, J717, J718, J719, J720, J721, J722, J723, J724, J725, J726, J727, J728, J729, J730, J731, J732, J733, J734, J735, J736, J737, J738, J739, J740, J741, J742, J743, J744, J745, J746, J747, J748, J749, J750, J751, J752, J753, J754, J755, J756, J757, J758, J759, J760, J761, J762, J763, J764, J765, J766, J767, J768, J769, J770, J771, J772, J773, J774, J775, J776, J777, J778, J779, J780, J781, J782, J783, J784, J785, J786, J787, J788, J789, J790, J791, J792, J793, J794, J795, J796, J797, J798, J799, J800, J801, J802, J803, J804, J805, J806, J807, J808, J809, J810, J811, J812, J813, J814, J815, J816, J817, J818, J819, J820, J821, J822, J823, J824, J825, J826, J827, J828, J829, J830, J831, J832, J833, J834, J835, J836, J837, J838, J839, J840, J841, J842, J843, J844, J845, J846, J847, J848, J849, J850, J851, J852, J853, J854, J855, J856, J857, J858, J859, J860, J861, J862, J863, J864, J865, J866, J867, J868, J869, J870, J871, J872, J873, J874, J875, J876, J877, J878, J879, J880, J881, J882, J883, J884, J885, J886, J887, J888, J889, J890, J891, J892, J893, J894, J89

Connection PC board  
NAETC-7340

Soldering  
side

Input/Output  
PC board  
NAETC-7341

Soldering  
side

4

ONKYO  
NCDIS-7342  
25137342

Q705

PASTE NOT DO  
TAPE THE

U701

D701

C720

S701

S702

S703

S704

S705

S706

S707

FREQUENCY  
ADJUST

U7

Display PC board  
NADIS-7342

Display PC board  
NADIS-7342

5

Component side

Soldering side

5

# PARTS LIST

## CIRCUIT SECTION 1

| U1        | Main PC board(NAAF-7336-1B/1C/1D/1E) |                     | U1            | Main PC board(NAAF-7336-1B/1C/1D/1E) |                               |
|-----------|--------------------------------------|---------------------|---------------|--------------------------------------|-------------------------------|
| REF. NO.  | PART NO                              | DESCRIPTION         | REF. NO.      | PART NO                              | DESCRIPTION                   |
|           | <b>ICs</b>                           |                     |               | <b>Capacitors</b>                    |                               |
| Q351      | 22241221R2                           | TC9164AF            | C352,C937     | 354761019                            | 100uF,35V,Elect.              |
| Q933      | 222780055JRC or                      | 78M05(NJM78M05FA)   | C511,C611     | 354741009                            | 10uF,16V,Elect.               |
|           | 222780055MIT or                      | 78M05L(M5F78M05L)   | C781          | 354744709                            | 47uF,16V,Elect.               |
|           | 222780055NEC                         | 78M05HF(MPC78M05HF) | C938,C939     | 354781019                            | 100uF,50V,Elect.              |
| Q934      | 222780565JRC                         | 78M56(NJM78M56FA)   | C942,C943     | 354742219                            | 200uF,16V,Elect.              |
|           | <b>Transistors</b>                   |                     | C945,C947     | 354741009                            | 10uF,16V,Elect.               |
| Q508,Q608 | 2215864 or                           | KTC3199-GR          | C933,C934     | 393353327                            | 3300uF,25V,Elect.             |
|           | 2212115 or                           | 2SC2458-GR          | C936          | 393352227                            | 3300uF,25V,Elect.             |
|           | 2213284 or                           | 2SC1740S-R          | C512,C612     | 374724734                            | ECQ-V50V-473J,Plastic film    |
|           | 2213285                              | 2SC1740S-S          | C931,C932     | 374723344                            | ECQ-V50V-334J,Plastic film    |
| Q509,Q609 | 2216563 or                           | KTC1027-O           | C512,C612     | 374724734                            | ECQ-V50V-473J,Plastic film    |
|           | 2211654 or                           | 2SC2235-Y           | C931,C932     | 374723344                            | ECQ-V50V-334J,Plastic film    |
|           | 2216564                              | KTC1027-Y           |               | <b>Resistors</b>                     |                               |
|           | 2216573 or                           | KTA1023-O           | R521,R621     | 443521014                            | 100ohm +/-5%,1/2W,Metal oxide |
| Q510,Q610 | 2211644 or                           | 2SA965-Y            | R932,R938     | 442521004                            | 10ohm +/-5%,1/2W,Metal oxide  |
|           | 2216574                              | KTA1023-Y           | R936,R937     | 442723314                            | 330ohm +/-5%,2W,Metal oxide   |
|           | 2216185R2 or                         | KTA1504-GR          | R939          | 442625604                            | 56ohm +/-5%,1W,Metal oxide    |
| Q781      | 2214374R2                            | 2SA1162-Y           | R522,R622     | 4500027                              | 0.22ohm +/-5%,2W,Metal plate  |
| Q782      | 2216175R2 or                         | KTC3875-GR          | R523,R623     | 453530824                            | 8.2ohm +/-5%,1/2W,Metal       |
|           | 2213143R2 or                         | 2SC2712-O           | R931          | 453534794                            | 0.47ohm +/-5%,1/2W,Metal      |
|           | 2213144R2 or                         | 2SC2712-Y           | R940          | 452530474                            | 4.7ohm +/-5%,1/2W,Metal       |
|           | 2213145R2 or                         | 2SC2712-GR          | R522,R622     | 4800071                              | RSS2WK-0.22,Cement resistor   |
|           | 2216173R2 or                         | KTC3875-O           |               | <b>Plugs</b>                         |                               |
|           | 2216174R2                            | KTC3875-Y           | P101A         | 25055709                             | NPLG-13P665                   |
| Q932      | 2215975 or                           | KTA1266-GR          | P102A,P103A   | 25055702                             | NPLG-6P658                    |
|           | 2211455                              | 2SA1015-GR          | P304A,P501A   | 25055708                             | NPLG-12P664                   |
|           |                                      |                     | P305          | 25055038                             | NPLG-2P29                     |
|           | <b>Diodes</b>                        |                     | P502A,P503A   | 25055804                             | NPLG-4P760                    |
| D931      | 22380271 or                          | D3SBA20             |               | <b>Sockets</b>                       |                               |
|           | 22380022 or                          | RBV402              | JL501B,JL502B | 25050269                             | NSCT-5P97                     |
|           | 22380285                             | RS403M              | JL931B        | 25050272                             | NSCT-8P100                    |
| D933-D939 | 22380260 or                          | RL1N4003            | JL932B        | 25050268                             | NSCT-4P96                     |
|           | 22380032 or                          | 1SR139-100          | P701A         | 25052223                             | NSCT-27P2120                  |
|           | 22380035                             | GP104003E           | P303A         | 2009990697UL                         | NSAS-6P0972                   |
| D934,D944 | 22380032                             | 1SR139-100          |               | <b>Jacks</b>                         |                               |
| D943,D944 | 22380260 or                          | RL1N4003            | P301,P302     | 25045575 or                          | NPJ-4PDRW389                  |
|           | 22380035                             | GP104003E           |               | 25045303                             | NPJ-4PDBL162                  |
| D781      | 223234R2 or                          | 1SS352,Chip         |               | <b>Retainer</b>                      |                               |
|           | 223269R2                             | 1SS355,Chip         | E931          | 27141059                             | Retainer                      |
| D940      | 224492700R2 or                       | UDZ27B,Zener        |               |                                      |                               |
|           | 224552700R2                          | UDZS27B,Zener       |               |                                      |                               |
| D941,D942 | 224490390R2 or                       | UDZ3.9B,Zener       |               |                                      |                               |
|           | 224550390R2 or                       | UDZS3.9B,Zener      |               |                                      |                               |
| D945-D948 | 224490390R2 or                       | UDZ3.9B,Zener       |               |                                      |                               |
|           | 224550390R2                          | UDZS3.9B,Zener      |               |                                      |                               |

|                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note                                                                                                                                                                                                               |
| <PP>.....European model only                                                                                                                                                                                       |
| <DT>.....120V model only                                                                                                                                                                                           |
| <GT,GR>...220-230V model only                                                                                                                                                                                      |
| THE COMPONENTS IDENTIFIED BY MARK  ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED. |

## PARTS LIST

### CIRCUIT SECTION 2

| U2 Acoustic PC board(NAAF-7337-1B/1C/1D/1E) |                     |                              | U3 Driver PC board(NAAF-7338-1B/1C/1D/1E) |                    |                              |
|---------------------------------------------|---------------------|------------------------------|-------------------------------------------|--------------------|------------------------------|
| REF. NO.                                    | PART NO             | DESCRIPTION                  | REF. NO.                                  | PART NO            | DESCRIPTION                  |
|                                             | <b>ICs</b>          |                              |                                           | <b>Transistors</b> |                              |
| Q361,Q461                                   | 22241383R2 or       | NJM4565M-D                   | Q501,Q502                                 | 2216154R2 or       | 2SC1622A(D18)                |
|                                             | 22240489R1NE        | MPC4570G2-T1(MST)            |                                           | 2216153R2          | 2SC1622A(D17)                |
| Q381                                        | 22240981R2          | TC9162AF                     | Q503,Q603                                 | 2216175R2 or       | KTC3875-GR                   |
|                                             | Transistors         |                              |                                           | 2213143R2 or       | 2SC2712-O                    |
| Q362,Q462                                   | 2215510R2           | RN1443                       |                                           | 2213144R2 or       | 2SC2712-Y                    |
| Q382                                        | 2216220R2 or        | KRA102S                      |                                           | 2213145R2 or       | 2SC2712-GR                   |
|                                             | 2214530R2           | RN2402                       |                                           | 2216173R2 or       | KTC3875-O                    |
|                                             | <b>Capacitors</b>   |                              |                                           | 2216174R2          | KTC3875-Y                    |
| C361,C367                                   | 354742209           | 22uF,16V,Elect.              | Q504-Q506                                 | 2215975 or         | KTA1266-GR                   |
| C369,C385                                   | 354780109           | 1uF,50V,Elect.               |                                           | 2211455            | 2SA1015-GR                   |
| C382                                        | 354761019           | 100uF,35V,Elect.             | Q507,Q607                                 | 2215985 or         | KTC3198-GR                   |
| C386,C387                                   | 354742219           | 220uF,16V,Elect.             |                                           | 2211255            | 2SC1815-GR                   |
| C461,C467                                   | 354742209           | 22uF,16V,Elect.              | Q601,Q602                                 | 2216154R2 or       | 2SC1622A(D18)                |
| C469                                        | 354780109           | 1uF,50V,Elect.               |                                           | 2216153R2          | 2SC1622A(D17)                |
| C365,C366                                   | 374725634           | ECQ-V50V-563J,Plastic film   | Q604-Q606                                 | 2215975 or         | KTA1266-GR                   |
| C368,C468                                   | 374721534           | ECQ-B50V-153J,Plastic film   |                                           | 2211455            | 2SA1015-GR                   |
| C370,C470                                   | 374721544           | ECQ-V50V-154J,Plastic film   |                                           | <b>Diodes</b>      |                              |
| C465,C466                                   | 374725634           | ECQ-V50V-563J,Plastic film   | D501,D503                                 | 223234R2 or        | 1SS352,Chip                  |
|                                             | <b>Resistors</b>    |                              |                                           | 223269R2           | 1SS355,Chip                  |
| R386,R387                                   | 443521004           | 10ohm +/-5%,1/2W,Metal oxide | D601,D603                                 | 223234R2 or        | 1SS352,Chip                  |
| R381                                        | 5104383             | N16RGL100KBT20F,Variable     |                                           | 223269R2           | 1SS355,Chip                  |
|                                             | <b>Plug</b>         |                              | D502,D602                                 | 224490560R2 or     | UDZ5.6B                      |
| P303B                                       | 25055441            | NPLG-3P423                   |                                           | 224550560R2        | UDZS5.6B                     |
|                                             | <b>Shield plate</b> |                              |                                           | <b>Capacitors</b>  |                              |
| R381A                                       | 27150477            | (VOL)                        | C501,C504                                 | 354742209          | 22uF,16V,Elect.              |
|                                             | <b>Socket</b>       |                              | C505,C605                                 | 354742219          | 220uF,16V,Elect.             |
| P304B                                       | 25051237            | NSCT-12P1027                 | C509,C609                                 | 354741009          | 10uF,16V,Elect.              |
|                                             |                     |                              | C5621,C562                                | 354761019          | 100uF,35V,Elect.             |
|                                             |                     |                              | C601,C604                                 | 354742209          | 22uF,16V,Elect.              |
|                                             |                     |                              |                                           | <b>Resistors</b>   |                              |
|                                             |                     |                              | R512,R513                                 | 443523904          | 39ohm +/-5%,1/2W,Metal oxide |
|                                             |                     |                              | R514,R614                                 | 443523304          | 33ohm +/-5%,1/2W,Metal oxide |
|                                             |                     |                              | R515,R612                                 | 443523904          | 39ohm +/-5%,1/2W,Metal oxide |
|                                             |                     |                              | R561,R562                                 | 443522204          | 22ohm +/-5%,1/2W,Metal oxide |
|                                             |                     |                              | R613,R615                                 | 443523904          | 39ohm +/-5%,1/2W,Metal oxide |
|                                             |                     |                              |                                           | <b>Sockets</b>     |                              |
|                                             |                     |                              | P501B                                     | 25051237           | NSCT-12P1027                 |
|                                             |                     |                              | P502B,P503B                               | 25051526           | NSCT-4P1313                  |

| U4 Headphone PC board(NAETC-7339-1B/1C/1D/1E) |                    |                               |
|-----------------------------------------------|--------------------|-------------------------------|
| REF. NO.                                      | PART NO            | DESCRIPTION                   |
|                                               | <b>Resistor</b>    |                               |
| R528,R628                                     | 443523914          | 390ohm +/-5%,1/2W,Metal oxide |
|                                               | <b>Jack</b>        |                               |
| P504                                          | 25045396           | LGT1516-0101                  |
|                                               | <b>Wire holder</b> |                               |
| JL501A                                        | 25051109           | NSCT-5P896                    |

|                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note                                                                                                                                                                                                             |
| <PP>.....European model only                                                                                                                                                                                     |
| <DT>.....120V model only                                                                                                                                                                                         |
| <GT,GR>.....220-230V model only                                                                                                                                                                                  |
| THE COMPONENTS IDENTIFIED BY MARK  ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED. |

## PARTS LIST CIRCUIT SECTION 3

| U5 Connection PC board(NAETC-7340-1B/1C/1D/1E) |                 |                               | U8 Microprocessor PC board(NADG-7343-1B/1C/1D/1E) |                |                       |
|------------------------------------------------|-----------------|-------------------------------|---------------------------------------------------|----------------|-----------------------|
| REF. NO.                                       | PART NO         | DESCRIPTION                   | REF. NO.                                          | PART NO        | DESCRIPTION           |
| <b>ICs</b>                                     |                 |                               | <b>ICs</b>                                        |                |                       |
| Q951                                           | 222780125JRC or | NJM78M12FA                    | Q701                                              | 22241712R3     | MPD78045FGF-133-3B9   |
|                                                | 222780125MIT or | M5F78M12L                     | Q702                                              | 22240239       | TA7291S               |
|                                                | 222780125NEC    | MPC78M12HF                    | Q704                                              | 22241297R2     | BU1923F<PP>           |
| <b>Transistors</b>                             |                 |                               | <b>Transistors</b>                                |                |                       |
| Q101                                           | 2216175R2 or    | KTC3875-GR<PP>                | Q703                                              | 2216210R2 or   | KRC104S               |
|                                                | 2213143R2 or    | 2SC2712-O<PP>                 |                                                   | 2214490R2      | RN1404                |
|                                                | 2213144R2 or    | 2SC2712-Y<PP>                 | Q706                                              | 2216230R2 or   | KRA103S               |
|                                                | 2213145R2 or    | 2SC2712-GR<PP>                |                                                   | 2214540R2      | RN2403                |
|                                                | 2216173R2 or    | KTC3875-O<PP>                 | <b>Diodes</b>                                     |                |                       |
|                                                | 2216174R2       | KTC3875-Y<PP>                 | D701,D702                                         | 22380260 or    | RL1N4003              |
| <b>Capacitors</b>                              |                 |                               |                                                   | 22380032 or    | 1SR139-100            |
| C952                                           | 354741009       | 10uF,16V,Elect.               |                                                   | 22380035       | GP104003E             |
| C104                                           | 354780339       | 3.3uF,50V,Elect.              | D703,D704                                         | 223234R2 or    | 1SS352,Chip           |
| <b>Resistor</b>                                |                 |                               |                                                   | 223269R2       | 1SS355,Chip           |
| R951                                           | 452530474       | 4.7ohm +/-5%,1/2W,Metal oxide | D705,D706                                         | 224490510R2 or | UDZ5.1B,Zener         |
| <b>Plug</b>                                    |                 |                               |                                                   | 224550510R2    | UDZ5.1B,Zener         |
| P104A                                          | 25055707        | NPLG-11P663                   | <b>Oscillators</b>                                |                |                       |
| <b>Sockets</b>                                 |                 |                               | X701                                              | 3010261        | HC-49/U03 4.19M10P    |
| P102B,P103B                                    | 25051231        | NSCT-6P1021                   | X702                                              | 3010203        | AF6146CG<PP>          |
| P101B                                          | 25051238        | NSCT-13P1028                  | <b>Coils</b>                                      |                |                       |
| P105A                                          | 25052248        | NSCT-15P2145                  | L701                                              | 231237K220R2   | NCH-1477              |
|                                                |                 |                               | L702                                              | 231237K220R2   | NCH-1477<PP>          |
|                                                |                 |                               | <b>Capacitors</b>                                 |                |                       |
|                                                |                 |                               | C708                                              | 3000120        | FMC0H104Z,EDL         |
|                                                |                 |                               | C703                                              | 353744709      | 47uF,16V,Elect.       |
|                                                |                 |                               | C705                                              | 353780109      | 1uF,50V,Elect.        |
|                                                |                 |                               | C711                                              | 354780339      | 3.3uF,50V,Elect.      |
|                                                |                 |                               | C715                                              | 353781009      | 10uF,50V,Elect.       |
|                                                |                 |                               | C716                                              | 354721019      | 100uF,6.3V,Elect.     |
|                                                |                 |                               | C721,C724                                         | 354721019      | 100uF,6.3V,Elect.<PP> |
|                                                |                 |                               | C722                                              | 374725614      | ECQ-B50V-561J<PP>     |
|                                                |                 |                               | C707                                              | 3060031        | NTC-45P27             |
|                                                |                 |                               | <b>Socket</b>                                     |                |                       |
|                                                |                 |                               | P701B                                             | 25052223       | NSCT-27P2120          |
|                                                |                 |                               | <b>Wire holders</b>                               |                |                       |
|                                                |                 |                               | JL701A,JL702A                                     | 25051094       | NSCT-10P881           |
|                                                |                 |                               | JL703A                                            | 25051093       | NSCT-9P880            |
|                                                |                 |                               | JL704A                                            | 25051094       | NSCT-10P881           |

| U6 Input/Output PC board(NAETC-7341-1B/1C/1D/1E) |             |              |
|--------------------------------------------------|-------------|--------------|
| REF. NO.                                         | PART NO     | DESCRIPTION  |
| <b>Jacks</b>                                     |             |              |
| P311                                             | 25045571 or | NPJ-6PDRW386 |
|                                                  | 25045300    | NPJ-6PDBL159 |
| P781                                             | 25045504    | NPJ-1PDBL319 |
| <b>Socket</b>                                    |             |              |
| P104B                                            | 25051236    | NSCT-11P1026 |

| U7 Display PC board(NADIS-7342-1B/1C/1D/1E) |           |                 |
|---------------------------------------------|-----------|-----------------|
| REF. NO.                                    | PART NO   | DESCRIPTION     |
| <b>FL. Tube</b>                             |           |                 |
| Q705                                        | 212223    | HNA-09SS27T     |
| <b>LES</b>                                  |           |                 |
| D707                                        | 225338    | SLR-332VR       |
| D708                                        | 225340    | SLR-332DU       |
| <b>Remote sensors</b>                       |           |                 |
| U701                                        | 241335 or | SPS-444-1       |
|                                             | 241341    | SPS-444-1-E1    |
| <b>Capacitor</b>                            |           |                 |
| C726                                        | 353741009 | 10uF,16V,Elect. |
| <b>Push switch</b>                          |           |                 |
| S702-S707                                   | 25035699  | NPS-111-S662    |
| <b>Rotary Encoder</b>                       |           |                 |
| S701                                        | 25065622  | EC11101200      |
| <b>Wire holder</b>                          |           |                 |
| JL703B                                      | 25051093  | NSCT-9P880      |
| JL701B,JL702B                               | 25051094  | NSCT-10P881     |

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| Note                                                                                                                         |
| <PP>.....European model only                                                                                                 |
| <DT>.....120V model only                                                                                                     |
| <GT,GR>...220-230V model only                                                                                                |
| THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED. |

# PARTS LIST

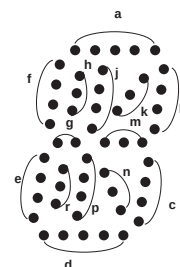
## CIRCUIT PARTS 4

| U9          | Power supply PC board(NAPS-7344-1B/1C/1D/1E) |                                   |
|-------------|----------------------------------------------|-----------------------------------|
| REF. NO.    | PART NO                                      | DESCRIPTION                       |
|             | <b>Transistors</b>                           |                                   |
| Q901        | 2215830 or                                   | KRC105M                           |
|             | 2213640                                      | DTC123JS                          |
|             | <b>Diodes</b>                                |                                   |
| D902-D905   | 22380260 or                                  | RL1N4003                          |
|             | 22380032 or                                  | 1SR139-100                        |
|             | 22380035                                     | GP104003E                         |
| D901,D906   | 223234R2 or                                  | 1SS352,Chip                       |
|             | 223269R2                                     | 1SS355,Chip                       |
| D907        | 223234R2 or                                  | 1SS352,Chip                       |
|             | 223269R2                                     | 1SS355,Chip                       |
| D908        | 224490510R2 or                               | UDZ5.1B,Zener                     |
|             | 224550510R2                                  | UDZS5.1B,Zener                    |
|             | <b>Coils</b>                                 |                                   |
| L571,L671   | 231176S                                      | S-1.3C                            |
|             | <b>Capacitors</b>                            |                                   |
| C904        | 354742219                                    | 220uF,16V,Elect.                  |
| C905        | 354741009                                    | 10uF,16V,Elect.                   |
| C901        | 3500196                                      | RE275V-103M,Plastic film          |
| C571,C671   | 374721034                                    | ECQ-B50V-103J,Plastic             |
| C573        | 374724734                                    | ECQ-V50V-473J,Plastic             |
|             | <b>Resistors</b>                             |                                   |
| R901        | 443521004                                    | 82ohm +/-5%,1/2W,Metal oxide<PP>  |
| R906        | 443528204                                    | 10ohm +/-5%,1/2W,Metal oxide      |
| R571,R671   | 453530564                                    | 5.6ohm +/-5%,1/2W,Metal           |
| R901        | 453530564                                    | 5.6ohm +/-5%,1/2W,Metal<DT,GR,GT> |
| R907        | 431533355                                    | ⚠ RC1/2GFKUL-3.3M,Solid<DT>       |
|             | <b>Transformer</b>                           |                                   |
| T902        | 2301464                                      | ⚠ NPT-1398D<DT>                   |
|             | 2301465                                      | ⚠ NPT-1398G<GR,GT>                |
|             | 2301539                                      | ⚠ NPT-1398P<PP>                   |
|             | <b>Relays</b>                                |                                   |
| RL901       | 25065603 or                                  | ⚠ NRL-1P5A-DC9-152                |
|             | 25065601                                     | ⚠ NRL-1P5A-DC9-150                |
|             | <b>Terminal</b>                              |                                   |
| P571        | 25060286                                     | NTM-4PDML217                      |
|             | <b>Jack</b>                                  |                                   |
| P572        | 25045567                                     | NPJ-1PDBL382                      |
|             | <b>Plug</b>                                  |                                   |
| P901A       | 25055676                                     | NPLG-2P632                        |
|             | <b>Fuse holders</b>                          |                                   |
| F901A,F901B | 25052133                                     | ⚠ NSCT-1P2031                     |
|             | <b>Wire holders</b>                          |                                   |
| JL502A      | 25051109                                     | NSCT-5P896                        |
| JL931A      | 25051112                                     | NSCT-8P899                        |
| JL932A      | 25051108                                     | NSCT-4P895                        |
|             | <b>Labels</b>                                |                                   |
| F901C       | 29363040                                     | T315mAL250V<PP>                   |
|             | 29363040                                     | T315mAL250V<GR>                   |
|             | 29363040                                     | T315mAL250V<GT>                   |
|             | 29360667                                     | LABEL(F)<DT>                      |

|                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------|
| Note                                                                                                                           |
| <PP>.....European model only                                                                                                   |
| <DT>.....120V model only                                                                                                       |
| <GT,GR>...220-230V model only                                                                                                  |
| THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED. |

## FL.TUBE

| SLEEP | TIMER | RDS | ▶◀  | ▶◀RDM/ | MEM | RPT | ST | AUTO |
|-------|-------|-----|-----|--------|-----|-----|----|------|
| 9G    | 8G    | 7G  | 6G  | 5G     | 4G  | 3G  | 2G | 1G   |
| AM    | PM    | kHz | MHz |        |     |     |    |      |



|     | 9G    | 8G    | 7G  | 6G | 5G  | 4G  | 3G  | 2G | 1G   |
|-----|-------|-------|-----|----|-----|-----|-----|----|------|
| P1  | a     | a     | a   | a  | a   | a   | a   | a  | -    |
| P2  | i     | i     | i   | i  | i   | i   | i   | i  | -    |
| P3  | h     | h     | h   | h  | h   | h   | h   | h  | -    |
| P4  | k     | k     | k   | k  | k   | k   | k   | k  | -    |
| P5  | b     | b     | b   | b  | b   | b   | b   | b  | -    |
| P6  | f     | f     | f   | f  | f   | f   | f   | f  | -    |
| P7  | g     | g     | g   | g  | g   | g   | g   | g  | -    |
| P8  | m     | m     | m   | m  | m   | m   | m   | m  | PM   |
| P9  | c     | c     | c   | c  | c   | c   | c   | c  | AM   |
| P10 | e     | e     | e   | e  | e   | e   | e   | e  | -    |
| P11 | n     | n     | n   | n  | n   | n   | n   | n  | -    |
| P12 | r     | r     | r   | r  | r   | r   | r   | r  | MHz  |
| P13 | p     | p     | p   | p  | p   | p   | p   | p  | kHz  |
| P14 | d     | d     | d   | d  | d   | d   | d   | d  | -    |
| P15 | SLEEP | TIMER | RDS | ▶  | RDM | MEM | RPT | ST | AUTO |
| P16 | Dp    | -     | -   | ◀  | ▶◀  | Dp  | -   | Dp | -    |
| P17 | -     | -     | -   | -  | -   | col | -   | -  | -    |

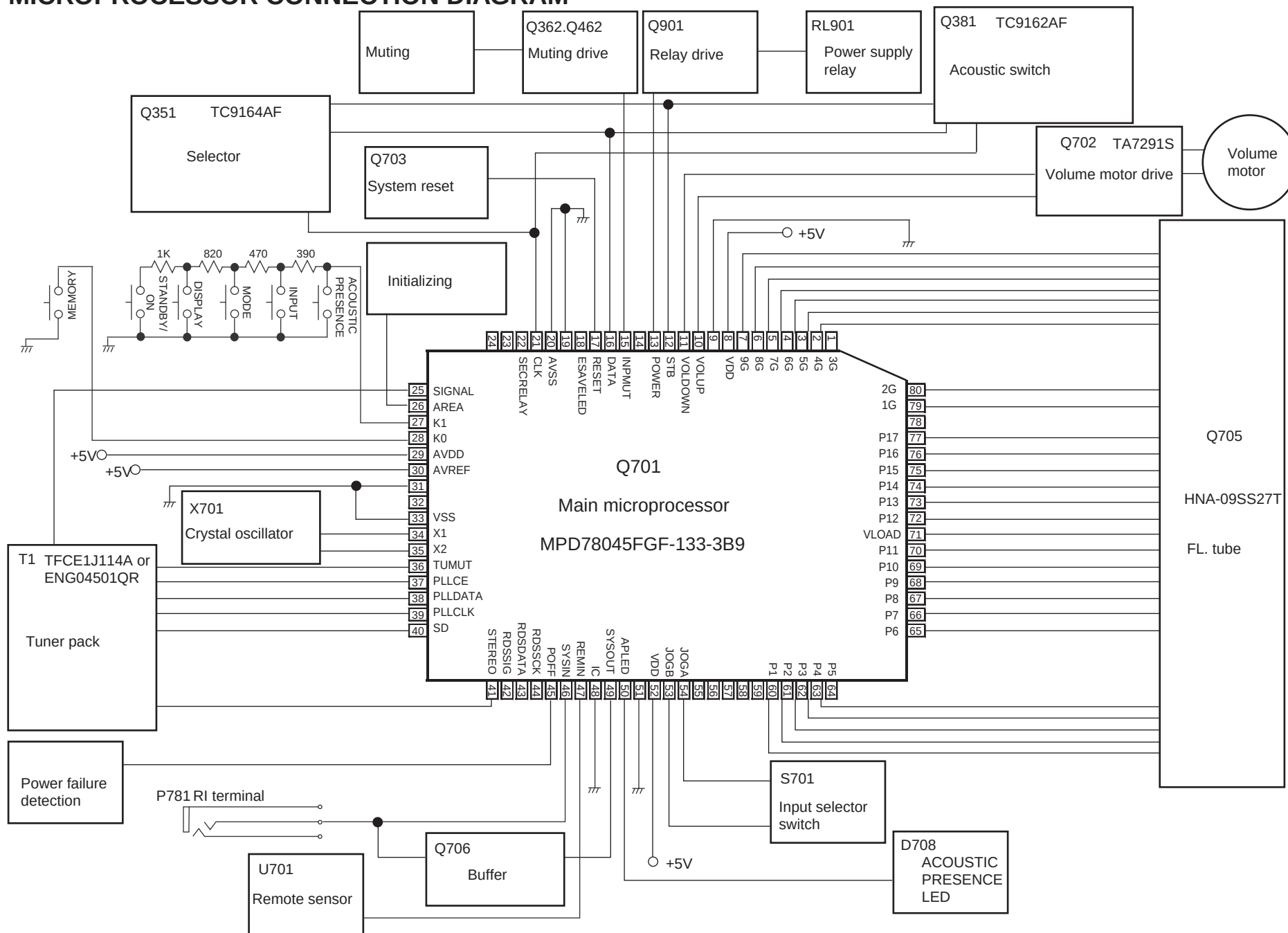
## MICROPROCESSOR CONNECTION DIAGRAM

1

2

3

4



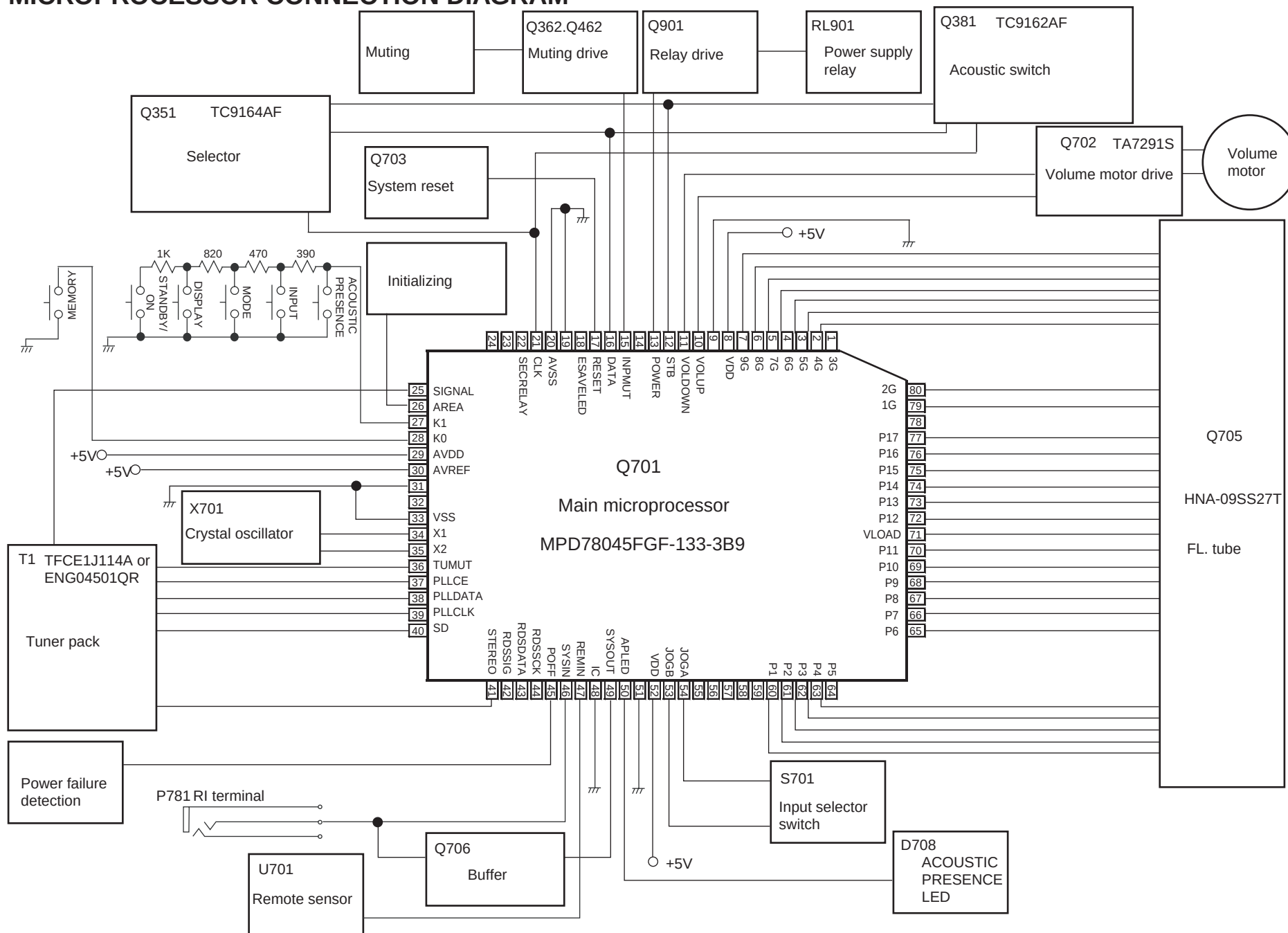
## MICROPROCESSOR CONNECTION DIAGRAM

1

2

3

4



## ADJUSTMENT PROCEDURES

### Adjustment of clock frequency

1. Connect the frequency counter between the terminal P305 and Chassis.
2. Press and hold down the MEMORY button, then press the DISPLAY button.(All segments on FL tube light on)
3. Adjust the trimmer capacitor C707 so that the reading of frequency counter becomes 524.288 kHz.

### Destination check

Press and hold down "MEMORY"key at standby,then press "INPUT"key .

| Destination | Indication |
|-------------|------------|
| MJJ         | JJ         |
| MPP         | PP         |
| MDT,MGT,MGR | DT,GT      |
| NO GOOD     | AREA NG    |

### Version indication of microprocessor

Press and hold down "ACOUSTIC PRESENCE"key at standby,then press "INPUT"key.

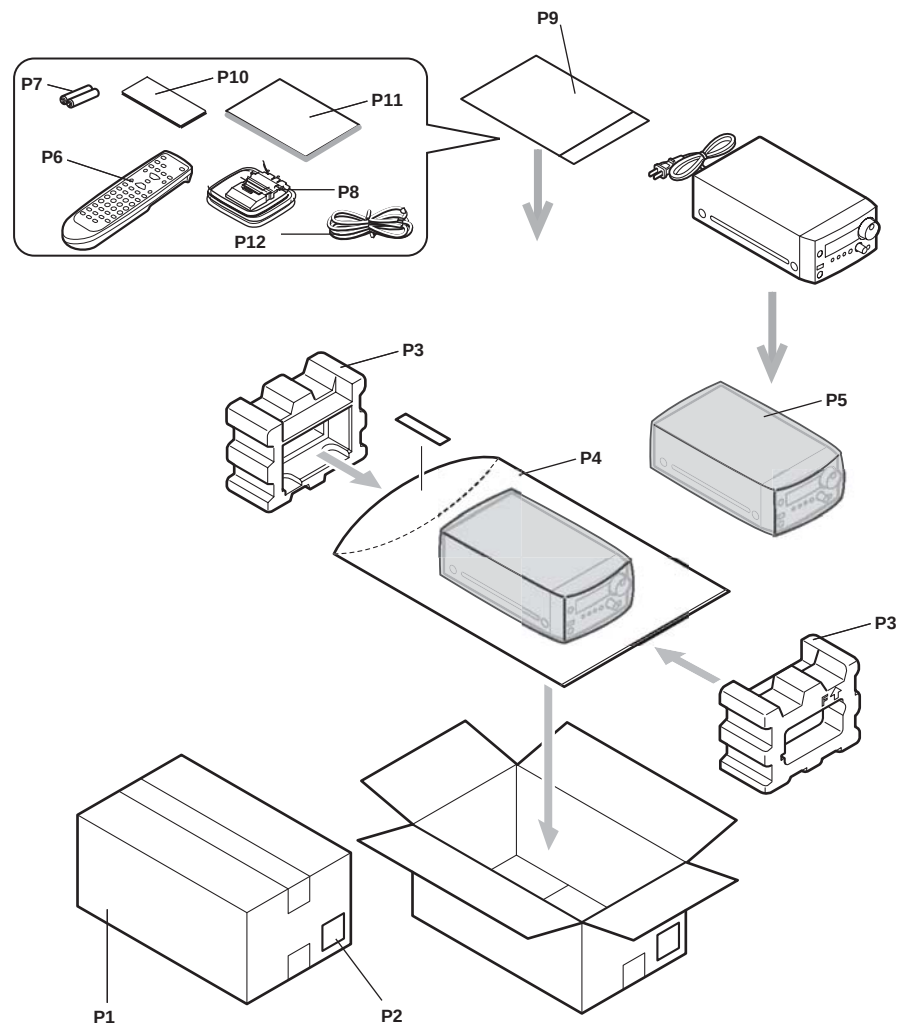
### Initialize

- 1.Press and hold down "MEMORY"key at standby,then press "DISPLAY"key.  
(The all segments on the FL. tube light on)
- 2.Press "STANDBY/ON"key.

### Shipping position

Turn the volume to a minimam position.

## PACKING VIEW



## PARTS LIST

| REF. NO. | PART NO.    | DESCRIPTION                     |
|----------|-------------|---------------------------------|
| P1       | 29053813    | Carton <PP>                     |
|          | 29053812    | Carton <DT,GT>                  |
|          | 29053814A   | Carton <GR>                     |
| P2       | 29362962A   | EAN Label                       |
| P3       | 29092008    | Pad ass'y                       |
| P4       | 29100123C   | 430x550,Polybag                 |
| P5       | 29095906    | Sheet                           |
| P6       | 24140466A   | RC-466S,Remote controller       |
| P7       | 3010154     | UM-3,Battery                    |
| P8       | 232140      | NMA-3057,AM 100p antenna        |
| P9       | 29100097-1A | 350x250,Polybag                 |
| P11      | 29343214A   | Instruction manual,E            |
|          | 29343215A   | Instruction manual,U3GDSW<PP>   |
|          | 29343216A   | Instruction manual,U3FSI<PP>    |
|          | 29343218A   | Instruction manual,CT<DT,GR,GT> |
|          | 29343233A   | Instruction manual,CS<GR>       |
| P12      | 292115      | FM Antenna ass'y                |
| P13      | 25065462    | YAE21-0237,FM antenna adapter   |

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