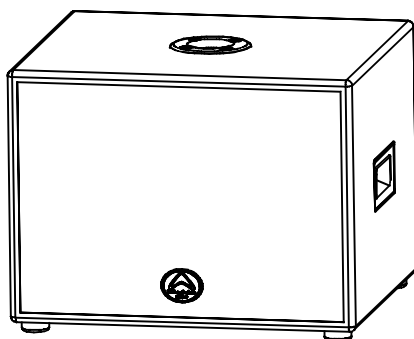


# Titan™ Sub A12

## Service Manual



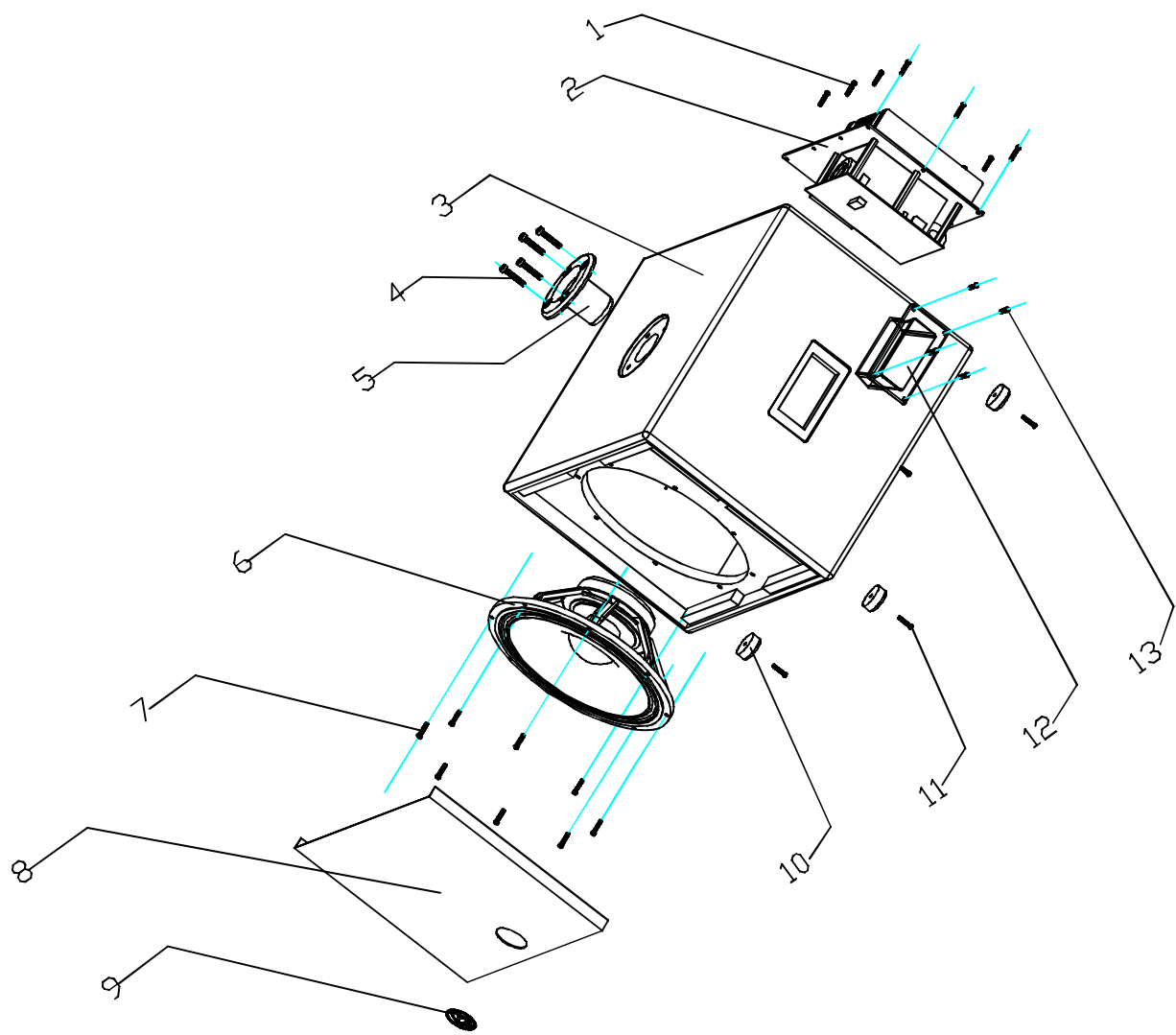
|                       |    |
|-----------------------|----|
| SPECIFICATION         | 1  |
| ASSEMBLY SKETCH       | 2  |
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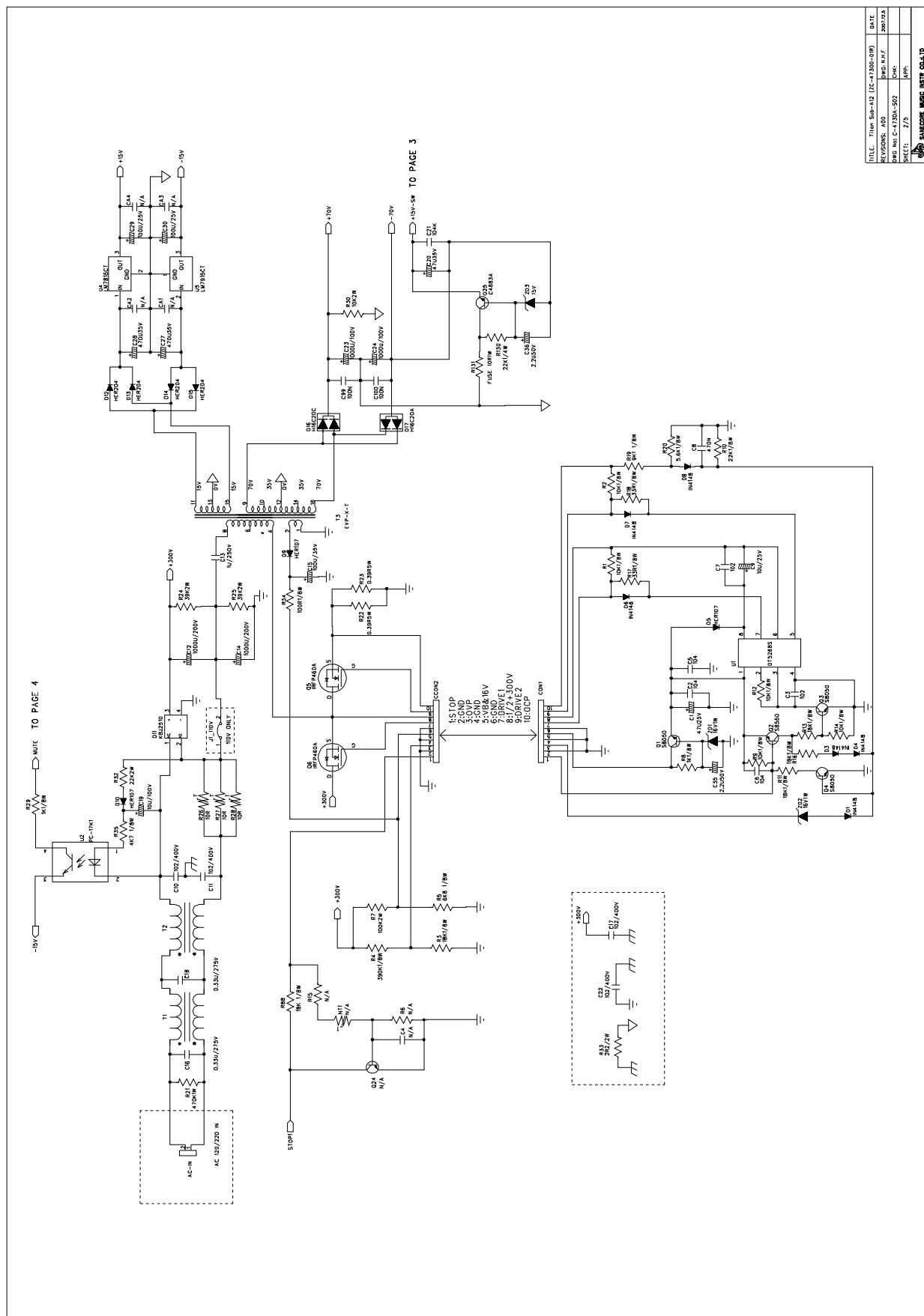
## 1.SPECIFICATIONS

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| System Type                      | Reflex subwoofer                                    |
| Frequency Response (+/-3dB)      | 55-200Hz                                            |
| Enclosure Material               | 15mm MDF                                            |
| Enclosure Colour                 | Grey                                                |
| Frame material                   | steel frame                                         |
| Size (mm / inches)               | 305mm / 12 "                                        |
| Coil Size (mm / inches)          | 64.26mm / 2.5 "                                     |
| Impedance                        | 4 ohm                                               |
| Speaker Pole Adapter             | Yes                                                 |
| Inputs A & B - Type / Connection | Balanced Line Level inputs via two combo connectors |
| Output A & B Type / Connection   | Balanced Line Level inputs via two combo connectors |
| Input Sensitivity                | 0.37V                                               |
| High Pass Frequency Selection    | 150Hz                                               |
| Phase Switch Selection           | 0° / 180°                                           |
| Crossover Frequency              | 80Hz/100Hz/120Hz/150Hz/180Hz/200Hz (adjustable)     |
| Speaker Level Input Impedance    |                                                     |
| Speaker Level Input Connection   |                                                     |
| Amplifier Power:                 |                                                     |
| Continuous                       | 250W                                                |
| Peak                             | 500W                                                |
| Power On Indicator               | LED                                                 |
| Power On Protection              | Power switch on / off mute                          |
| Thermal Protection               | Amplifier shutdown, auto reset                      |
| Low Line Voltage Shut Down       | 60% Nominal line voltage                            |
| Driver Protection                | Independent LF limiters                             |
| DC Protection                    | Yes                                                 |
| Short Protection                 | Yes                                                 |
| Clip Limiter:                    | Turns on approx 250W output                         |
| Limiter Indicator                | Red LED                                             |
| Power Indicator                  | Blue LED                                            |
| Dimensions (mm / inches):        |                                                     |
| Height                           | 360.0mm/14.2 "                                      |
| Width                            | 493.0mm/19.4 "                                      |
| Depth                            | 431.0mm/16.9 "                                      |
| Weight (Net) kg / lbs            | 22.31kg /49.0lbs                                    |
| Weight (Gross) kg / lbs          | 26.26kg / 57.8lbs                                   |

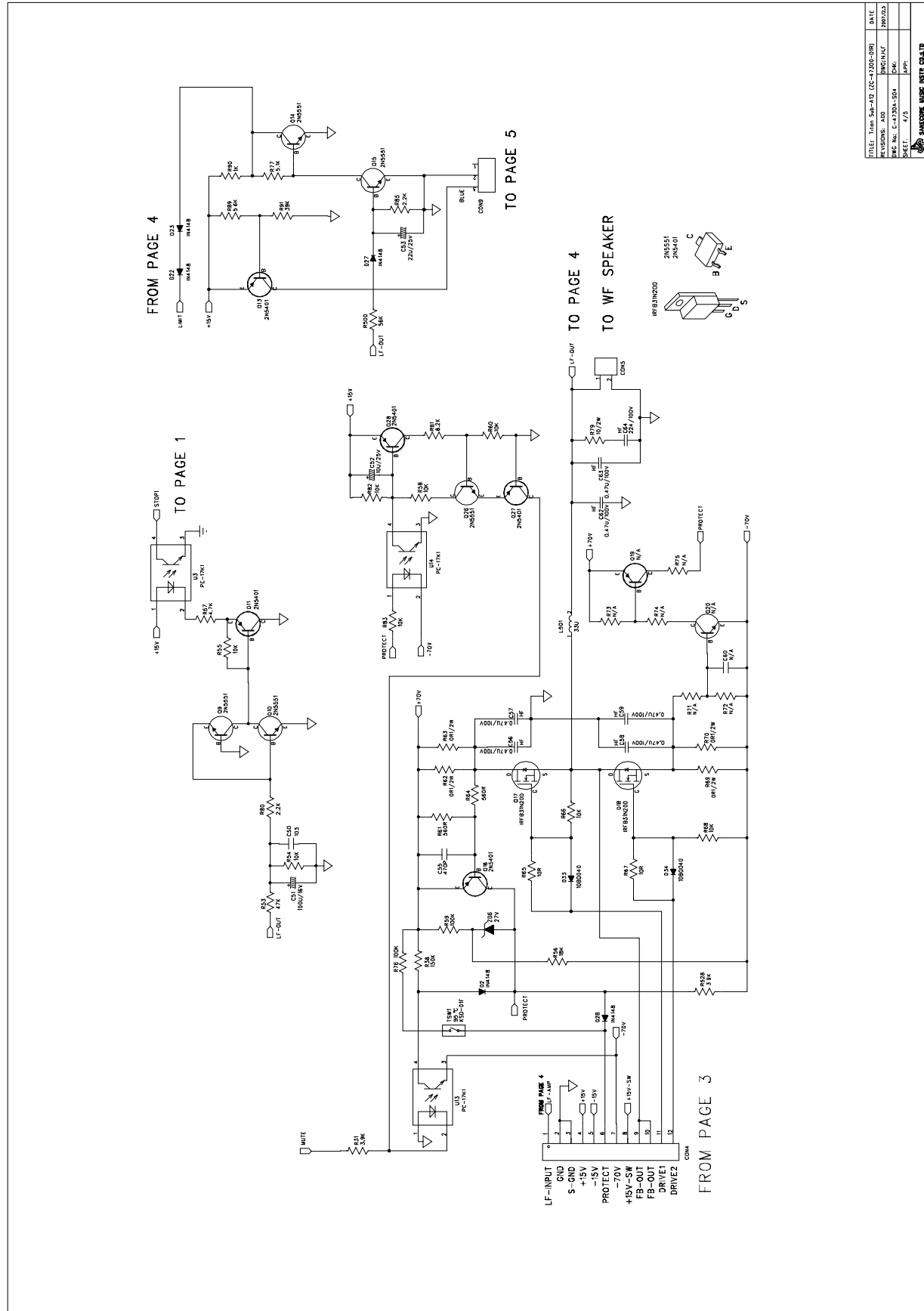
2.ASSEMBLY SKETCH



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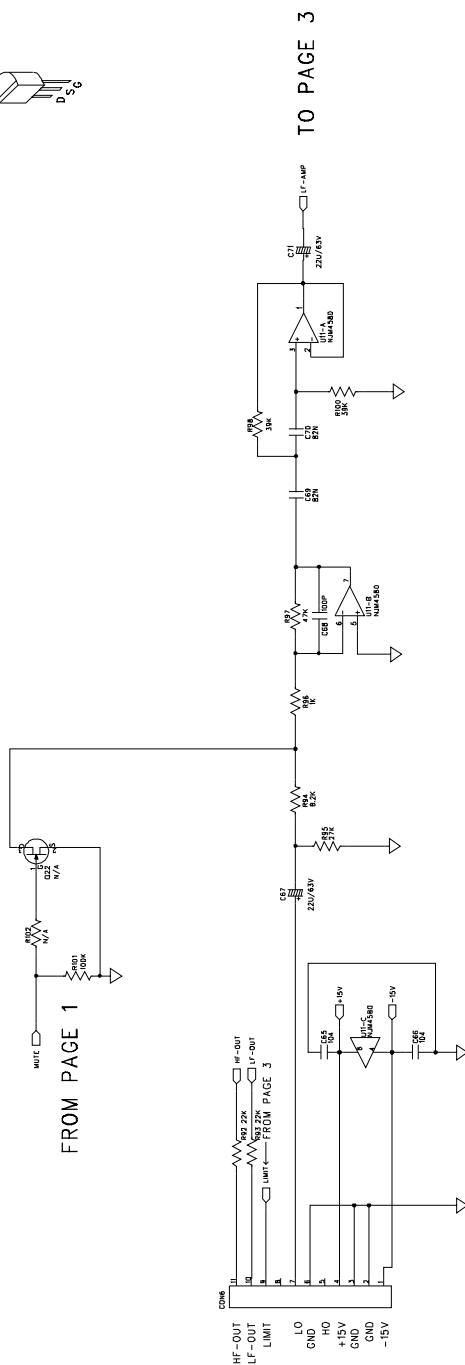
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## Titan™ Sub A12



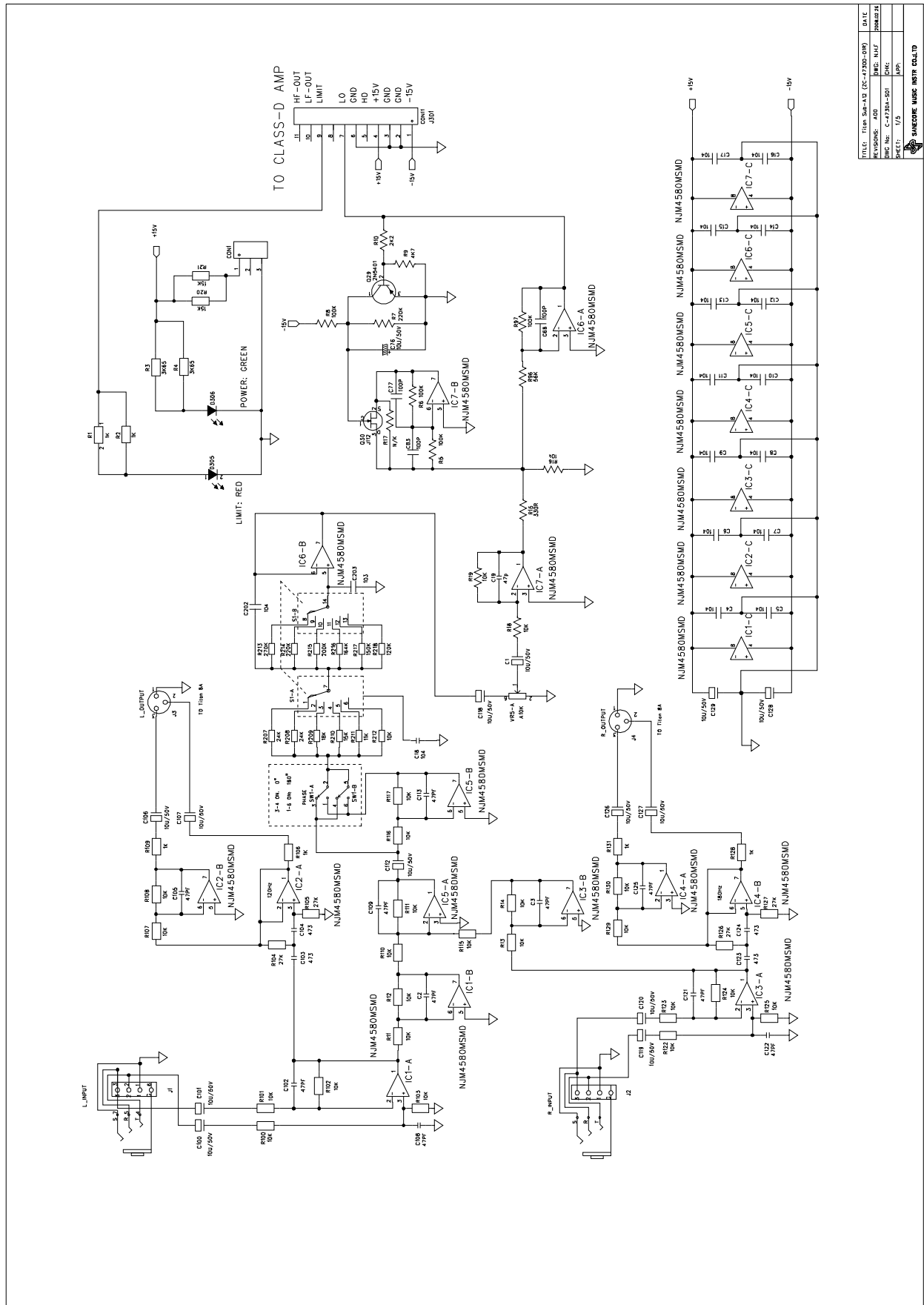
## Titan™ Sub A12



TO PAGE 3

|                                      |              |
|--------------------------------------|--------------|
| TITLE: Tilton Sub-A12 (2C-47500-01R) | DATE         |
| TELEVISIONS A00                      | DWIC: M.J.F. |
| DWG No: C-4750A-505                  | CHK          |
| SHEETS: 5/6                          | APP.         |

## 7. SCHEMATIC DIAGRAM



|                                     |           |
|-------------------------------------|-----------|
| TITLE: Titan™ Sub-A12 (IC-1350-08M) | DATE      |
| REVISED: A03                        | ENG: NULF |
| DOC No: C-47304-001                 | CHK       |
| DATE: 1/5                           | APP       |
| SANECORE MUSIC INSTR. CO., LTD      |           |



## 8.ASSEMBLY PARTS LIST

| R/N | P/N              | PART NAME             | DESCRIPTION   | QTY |
|-----|------------------|-----------------------|---------------|-----|
| 1   | 537-4002300801AR | SCREW                 | MP(+)<br>4*30 | 10  |
| 2   | ZC-47300-07R     | AMPLIFIER             |               | 1   |
| 3   | 344-2142400001R  | CABINET               |               | 1   |
| 4   | 534-6001400801AR | SCREW                 | MK(+)<br>6*40 | 4   |
| 5   | 259-2142500001R  | SPEAKER STAND ADAPTER |               | 1   |
| 6   | ZD-70302-01R     | WOOFER                |               | 1   |
| 7   | 537-5001250801AR | SCREW                 | MT(+)<br>5*25 | 8   |
| 8   | 310-2142400001R  | FRONT GRILLE          |               | 1   |
| 9   | 313-2104900001R  | LOGO                  |               | 1   |
| 10  | 226-0380001515R  | RUBBER FOOT           |               | 4   |
| 11  | 558-4001258061AR | SCREW                 | M4*25         | 4   |
| 12  | 243-2009000001R  | HANDLE                |               | 2   |
| 13  | 523-4013250601R  | SCREW                 |               | 8   |

## 9.ELECTRONIC PARTS LIST

| R/N | P/N             | PART NAME    | DESCRIPTION         | QTY | LOCATION     |
|-----|-----------------|--------------|---------------------|-----|--------------|
| 1   | 019-0556122001R | POWER LED    | BLUE                | 1   |              |
| 2   | 031-4200510121R | FUSE         | T3.15A 250V 5*20mm  | 1   |              |
| 3   | 042-1003005001R | POWER SWITCH | RF-1003TV-5AC250V   | 1   |              |
| 4   | 044-2600000000R | POWER SOCKET | RF-2004             | 1   |              |
| 5   | 055-0311022133R | RIBBON CABLE | 11PIN L=300MM       | 1   |              |
| 6   | 055-0402030333R | RIBBON CABLE | UL1617 18# 2PIN     | 1   |              |
| 7   | 055-1303600333R | RIBBON CABLE | C-022-4 L=600 24#   | 1   |              |
| 8   | 060-0180120100R | WIRE         | 1617#18 BROWN       | 1   |              |
| 9   | 060-0180120300R | RIBBON CABLE | BLUE 18# C-022-8    | 1   |              |
| 10  | 060-0180151004R | RIBBON CABLE | C-022-6 L=150 18#   | 1   |              |
| 11  | 071-1100000000R | CABLE TIES   | 100MM YJ-100        | 8   |              |
|     | 088-1472414500R | POWER BOARD  |                     | 1   |              |
| 1   | 001-1002203010R | RESISTOR     | 1K 1/8W F           | 1   | R8           |
| 2   | 001-1003203010R | RESISTOR     | 10K 1/8W F          | 5   | R1 2 9 12 14 |
| 3   | 001-1803203010R | RESISTOR     | 18K 1/8W F          | 3   | R11 13 16    |
| 4   | 001-2203203010R | RESISTOR     | 22K 1/8W F          | 1   | R10          |
| 5   | 001-3300103050R | RESISTOR     | 33 OHM 1/8W J       | 2   | R17 18       |
| 6   | 001-5602103050R | RESISTOR     | 5.6K 1/8W J         | 1   | R20          |
| 7   | 001-9102203010R | RESISTOR     | 9.1K 1/8W F         | 1   | R19          |
| 8   | 006-1004061194R | CAPACITOR    | 10uF 100V           | 1   | C9           |
| 9   | 006-2291051163R | CAPACITOR    | 2.2UF/50V 10%       | 1   | C35          |
| 10  | 006-4700051251R | CAPACITOR    | 47uF 35V            | 1   | C1           |
| 11  | 014-1020100002R | CAPACITOR    | AMZ 0.001UF 50V 5%  | 2   | C3 7         |
| 12  | 014-4740311028R | CAPACITOR    | MKS2 470nF 100V 10% | 1   | C8           |
| 13  | 017-1124000000R | IC           | IR2153D DIP-8 IR    | 1   | U1           |
| 14  | 018-3408050115R | TRANSISTOR   | SS8050 T0-92        | 3   | Q1 3 4       |
| 15  | 018-3408550115R | TRANSISTOR   | SS8550C T0-92       | 1   | Q2           |
| 16  | 057-2545011241R | JACK         | 24P BLACK           | 0.5 | CON1         |
| 17  | 067-1104148000R | DIODE        | IN4148              | 6   | D1 3 4 6 7 8 |
| 18  | 067-2200107000R | DIODE        | HER107 JAL          | 1   | D5           |
| 19  | 067-3305246000R | ZENER        | 16V 1/2W IN5246     | 2   | ZD1 2        |
| 20  | 007-0108062060R | CAPACITOR    | 0.1UF 50V           | 3   | C2 5 6       |
| 21  | 053-1407001676R | POWER PCB    | FR-4 1.6 10Z        | 1   |              |
|     | 088-1472415500R | AMP BOARD    |                     | 1   |              |
| 1   | 057-2545011241R | JACK         | 24P BLACK           | 0.5 | CON3         |
| 2   | 002-1002032010R | RESISTOR     | 1K 1/8W 1% 0805     | 1   | R41          |
| 3   | 002-1003032010R | RESISTOR     | 10KOHM 1/8W 1% 0805 | 2   | R37 42       |
| 4   | 002-2003032010R | RESISTOR     | 20KOHM 1/8W 1% 0805 | 1   | R52          |
| 5   | 002-2003403010R | RESISTOR     | 2K 0805 1% 0.125W   | 1   | R36          |

## 10.ELECTRONIC PARTS LIST

|    |                  |             |                      |   |                          |
|----|------------------|-------------|----------------------|---|--------------------------|
| 6  | 002-2203032010R  | RESISTOR    | 22K 1/8W 1% 0805     | 1 | R47                      |
| 7  | 002-2205032010R  | RESISTOR    | 2.2M 1/8W 1% 0805    | 1 | R44                      |
| 8  | 002-2703032010R  | RESISTOR    | 27K 1/8W 1% 0805     | 1 | R48                      |
| 9  | 002-3903032010R  | RESISTOR    | 39K 1/8W 1% 0805     | 1 | R51                      |
| 10 | 002-4701032010R  | RESISTOR    | 470 OHM 1/8W 1% 0805 | 1 | R43                      |
| 11 | 002-4702032010R  | RESISTOR    | 4.7K 1/8W 1% 0805    | 3 | R40 49 39                |
| 12 | 002-4703032010R  | RESISTOR    | 47KOHM 1/8W 1% 0805  | 2 | R45 46                   |
| 13 | 002-4709032010R  | RESISTOR    | 4.70HM 1/8W 1% 0805  | 1 | R50                      |
| 14 | 007-1001052093R  | CAPACITOR   | 10PF 100V 5%         | 1 | C45                      |
| 15 | 007-1003062090R  | CAPACITOR   | 103/100V 0805 10%    | 1 | C37                      |
| 16 | 007-1004052060R  | CAPACITOR   | 100nF 50V 5% 0805    | 8 | C34 38 39 41 44 46 47 48 |
| 17 | 007-1014063090R  | CAPACITOR   | 1U/100V 10% 1206     | 2 | C33 49                   |
| 18 | 007-1802052060R  | CAPACITOR   | 1.8NF 50V 5%         | 2 | C42 43                   |
| 19 | 010-2251602010R  | CAPACITOR   | T450A12251CMAP1      | 1 | C40                      |
| 20 | 017-5220000001R  | IC          | L78L05ABD S0-8 ST    | 1 | U10                      |
| 21 | 017-7070000000R  | IC          | IR2011S PBF 8PIN     | 1 | U9                       |
| 22 | 017-7110000000R  | IC          | ISL55001IBZ S0-8     | 1 | U6                       |
| 23 | 017-7120000000R  | IC          | TC7WH08FU 8PIN       | 1 | U8                       |
| 24 | 017-7130000000R  | IC          | TC7WH04FU 8PIN       | 1 | U7                       |
| 25 | 018-2905401227R  | TRANSISTOR  | 2N5401S S0T-23 KEC   | 1 | Q7                       |
| 26 | 018-2905551227R  | TRANSISTOR  | 2N5551S S0T-23 KEC   | 1 | Q8                       |
| 27 | 019-0012003103R  | DIODE       | MURS120T3            | 1 | D26                      |
| 28 | 053-1407001610R  | AMP BOARD   | FR-4                 | 1 |                          |
| 29 | 067-2204148110R  | DIODE       | ST LL4148 SMD1206    | 3 | D24 25 903               |
|    | 088-1473000000R  | POWER BOARD |                      | 1 |                          |
| 1  | 001-0393108050R  | RESISTOR    | 39K 2W 5%            | 2 | R24 25                   |
| 2  | 001-0398810050R  | RESISTOR    | 0.39R 5W 5%          | 2 | R22 23                   |
| 3  | 001-1000207051R  | RESISTOR    | 10R FMF 1W 5%        | 1 | R131                     |
| 4  | 001-1000308050R  | RESISTOR    | 10 OHM 2W J          | 1 | R79                      |
| 5  | 001-1001105050R  | RESISTOR    | 100 OHM 1/4W J       | 1 | R34                      |
| 6  | 001-1002203010R  | RESISTOR    | 1K 1/8W F            | 1 | R29                      |
| 7  | 001-1003308050R  | RESISTOR    | 10K 2W J             | 1 | R30                      |
| 8  | 001-1004208050R  | RESISTOR    | 100K2W 5%            | 1 | R7                       |
| 9  | 001-1008708050R  | RESISTOR    | 0.1 OHM 2W 5%        | 4 | R62 63 69 70             |
| 10 | 001-1803203010R  | RESISTOR    | 18K 1/8W F           | 1 | R3                       |
| 11 | 001-2203208010R  | RESISTOR    | 22K 2W 1%            | 1 | R32                      |
| 12 | 001-2209308050QR | RESISTOR    | 2R2 2W 5%            | 1 | R33                      |
| 13 | 001-3904203010R  | RESISTOR    | 390KOHM 1/8W F       | 1 | R4                       |
| 14 | 001-4702203010R  | RESISTOR    | 4.7K 1/8W F          | 1 | R35                      |
| 15 | 001-4703107050R  | RESISTOR    | 470K 1W 5%           | 1 | R21                      |

## 11.ELECTRONIC PARTS LIST

|    |                  |                         |                     |   |                    |
|----|------------------|-------------------------|---------------------|---|--------------------|
| 16 | 001-6802203010R  | RESISTOR                | 6.8K 1/8W F         | 1 | R5                 |
| 17 | 004-3307000000R  | RESISTOR                | 10D-20              | 2 | R26 27             |
| 18 | 006-1004061194R  | CAPACITOR               | 10uF 100V           | 1 | C19                |
| 19 | 006-1006051243R  | CAPACITOR               | 10UF/25V            | 1 | C52                |
| 20 | 006-1014060533R  | CAPACITOR               | SVP101M1CE05ME2     | 1 | C51                |
| 21 | 006-1014061153AR | CAPACITOR               | 100UF/25V 20%       | 2 | C29 30             |
| 22 | 006-1014081153AR | CAPACITOR               | 100UF/35V 20%       | 1 | C15                |
| 23 | 006-1021174293R  | CAPACITOR               | 1000U/100V/20%      | 2 | C23 24             |
| 24 | 006-1024304109R  | CAPACITOR               | 1000UF/200V         | 2 | C12 14             |
| 25 | 006-2201061173R  | CAPACITOR               | 22uF/63V            | 2 | C67 71             |
| 26 | 006-2204051143AR | CAPACITOR               | 22UF/25V            | 1 | C53                |
| 27 | 006-2291051163R  | CAPACITOR               | 2.2UF/50V           | 1 | C36                |
| 28 | 006-4700051251R  | CAPACITOR               | 47uF 35V            | 1 | C20                |
| 29 | 006-4714102053AR | CAPACITOR               | 470UF/35V           | 2 | C27 28             |
| 30 | 008-1021040005R  | CAPACITOR               | 102PF 400V M        | 4 | C10 11 17 22       |
| 31 | 013-2240320503R  | CAPACITOR               | 220NF100V           | 1 | C64                |
| 32 | 013-3304025005R  | CAPACITOR               | 334/275V J          | 2 | C16 18             |
| 33 | 014-1040311028R  | CAPACITOR               | MKS2 100nF 100V 10% | 2 | C99 100            |
| 34 | 014-1050411006R  | CAPACITOR               | 1UF/250V 10%        | 1 | C13                |
| 35 | 016-4741112201R  | CAPACITOR               | 0.47UF/100V P=15mm  | 6 | C56 57 58 59 62 63 |
| 36 | 017-0190000000R  | IC                      | NJM7815FA T0-220F   | 1 | U4                 |
| 37 | 017-1830000000R  | IC                      | KIA7915 T0-220      | 1 | U5                 |
| 38 | 018-0304883113R  | TRANSISTOR              | 2SC4883A T0-220F    | 1 | Q25                |
| 39 | 018-4404229225R  | FIELD EFFECT TRANSISTOR | IRFP4229T0-247AC    | 2 |                    |
| 40 | 018-7000460125R  | FIELD EFFECT TRANSISTOR | IRFP460A T0-247AC   | 2 | Q5 6               |
| 41 | 022-1040041316R  | TRANSFORMER             | EC40                | 1 |                    |
| 42 | 026-3334000170R  | INDUCTOR                | 33UH                | 1 |                    |
| 43 | 034-1119992508R  | BRIDGE RECTIFIER        | RBV2510             | 1 | D11                |
| 44 | 056-0102224400R  | JACK                    | JS3962-2P-WAFER     | 1 | CON5               |
| 45 | 056-0103003300R  | POWER SOCKET            | 2PIN 3.96PH         | 1 | AC-IN              |
| 46 | 056-4111221100R  | POWER SOCKET            | PIN=2.54MM 11PIN    | 1 | CON6               |
| 47 | 066-0095010000R  | SWITCH                  | T0-2P               | 1 | TSW1               |
| 48 | 067-2200107000R  | DIODE                   | HER107 JAL          | 2 | D9 10              |
| 49 | 067-2200207000R  | DIODE                   | HER204              | 4 | D12 13 14 15       |
| 50 | 067-2201620000R  | DIODE                   | F16C20C             | 1 | D16                |
| 51 | 067-2201620001R  | DIODE                   | F16C20A             | 1 | D17                |
| 52 | 067-3304744000R  | ZENER                   | 1N4744A 15V-1W      | 1 | ZD3                |
| 53 | 071-1100000000R  | CABLE TIES              | 100MM YJ-100        | 2 |                    |
| 54 | 080-0210012016R  | INDUCTOR                | 13.6MH 0.8MM 230V   | 2 | T1 2               |
| 57 | 002-1000032010R  | RESISTOR                | 10 OHM 1/8W 1% 0805 | 2 | R65 67             |

## 12.ELECTRONIC PARTS LIST

|    |                  |                         |                      |    |                                                  |
|----|------------------|-------------------------|----------------------|----|--------------------------------------------------|
| 58 | 002-1000033050R  | RESISTOR                | 1206 10R 1/8W 5%     | 1  | D28                                              |
| 59 | 002-1002032010R  | RESISTOR                | 1K 1/8W 1% 0805      | 2  | R90 96                                           |
| 60 | 002-1003032010R  | RESISTOR                | 10KOHM 1/8W 1% 0805  | 8  | R54 55 58 60 66 68 82 83                         |
| 61 | 002-1004032010R  | RESISTOR                | 100KOHM 1/8W 1% 0805 | 2  | R5 6 8 97                                        |
| 62 | 002-1504032050R  | RESISTOR                | 150K 0805 1/8W       | 1  | R217                                             |
| 63 | 002-1803032010R  | RESISTOR                | 18K 1/8W 0805 1%     | 1  | R209                                             |
| 64 | 002-2202032010R  | RESISTOR                | 2.2K 1/8W 1% 0805    | 2  | R10                                              |
| 65 | 002-2203032010R  | RESISTOR                | 22K 1/8W 1% 0805     | 3  | R92 93 130                                       |
| 66 | 002-2703032010R  | RESISTOR                | 27K 1/8W 1% 0805     | 1  | R95                                              |
| 67 | 002-3902032010R  | RESISTOR                | 3.9KOHM 1/8W 1% 0805 | 2  | R528 31                                          |
| 68 | 002-3903032010QR | RESISTOR                | 39K 1/8W 1% 0805     | 1  | R91                                              |
| 69 | 002-4702032010R  | RESISTOR                | 4.7K 1/8W 1% 0805    | 2  | R57 59                                           |
| 70 | 002-4703032050R  | RESISTOR                | 47K 0805 1/8W        | 4  | R53 97 98 100                                    |
| 71 | 002-5102032010R  | RESISTOR                | 5.1KOHM 1/8W 1% 0805 | 1  | R77                                              |
| 72 | 002-5601032010R  | RESISTOR                | 560OHM 1/8W 1% 0805  | 2  | R61 64                                           |
| 73 | 002-5602032010R  | RESISTOR                | 5.6KOHM 1/8W 1% 0805 | 1  | R89                                              |
| 74 | 002-5603032050R  | RESISTOR                | 56K 0805             | 1  | R500                                             |
| 75 | 002-8202032010R  | RESISTOR                | 8.2K 1/8W 1% 0805    | 2  | R81 94                                           |
| 76 | 007-0108062060R  | CAPACITOR               | 0.1UF 50V            | 1  | C21                                              |
| 77 | 007-1001032060R  | CAPACITOR               | 100PF 50V 5% 0805    | 1  | C68                                              |
| 78 | 007-1003062090R  | CAPACITOR               | 103/100V 0805 10%    | 1  | C50                                              |
| 79 | 007-1004052060R  | CAPACITOR               | 100nF 50V 5% 0805    | 4  | C65 66 69 70                                     |
| 80 | 007-4701062060R  | CAPACITOR               | 470PF CP50V 10% 0805 | 1  | C55                                              |
| 81 | 017-5270000001R  | IC                      | NJM4580M NJM-DMP8    | 1  | U11                                              |
| 82 | 018-2905401227R  | TRANSISTOR              | 2N5401S SOT-23 KEC   | 5  | Q11 13 16 27 28                                  |
| 83 | 018-2905551227R  | TRANSISTOR              | 2N5551S SOT-23 KEC   | 5  | Q9 10 14 15 26                                   |
| 84 | 053-1407001600R  | PCB                     | FR-4 1.6 20Z 190*125 | 1  |                                                  |
| 85 | 067-2204148110R  | DIODE                   | ST LL4148 SMD1206    | 4  | D2 22 23 27                                      |
| 86 | 067-3305279000R  | DIODE                   | 180V DO-35           | 1  | ZD6                                              |
| 87 | 067-6600040110R  | DIODE                   | 10BQ040 SMB          | 2  | D33 34                                           |
|    | 088-1473000001R  | SIGNAL BOARD            |                      | 1  |                                                  |
| 1  | 006-1001051163R  | CAPACITOR               | SM10uF 50V 10%       | 14 | C1 76 100 101 106 107 112<br>118 119 120 126-129 |
| 2  | 018-2800112115R  | FIELD EFFECT TRANSISTOR | J112G TO-92          | 1  | Q30                                              |
| 3  | 019-0311122001R  | LED                     | 204HD/E-A RED        | 1  | D305                                             |
| 4  | 019-0322122001R  | LED                     | LED GREEN            | 1  | D306                                             |
| 5  | 020-1032120325R  | POTENTIOMETER           | RD16K12D0094-10K     | 1  | VR5                                              |
| 6  | 044-4470000000R  | POWER SOCKET            | LA1114-6P            | 2  | J1 2                                             |
| 7  | 048-3000000000R  | POWER SOCKET            | NYS143 J3Y1 3pin     | 2  | J3 4                                             |
| 8  | 056-4103220000R  | POWER SOCKET            | 1136S-3P             | 1  | CON1                                             |
| 9  | 056-4111221100R  | POWER SOCKET            | PIN=2.54MM 11PIN     | 1  | J301                                             |

## 13.ELECTRONIC PARTS LIST

|    |                  |            |                      |    |                                                                                                    |
|----|------------------|------------|----------------------|----|----------------------------------------------------------------------------------------------------|
| 10 | 002-1002032010R  | RESISTOR   | 1K 1/8W 1% 0805      | 6  | R1 2 106 109 128 131                                                                               |
| 11 | 002-1003032010R  | RESISTOR   | 10KOHM 1/8W 1% 0805  | 25 | R11 12 13 14 16 18 19 100<br>102 103 107 108 110 111<br>115 116 117 122 123 124<br>125 129 130 212 |
| 12 | 002-1004032010R  | RESISTOR   | 100KOHM 1/8W 1% 0805 | 4  | R5 6 8 97                                                                                          |
| 13 | 002-1103032010QR | RESISTOR   | 11K 1/8W 1% 0805     | 1  | R211                                                                                               |
| 14 | 002-1204032050R  | RESISTOR   | 120K 0805 1/8W       | 1  | R218                                                                                               |
| 15 | 002-1503032010R  | RESISTOR   | 15K 1/8W 1% 0805     | 3  | R20 21 210                                                                                         |
| 16 | 002-1504032050R  | RESISTOR   | 150K 0805 1/8W       | 1  | R217                                                                                               |
| 17 | 002-1654022010R  | RESISTOR   | 0805 165K 1/10W      | 1  | R216                                                                                               |
| 18 | 002-1803032010R  | RESISTOR   | 18K 1/8W 0805 1%     | 1  | R209                                                                                               |
| 19 | 002-2004032010R  | RESISTOR   | 200KOHM 1/8W 1% 0805 | 1  | R215                                                                                               |
| 20 | 002-2202032010R  | RESISTOR   | 2.2K 1/8W 1% 0805    | 1  | R10                                                                                                |
| 21 | 002-2204032050R  | RESISTOR   | 220K 0805 1/8W       | 2  | R7 214                                                                                             |
| 22 | 002-2402032050R  | RESISTOR   | 24K 0805 1/8W        | 2  | R207 208                                                                                           |
| 23 | 002-2703032010R  | RESISTOR   | 27K 1/8W 1% 0805     | 4  | R104 105 126 127                                                                                   |
| 24 | 002-2704042010R  | RESISTOR   | 270K 0805 1% 0.25W   | 1  | R213                                                                                               |
| 25 | 002-3301032010R  | RESISTOR   | 330OHM 1/8W 1% 0805  | 1  | R15                                                                                                |
| 26 | 002-3651012010R  | RESISTOR   | 3.65K 1% 0805        | 2  | R3 4                                                                                               |
| 27 | 002-4702032010QR | RESISTOR   | 4.7K 1/8W 1% 0805    | 1  | R9                                                                                                 |
| 28 | 002-5603032050R  | RESISTOR   | 56K 0805 1/8W        | 1  | R96                                                                                                |
| 29 | 007-1001062060R  | CAPACITOR  | 100PF CP50V 10% 0805 | 3  | C68 77 83                                                                                          |
| 30 | 007-1003052060R  | CAPACITOR  | SMD10nF 50V 10%0805  | 1  | C203                                                                                               |
| 31 | 007-1004052060R  | CAPACITOR  | 100nF 50V 5% 0805    | 16 | C4-18 202                                                                                          |
| 32 | 007-4700052060R  | CAPACITOR  | 47PF 50V 5% 0805     | 11 | C2 3 19 102 105 108 109<br>113 121 122 125                                                         |
| 33 | 007-4703052060QR | CAPACITOR  | 47nF 50V 10% 0805    | 4  | C103 104 123 124                                                                                   |
| 34 | 017-5270000001R  | IC         | NJM4580M NJM-DMP8    | 7  | IC1-7                                                                                              |
| 35 | 018-2905401227R  | TRANSISTOR | 2N5401S SOT-23 KEC   | 1  | Q29                                                                                                |
| 36 | 053-1473000000R  | PCB        | FR-4 T1.6 0.8*101    | 1  |                                                                                                    |
| 37 | 089-0500000012R  | SWITCH     | SS-22F20-G12         | 1  | SW1                                                                                                |
| 38 | 097-0701200000R  | SWITCH     | SR2512-0206-26F1A    | 1  | S1                                                                                                 |
| 39 | 221-1472410000R  | LED HOLDER | M5*22.5mm,WHITE      | 2  | D305 306                                                                                           |