

# ***Service Manual***

**MODEL: APM120/160**

## CONTENT

1. INTRODUCTION.....	1
2. TECHNICAL SPECIFICATION.....	3
3. BLOCK DIAGRAM.....	5
4. SCHEMATIC DIAGRAM.....	7
5. WIRING DIAGRAM.....	11
6. PCB LAYOUT.....	13
7. TEST PROCEDURE.....	19
8. EXPLODED VIEW & MECHANICAL PARTS LIST.....	29
9. BOM.....	33

# 1. INTRODUCTION

## **APM120**

- 8 MONO Inputs with gold plated XLR and balanced TRS JACK.
- GAIN and +48V Phantom power for mono/mic inputs.
- 2 Stereo Inputs with balanced TRS Jacks.
- Peak LED in each Channel.
- 3-band EQ with sweepable MID on mono inputs.
- 4-band EQ on stereo inputs
- 24-bit internal DSP with 256 effects, 16 preset by 16 variations.

With DSP mute switch and peak LED.

- Graphic Equalizer: 9 band (63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz)
- BNC socket for connecting gooseneck lamps.
- Low cut filters-75Hz, 18dB/OCT on mono inputs.
- Low pass filter on mono output (80~120Hz).
- 4 AUX sends (AUX 1.2 pre/post, AUX 3.4 post).
- Foot switch digital effect on/off.
- Highly accurate 12 segment Bar graph Meters.
- Maximum Output Power: 500W+500W/4ohms. (1000 bridge/8ohms).
- Performance and excellent noise figures.
- Manufactured under ISO9001 certified management system.

## **APM160**

- 12 MONO Inputs with gold plated XLR and balanced TRS JACK.
- GAIN and +48 Phantom power for mono/mic inputs.
- 2 Stereo Inputs with balanced TRS Jacks.
- Peak LED in each Channel.
- 3-band EQ with sweepable MID on mono inputs.
- 4-band EQ on stereo inputs.
- 24-bit internal DSP with 256 effects, 16 preset by 16 variations.  
With DSP mute switch and peak LED.
- Graphic Equalizer: 9 band (63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz)
- BNC socket for connecting gooseneck lamps.
- Low cut filters-75Hz, 18dB/OCT on mono inputs.
- Low pass filter on mono output (80~120Hz).
- 4 AUX sends (AUX1, 2 pre/post, AUX3, 4 post)
- Foot switch digital effect on/off.
- Highly accurate 12 segment Bar graph Meters.
- Maximum Output Power: 750W+750W/4ohms. (1500W bridge/8ohms).
- Performance and excellent noise figures.
- Manufactured under ISO9001 certified management system.

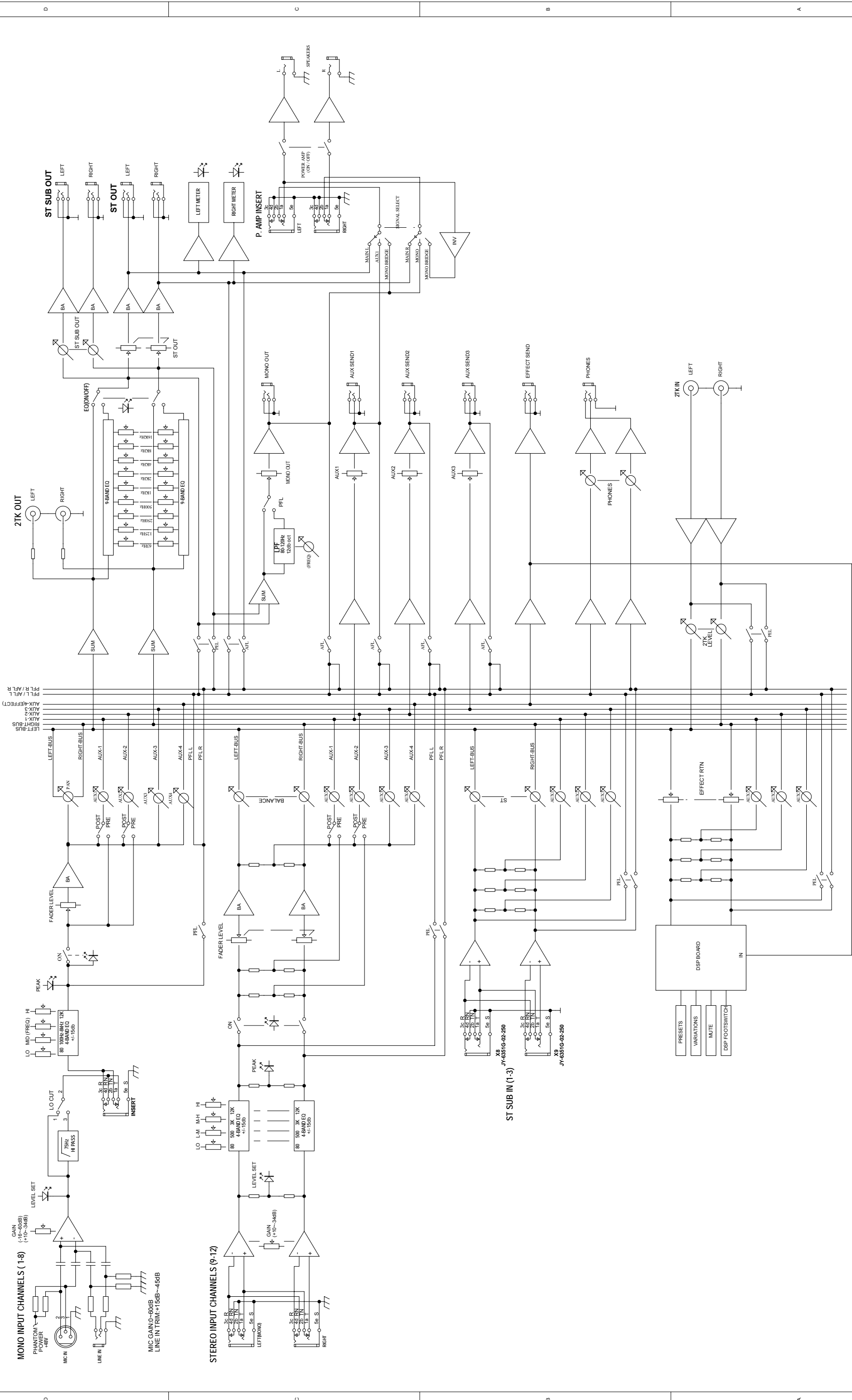
## 2. TECHNICAL SPECIFICATION

Input	
Input Impedance	Mic 2kohm Balanced
	Line 10kohm Balanced
Input Gain Mic	Continuously variable from 0dB to +45dB
Input Gain Line-Mono Channel	Continuously variable from -15dB to 30dB
Input gain Line-Stereo Channel	Continuously variable from -20dB to +20dB
Maximum Input Level	Mic +22dBu
	Line (Mono Channel) +22dBu
	Line (Stereo Channel) +22dBu
Insert send impedance	100ohm Unbalanced
Insert send level/Max	-10dBu/+22dBu
Insert return impedance	10kohm Unbalanced
Insert return level /Max	-10dBu/+22dBu
CMR at 1kHz Line(20Hz-20kHz)	>80dB
Frequency response	Mic to Mix 20Hz-20kHz +0/-1dB
Signal/Noise Ratio (20Hz-20kHz)	Mic EIN ref. 150ohms-101dBu (gain+60dB)
System Noise (20Hz-20kHz)	
Summing Noise	-85dBu (16 channels routed with faders down)
Line to Mix Noise	-83dBu (16channels routed at 0dB, pan centre)
Distortion at 1kHz	Mic to Insert (+30dB unity gain, +20dBu output)<0.01%
	Mic to Mix (+30dB unity gain, +20dBu output) Typ 0.03%)
Crosstalk at 1kHz channel to channel	>-75dB
Mix to Mix	>-78dB
Channel to Mix	>-80dB
Fader Attenuation	>100dB
Output (Nominal Signal Level Mic -60dBu to 0dBu –Line 0dBu)	
Output Impedance	All Line Outputs 100ohm Balanced
Insert send impedance	100ohm Unbalanced
Insert send level/Max.	+22dBu
Insert return impedance	10kohm Unbalanced
Insert return level/Max.	+22dBu
Maximum Output level Master Outputs on XLR	+22dBu
All other Outputs on XLR	+22dBu
All Outputs on 1/4 inch jacks	+22dBu
headphones	+22dBu/600ohm

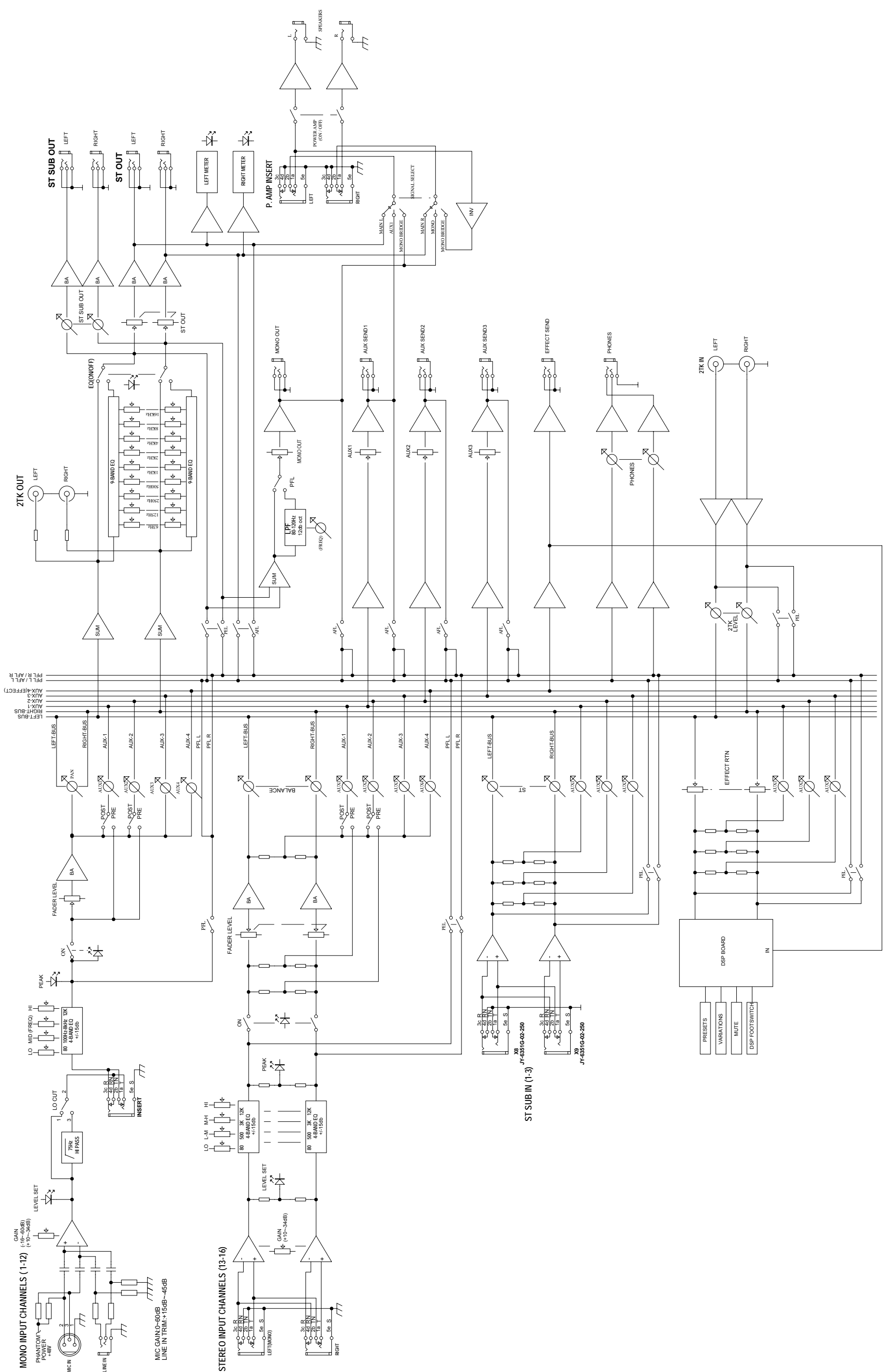
Equalizer- Mono Channel		
Treble -shelving		+15/-15dB @12kHz
MID –peak/clip		+15/-15dB – frequency range 100Hz~8kHz bandwidth 1 octave
Bass –shelving		+15/-15dB @80Hz
Hi Pass Filter		18dB/oct @75Hz
Equalizer –Stereo Channel		
Treble –shelving		+15/-15dB @12kHz
Hi Mid –shelving		+15/-15dB @3kHz
Lo Mid –shelving		+15/-15dB @400Hz
Bass -shelving		+15/-15dB @80Hz
DSP Section	A/D and D/A converters	24 bit
	DSP resolution	24 bit
	Type of effects	Hall, Room, Vocal & Plate REVERBS
		Mono &Stereo DELAY (max DELAY TIME 650ms)
		Chorus, Flanger & Reverb MODULATIONS
		REVERB+DELAY, REVERB+CHORUS
		REVERB+FLANGER combinations
	Presets	256
	Controls	16-position PRESET Selector
		16-position VARIATION Selector
		PEAK LED
		MUTE SWITCH with LED indicator
Power AMP		
Mode	Stereo	Bridged
APM120	2*500 Watts EIAJ (4ohms)	1*1000 Watts EIAJ (8ohms)
APM160	2*750 Watts EIAJ (4ohms)	1*1500 Watts EIAJ (8ohms)

3. BLOCK DIAGRAM

APM120 BLOCK DIAGRAM

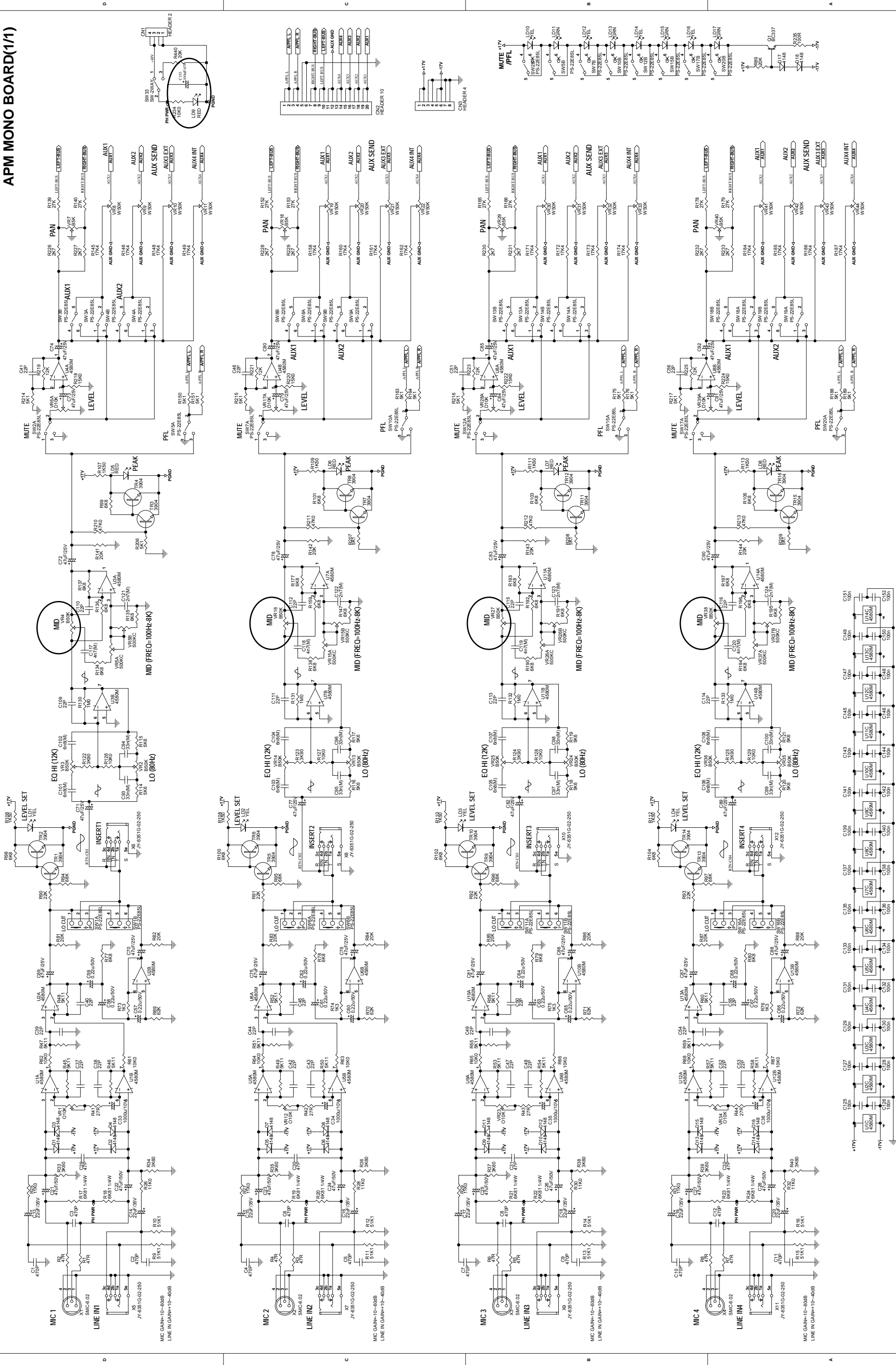


APM160 BLOCK DIAGRAM

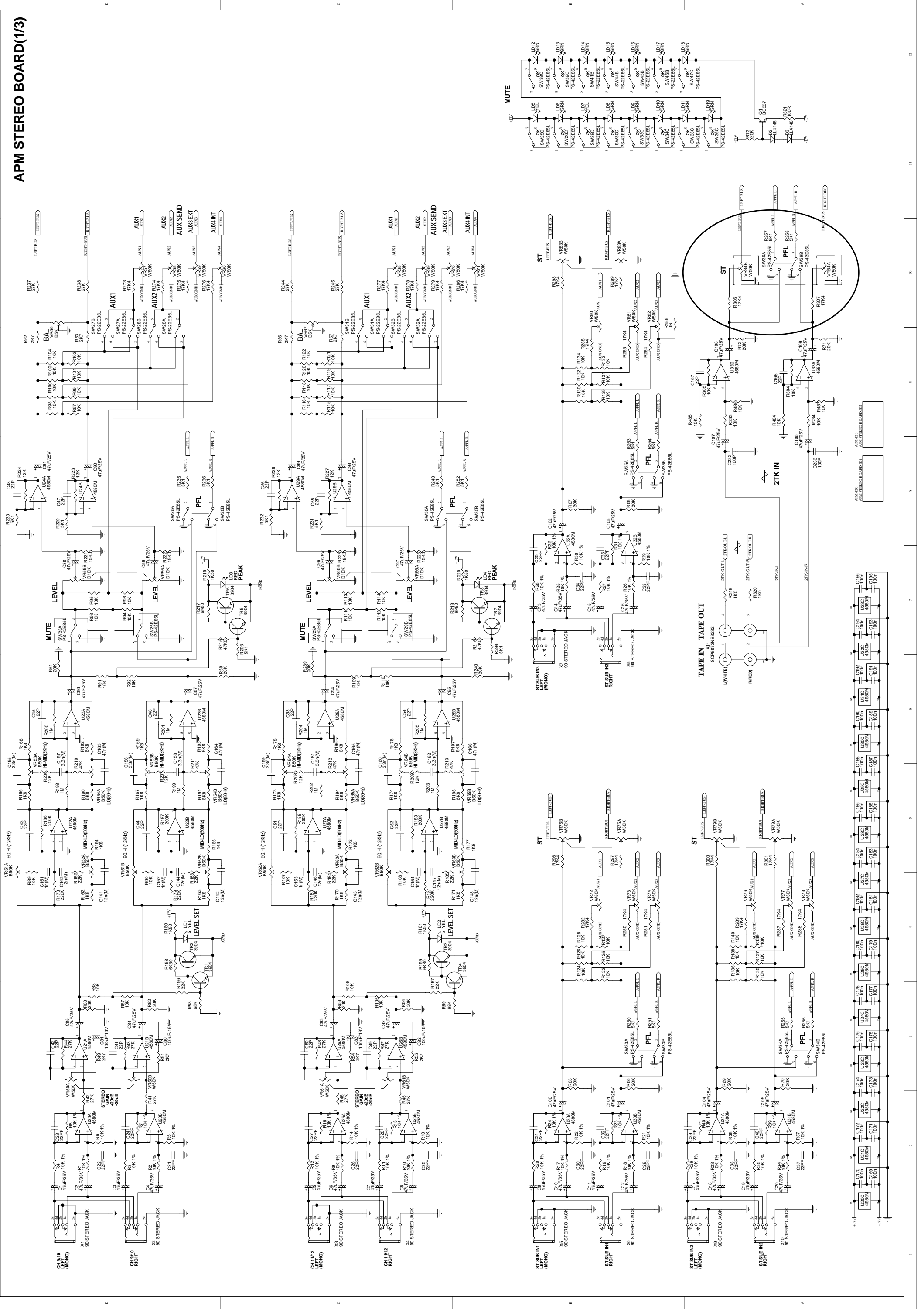


4. SCHEMATIC DIAGRAM

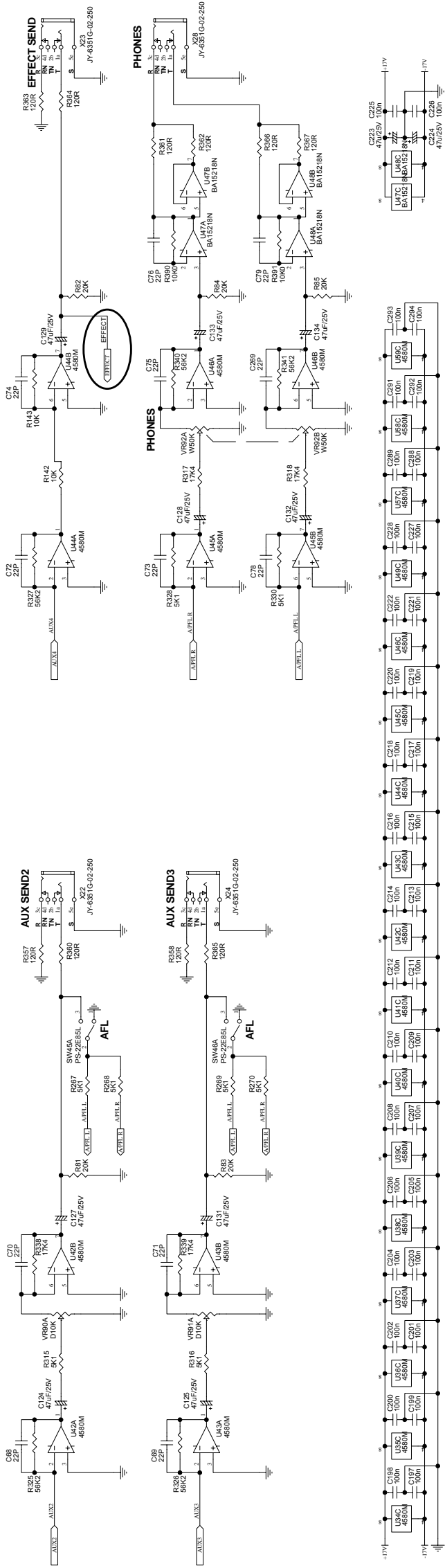
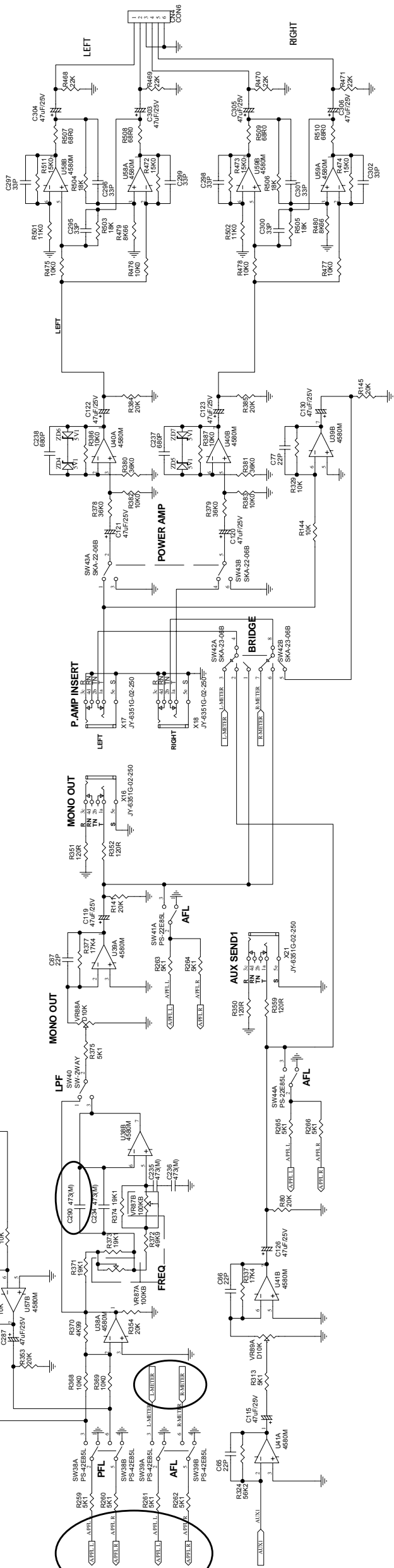
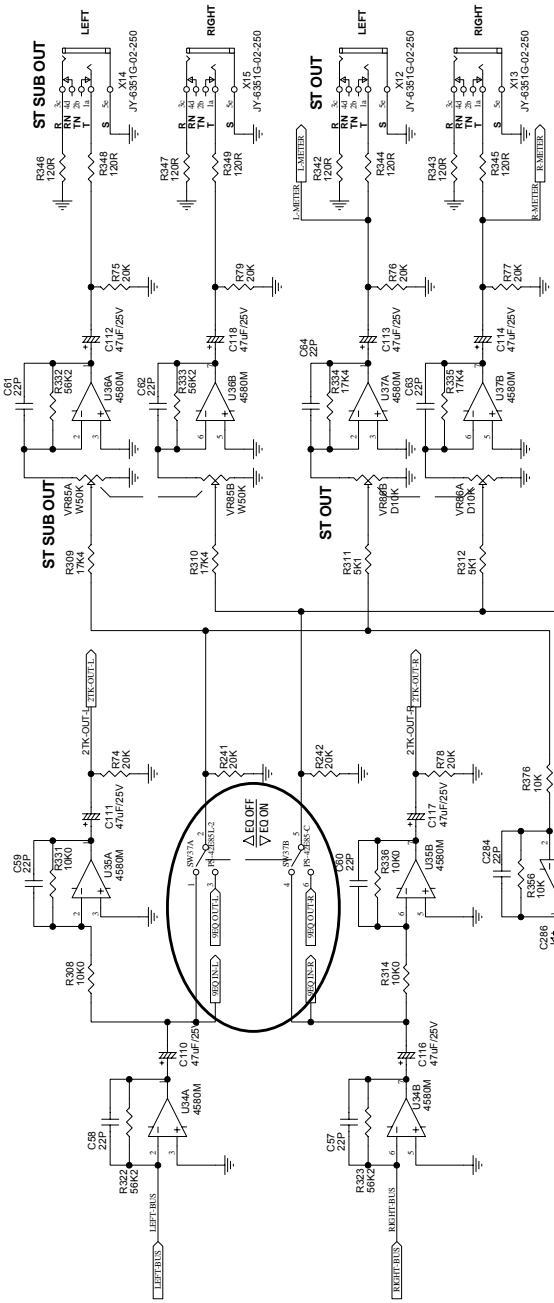
APM MONO BOARD(1/1)



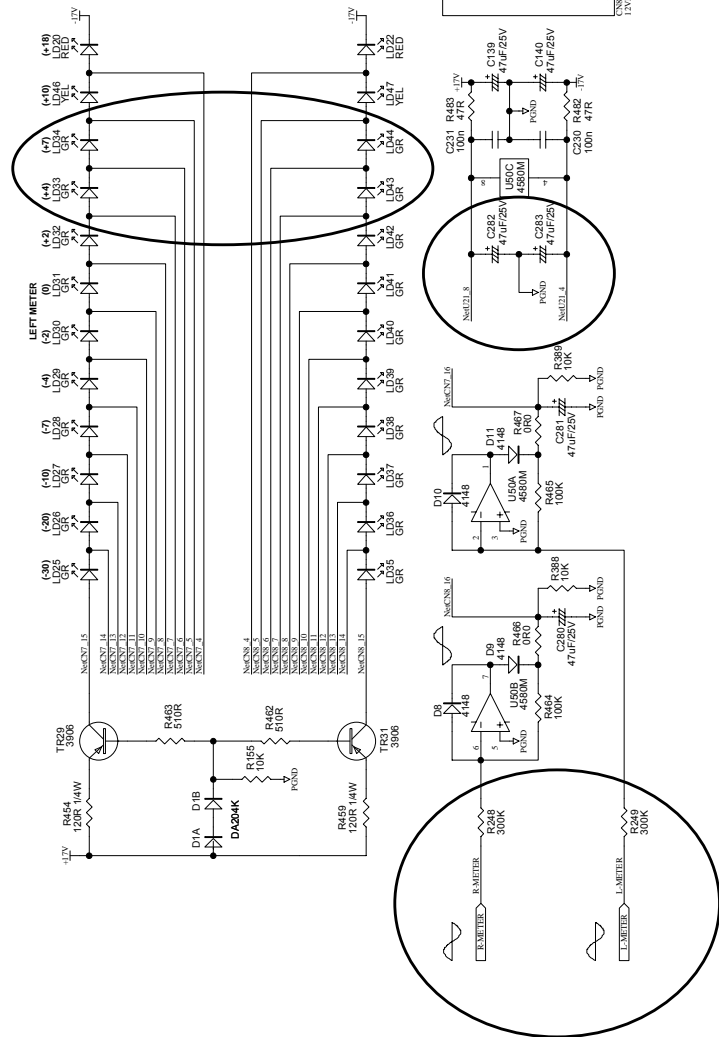
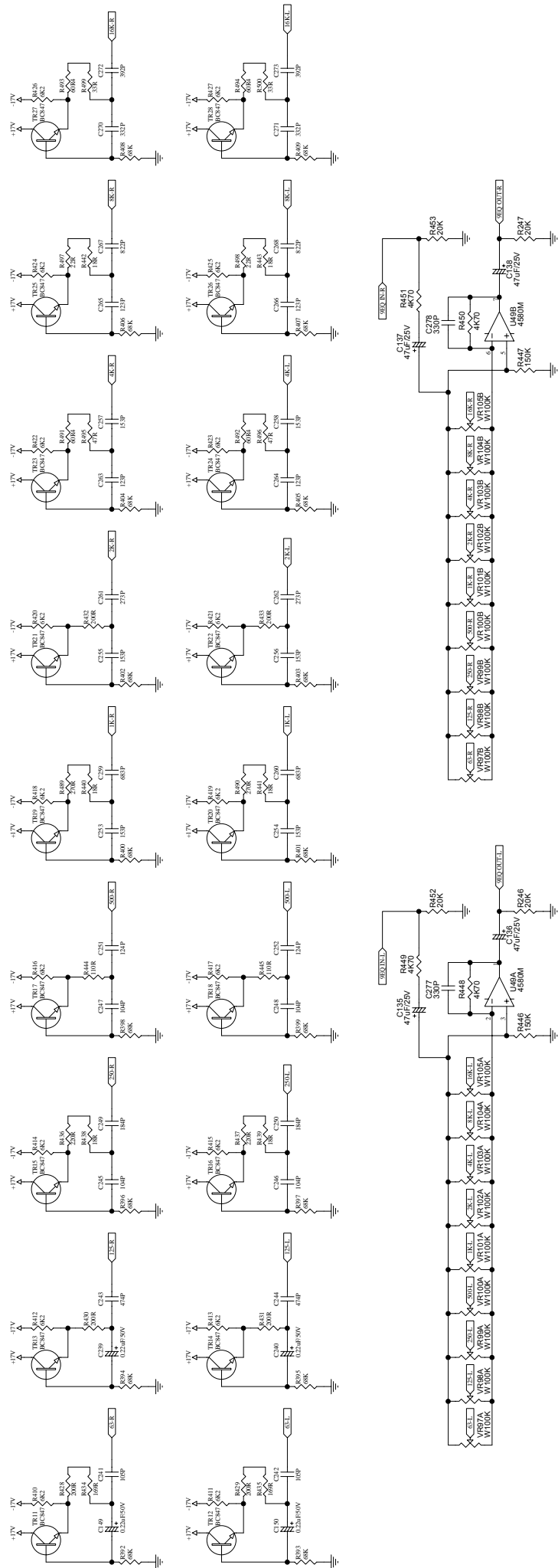
# APM STEREO BOARD(1/3)



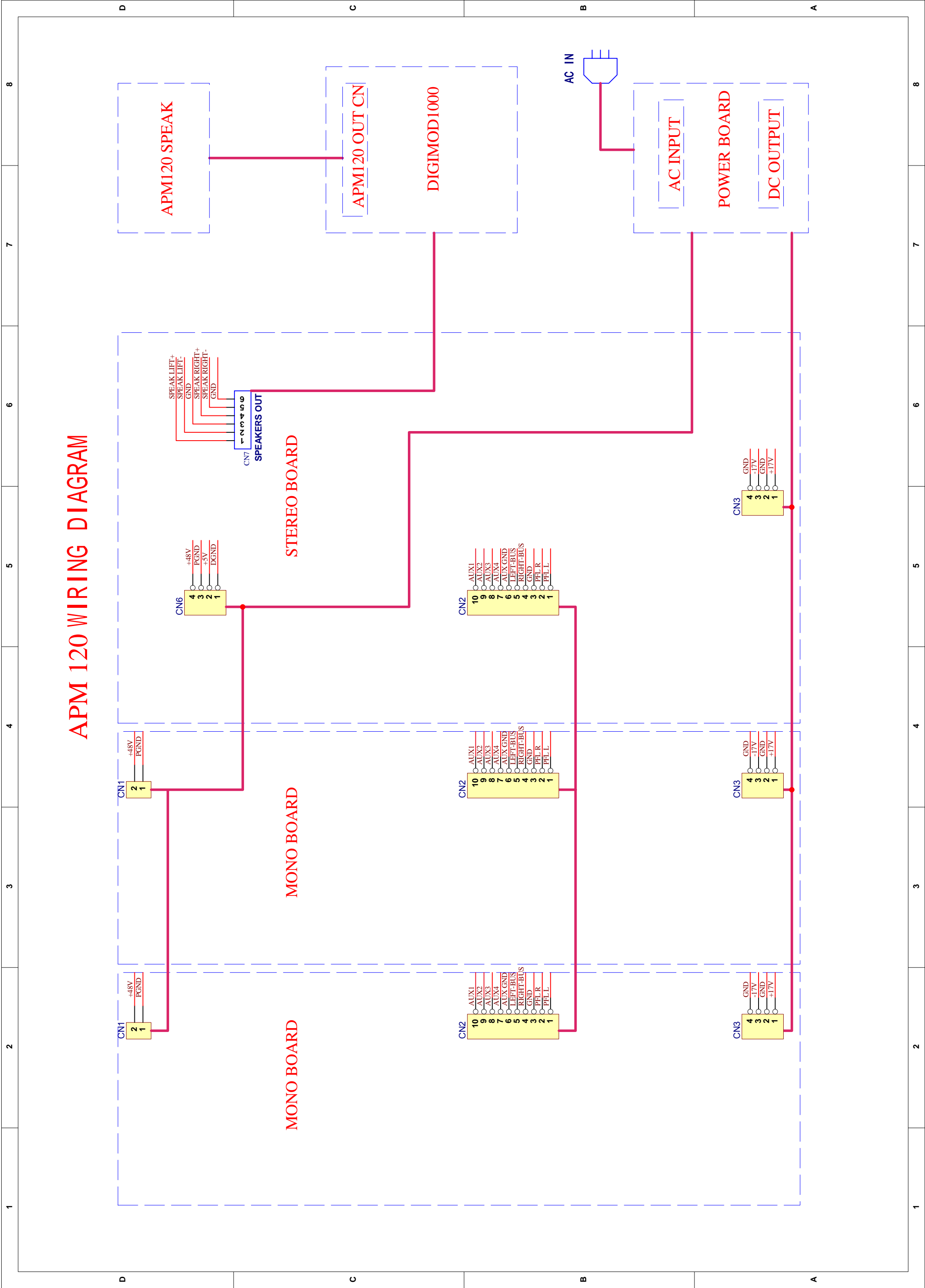
**APM STEREO BOARD(2/3)**



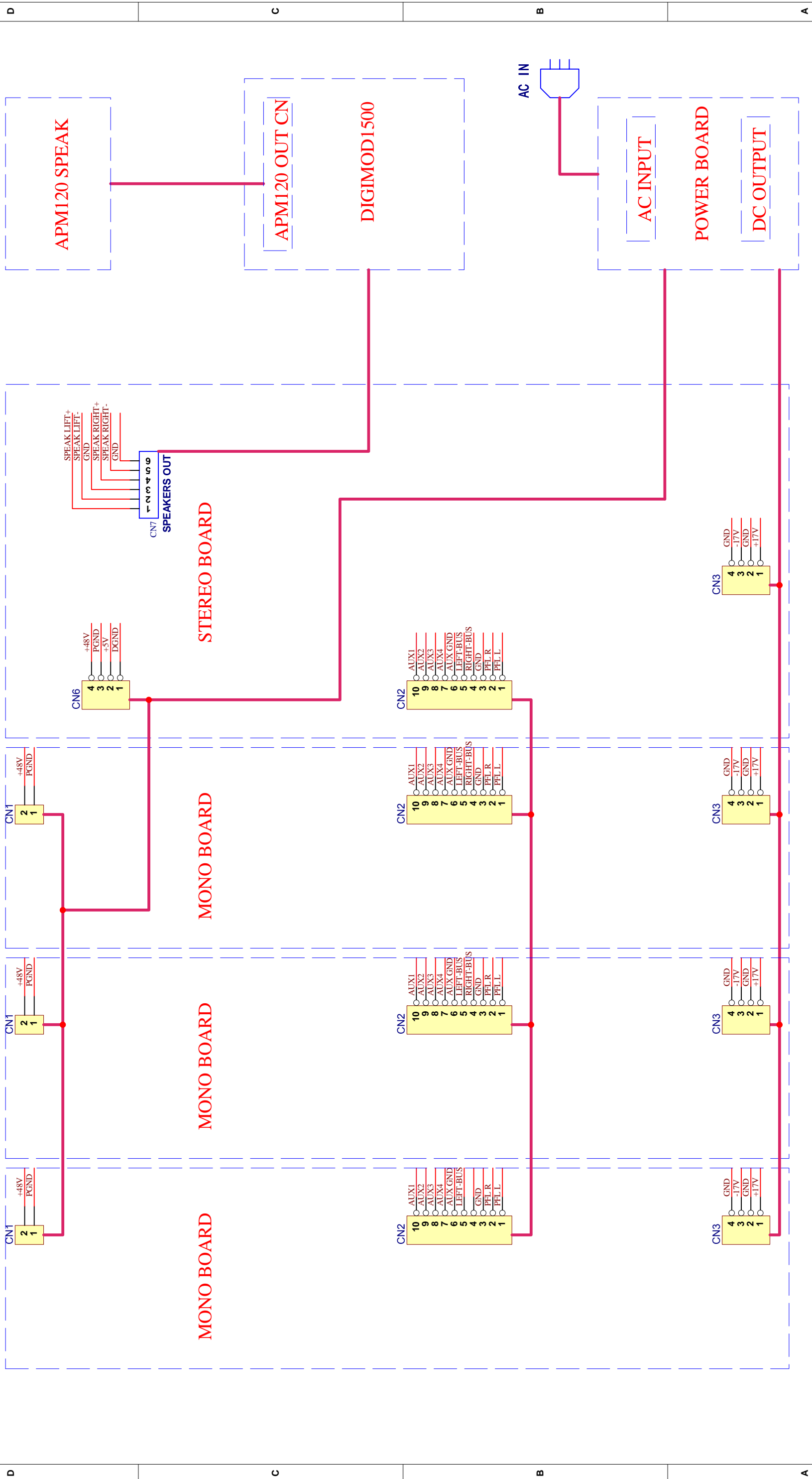
**APM STEREO BOARD(3/3)**



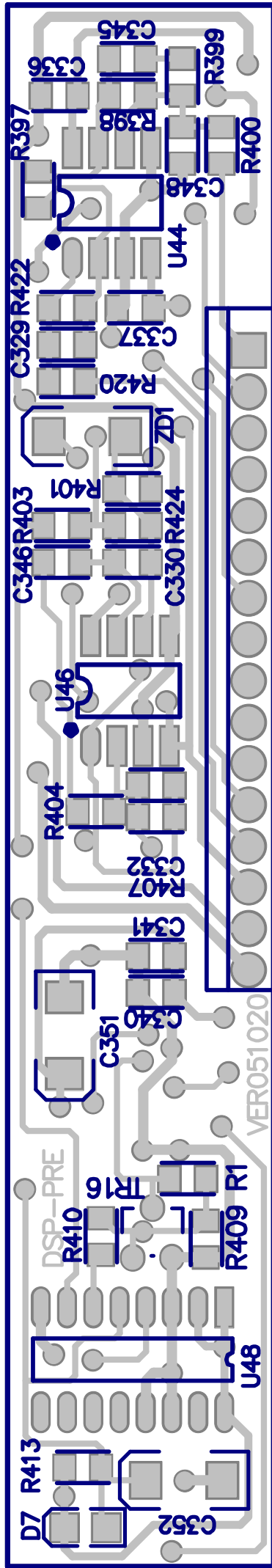
5. WIRING DIAGRAM



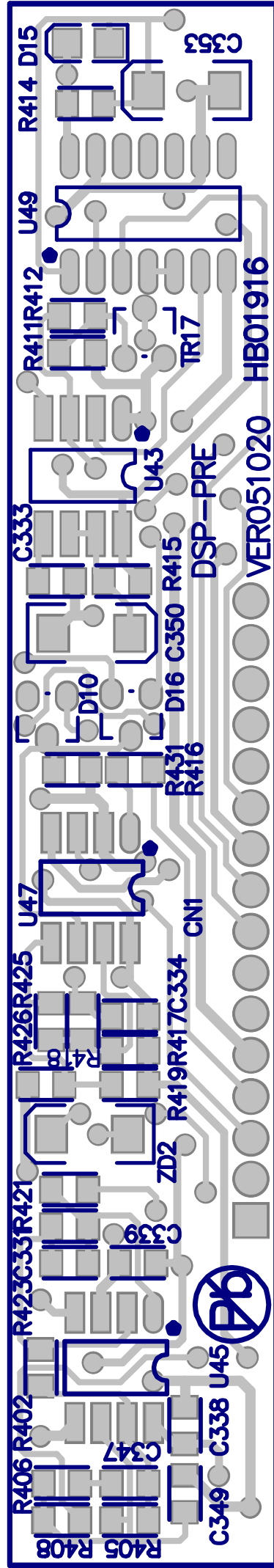
# APM 160 WIRING DIAGRAM



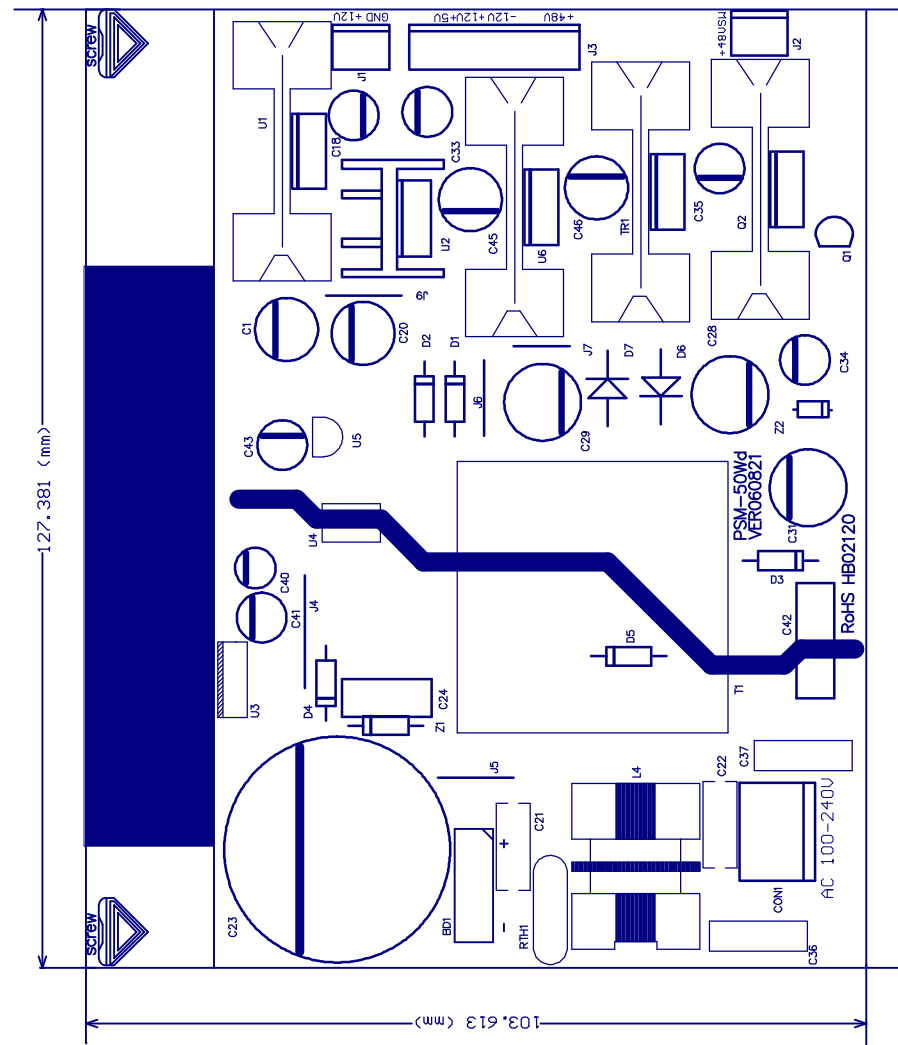




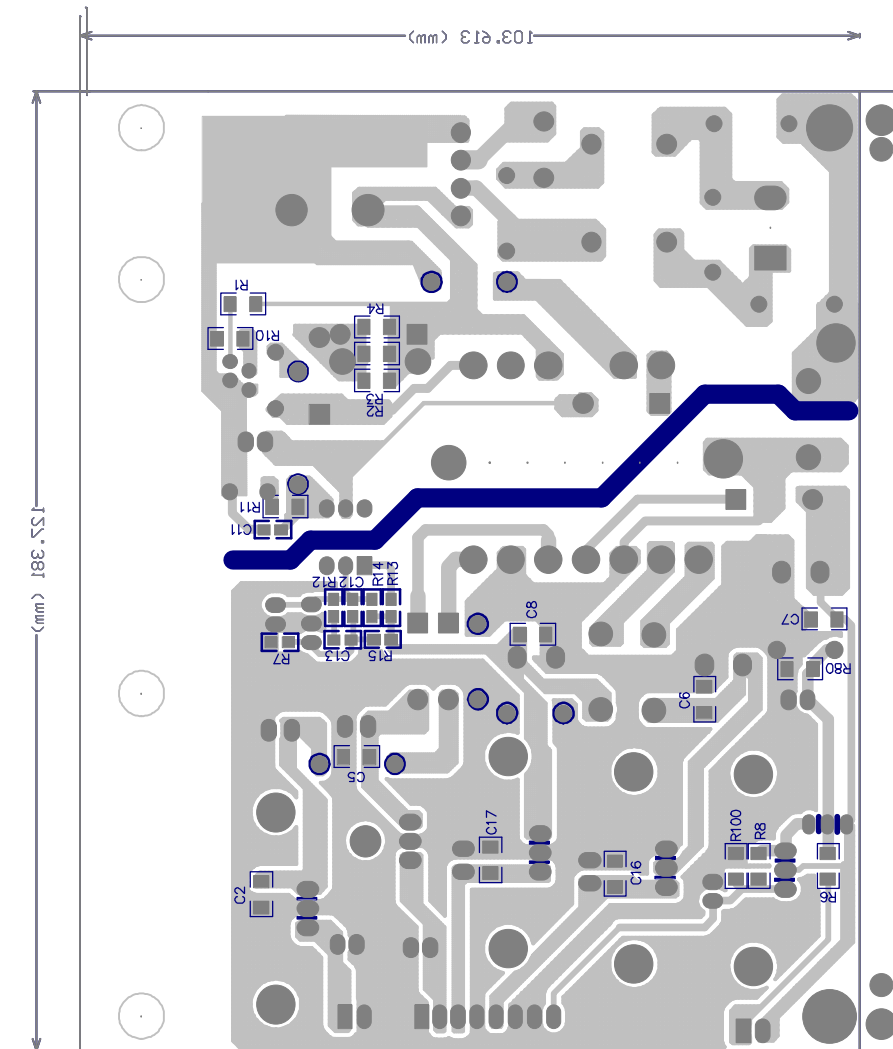
HB01916 DSP-PRE\_VER051020 BOTTOM LAYER BOTOM OVERLAY BOTTOM SOLDER



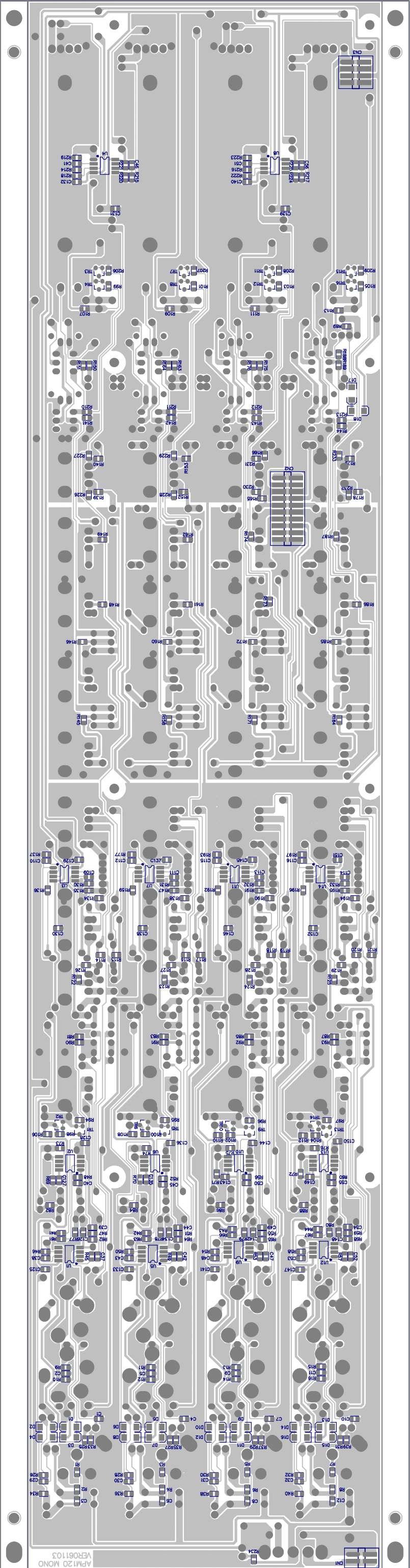
HB01916 DSP-PRE\_VER051020 TOP LAYER TOP OVERLAY TOP SOLDER



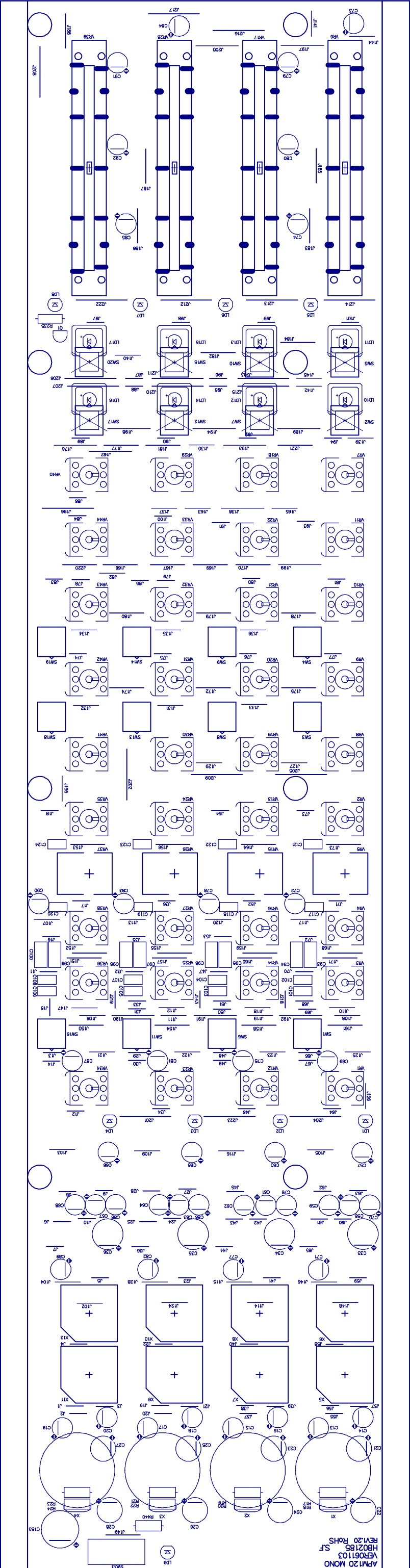
HB02120 PSM-50Wd\_VER060821 TOP OVERLAY



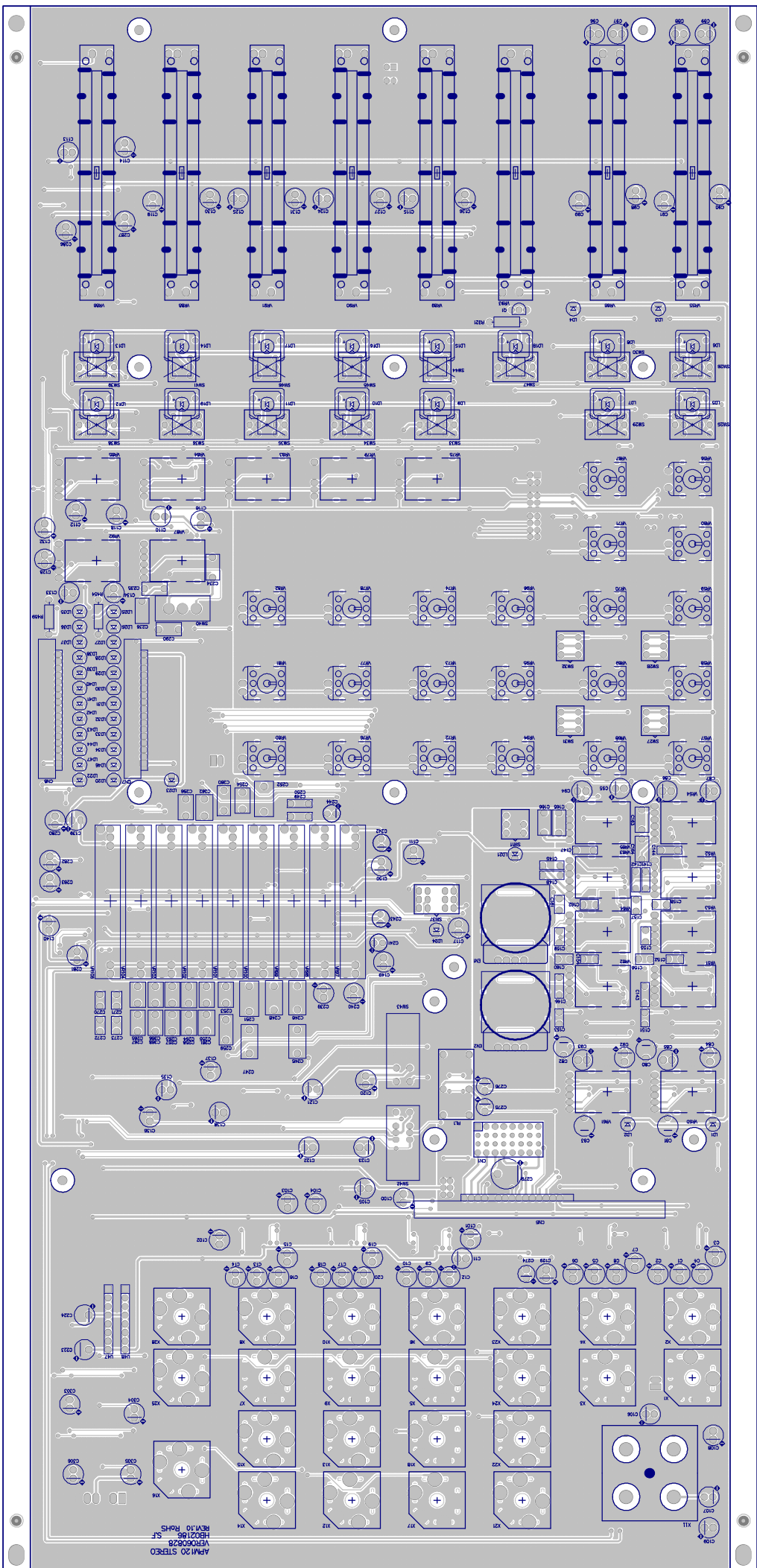
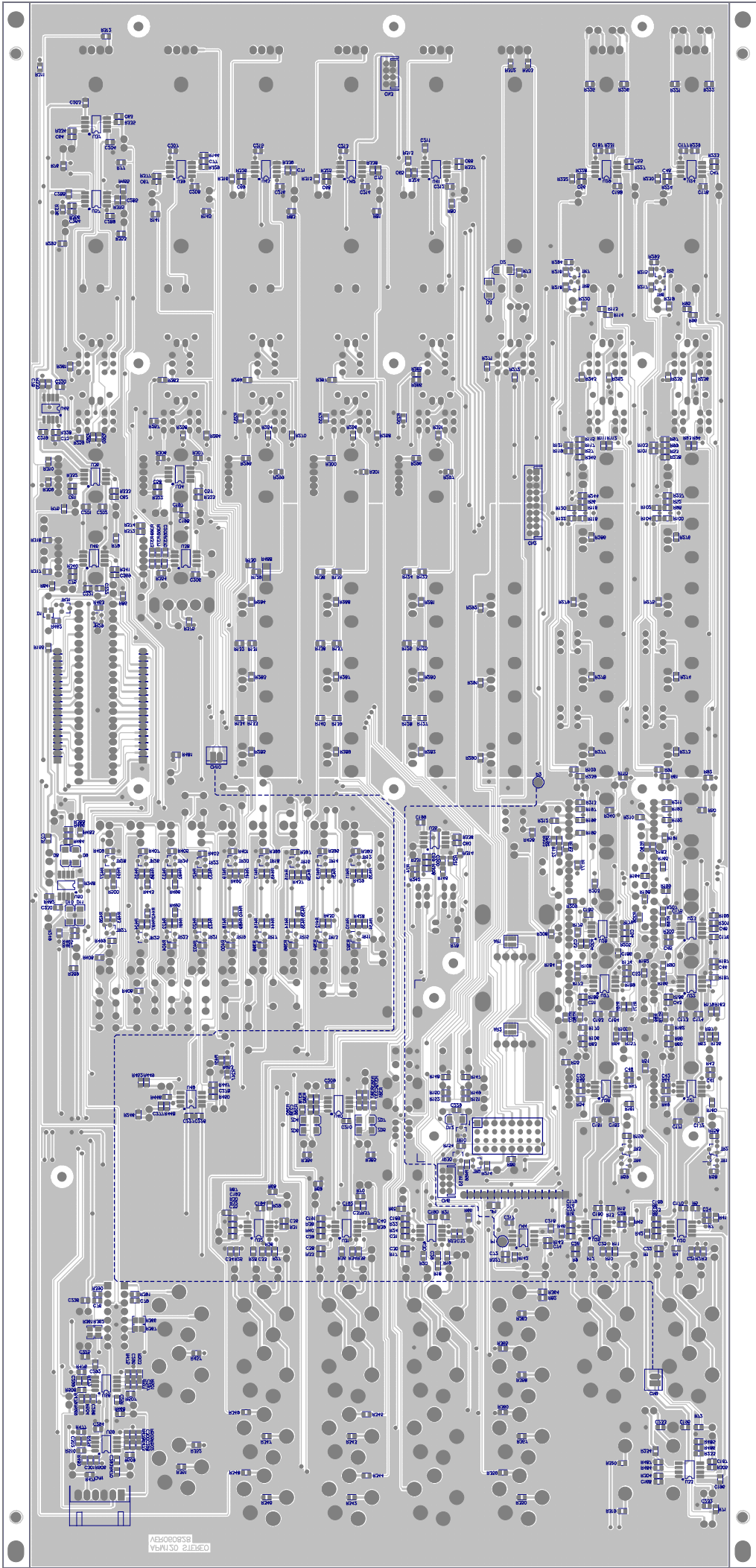
HB02120 PSM-50Wd\_VER060821  
BOTTOM LAYER BOTTOM OVERLAY BOTTOM SOLDER

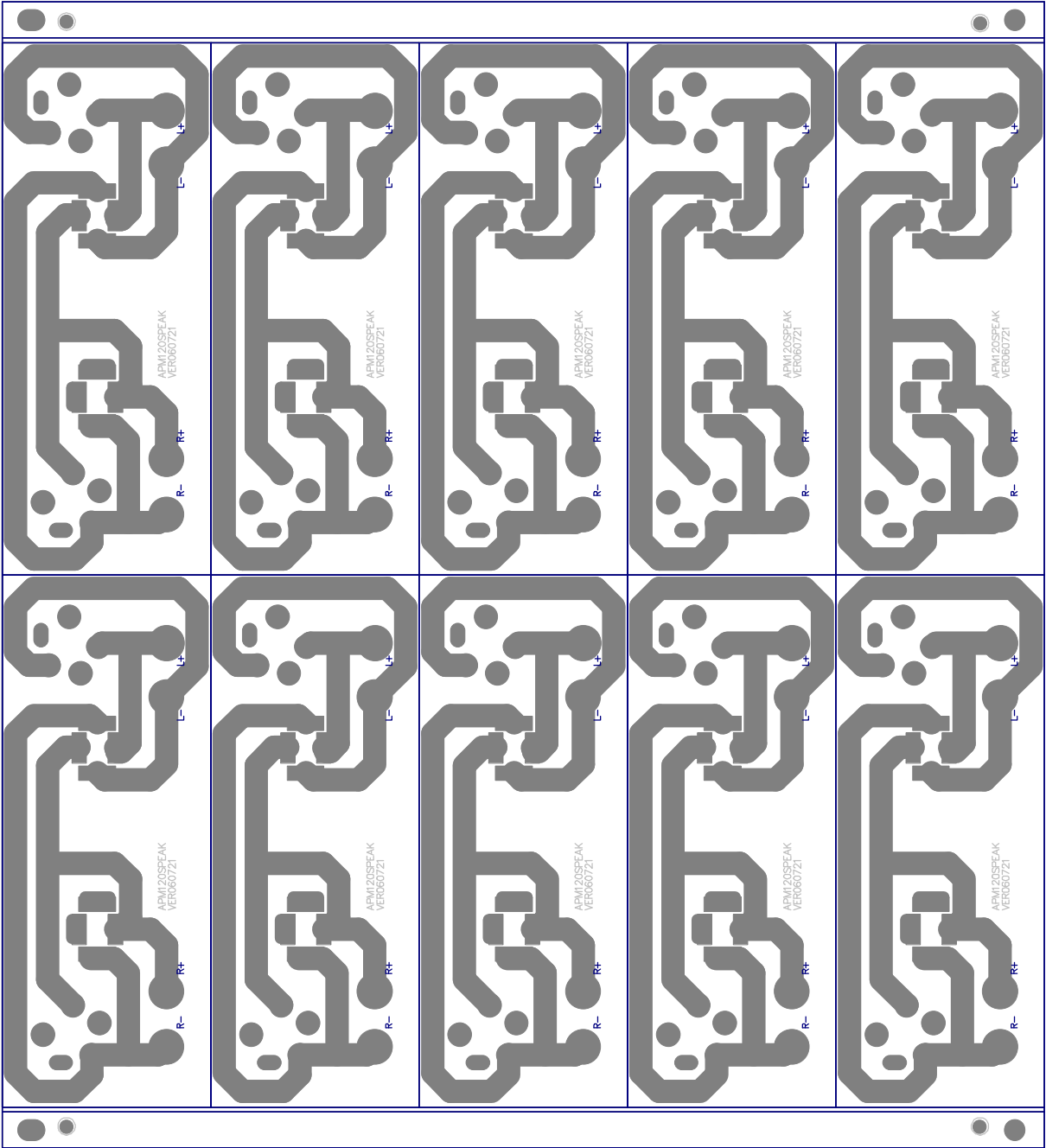


HB02185 APM120 MONO\_REV1.20\_VER061103 BOTTOM LAYER BOTTOM OVERLAY BOTTOM SOLDER

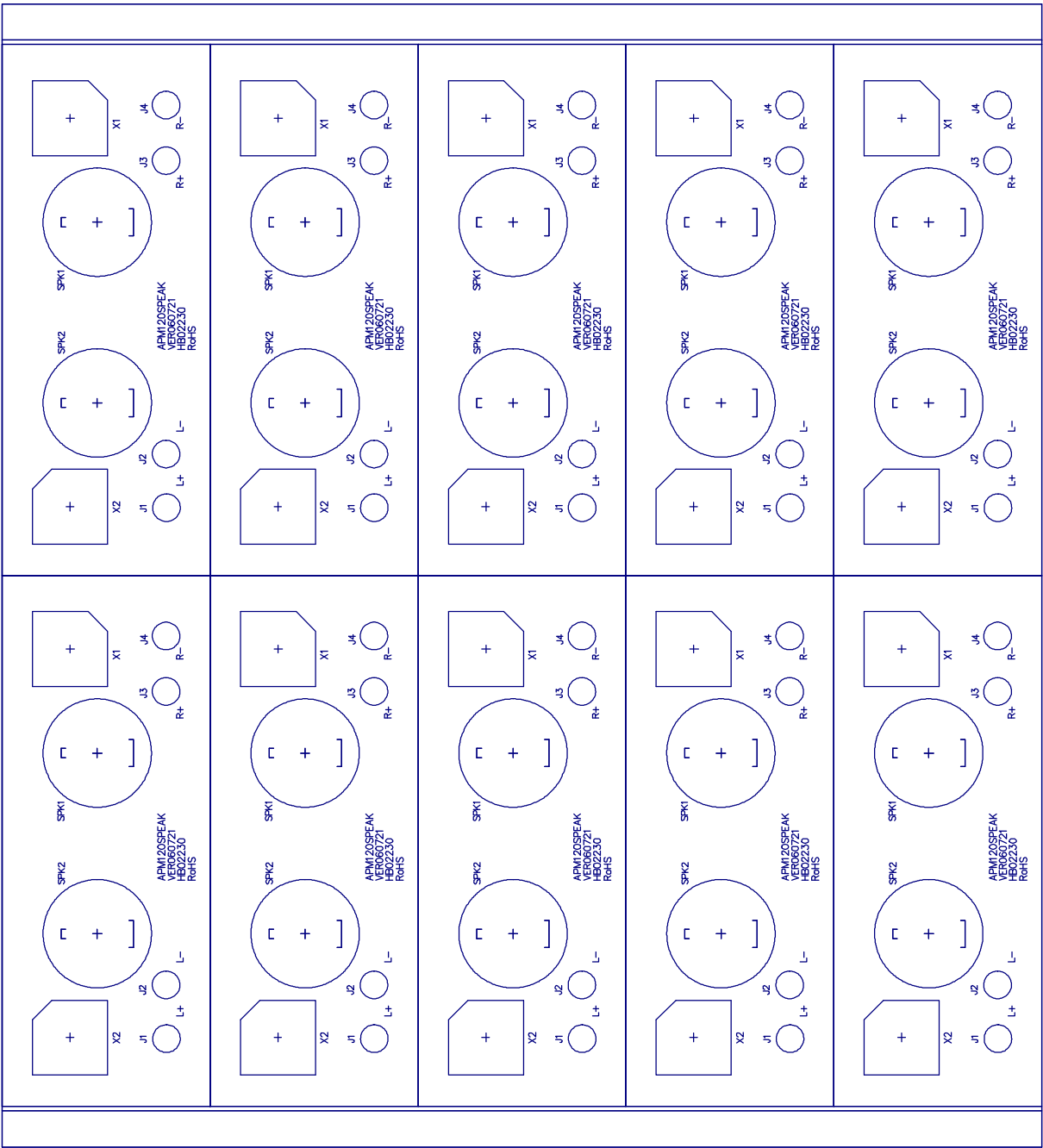


HB02185 APM120 MONO\_REV1.20\_VER061103 TOP OVERLAY





HB02230-APM120SPEAK\_VER060721  
BOTTOM LAYER BOTTOM OVERLAY BOTTOM SOLDER



HB02230-APM120SPEAK\_VER060721 TOP OVERLAY

## 7. TEST PROCEDURE

### Visual Check:

1. Check the APM120 (160) surface and be sure no frication of the unit.
2. Check all the screw and be sure that it installed in the right position;
3. Check all the knobs and be sure no frication of it;
4. Check all the keys and be sure no frication of it.

### Instruments Setting:

1. Release all the keys;
2. Rotate the potentiometer of GAIN, AUX, 2TR IN LEVEL and EQ FREQ to minimum in counterclockwise;
3. Rotate the potentiometer of EQ GAIN, EQ FREQ, PAN, BAL, PHONES, ST SUB OUT and ST SUB IN to midpoint;
4. Slide the potentiometer of all channels, push the EFFECT RTN to " $-\infty$ ", and push the potentiometer of AUX LEVEL, MONO OUT LEVEL, ST OUT LEVEL and 9-band EQ to "0";
5. Turn the Phantom Power and witch to "OFF", push the AMP MODE switch to top.  
Input signal: 1 KHz sine wave signal (except the special instruction).  
The unit have power, the power indicator in board will light up; press the DFX MUTE key down, the PEAK indicator will decrease.

### 1. MONO CH Test

- 1). Switch the +48V PHANTOM of the tested channel to "ON" (every four MONO CH in share), the indicator will light up (red), the corresponding channel MIC socket 2, 3 pin have  $47\pm 2V$  voltage; Insert the tested LED socket to MIC socket, the two LED will light up and the illumination will match with the sample;  
After the test is OK, turn the switch to "OFF";
- 2). Input from MIC: BAL-XLR, -30dB, the INSERT output signal of the corresponding channel is BNC-UNBAL,  $-30\pm 2dB$ ; turn the GAIN knob to maximum, the INSERT output is  $15\pm 2dB$ .  
After the test is OK, turn the knob to minimum;  
Input from LINE IN: UNBAL-BNC,  $-20\pm 2dB$ , the INSERT output signal of corresponding channel is  $-35\pm 2dB$ ; rotate the GAIN knob to midpoint, the INSERT output is  $-5\pm 2dB$ .  
Rotate the GAIN knob to maximum, the INSERT output is  $10\pm 2dB$ .  
After the test is OK, rotate the knob to minimum;
- 3). Input from MIC: BAL-XLR, 1dB, pushes the ST OUT slide potentiometer and the tested channel slide potentiometer to "0", the ST OUT output is  $0\pm 2dB$ , and the right LEVEL indicator light in 0dB; rotate the GAIN potentiometer to maximum in clockwise, the output will increase gradually, the channel LEVEL and main output LEVEL indicator signal will enhance gradually, and to CLIP in the end; rotate the GAIN potentiometer to min; insert the disconnect jack to the tested channel INSERT socket, the ST OUT has no output;

After the test is OK, take the phantom jack out, the output is 0dB;

- 4). Press the LOW CUT key in the tested channel down, use AP to test the frequency specification, as for the fig1

After the test is OK, release the LOW CUT key;

- 5). EQ Test:

- a. Rotate the HI GAIN knob to min and max to scan the frequency response; rotate the LOW GAIN knob to min and max, as for fig2;

After the test is OK, rotate the HI GAIN, LOW GAIN knob to midpoint;

- b. Rotate the MID-GAIN knob to min, and rotate the MID-FREQ knob to min, mid and max to scan the frequency response in separately; rotate the MID-GAIN knob to max, and rotate the MID-FREQ knob to min, mid and max to scan the frequency response, as for fig3;

After the test is OK, rotate the MID-GAIN, MID-FREQ knob to mid;

- 6). AUX Output Test:

- a. Rotate the AUX1 knob in tested channel to min, the AUX1 has no output;
- b. Rotate the AUX1 knob in tested channel to "0", the AUX1 output is  $0\pm 2\text{dB}$ ;
- c. Rotate the AUX1 knob in tested channel to "+10", the AUX1 output is  $10\pm 2\text{dB}$ .

After the test is OK, rotate the knob to "0";

- d. Push the channel LEVEL to min, the AUX1 has no output;
- e. Push the channel LEVEL to "0", the AUX1 output is  $0\pm 2\text{dB}$ ;
- f. Push the channel LEVEL to "+10", the AUX1 output is  $10\pm 2\text{dB}$ ;

After the test is OK, push the slide key to "0";

- g. Press the AUX1 input selector key down, and select the "PRE", the AUX1 output is  $0\pm 2\text{dB}$ , push the LEVEL slide key in channel to max, the output has no variation, release the "PRE" key, push the channel slide potentiometer to "0" to make the AUX1 output is 0dB;

After the test is OK, rotate the AUX1 knob to min "-∞" in counterclockwise.

(the same procedure to test the AUX2)

- h. Rotate the AUX3 knob in tested channel to min, the AUX3 has no output;
- i. Rotate the AUX3 knob in tested channel to "0", the AUX3 output is  $0\pm 2\text{dB}$ ;
- j. Rotate the AUX3 knob in tested channel to "+10", the AUX3 output is  $10\pm 2\text{dB}$ .

After the test is OK, rotate the knob to "0";

- k. Push the channel LEVEL to min, the AUX1 has no output;
- l. Push the channel LEVEL to "0", the AUX1 output is  $0\pm 2\text{dB}$ ;
- m. Push the channel LEVEL to "+10", the AUX1 output is  $10\pm 2\text{dB}$ ;

After the test is OK, push the slide key to "0", and rotate the knob potentiometer to min "-∞" in counterclockwise.

(the same procedure to test AUX4)

- 7). PAN Test:

- a. Rotate the PAN knob to "LEFT", the ST OUT L output is  $2\pm 2\text{dB}$ , but the ST OUT R has

no output;

b. Rotate the PAN knob to mid, the ST OUT L & R output is  $0\pm 2\text{dB}$ ;

c. Rotate the PAN knob to "RIGHT", the ST OUT R output is  $2\pm 2\text{dB}$ , but the ST OUT L has no output;

After the test is OK, rotate the PAN knob to mid.

8). Press the MUTE key in the tested channel down, the Lens key will light up (yellow), the ST OUT L/R has no output;

After the test is OK, release the MUTE key;

9). Press the PFL key in the tested channel down, the Lens key will light up (green), the PHONES output is  $0\pm 2\text{dB}$ , even adjust the channel potentiometer, the output has no variation; adjust the PHONES potentiometer to min, the PHONES has no output; adjust the PHONES potentiometer to max, the PHONES output is  $10\pm 2\text{dB}$ .

After the test is OK, release the PFL key and adjust the PHONES potentiometer to mid.

## 2. STEREK CH Test

1). Input from LINE IN L: UNBAL-BNC,  $0\text{dB}$ , push the slide potentiometer in tested channel to "0", the ST OUT L/R output is  $-20\pm 2\text{dB}$ ; rotate the GAIN to mid in clockwise, the ST OUT L/R output is  $0\pm 2\text{dB}$ ; once rotate the knob to max in clockwise, the output is  $20\pm 2\text{dB}$ .

After the test is OK, rotate the knob to mid and make the output is  $0\text{dB}$ ;

2). EQ Test:

a. Rotate the HIGH 12 kHz knob to min ( $-15$ ) and max ( $+15$ ), and scan the frequency response respectively, then rotate the knob to mid.

b. Rotate the HI MID 3 KHz knob to min ( $-15$ ) and max ( $+15$ ), and scan the frequency response respectively, then rotate the knob to mid;

c. Rotate the MID LOW 500Hz knob to min ( $-15$ ) and max ( $+15$ ), and scan the frequency response respectively, then rotate the knob to mid;

d. Rotate the LOW 80Hz knob to min ( $-15$ ) and max ( $+15$ ), and scan the frequency response, then rotate the knob to mid, as for fig4;

3). AUX Output Test:

a. Rotate the AUX1 knob in tested channel to min, the AUX1 has no output;

b. Rotate the AUX1 knob in tested channel to "0":

When it is in the LINE IN L input, the AUX1 output is  $0\pm 2\text{dB}$ ;

When it is in the LINE IN R input, the AUX1 output is  $-6\pm 2\text{dB}$ ;

c. Rotate the AUX1 knob in tested channel to "+10":

When it is in the LINE IN L input, the AUX1 output is  $10\pm 2\text{dB}$ ;

When it is in the LINE IN R input, the AUX1 output is  $4\pm 2\text{dB}$ .

After the test is OK, rotate the knob to "0";

d. When it is in the LINE IN L input, press the AUX1 selector down and select the "PRE" output, the AUX1 output is  $0\pm 2\text{dB}$ ; push the LEVEL in channel to "+10", the output has no variation; release the "PRE" key, the AUX1 output is  $10\pm 2\text{dB}$ ;

When it is in LINE IN R input, press the AUX1 key down and select the "PRE" output, the AUX1 output is  $-6\pm 2\text{dB}$ ; push the LEVEL in channel to "+10", the output has no variation; release the "PRE" key, the AUX1 output is  $4\pm 2\text{dB}$ .

After the test is OK, push the channel slide potentiometer to "0", and make the AUX1 output is 0dB, then rotate the AUX1 knob to min " $-\infty$ ". (the same procedure to test AUX2)

e. Rotate the AUX3 in tested channel to min, the AUX3 has no output;

f. Rotate the AUX3 knob in tested channel to "0",

When it is in the LINE IN L input, the AUX3 output is  $2\pm 2\text{dB}$ ;

When it is in the LINE IN R input, the AUX3 output is  $-6\pm 2\text{dB}$ .

g. Rotate the AUX3 in tested channel to "10",

When it is in the LINE IN L input, the AUX3 output is  $10\pm 2\text{dB}$ ;

When it is in the LINE IN R input, the AUX3 output is  $4\pm 2\text{dB}$ .

After the test is OK, push the channel slide potentiometer to "0", then rotate the AUX3 knob to min " $-\infty$ " in counterclockwise.

(the same procedure to test AUX4)

#### 4). BAL Test:

a. Rotate the BAL knob in tested channel to "LEFT", the ST OUT L output is  $2.5\pm 2\text{dB}$ , the ST OUT R has no output;

b. Rotate the BAL knob in tested channel to mid, the ST OUT L/R output is  $0\pm 2\text{dB}$ ;

c. Rotate the BAL knob in tested channel to "RIGHT", the ST OUT L has no output, the ST OUT R output is  $2.5\pm 2\text{dB}$ ;

After the test is OK, rotate the BAL knob to mid.

5). Press the MUTE key in tested channel down, the Lens key will light up (yellow), the ST OUT L/R has no output; release the "MUTE" key, the Lens will decrease and the ST OUT L/R has output;

6). Press the PFL key in tested channel down, the Lens will light up (green), the PHOENS output is  $0\pm 2\text{dB}$ ; once adjust the channel GAIN, the rotate potentiometer has variation in output, the output has no variation after adjusting the channel slide potentiometer.

After the test is OK, release the PFL key.

#### 3. ST SUB IN Test:

##### 1). ST OUT Output Test:

a. Input from ST SUB: 0dB, rotate the ST SUB knob to " $-\infty$ ", the ST OUT L/R has no output;

b. Rotate the ST SUB knob to "0", the ST OUT L/R output is  $0\pm 2\text{dB}$ ;

c. Rotate the ST SUB knob to "+10", the ST OUT L/R output is  $10\pm 2\text{dB}$ ;

d. Input from ST SUB: 0dB, rotate the ST knob to " $-\infty$ ", the ST OUT L/R has no output;

e. Rotate the ST SUB knob to "0", the ST OUT R output is  $0\pm 2\text{dB}$ , the ST OUT L has no output;

f. Rotate the ST SUB knob to "+10", the ST OUT R output is  $10\pm 2\text{dB}$ , ST OUT L has no

output;

After the test is OK, rotate the ST SUB knob to "0".

## 2). AUX SEND Output Test:

- a. Rotate the AUX knob in tested ST SUB channel to " $-\infty$ ", the AUX has no output;
- b. Rotate the knob to mid "0", the output is  $0\pm 2\text{dB}$  (input from channel R is  $-6\pm 2\text{dB}$ );
- c. Rotate the knob to "+10", the output is  $10\pm 2\text{dB}$  (input from channel R is  $4\pm 2\text{dB}$ );

After the test is OK, rotate the AUX knob to mid "0".

- d. Push the AUX LEVEL to " $-\infty$ ", the AUX has no output;
- e. Push the AUX LEVEL to "0", the output is  $0\pm 2\text{dB}$  (input from sounding channel R is  $-6\pm 2\text{dB}$ );
- f. Push the AUX LEVEL to "+10", the output is  $10\pm 2\text{dB}$  (input from sounding channel R is  $4\pm 2\text{dB}$ );
- g. Press all the AFL (green) in AUX, the PHOENS and AUX have the same output;  
After the test is OK, push the AUX LEVEL to "0", release the AFL key.

## 3). PHONES Output Test:

- a. Press the PFL key in tested ST SUB channel, the Lens will light up (green), the PHONES L/R output is  $0\pm 2\text{dB}$ ; rotate the ST SUB LEVEL potentiometer, the PHOES L/R output has no variation; release the key, the PHONES has no output (when input from R only, the PHONES has no output).

After the test is OK, release the PFL key.

## 4. 2TR IN/OUT Test:

Input from 2TK IN L, R: 0dB signal:

- 1). Rotate the 2TK IN potentiometer to " $-\infty$ ", the ST OUT and 2TK OUT L/R has no output;
- 2). Rotate the knob to "0", the ST OUT and 2TK OUT L/R output is  $0\pm 2\text{dB}$ ;
- 3). Rotate the knob to "+10", the ST OUT and 2TK OUT L/R output is  $10\pm 2\text{dB}$ ;
- 4). Press the 2TK IN PFL down, the Lens will light up, the PHONES L/R output is  $0\pm 2\text{dB}$ ; rotate the 2TK IN potentiometer, it has no variation;

After the test is OK, rotate the 2TK IN knob to "0", release the PFL key.

## 5. ST OUT Output Test:

Input 0dB BAL signal from CH1, push the channel slide potentiometer to "0":

- 1). Push the ST OUT LEVEL slide potentiometer to " $-\infty$ ", the ST OUT L/R has no output;
- 2). Push the ST OUT LEVEL slide potentiometer to "0", the ST OUT L/R output is  $0\pm 2\text{dB}$ ;
- 3). Push the ST OUT LEVEL slide potentiometer to "+10", the ST OUT L/R output is  $10\pm 2\text{dB}$ ;

After the test is OK, push the ST LEVEL to "0".

- 4). Press the 9-band EQ switch down, the indicator will light up (yellow), push the slide potentiometer of each frequency point to top and bottom in return, the frequency response specification as for the fig5.

After the test is OK, push all the slide potentiometer to "0" and release the press key.

- 5). Press the PFL key in ST OUT LEVEL slide potentiometer down, the Lens will light up,

the PHONES L/R output is  $0\pm 2\text{dB}$ , and it has no PHONES output effect when push the slide potentiometer.

After the test is OK, release the PFL key.

- 6). Press the AFL in ST OUT LEVEL slide potentiometer down, the Lens will light up, the PHONES L/R output is  $0\pm 2\text{dB}$ ; push the slide potentiometer to bottom, the PHONES has no output; push the slide potentiometer to top, the PHONES output is  $10\pm 2\text{dB}$ .

After the test is OK, release the PFL, and push the ST OUT LEVEL to "0".

#### 6. ST SUB OUT Output Test:

- 1). Rotate the ST SUB OUT knob to " $-\infty$ ", the ST SUB OUT L/R has no output;
- 2). Rotate the knob to "0", the ST SUB OUT L/R output is  $0\pm 2\text{dB}$ ;
- 3). Rotate the knob to "+10", the ST SUB OUT L/R output is  $10\pm 2\text{dB}$ ;

After the test is OK, rotate the ST SUB OUT knob to "0".

#### 7. MONO OUT Test:

- 1). Push the MONO OUT LEVEL slide potentiometer to " $-\infty$ ", the MONO OUT has no output;
  - 2). Push the slide potentiometer to "0", the MONO OUT output is  $0\pm 2\text{dB}$ ;
  - 3). Push the slide potentiometer to "+10", the MONO OUT output is  $10\pm 2\text{dB}$ ;
- After the test is OK, push the MONO LEVEL slide potentiometer to "0";
- 4). Turn the "LPF" on board to "ON", scan the output frequency response, and then turn the LPF potentiometer to maximum in clockwise, scan the output frequency response, please see the attachment figure6;
- After the test is Ok, turn the "LPF" switch to "OFF";
- 5). Press the AFL on MONO OUT slide potentiometer down, the Lens will light up (green), the PHONES L/R output is  $0\pm 2\text{dB}$ ; turn the slide potentiometer to minimum, the PHONES has no output; turn the slide potentiometer to maximum, the PHONES output is  $10\pm 2\text{dB}$ ;

After the test is OK, release the AFL and turn the slide potentiometer to "0";

#### 8. DSP Test:

Press the DFX MUTE key to make the DSP PEAK indicator gradually decreased:

- 1). Turn the EFFECT RTN slide potentiometer, AUX1-AUX4 rotate potentiometer of CH1, and AUX1-AUX3 of DSP CH1 to "0"; observe the ST OUT, the AUX1-AUX3 has the same output signal waveform, rotate the PRESETS potentiometer to make it dial at "1-16", each rotate, the indicator will flash and the relay will drive one time, the variation of the output signal waveform coincide with the sample;
- 2). Rotate the VARIATIONS potentiometer to point at the "1~16", each rotate will make the indicator flashing and the relay driving for one time, the variation of output signal waveform coincide with the sample.
- 3). Put the EFFECT RTN slide potentiometer on channel DSP and rotate potentiometer to " $-\infty$ ", "0", "+10", observe each output signal waveform coincide with the sample.

After the test is OK, rotate the PRESETS, VARIATIONS to midpoint "1", push the

EFFECCT RTN slide potentiometer and AUX1-AUX3 rotate potentiometer to "-∞".

#### 9. Amplifier Output Test (RMS Test):

Turn the POWER AMP switch to "ON", input from MIC1: -5dB sine waveform signal, rotate the GAIN to minimum, push the channel, ST OUT, AUX1 and MONO slide potentiometer to "+10":

- 1). Connect a  $4\Omega$  load resistor in each output terminal "1+, 1-" of APM L/R, turn the AMP MODE switch to "MAIN L+MAIN R" and use this mode to output, the left and right AMP output power is 300W (APM160 is about 500W), THD<1%:
- 2). Turn the AMP MODE switch to "AUX+MONO" and use this mode to output, push the MONO OUT and AUX1 slide potentiometer to "+10", the left and right AMP output power is 300W (APM160 is about 500W), THD<1%.
- 3). Push the AMP MODE switch to BRIAGE and use this mode to output, connect a  $8\Omega$  load resistor in output terminal "1+, 2+" of AMP L, the AMP output power is about 550W (APM is about 900), THD<1%.

After the test is OK, push the AMP POWER switch to "OFF"; push the AMP MODE to "MAIN L+MAIN R" and use this mode to output.

#### 10. Output Noise Test:

No input signals, turn all the MIC GAIN of the channel to minimum, and slide potentiometer to "0", the oscillograph waveform should be flat and no other noise wave.

#### 11. Gooseneck Lamp Test:

Insert gooseneck lamp to BNC socket of PCB, the lamp will light up and the illumination will in normal

#### 12. Listening Test:

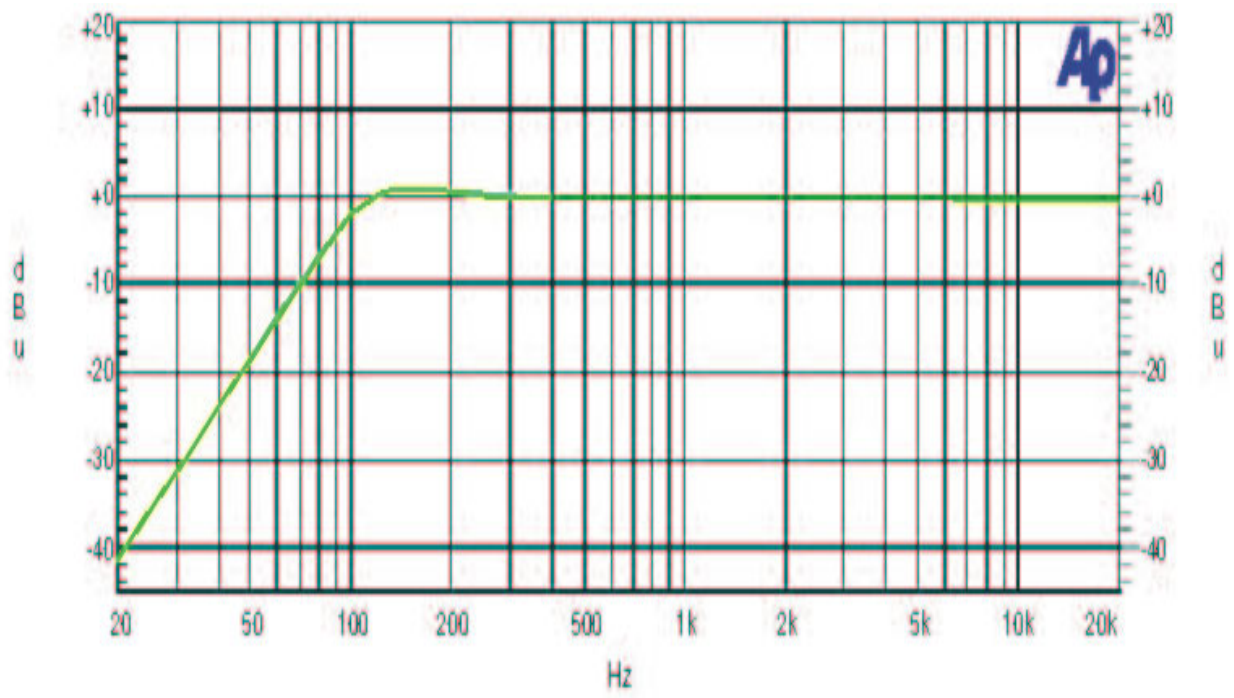
- 1). Connect all output terminal of the units to high quality AMP or horn in return and listen to all the output whether it will have abnormal voice;
- 2). Press all the keys down and listen to this unit whether it has abnormal voice.

#### 13. Burning Test

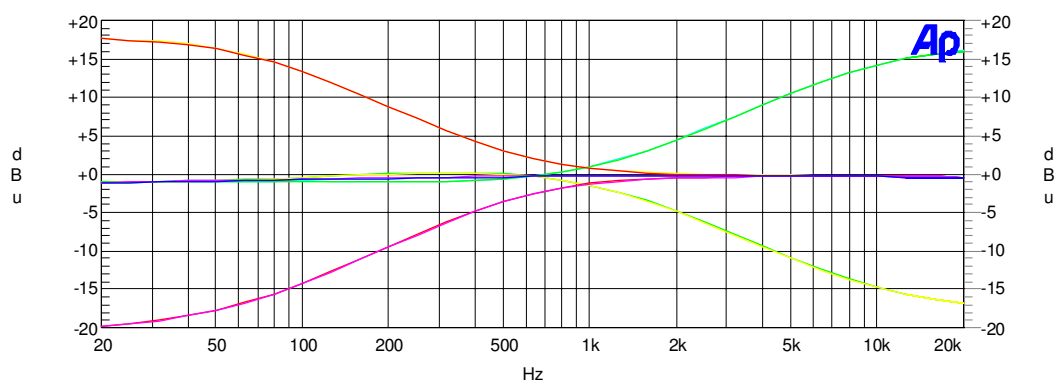
Connect the unit to music signal, and the output to false load, three output modes test for 60min.

#### 14. Factory Preset:

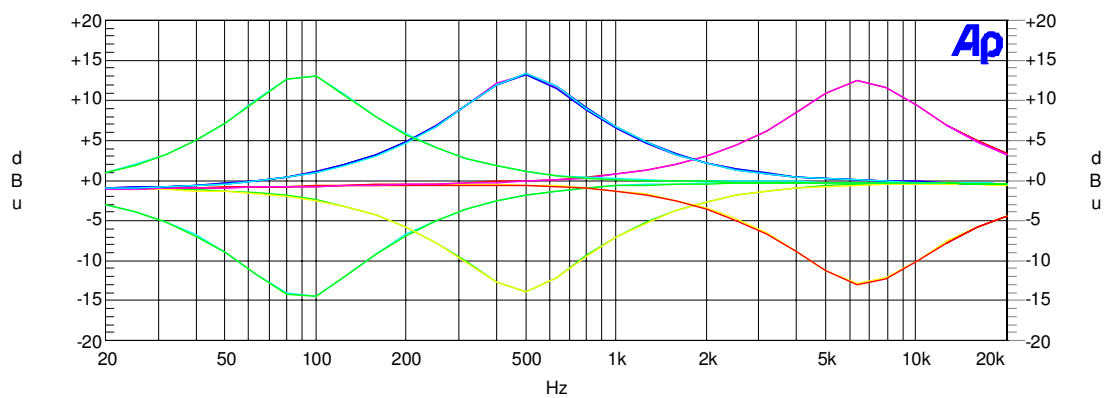
- 1). Push all the PHONES, LPF, and POWER AMP slide switch to "OFF";
- 2). Rotate the entire GAIN knob to minimum;
- 3). Rotate all the EQ GAIN, EQ FREQ, PAN and BAL potentiometer to midpoint;
- 4). Turn the 9-band EQ slide potentiometer to midpoint, and turn all the slide potentiometer to maximum.



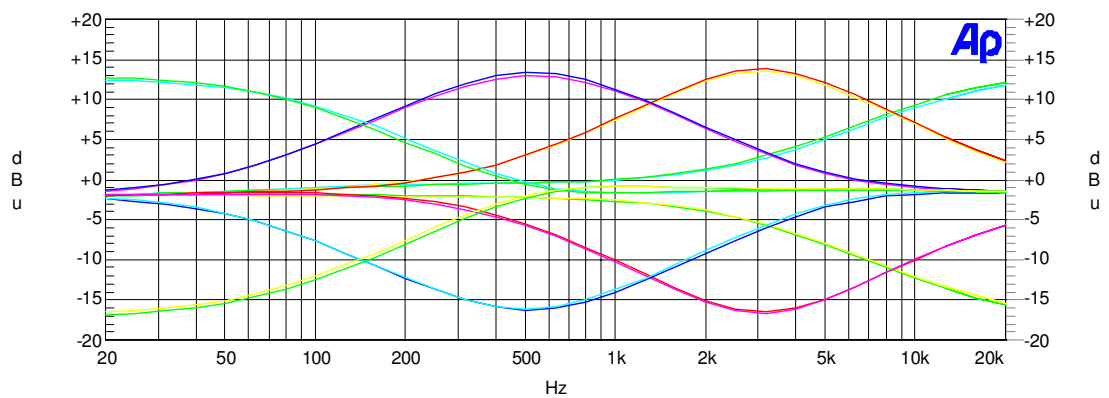
**fig1**



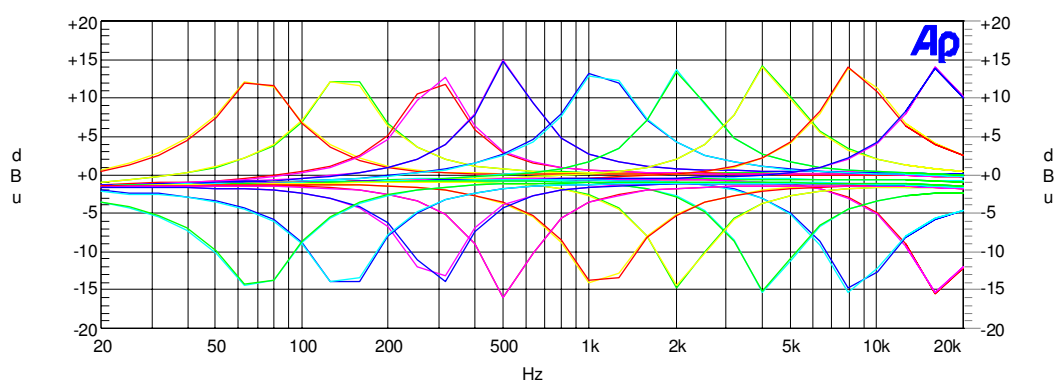
**fig2**



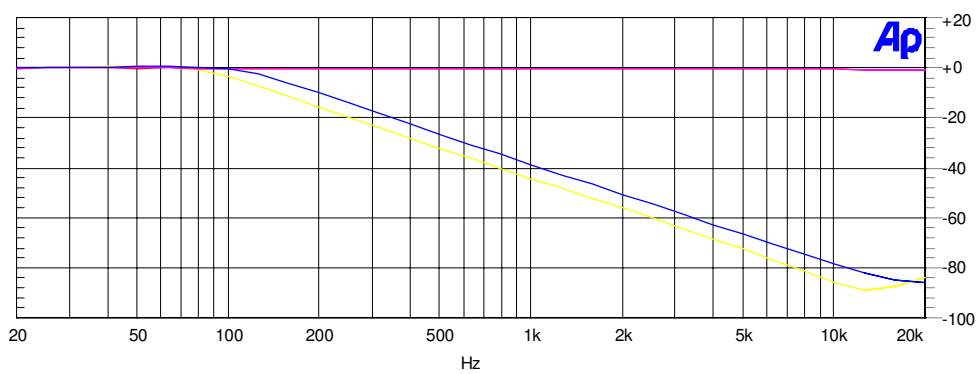
**fig3**



**fig4**



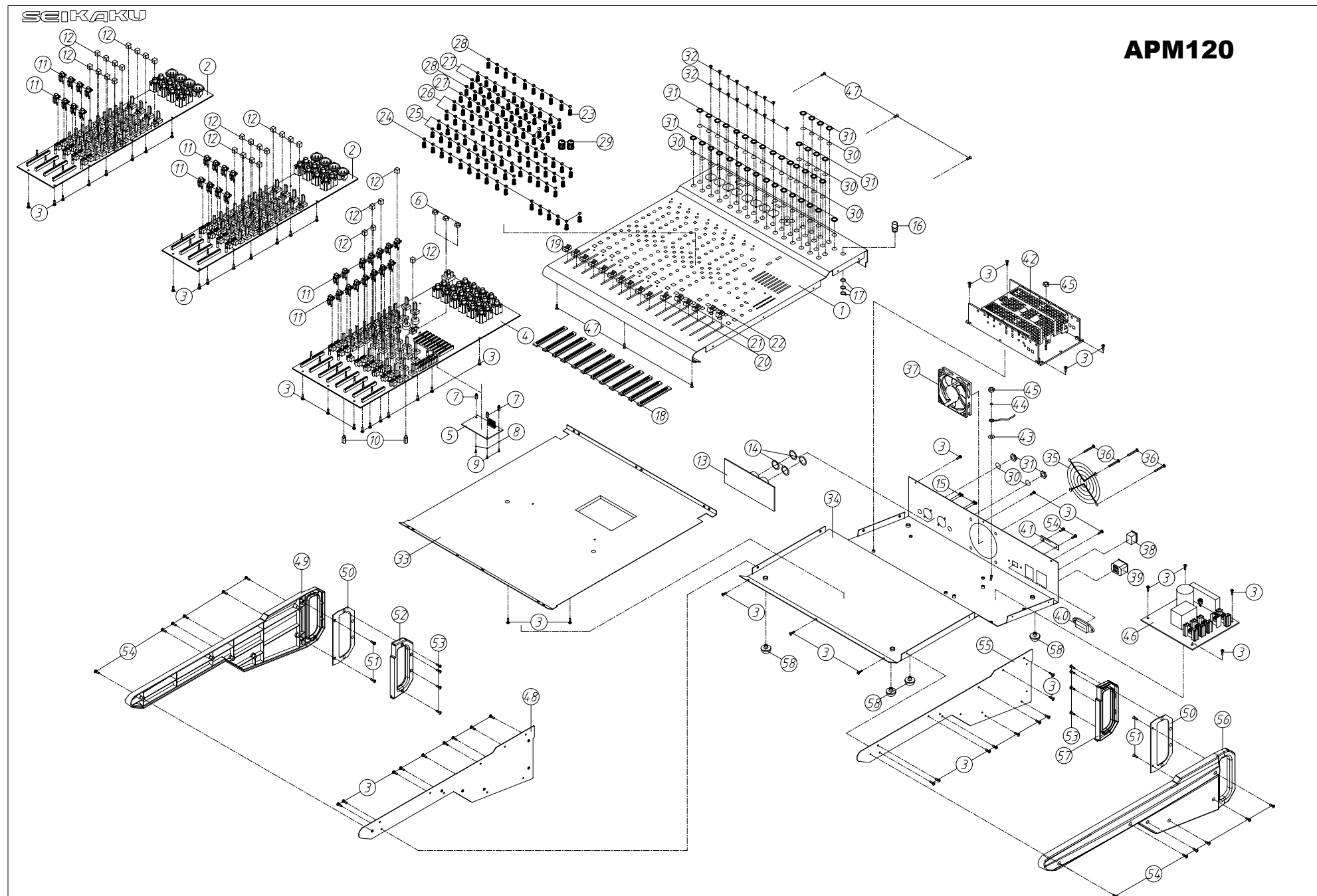
**fig5**

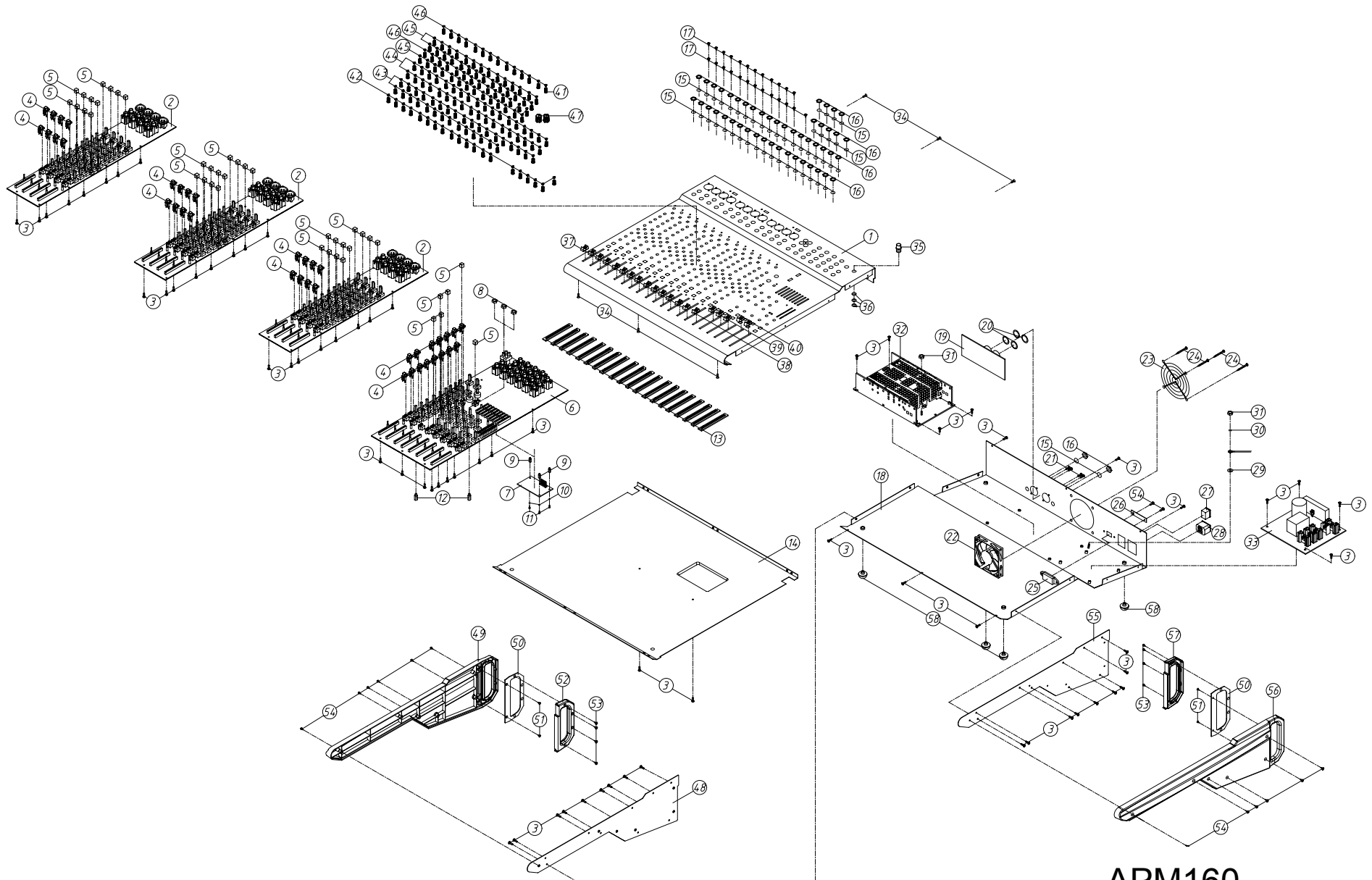


**fig6**

- test Complete -

## 8. Exploded View & MECHNICAL PARTS LIST





APM160

# PARTS LIST

## APM120

No.	Part No.	Description	Specification	Pcs
1	MA05851	ZC-board-RS-SR#2000 5249	APM120 ALTO-V1.0	1
2	HK07692	K-PC Board	P-APM120 MONO-DIP	2
3	MG00041	Screw-RS	M3*6	60
4	HK07695	K-PC Board	P-APM120 STEREO-DIP	1
5	HK01409	K-PC Board	P-313123-DIP(AMX-140FX)	1
6	ME00015	color nut	3mm	3
7	MG00234	copper pillar	M3*5*0.5PH	3
8	MF00037	MIC jack-RS-ACT-HC00125 attachment	φ3*φ5*1t	3
9	MG00036	Screw-RS	M3*4	3
10	MG00572	copper pillar-RS	M3*12.5*0.5PH 17mm 9mm	2
11	NI03192	ZC-Lens-RS-ACT	TYPHOON-V1.0	31
12	NI03140	knob-RS-C	5*5*9 dual TYPHOON-V1.0	30
13	HK07709	K-PC Board	P-APM120SPEAK	1
14	NC00131	T-washer-RS-ACT	1*φ11.3*φ15.3 red	4
15	MG00057	Screw-RS	M3*8	4
16	HC00206	BNC jack-RS	WJ-7031(28*12.7)	1
17		BNC attachment		
18	NI04090	fixed board-RS-C-ABS	TYPHOON1600 3.5*47*81 black-V1.0	4
19	NI03367	knob-RS-C-ABS	24*9.5*10.5 CYCLONE	10
20	NI03055	knob-RS-C-ABS	24*9.5*10.5 TYPHOON	1
21	NI03056	knob-RS-C-ABS	24*9.5*10.5 TYPHOON	3
22	NI03043	knob-RS-C-ABS	24*9.5*10.5 TYPHOON	2
23	NI04004	knob-RS-C-ABS	φ10*16.5 90° -V1.0	118
24	NI02692	knob cover-RS-C-ABS	φ7*3.5 black	16
25	NI04602	knob cover-RS-C-ABS	φ7*3.5 yellow	24
26	NI04601	knob cover-RS-C-ABS	φ7*3.5 green	28
27	NI02678	knob cover-RS-C-ABS	φ7*3.5 534C blue	32
28	NI01147	knob cover-RS-C-ABS	φ7*3.5 534C white	18
29	NI02386	knob-RS-C	14*13mm dual	2
30	MF00061	washer-RS-ACT	φ9.6*φ13*0.5t	41
31	ME00060	MIC jack-RS-ACT-HC00125 attachment	JY-6351G-02-250	41
32	MG00061	screw-RS	M3*10	17
33	MI03818	ZD-barrier-RS-APM120-05	APM-120 0.8t*484.48*430*10-V1.0	1
34	MB05006	ZC-chassis-RS-SR#2000 5249	APM120 -V1.0	1
35	MD00444	protective cover-RS	80*80mm(K-G08A05-4HA)	1
36	MG00268	Screw-RS	M5*12	4
37	HE00113	fan-RS-CT-KD2408PTS1	DC24V/67mA 80*80*25mm 125mm	1
38	HI00022	power switch SW-RS	4P black frame red key R13-69A	1
39	HC00331	AC socket-RS	RF-2004	1
40	HI00120	slide switch SW-RS	L21-22A	1
41	HI03205	protective cover-RS-0.5T PVC	0.5*44*15-V1.0	1
42	HK07495	K-PC Board	P-DGM1000(D1)-DIP	1
43	MF00048	washer-RS-ACT	φ4*φ8*0.5t	1
44	MF00038	washer-RS-ACT	φ4*φ7*1t	1
45	ME00016	color nut-RS	4mm	2
46	HK07395	K-PC Board	P-PSM-50Wd-DIP	1
47	MG00025	Screw-RS	M3*6	6
48	MI03813	ZB-side cover board-RS-SR#2000 5249	APM-120 1t*129.57*505* left-V1.0	1
49	NI04460	handle-RS-CT-ABS	APM-120 25.5*134.3*559 black left-V1.0	1
50	MI03815	ZD-caushion-RS-APM120-10	APM-120 1.5t*61.5*123*128-V1.0	2
51	MG00045	Screw-RS	M3*7	4
52	NI04462	handle cover-RS-CT-ABS	APM-120 12*58.47*134.3 black left-V1.0	1
53	MG00063	Screw-RS	M3*12	8
54	MG00027	Screw-RS	M3*12	14
55	MI03811	ZB-side cover board-RS-SR#2000 5249	APM-120 1t*129.57*505* right-V1.0	1
56	NI04461	handle-RS-CT-ABS	APM-120 25.5*134.3*559* black right-V1.0	1
57	NI04463	handle cover-RS-CT-ABS	APM-120 12*58.47*134.3* black right-V1.0	1
58	NI04569	rubber cushion-RS	APM-120 black-V1.0	4

# APM160

No.	Part No.	Description	Specification	Pcs
1	MA06242	ZC-board-RS-SR#2000 5249	APM160 ALTO-V1.2	1
2	HK07692	K-PC Board	P-APM120 MONO-DIP	3
3	MG00041	Screw-RS	M3*6	68
4	NI03192	ZC-Lens-RS-ACT	TYPHOON-V1.0	39
5	NI03140	knob-RS-C	5*5*9 dual TYPHOON-V1.0	42
6	HK07695	K-PC Board	P-APM120 STEREO-DIP	1
7	HK01409	K-PC Board	P-313123-DIP(AMX-140FX)	1
8	ME00015	color nut	3mm	3
9	MG00243	copper pillar	M3*5*0.5PH	3
10	MF00037	washer	φ3*φ5*1t	3
11	MG00036	Screw-RS	M3*4	3
12	MG00572	copper pillar-RS	M3*12.5*0.5PH 17mm 9mm	2
13	NI04090	fixed board-RS-C-ABS	TYPHOON1600 3.5*47*81 black-V1.0	5
14	MI03820	ZD-barrier-RS-APM160-03	APM160 0.8t*484.48*535*10-V1.0	1
15	MF00061	washer-RS-ACT	φ9.6*φ13*0.5t	49
16	ME00060	MIC jack-RS-ACT-HC00125 attachment	JY-6351G-02-250	49
17	MG00061	screw-RS	M3*10	25
18	MB05007	ZC-rear board-RS-SR#2000 5249	APM160-V1.1	1
19	HK07709	K-PC Board	P-APM120SPEAK	1
20	NC00131	T-washer-RS-ACT	1*φ11.3*φ15.3 red	4
21	MG00643	Screw-RS	M3*10-V1.0	4
22	HE00113	fan-RS-CT-KD2408PTS1	DC24V/67mA 80*80*25mm 125mm	1
23	MD00444	protective cover-RS	80*80mm(K-G08A05-4HA)	1
24	MG00268	Screw-RS	M5*12	4
25	HI00120	slide switch SW-RS	L21-22A	1
26	NI03205	protective cover-RS-0.5TPVC	0.5*44*15-V1.0	1
27	HI00022	power switch SW-RS	4P black frame red key R13-69A	1
28	HC00331	AC socket-RS	RF-2004	1
29	MF00048	washer-RS-ACT	φ4*φ8*0.5t	1
30	MF00038	washer-RS-ACT	φ4*φ7*1t	1
31	ME00016	color nut-RS	4mm	2
32	HK07312	K-PC Board	P-DGM1500(PowerSoft)-DIP	1
33	HK07395	K-PC Board	P-PSM-50Wd-DIP	1
34	MG00025	Screw-RS	M3*6	6
35	HC00206	BNC jack-RS	WJ-7031(28*12.7)	1
36		BNC attachment		
37	NI03367	knob-RS-C-ABS	24*9.5*10.5 CYCLONE-V1.0	14
38	NI03055	knob-RS-C-ABS	24*9.5*10.5 TYPHOON(187C)-V1.0	1
39	NI03056	knob-RS-C-ABS	24*9.5*10.5 TYPHOON(282C)-V1.0	3
40	NI03043	knob-RS-C-ABS	24*9.5*10.5 TYPHOON(8C)	2
41	NI04004	knob-RS-C-ABS	φ10*16.5(8C) 90° -V1.0	158
42	NI02692	knob cover-RS-C-ABS	φ7*3.5 black	20
43	NI04602	knob cover-RS-C-ABS	φ7*3.5 yellow	32
44	NI04601	knob cover-RS-C-ABS	φ7*3.5 green	36
45	NI02678	knob cover-RS-C-ABS	φ7*3.5 534C blue	44
46	NI01147	knob cover-RS-C-ABS	φ7*3.5 534C white	26
47	NI02386	knob-RS-C	φ14*13mm dual(8C 072Cblue)	2
48	MI03813	ZB-side cover board-RS-SR#2000 5249	APM-120 1t*129.57*505* left-V1.0	1
49	NI04460	handle-RS-CT-ABS	APM-120 25.5*134.3*559 black left-V1.0	1
50	MI03815	ZD-caushion-RS-APM160-10	APM-120 1.5t*61.5*123*128-V1.0	2
51	MG00045	Screw-RS	M3*7	4
52	NI04462	handle cover-RS-CT-ABS	APM-120 12*58.47*134.3 black left-V1.0	1
53	MG00063	Screw-RS	M3*13	8
54	MG00027	Screw-RS	M3*12	14
55	MI03811	ZB-side cover board-RS-SR#2000 5249	APM-120 1t*129.57*505* right-V1.0	1
56	NI04461	handle-RS-CT-ABS	APM-120 25.5*134.3*559* black right-V1.0	1
57	NI04463	handle cover-RS-CT-ABS	APM-120 12*58.47*134.3* black right-V1.0	1
58	NI04569	rubber cushion-RS	APM-120 black-V1.0	4

## 9. BOM

### APM120

No.	Part No.	Description	Specification	Remark
1	MA05851	panel-RS	APM120 ALTO_V1.4	
2	MA06198	panel-RS	APM-120	
3	AE00055	solvent	solvent	
4	AE00235	paint-RS	5249	
5	MA06197	panel-RS	APM-120 1.2t*40*430*505_V1.2	
6	MJ00063	iron board	1.2*2135*1220 24.54kg	
7	MB05006	chassis-RS	APM120_V1.1	
8	MB04970	chassis-RS	APM-120	
9	AE00055	solvent	solvent	
10	AE00235	paint-RS	5249	
11	MB04969	chassis-RS	APM-120 1.0t*488.28*430*99.5_V1.1	
12	ME00001	screw pillar	M4*10*0.7PH	
13	ME00041	iron pillar	hexagon6.35*M3*6	
14	ME00048	iron pillar	hexagon6.35*M3*3.5	
15	MJ00058	single light board	1*2135*1220 20.45kg	
16	MI03818	barrier-RS	APM-120 0.8t*484.48*430*10_V1.0	
17	MJ00068	iron board	0.8*2135*1220 16.35kg	
18	MI03914	separating shade-RS	APM-120 0.8t*5*89.6*121.6_V1.0	
19	MJ00068	iron board	0.8*2135*1220 16.35kg	
20	MI03813	side cover board-RS	APM-120_V1.0	
21	AE00055	solvent	solvent	
22	AE00235	paint-RS	5249	
23	MI03812	side cover board-RS	APM-120 1t*129.57*505_V1.0	
24	MJ00058	single light board	1*2135*1220 20.45kg	
25	MI03811	side cover board-RS	APM-120 1t*129.57*505 right_V1.0	
26	AE00055	solvent	solvent	
27	AE00235	paint-RS	5249	
28	MI03810	side cover board-RS	APM-120 1t*129.57*505_V1.0	
29	MJ00058	single light board	1*2135*1220 20.45kg	
30	NI04462	handle cover-RS	APM-120 12*58.47*134.3_V1.0	
31	NI04463	handle cover-RS	APM-120 12*58.47*134.3_V1.0	
32	MI03815	caushion-RS	APM-120 1.5t*61.5*123*128_V1.0	
33	MJ00069	iron board	1.5*2135*1220 30.67kg	
34	NI04460	handle-RS	APM-120 25.5*134.3*559_V1.0	
35	NI04461	handle-RS	APM-120 25.5*134.3*559_V1.0	
36	HA00861	power cord Europe 3P	LT-312+LT-501	
37	NI04004	knob	φ10*16.5 90°_V1.0	
38	NI01147	knob cover-RS	φ7*3.5_V1.3	
39	NI02678	knob cover	φ7*3.5 534C blue	
40	NI02692	knob cover	φ7*3.5 black	
41	NI04601	knob-RS	φ7*3.5 3298U_V1.0	
42	NI04602	knob-RS	φ7*3.5 123U_V1.0	
43	NI02386	konb	φ14*13mm	
44	NI03701	knob-RS-C	24*9.5*10_V1.2	
45	NI03055	knob-RS-C	24*9.5*10 TYPHOON 187_V1.1	
46	NI03056	knob-RS-C	24*9.5*10 TYPHOON 282_V1.1	
47	NI03043	knob-RS-C	24*9.5*10 TYPHOON_V1.1	
48	NI03192	acrylic panel	TYPHOON_V1.0	
49	NI02926	button	13.9*10*24mm TYPHOON_V1.4	
50	NI03140	knob	5*5*9 TYPHOON_V1.0	
51	NI04090	fixed board	TYPHOON1600 3.5*47*81 black_V1.0	
52	HC00206	BNC jack	WJ-7031(28*12.7)	
53	MG00041	screw	M3*6	
54	MG00025	screw-RS	M3*6	
55	MG00268	screw	M5*12	
56	HE00113	fan-RS-CT	DC24V/67mA 80*80*25mm 125mm	

No.	Part No.	Description	Specification	Remark
57	MD00444	protective cover	80*80mm(K-G08A05-4HA)	
58	MG00027	screw	M3*12	
59	MG00063	screw	M3*12	
60	MG00045	screw	M3*7	
61	MG00061	screw-RS	M3*10	
62	MG00243	copper pillar	M3*5*0.5PH	
63	MG00572	copper pillar	M3*12.5*0.5PH 17mm 9mm	
64	MG00036	screw	M3*4	
65	ME00015	color nut	3m/m	
66	MF00037	washer	φ3.2*φ5.5*1t	
67	ME00060	MIC jack	JY-6351G-02-250	
68	MF00061	MIC jack	φ9.6*φ13*0.5t	
69	HI00120	slide switch	L21-22A	
70	HA00056	wire	90mm black L5R5	
71	NI00252	sleeve	φ4*20mm	
72	NI00248	sleeve	φ4*1000mm	
73	MG00057	screw	M3*8	
74	NI03205	protective cover	0.5*44*15_V1.0	
75	HC00876	terminal block-RS	7ESDP-02P	
76	HA02276	wire-RS	70mm 0.75A*3C(H05VV-F)	
77	HA02278	wire-RS	70mm 0.75A*3C(H05VV-F)	
78	HI00022	power switch-RS	4p black frame red key	
79	HC00331	AC socket	RF-2004	
80	HD00098	glass tube fuse	T6.3A 250V φ5.2*20mm CCC/BSI/C-UR/VDE	
81	HA04877	wire-RS	3P 180*2/65/55mm UL1015 22AWG	
82	HA04878	wire-RS	130/110mm UL1015 18AWG	
83	HA04828	wire-RS	20P*3 110/95mm UL1007 28AWG	
84	HA04853	wire-RS	6P-3P*2 720mm UL1007 24AWG	
85	HA04854	wire-RS	8P-4P*2 650/110*3/340/200 UL1007 28AWG	
86	MF00048	washer	φ4*φ8*0.5t	
87	MF00038	washer	φ4*φ7*1t	
88	ME00016	color nut	4m/m	
89	NI04569	rubber cushion-RS	M6*φ23.5*20.5mm black	
90	NA00235	PE bag	0.05t*650*550mm	
91	NF00061	assurance card	ALTO	
92	HJ00006	dessicant	30g	
93	NE05004	label	ALTO	
94	NH00334	cone paper	0.040*1m	
95	NE16529	lable-RS	APM120_V1.0	
96	NI00014	membrane	0.035*1M	
97	NH00012	bond paper	0.04*1M	
98	NI00218	cable tie	ALT-102SB	
99	NC00131	washer	1*φ11.3*φ15.3 red	
100	MJ00808	fixed clip	WL3-32T	
101	NC00080	washer	φ3.17*φ8.2*1	
102	NC01112	black foil white board	1.0t*65mm(+0.1)*60M	
103	HC00034	short circuit connector	NO.2700 2.54mm/6mm OPEN	
104	HK01409	PC board-RS	P-313123-DIP(AMX-140FX)	
105	SC00004	crystal oscillator	16.00MHZ	XT1
106	HC00484	connector	2.54 180° 2*8P(gold-plated) 13.5/19mm	CN2
107	SG00193	SMD integrated circuit	AT27LV010A-90JC/L-8	IC4
108	SG00168	SMD integrated circuit-RS	HT27LC010-90J(PLCC32)/(HOLTEK)	
109	HK03894	PC board-RS-ACT	P-313123-SMD(L-8)	
110	HB00895	PCB	313123/2(1*6)	
111	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C17,C15,C18,C6,C10,C22,C20,C13,C14,C1,C3,C4,C11
112	RD00061	SMD fixed resistor 1/10W	10Ω ±5% 0603	R22

No.	Part No.	Description	Specification	Remark
113	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R12,R14,R7,R8,R34,R17,R13,R33
114	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R3
115	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R16,R15,R21,R20,R4,R19,R10,R18,R9,R5
116	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R28,R27,R23,R24,R29,R30,R25,R26
117	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R32,R31,R1
118	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R2
119	RE00006	SMD resistor networks 1/16W	100Ω*4 ±5% 8P 0603	AR1,AR2
120	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
121	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	IC1
122	SG00410	SMD integrated circuit	IC41LV16256-35KG(SOJ40)/(ICSI)	IC6
123	SG00166	SMD integrated circuit	TY-2 ALTO(GMCODE:105022)	IC3
124	SG00147	SMD integrated circuit	CHEF DSP(GMCODE:105022)	
125	SG00037	SMD integrated circuit	LD1117DT33C(TO252)/(ST)	IC2
126	HC00611	IC socket (SMD)	PLCC32 (AMP S/N:822516-7)	IC4
127	SG00016	SMD integrated circuit	UDA1345TS(SSOP28)/(PHI)	IC5
128	AE00449	solder material without lead	9308/Sn Ag Cu	
129	CI00264	SMD ceramic capacitor-RS 0603	15PF/50V NPO ±5%	C8,C9
130	NE11475	label	L-8	
131	NH00221	paper	0.055*1M	
132	NI00016	membrane	0.05*1M	
133	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
134	CB00166	electrolytic capacitor	100uF/16V φ6*5mm	C19,C12,C5,C2,C24,C16,C21,C25,C26,C28,C7
135	HK07395	PC board	P-PSM-50Wd-DIP	
136	SD00074	integrated circuit	L7805CV(TO220)/(ST)	U2
137	SD00079	integrated circuit	L7915CV(TO220)/(ST)	TR1
138	SD00077	integrated circuit-RS	L7815CV(TO220)/(ST/MOROCCO)	U6
139	SD00066	integrated circuit	L7812CV(TO220)/(ST)	U1
140	SB00015	Pohtotriode	4N33.300	U4
141	SA00223	zener diode	3.6W 36V KA431AZ(TO-92)	U5
142	SA00221	bridge rectifier	2A/600V KBP206	BD1
143	SA00222	diode	2.2A/274V P6KE200A	Z1
144	SA00093	rectifier diode	1N4148 0.5A	D5
145	SB00073	transistor-RS-ACT	2N5550/2N5551(TO92)/(HSMC)	Q1
146	SB00064	transistor-RS-ACT	TIP41C(TO220)/(ST)	Q2
147	SA00130	diode	1A/600V/35ns BYV26C	D4,D3
148	SA00144	diode	3.5A/200V BYV28-200,113	D6,D7
149	SA00127	zener diode	1/2W 47V 1N5261	Z2
150	SA00004	high speed diode	2A/100V BYV27-200,113	D2,D1
151	NI02249	plastic washer	TW-1(TO-220)	
152	NC00005	mica	SB-9500DSP 18*13*0.1t_V1.0	
153	MI00257	heat-sink	25*34.6*12*1.5 DX26	
154	MI00256	heat-sink	25*15*10.6-1PIN SCL-2020	
155	MG00161	screw	M3*6	
156	MG00163	screw	M3*8	
157	MF00037	washer	φ3.2*φ5.5*1t	
158	ME00015	color nut	3m/m	
159	MF00014	washer	φ3*φ6.5*0.5t	
160	HC00172	connector(male)	3P 3.96mm 180°	CON1
161	HC00076	connector(male)	2P 2.5mm 180°	J2,J1
162	HC00082	connector(male)	8P 2.5mm 180°	J3
163	CG00042	Y-type capacitor	0.01uF/400V	C37,C36
164	CB00132	electrolytic capacitor	330uF/25V 105℃ LZ φ8*15mm	C46,C45,C1
165	CB00006	electrolytic capacitor	1uF/50V ψ4*5mm	C41
166	CB00195	electrolytic capacitor	100uF/16V φ6*7mm	C18,C33
167	CB00034	electrolytic capacitor	33uF/16V φ5*11mm	C43
168	CF00113	metal-film capacitor MPX	0.047uF/275V ±10% CASEC2	C21,C22

No.	Part No.	Description	Specification	Remark
169	CB00221	electrolytic capacitor	10uF/63V ±20% φ5*11mm	C34,C35
170	CG00035	Y-type capacitor	4.7nF/400V	C24,C42
171	CG00033	metal oxide varistors	B57237-S100-M	RTH1
172	CB00254	electrolytic capacitor	47uF/100V φ10*12mm 5mm	C31
173	HA01925	jump	10mm	J5,J6,J9
174	HA02249	wire	φ0.6	
175	HA01930	jump	15mm	J4
176	HA02249	wire	φ0.6	
177	HA01921	jump	7mm	J7
178	HA02249	wire	φ0.6	
179	CB00201	electrolytic capacitor	47uF/25V φ6*7mm	C40
180	CB00072	electrolytic capacitor	1000uF/25V φ10*20mm	C29,C28
181	CB00056	electrolytic capacitor	220uF/25V φ8*11mm	C20
182	CN00153	inductance-RS-ACT	3mH UT20-H125NP	L4
183	TC00341	transformer-RS	ETD29_230V	T1
184	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
185	SD00319	integrated circuit-RS	TOP248YN(TO220)/(PI)	U3
186	CB00337	electrolytic capacitor-RS	220uF/400V φ30*31mm	C23
187	HK07396	PC board	P-PSM-50Wd-SMD	
188	RD00015	SMD fixed resistor 1/8W	560Ω ±5% 0805	R13
189	RD00141	SMD fixed resistor 1/4W	6.8KΩ ±5% 1206	R6
190	RD00025	SMD fixed resistor 1/8W	3.3KΩ ±5% 0805	R12
191	RD00235	SMD precise resistor 1/8W	4.70KΩ ±1% 0805	R15
192	RD00515	SMD precise resistor 1/4W	4.7Ω ±1% 1206	R11
193	RD00254	SMD precise resistor 1/4W	68.0KΩ ±1% 1206	R80
194	RD00149	SMD fixed resistor 1/4W	220KΩ ±5% 1206	R4,R2,R3
195	RD00142	SMD fixed resistor 1/4W	10KΩ ±5% 1206	R10,R100
196	RD00146	SMD fixed resistor 1/4W	47KΩ ±5% 1206	R8
197	CI00100	SMD ceramic capacitor 0805	0.1uF/50V X7R ±10%	C13,C11
198	CI00028	SMD ceramic capacitor 0805	0.01uF/50V Y5V	C12
199	CI00154	SMD ceramic capacitor 1206	0.1uF/100V X7R ±10%	C6,C2,C7,C5,C8,C17,C16
200	RD00585	SMD precise resistor -RS	820.00Ω ±1% 0805	R14
201	RD00617	SMD fixed resistor-RS 1/4W	2.0MΩ ±5% 1206	R1
202	HB02120	PCB-RS	PSM-50Wd_VER060821	
203	RD00521	SMD fixed resistor 1/8W	750Ω ±5% 0805	R7
204	MI03891	separating shade-RS	XM-24 0.33t*37.6*37.6*28.3_V1.0	
205	MJ00116	tinplate	0.33*1000*1000 2.59kg	
206	MI03847	heat-sink-RS	2.9*77*30*15_V1.0	
207	HK07847	PC board	P-DIGIMOD1000(APM120)-DIP	
208	SD00066	integrated circuit	L7812CV(TO220)/(ST)	U13/B
209	NI00280	sleeve	φ15*25mm	
210	NI00278	sleeve	φ15*1000mm	
211	MG00161	screw	M3*6	
212	HC00359	connector	2.54 180° 4P(gold-plated) 6/11.6mm	CN17,CN18
213	HC00389	connector(male)	16P 2.54mm180°	CN13
214	HC00082	connector(male)	8P 2.5mm 180°	CN16
215	HC00276	connector(male)	3P 2.54mm 180°	CN4,CN10
216	HC00034	short circuit connector	NO.2700 2.54mm/6mm OPEN	JR1,JR2,JR3,JR4
217	CF00022	metal-film capacitor MSC	0.022uF/100V 5% CASE01	C14,C20,C99,C100
218	CF00016	metal-film capacitor MSC	0.01uF/100V 5% CASE01	C10
219	HA01919	jump	5mm	JP5
220	HA02249	wire	φ0.6	
221	CB00038	electrolytic capacitor	47uF/16V φ5*7mm	C84,C85
222	CH00027	laminated capacitor	0.1uF/100V X7R PH5mm	C60,C59,C71,C72
223	MB04575	chassis	DigiMod 3.0t*51*122*216(ME000155)_V1.1	MEC1
224	MB04577	chassis	DigiMod	

No.	Part No.	Description	Specification	Remark
225	MB04654	chassis	DigiMod 3.0t*51*122*216(ME000155)_V1.1	
226	MJ00057	AL plate-RS	3.0t*2000*1000mm 16.32kg	
227	ME00220	iron pillar	M4*8*0.7PH_V1.0	
228	ME00221	iron pillar	M3*4*0.8PH_V1.0	
229	MK00115	spring-RS-C	1.0T*7.6*13*34.2(ML00004)_V 1.2	ML1,ML2,ML3,ML4,ML5,ML6,ML7,ML8
230	MC00801	top cover	DigiMod 1.0t*48*116*136.8(ME000156)_V1.1	MEC2
231	MJ01323	hot gradual zinc	1.0t*2135*1220 20.45kg_V1.0	
232	ME00222	iron pillar	M3*4*0.5PH	
233	HC00859	terminal block-RS	2P 7EHDV-02P male	CN1,CN2
234	HC00858	terminal block-RS	2P 2EHDV-02P male	CN3,CN7
235	HC00857	terminal block-RS	4P 2EHDV-04P male	CN14
236	HC00856	terminal block-RS	5P 2EHDV-05P male	CN11,CN12
237	CB00322	electrolytic capacitor-RS	820uF/35V 105℃ WL φ10*30mm(JAMICON)	C47,C49,C50
238	HC00866	row-wire header(MICRO-EDGE)	72P 1.27mm 180°(AMP:5822021-4)	CN8
239	NC00980	Silicone insulator-RS	1.0t*25mm*30mm	GAPAD1
240	CN00180	common inductance-RS	1.90uH-2.30uH/T50-2(TO000061)	L1,L2
241	RA01614	chassis bracket 5W	4.7Ω ±5% SQM type	R73,R79
242	HC00879	connector(male)-RS	2*5P 3.0mm 180°(C3030WV-F-2*5P)/	CN15
243	SD00318	integrated circuit-RS-C	TC4423EPA(PDIP8)/(MICROCHIP)	U7,U8,U9,U10,U15
244	SD00317	integrated circuit	NJM7912FA(TO220F)/(JRC)	U14/B
245	SA00309	high speed diode-RS	BYW51FP-200(TO220AB)/(ST)	D11,D12,D13
246	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
247	MG00692	screw-RS	M3*12*0.5PH	VT3,VT4,VT7,VT8,VT13,VT14,VT15,VT16,VT20,VT24,VT28
248	ME00226	screw-RS	M3*0.5PH	DD2,DD3,DD4,DD5,DD6,DD7,DD8,DD9,DD10,DD11,DD12
249	MG00694	screw-RS	M2.9*9.5	VT2,VT6,VT11,VT18,VT22,VT26
250	MG00693	screw-RS	M3*6*0.5PH	VT1,VT5,VT9,VT10,VT17,VT21,VT29,VT30
251	SA00316	bridge rectifier-RS	8A GBU-8K/(PANJIT)	D1
252	NE16112	lable	K-SERIES_V1.0	
253	NI00020	membrane	0.07*1M	
254	NH00015	bond paper	0.075*1M	
255	NC01179	insulator spacer-RS	0.13t*40mm*55mm(HI-FLOW-625)	SPAD1,SPAD2,SPAD3
256	NI04389	plastic washer-RS	TW-20N	
257	CF00226	metal-film capacitor-RS MKP	0.33uF/160V±5%(BFC237934334)	C63,C64,C65,C66
258	SB00226	transistor-RS-CT	IRFP260NPBF(TO247)/(IR)	Q3,Q4,Q5,Q6
259	CG00079	X1/Y2 capacitor-RS	0.0047uF/250V(S472M59Z5US63K7)	C8,C9,C7,C6
260	CG00078	X2 capacitor-RS MKT	1.0uF/275V ±5%(BFC233620105)	C1
261	CF00224	metal-film capacitor-RS MKP	0.1uF/630V±5%(BFC238320104)	C4,C5
262	CF00222	metal-film capacitor-RS MKT	1.0uF/250V ±5%(BFC237341105)	C67,C68
263	SB00221	transistor-RS-CT	BD237(SOT32)/(ST)	Q7
264	SB00222	transistor-RS-CT	HGTG12N60A4D(TO247)/(FAIRCHILD)	Q1,Q2
265	RA01654	wirewound resistor 5W	0.1Ω±5%/(AC05000001007JAC00)	R69,R70,R75,R76
266	RH00032	thermistor-RS-NTC	10K±5%(NTCLE100E3103JB0)	R43,R44
267	SB00227	Pohtotriode-RS-CT	CNY17F-2BNC(DIP6)/(FAIRCHILD)	U16
268	CN00200	common inductance-RS-CT	2.3mH/4A EV28-4.0-02-2M3/(SCHAFFNER)	T1,T2
269	CB00342	electrolytic capacitor-RS-ACT	220uF/200V φ18*31.5mm (NICHICON)	C24,C25,C26,C27,C28,C29
270	CB00343	electrolytic capacitor-RS-ACT	390uF/100V φ16*31.5mm(NICHICON)	C51,C52,C53,C54
271	RA01659	metal-oxide-film resistor-RS 1	240K±5% VR37(VR37000002403JA100)	R1
272	CG00081	Y-type capacitor-RS-ACT	S20-K300(B72220301K101)/(EPCOS)	RV1
273	HC00941	fuse drawer-RS-ACT	520101(5.2mm) PCB式 LITTLEFUSE	F1
274	CG00082	X2 capacitor-RS-ACT	0.1uF/275V±20% R46-KI3100-JP M1M(ARC)	C137
275	NE16636	lable-RS	POWERMODII350/65_V1.0	
276	NI00017	membrane	0.055*1M	
277	NI00039	adhesive label	0.06*1M	
278	NE16634	lable-RS-CT	DIGIMOD1000_V1.1	
279	NI00039	adhesive label	0.06*1M	
280	NI00017	membrane	0.055*1M	

No.	Part No.	Description	Specification	Remark
281	RH00034	thermistor-RS-CT	2.5Ω B57237S259M/(EPCOS)	R10
282	HK07157	PC board	P-DGM1000(PowerSoft)-SMD	
283	SE00025	SMD diode	0.45A/85V BAV99	D18,D19,D20,D21,D26
284	RD00255	SMD precise resistor 1/4W	100KΩ ±1% 1206	R14,R15,R16,R17,R18,R19,R51,R52,R53,R54,R84,R85,R88,R89
285	RD00245	SMD precise resistor 1/4W	1.00KΩ ±1% 1206	R25,R28,R29,R49,R34,R50,R87
286	RD00399	SMD precise resistor 1/4W	10.0KΩ ±1% 1206	R11,R47,R48,R57
287	RD00140	SMD fixed resistor 1/4W	4.7KΩ ±5% 1206	R12
288	CI00095	SMD ceramic capacitor 1206	0.1uF/50V X7R	C31,C33,C34,C39
289	CI00103	SMD ceramic capacitor 1206	100PF/50V NPO ±5%	C136
290	CI00042	SMD ceramic capacitor 1206	0.001uF/50V NPO	C73,C74,C75,C76,C80,C81,C82,C83,C92,C93,C94,C95
291	CI00135	SMD ceramic capacitor 1206	33PF/50V NPO ±5%	C44
292	CI00046	SMD ceramic capacitor 1206	1uF/16V Y5V-1206(3216)	C30,C37,C38,C41,C42,C45,C55,C56,C57,C58,C78,C79,C90,C91,C96,C97,C98,C129,C130,C131,C132,C133,C134
293	CI00041	SMD ceramic capacitor 1206	470PF/50V NPO	C43
294	HB01989	PCB-RS	DGMMAIN19_VER060411	CS1
295	CI00263	SMD ceramic capacitor-RS 1206	0.0047uF/200V X7R ±10%	C12,C13,C15,C18,C19,C21
296	RD00615	SMD precise resistor-RS 1/8W	1.50Ω± 5% 0805	R22,R23,R45
297	RD00607	SMD precise resistor-RS 1/4W	330Ω± 1% 1206	R26,R27,R30,R31,R32,R33,R35,R36,R80,R81,R82,R83
298	RD00605	SMD precise resistor-RS 1/4W	4.70Ω± 1% 1206	R58,R59,R60,R61
299	RD00608	SMD precise resistor-RS 1/4W	33.0KΩ± 1% 1206	R13
300	RD00606	SMD precise resistor-RS 1/4W	15.0Ω± 1% 1206	R20,R21
301	RD00604	SMD precise resistor-RS 1/4W	47.0Ω± 1% 1206	R86
302	SG00465	SMD integrated circuit-RS	M24C16WMN6TP(SO8)/(ST)	U12
303	AE00449	solder material without lead	9308/Sn Ag Cu	
304	SG00466	SMD integrated circuit-RS-ACT	HCPL-0611#060(SO8)/(AGILENT)	U3,U4,U5,U6
305	SE00089	SMD zener diode-RS	1/2W 5.1V(MMSZ5231B)(SOD-123)/(PANJIT)	D14,D15,D16,D17
306	SF00101	voltage stabilized transistor-	L4941BDT-TR-PB FREE(DPAK)/(ST)	U11
307	SG00495	SMD integrated circuit-RS-CT	IR2156SPBF(SO14)/(IR)	U1
308	SE00095	SMD diode-RS-CT	ES3D(DO214AB)/(VISHAY)	D8,D9,D10
309	SE00097	SMD diode-RS-CT	1A/400V US1G(DO214AC)/(VISHAY)	D3,D4,D22,D23,D24,D25,D28
310	CI00279	SMD ceramic capacitor-RS 1206	0.0022uF/200Vx7R±10%	
311	SE00098	SMD zener diode-RS-C	1W 15V DL4744A MELF/(SJ)	D2,D27
312	CO00138	SMD fixed inductance-RS-CT	4*0.47mH(B82792-C2474-N315/(EPCOS)	T10
313	TC00330	transformer-RS	EE42/20(TO000068)	T3
314	NI04468	creel stand-RS-ACT	FE0252(MILES PLATTS)	
315	TC00386	transformer-RS	EE42/20(TO000068)	
316	HK07198	PC board-RS	P-DGMFILT14(TO000062)	SM1,SM2
317	HC00855	connector-RS	2.54 90° 2*2P (gold-plated) 6/14.4/19.5	J1,J2
318	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
319	NI00218	cable tie	ALT-102SB	
320	CN00179	common inductance-RS	25.344uH±15%/T130-2(TO000062)	
321	HB02094	PCB-RS	DGMFILT14_VER060411	
322	NE16887	lable-RS	POWERMOD_V1.0	
323	NI00015	membrane	0.04*1M	
324	NH00013	bond paper	0.045*1M	
325	HK07158	PC board	P-DGM500-1000/CNTRL17-DIP	
326	SC00319	crystal oscillator	12.288MHZ	Y1
327	HK07274	Photodiode	P-photosensitive resistance+φ3lled	D5,D105
328	RH00020	photosensitive resistance	VT90N1	
329	SA00305	L.E.D-RS	φ3 circle red high intensity	D5,D105
330	NI02405	sleeve	φ5*15mm	GU1,GU2
331	NI00258	sleeve	φ5*1000mm	
332	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
333	HK07159	PC board	P-DGM500-1000/CNTRL17-SMD	
334	SG00045	SMD integrated circuit	BU4081BF(SOT73)/(PHI)	U6/B

No.	Part No.	Description	Specification	Remark
335	SF00030	SMD transistor-RS-ACT	BC817(SOT23)/(PHI)	Q1,Q2/B
336	RD00298	SMD precise resistor 1/10W	47.0K $\pm 1\%$ 0603	R17,R19,R22,R34,R41,R87,R117,R119,R134,R141,R187
337	RD00201	SMD precise resistor 1/10W	1.50K $\pm 1\%$ 0603	R6,R13,R65,R113,R165
338	RD00292	SMD precise resistor 1/10W	1.00M $\pm 1\%$ 0603	R10,R60,R98,R99,R100,R110,R200,R209,R210
339	SG00001	SMD integrated circuit	TL074CDT(SO14)/(ST)	U3/B,U103/B
340	SE00025	SMD diode	0.45A/85V BAV99	D6,D7,D106,D107
341	SE00027	SMD diode	0.45A/85V BAW56	D1,D2,D3,D101,D102
342	SE00026	SMD diode	0.45A/85V BAV70	D110,D111,D4,D11,D9,D10,D109
343	RD00320	SMD precise resistor 1/4W	12.0K $\pm 1\%$ 1206	R74/B,R85/B,R174/B,R185/B
344	RD00341	SMD precise resistor 1/10W	4.70K $\pm 1\%$ 0603	R28,R45,R90,R128,R145,R1002
345	RD00322	SMD precise resistor 1/10W	2.70K $\pm 1\%$ 0603	R7,R8,R16,R75,R79,R80,R83,R107,R108,R116,R175,R179,R180,R183
346	RD00339	SMD precise resistor 1/10W	47.0K $\pm 1\%$ 0603	R4,R31,R33,R43,R104,R131,R133,R143
347	RD00342	SMD precise resistor 1/10W	1.50M $\pm 1\%$ 0603	R38,R138
348	RD00332	SMD precise resistor 1/10W	680 $\Omega \pm 1\%$ 0603	R68,R168
349	RD00214	SMD precise resistor 1/10W	10.0K $\pm 1\%$ 0603	R1,R5,R14,R24,R29,R30,R32,R39,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R69,R114,R129,R130,R132,R139,R147,R148,R149,R150,R151,R152,R153,R154,R155,R156,R157,R169,R201,R202,R219,R301,R302,R319,R1001,R1003
350	RD00218	SMD precise resistor 1/10W	15.0K $\pm 1\%$ 0603	R9,R12,R86,R109,R112,R186
351	RD00224	SMD precise resistor 1/10W	100K $\pm 1\%$ 0603	R35,R58,R59,R135,R158,R159,R208,R308
352	RD00506	SMD precise resistor 1/10W	3.30K $\pm 1\%$ 0603	R23,R27,R36,R81,R82,R136,R181,R182
353	RD00509	SMD fixed resistor 1/10W	24K $\pm 5\%$ 0603	R25
354	RD00399	SMD precise resistor 1/4W	10.0K $\pm 1\%$ 1206	R215/B,R216/B,R315/B,R316/B
355	RD00282	SMD precise resistor 1/10W	1.00K $\pm 1\%$ 0603	R2,R21,R44,R61,R62,R63,R64,R66,R67,R92,R93,R95,R102,R144,R161,R162,R163,R164,R166,R167
356	RD00390	SMD precise resistor 1/10W	10.0M $\pm 1\%$ 0603	R96,R97
357	RD00392	SMD precise resistor 1/10W	2.20K $\pm 1\%$ 0603	R15,R26,R46,R78,R115,R146,R178
358	RD00105	SMD fixed resistor 1/10W	22K $\pm 5\%$ 0603	R94
359	RD00129	SMD fixed resistor 1/4W	0.0 $\Omega \pm 5\%$ 1206	C34,C134
360	RD00525	SMD precise resistor 1/10W	33.0K $\pm 1\%$ 0603	R42,R142
361	RD00301	SMD precise resistor 1/10W	12.1K $\pm 1\%$ 0603	R11,R111
362	CI00125	SMD ceramic capacitor 1210	10uF/16V Y5V-1210(3225)	C16,C31,C40,C116,C131
363	CI00105	SMD ceramic capacitor 1206	0.0022uF/50V NPO $\pm 5\%$	C30,C130
364	CI00185	SMD ceramic capacitor 0603	0.1uF/50V X7R $\pm 10\%$ (C1608X7R1H104KT)/TDK	C6/B,C2,C4,C9,C11/B,C14,C17/B,C19/B,C20/B,C21/B,C24/B,C25/B,C27/B,C39,C49,C102,C104,C106/B,C117/B,C119/B,C120/B,C121/B,C124/B,C125/B,C127/B
365	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G $\pm 5\%$ (C1608C0G1H330JT)/TDK	C10,C12
366	CI00083	SMD ceramic capacitor 0603	3.9PF/50VC0G $\pm 0.25$ PF(C1608C0G1H3R9CT)/TDK	C23,C123
367	CI00084	SMD ceramic capacitor 0603	4.7PF/50VC0G $\pm 0.25$ PF(C1608C0G1H4R7CT)/TDK	C52/B
368	CI00201	SMD ceramic capacitor 0603	0.01uF/50V $\pm 10\%$ (C1608X7R1H103KT)/TDK	C15,C41,C42,C43
369	CI00224	SMD ceramic capacitor 0603	470PF/50V C0G $\pm 5\%$ (C1608C0G1H471JT)/TDK	C22,C26,C36,C37,C122,C126,C136,C137
370	CI00234	SMD ceramic capacitor 0603	0.0033uF/50VC0G $\pm 5\%$ (C1608C0G1H332JT)/TDK	C13
371	CI00220	SMD ceramic capacitor 0603	220PF/50V C0G $\pm 5\%$ (C1608C0G1H221JT)/TDK	C1,C33,C133
372	CI00216	SMD ceramic capacitor 0603	82PF/50V C0G $\pm 5\%$ (C1608C0G1H820JT)/TDK	C7,C8,C107,C108
373	CI00228	SMD ceramic capacitor 0603	0.001uF/50V C0G $\pm 5\%$ (C1608C0G1H102JT)/TDK	C5,C28,C105,C128
374	CI00222	SMD ceramic capacitor 0603	330PF/50V C0G $\pm 5\%$ (C1608C0G1H331JT)/TDK	C3,C32,C103,C132
375	SE00077	SMD L.E.D-RS	red KPTC-2012EC	D119,D19
376	SE00078	SMD L.E.D-RS	green KPTC-2012SGC	D16,D17,D18
377	HB01991	PCB-RS	DGMCNTRL17_VER060411	CS1
378	RD00592	SMD precise resistor-RS 1/10W	10.0K $\pm 0.1\%$ 0603	R72,R73,R88,R89,R172,R173,R188,R189
379	RD00590	SMD precise resistor-RS 1/10W	1.50K $\pm 0.1\%$ 0603	R76,R77,R176,R177
380	RD00591	SMD precise resistor-RS 1/10W	82.0K $\pm 0.1\%$ 0603	R70,R71,R170,R171
381	AE00449	solder material without lead	9308/Sn Ag Cu	
382	SE00090	SMD zener diode-RS	1/2W 6.8V(MMSZ5235B)(SOD-123)/(PANJIT)	D112,D114,D12,D14

No.	Part No.	Description	Specification	Remark
383	SG00496	SMD integrated circuit-RS	LF412CDR(SO8)/(TI)	U4/B,U104/B
384	CO00137	SMD inductance-RS	1.0mH $\pm 5\%$ (NL453232T-102J)/(TDK)	L1,L101
385	SG00502	SMD integrated circuit-RS	NE5532DR(SO8)/(TI)	U1/B,U2/B,U101/B,U102/B
386	SG00504	SMD integrated circuit-RS-C	ATmega8-16AU(TQFP32)/(ATMEL)	U8/B
387	SG00509	SMD integrated circuit-RS	HEF4069UBT(SO14)/(PHI)	U5/B,U105/B
388	CI00278	SMD ceramic capacitor-RS 1206	0.0018uF/50V NPO $\pm 5\%$	C29,C129
389	NE16833	lable-RS	DIGIMOD1000_V1.0	
390	NI00017	membrane	0.055*1M	
391	NH00035	bond paper	0.06*1M	
392	NE16889	lable-RS	DIGIMOD1000_V1.0	
393	NI00017	membrane	0.055*1M	
394	NH00035	bond paper	0.06*1M	
395	NE16886	lable-RS	DIGIMOD1000_V1.0	
396	NI00034	membrane	0.045*1M	
397	NH00014	bond paper	0.05*1M white	
398	HK07692	PC board	P-APM120 MONO-DIP	
399	RC00366	potentiometer	C500K $\Omega$ RD12L123A43D-500K15C*2(SAS1);30F-C	VR5,VR15,VR26,VR37
400	RC00358	potentiometer	B50K $\Omega$ -RD09F113A223-50K2BT(SAS1);30F-C	VR2,VR3,VR4,VR13,VR14,VR16,VR24,VR25,VR27,VR35,VR36,VR38
401	RC00465	potentiometer	B5K $\Omega$ RD09F113A225-5K2BT(SAS1);30F-C	VR7,VR18,VR29,VR40
402	SB00062	transistor-RS-ACT	BC337-25(TO92)/(PHI)	Q1
403	RC00284	slide potentiometer	D10K $\Omega$ RF6011YP600F-10KD(SAS1)	VR6,VR17,VR28,VR39
404	SA00071	L.E.D	$\phi 3$ green LVG2340/A	LD11,LD13,LD15,LD17
405	HC00125	MIC jack-RS	JY-6351G-02-250	X5,X6,X7,X8,X9,X10,X11,X12
406	RC00356	potentiometer	Z10K $\Omega$ RD09F1130042-10KZ(SAS1);30F	VR1,VR12,VR23,VR34
407	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW8,SW9,SW10,SW11,SW12,SW13,SW14,SW15,SW16,SW17,SW18,SW19,SW20
408	SA00053	L.E.D	$\phi 3$ round(red)long foot 26mm	LD5,LD6,LD7,LD8,LD9
409	HC00126	balance MIC jack-RS	JY-5042-030G female plug 180°	X1,X2,X3,X4
410	HI00380	slide switch-RS	2stage 3P 12mm SBA-12-12	SW33
411	RC00359	potentiometer	W50K $\Omega$ RD09F113A224-50K4BT(SAS1);30F-C	VR8,VR9,VR10,VR11,VR19,VR20,VR21,VR22,VR30,VR31,VR32,VR33,VR41,VR42,VR43,VR44
412	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD1,LD2,LD3,LD4
413	SA00073	L.E.D	$\phi 3$ yellow LUY2340/A	LD10,LD12,LD14,LD16
414	NI02384	LED spacer support	LEDS-4 4mm	
415	NI01773	LED spacer support	LEDS-13	
416	NI04453	LED spacer support-RS	LEDS-21 21mm	LD9
417	HC00982	connector-RS	2.0mm 180° 2*10P 4/9.4	CN2
418	HC00984	connector-RS	2.0mm 180° 2*2P 4/9.4	CN1
419	HC00983	connector-RS	2.0mm 180° 2*4P 4/9.4	CN3
420	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
421	HK07693	PC board	P-APM120 MONO-SMD	
422	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152
423	RD00214	SMD precise resistor 1/10W	10.0K $\Omega$ $\pm 1\%$ 0603	R61,R62,R63,R64,R65,R66,R67,R68,R126,R127,R128,R129,R234
424	RD00334	SMD precise resistor 1/10W	11.0K $\Omega$ $\pm 1\%$ 0603	R25,R26,R27,R28,R29,R30,R31,R32
425	RD00102	SMD fixed resistor 1/10W	12K $\Omega$ $\pm 5\%$ 0603	R219,R221,R223,R225
426	RD00218	SMD precise resistor 1/10W	15.0K $\Omega$ $\pm 1\%$ 0603	R218,R220,R222,R224
427	RD00293	SMD precise resistor 1/10W	17.4K $\Omega$ $\pm 1\%$ 0603	R145,R146,R148,R149,R158,R160,R161,R162,R171,R172,R173,R174,R184,R185,R186,R187
428	RD00351	SMD fixed resistor 1/10W	1.3K $\Omega$ $\pm 5\%$ 0603	R73,R74,R75,R76
429	RD00201	SMD precise resistor 1/10W	1.50K $\Omega$ $\pm 1\%$ 0603	R106,R107,R108,R109,R110,R111,R112,R113
430	RD00125	SMD fixed resistor 1/10W	1.0M $\Omega$ $\pm 5\%$ 0603	R130,R131,R132,R133

No.	Part No.	Description	Specification	Remark
431	RD00219	SMD precise resistor 1/10W	20.0K $\Omega$ $\pm$ 1% 0603	R81,R82,R83,R84,R85,R86,R87,R88,R89,R141,R142,R143,R144
432	RD00105	SMD fixed resistor 1/10W	22K $\Omega$ $\pm$ 5% 0603	R90,R91,R92,R93
433	CI00266	SMD ceramic capacitor-RS 0603	22PF/50V NPO $\pm$ 5%	C37,C38,C39,C40,C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C109,C110,C111,C112,C113,C114,C115,C116
434	RD00106	SMD fixed resistor 1/10W	27K $\Omega$ $\pm$ 5% 0603	R139,R140,R152,R153,R165,R166,R178,R179
435	RD00265	SMD fixed resistor 1/10W	27 $\Omega$ $\pm$ 5% 0603	R41,R42,R43,R44
436	RD00089	SMD fixed resistor 1/10W	2.7K $\Omega$ $\pm$ 5% 0603	R226,R227,R228,R229,R230,R231,R232,R233
437	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10,TR11,TR12,TR13,TR14,TR15,TR16
438	RD00406	SMD precise resistor 1/10W	3.60K $\Omega$ $\pm$ 1% 0603	R33,R34,R35,R36,R37,R38,R39,R40
439	RD00092	SMD fixed resistor 1/10W	3.9K $\Omega$ $\pm$ 5% 0603	R122,R123,R124,R125
440	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1,D2,D3,D4,D5,D6,D7,D8,D9,D10,D11,D12,D13,D14,D15,D16,D17,D18
441	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14
442	CI00063	SMD ceramic capacitor 0603	470PF/50V NPO $\pm$ 5%	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12
443	RD00339	SMD precise resistor 1/10W	47.0K $\Omega$ $\pm$ 1% 0603	R210,R211,R212,R213
444	CI00268	SMD ceramic capacitor-RS 0603	47PF/50V NPO $\pm$ 5%	C29,C30,C31,C32
445	RD00298	SMD precise resistor 1/10W	47.0 $\Omega$ $\pm$ 1% 0603	R1,R2,R3,R4,R5,R6,R7,R8
446	RD00371	SMD precise resistor 1/10W	51.1K $\Omega$ $\pm$ 1% 0603	R9,R10,R11,R12,R13,R14,R15,R16
447	RD00094	SMD fixed resistor 1/10W	5.1K $\Omega$ $\pm$ 5% 0603	R150,R151,R163,R164,R175,R176,R188,R189,R206,R207,R208,R209,R214,R215,R216,R217
448	RD00210	SMD precise resistor 1/10W	5.11K $\Omega$ $\pm$ 1% 0603	R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60
449	RD00095	SMD fixed resistor 1/10W	5.6K $\Omega$ $\pm$ 5% 0603	R114,R115,R116,R117,R118,R119,R120,R121
450	RD00113	SMD fixed resistor 1/10W	62K $\Omega$ $\pm$ 5% 0603	R69,R70,R71,R72
451	RD00539	SMD precise resistor 1/10W	68.0K $\Omega$ $\pm$ 1% 0603	R94,R95,R96,R97
452	RD00097	SMD fixed resistor 1/10W	6.8K $\Omega$ $\pm$ 5% 0603	R77,R78,R79,R80,R134,R135,R136,R137,R138,R147,R159,R177,R190,R191,R192,R193,R194,R195,R196,R197,R98,R99,R100,R101,R102,R103,R104,R105
453	AE00449	solder material without lead	9308/Sn Ag Cu	
454	HK07694	PC board	P-APM120 MONO-AI	
455	HB02185	PCB-RS	APM120 MONO_REV1.20_VER061103	
456	CB00238	electrolytic capacitor	0.22uF/50V $\phi$ 5*11mm	C57,C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C68
457	CB00255	electrolytic capacitor	1000uF/10V $\phi$ 8*11mm 5mm	C33,C34,C35,C36
458	RA01112	fixed resistor 1/4W	100 $\Omega$	R235
459	CB00051	electrolytic capacitor	100uF/63V $\phi$ 10*12mm	C153
460	RA01115	fixed resistor 1/4W	20K $\Omega$	R440
461	CB00242	electrolytic capacitor	22uF/35V $\phi$ 5*11mm	C13,C14,C15,C16,C17,C18,C19,C20
462	CC00067	mylar capacitor	0.0027uF/100V 10%	C121,C122,C123,C124
463	CC00059	mylar capacitor	0.033uF/100V 3%	C93,C94,C95,C96,C97,C98,C99,C100
464	CB00194	electrolytic capacitor	47uF/25V $\phi$ 5*11mm	C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92
465	CB00334	electrolytic capacitor-RS	47uF/50V $\phi$ 6.3*11mm	C21,C22,C23,C24,C25,C26,C27,C28
466	CC00077	mylar capacitor	0.0047uF/100V 3%	C117,C118,C119,C120
467	RA01262	precise resistor 1/4W	6.81K $\Omega$	R17,R18,R19,R20,R21,R22,R23,R24
468	CC00079	mylar capacitor	0.0068uF/100V 3%	C101,C102,C103,C104,C105,C106,C107,C108
469	HA01919	jump	5mm	J1,J2,J3,J4,J5,J6,J7,J8,J9,J10,J11,J12,J13,J14,J15,J16,J17,J18,J19,J20,J21,J22,J23,J24,J25,J26,J27,J28,J29,J30,J31,J32,J33,J34,J35,J36,J37,J38,J39,J40,J41,J42,J43,J44,J45,J46,J47,J48,J49,J50,J51,J52,J53,J54,J55,J56,J57,J58,J59,J60,J61,J62,J63,J64,J65,J66,J67,J68,J69,J70,J71,J72,J73,J74,J75,J76,J77,J78,J79,J80,J81,J83,J84,J85,J86,J87,J88,J89,J90,J91,J92,J93,J94,J95,J96,J97,J98,J99,J100,J101,J143,J218,J219

No.	Part No.	Description	Specification	Remark
470	HA02249	wire	φ0.6	
471	HA01930	jump	15mm	J196,J201,J202,J203,J204,J205,J206,J207,J208,J209,J210,J211,J212,J213,J214,J215,J216,J217,J222,J223
472	HA02249	wire	φ0.6	
473	HA01935	jump	12.5mm	J138,J162,J176,J189,J190,J191,J192,J193,J194,J197,J198,J199,J200
474	HA02249	wire	φ0.6	
475	HA01925	jump	10mm	J149,J150,J151,J152,J153,J154,J155,J156,J157,J158,J159,J160,J161,J164,J166,J167,J168,J169,J170,J171,J172,J173,J174,J175,J177,J178,J179,J180,J181,J182,J183,J184,J185,J186,J187,J188,J220,J221
476	HA02249	wire	φ0.6	
477	HA02441	jump	7.5mm	J82,J102,J103,J104,J105,J106,J107,J108,J109,J110,J111,J112,J113,J114,J115,J116,J117,J118,J119,J120,J121,J122,J123,J124,J125,J126,J127,J128,J129,J130,J131,J132,J133,J134,J135,J136,J137,J139,J140,J141,J142,J144,J145,J146,J147,J148,J163,J165,J195
478	HA02249	wire	φ0.6	
479	HK07695	PC board	P-APM120 STEREO-DIP	
480	CC00041	mylar capacitor	0.12uF/100V 10%	C251,C252
481	HK04376	PC board	P-12VMETER-DIP(AMX-220)	CN7,CN8
482	HC00698	connector	2.0 90° 17P(gold-pated)2.5/9.5mm 2mm	CN6
483	HK04377	PC board	P-12VMETER-SMD(AMX-220)	
484	HB01285	PCB	12VMETER(2*5)_VER040611	
485	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R2
486	RD00076	SMD fixed resistor 1/10W	330Ω ±5% 0603	R4,R6
487	RD00078	SMD fixed resistor 1/10W	470Ω ±5% 0603	R3,R5,R7
488	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R8
489	RD00348	SMD fixed resistor 1/10W	620Ω ±5% 0603	R9
490	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R10
491	RD00087	SMD fixed resistor 1/10W	2.0KΩ ±5% 0603	R11
492	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R12
493	RD00115	SMD fixed resistor 1/10W	82KΩ ±5% 0603	R13
494	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C2
495	SG00210	SMD integrated circuit	LM339DT/(ST)	U1,U2,U3
496	AE00449	solder material without lead	9308/Sn Ag Cu	
497	RD00346	SMD fixed resistor 1/10W	56Ω ±5% 0603	R1
498	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
499	HC00125	MIC jack-RS	JY-6351G-02-250	X1,X2,X3,X4,X5,X6,X7,X8,X9,X10,X12,X13,X14,X15,X16,X17,X18,X21,X22,X23,X24,X25,X28
500	RC00626	potentiometer-RS	B100KΩ RD12L12C0217-100K3B*2(SAS1);15F	VR87
501	RC00360	potentiometer	B50KΩ RD12L12CA23A-50K3BT*2(SAS1);30F-C	VR51,VR52,VR53,VR54,VR62,VR63,VR64,VR65
502	RC00465	potentiometer	B5KΩ RD09F113A225-5K2BT(SAS1);30F-C	VR56,VR67
503	SD00007	integrated circuit	BA15218N(M5218L)(SIP8)/(ROHM)	U47,U48
504	SB00062	transistor-RS-ACT	BC337-25(TO92)/(PHI)	Q1
505	HC00253	connector(male)	2P 2.0mm 180°	CN9,CN10
506	HC00070	connector(male)	6P 2.5mm 90°	CN4
507	RC00285	slide potentiometer-dual unit	D10KΩ RF60112P600G-10KD*2(SAS1)	VR55,VR66,VR86,VR93
508	RC00284	slide potentiometer	D10KΩ RF6011YP600F-10KD(SAS1)	VR88,VR89,VR90,VR91
509	SA00052	L.E.D	φ3 round(green)long foot 26	LD23,LD25,LD26,LD27,LD28,LD29,LD30,LD31,LD32,LD33,LD34,LD35,LD36,LD37,LD38,LD39,LD40,LD41,LD42,LD43,LD44
510	SA00071	L.E.D	φ3 green LVG2340/A	LD6,LD8,LD9,LD10,LD11,LD12,LD13,LD14,LD15,LD16,LD17,LD18,LD19
511	HC00887	connector(male)-RS	10P 2.0mm 180°(A2004WV-2*10P)	CN2
512	HC00932	connector(male)-RS	4P 2.0mm 180°(A2004WV-2*4P)	CN3,CN6

No.	Part No.	Description	Specification	Remark
513	HC00473	connector-RS-ACT	2.45mm 180° 2*8P B25-2*8BG1(B)H=5mm	CN1
514	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW27,SW28,SW31,SW32,SW41,SW44,SW45,SW46
515	HI00238	push-button switch-RS	2 6P PS-92 26A(NON-LOCK)	SW11
516	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW25,SW26,SW29,SW30,SW33,SW34,SW35,SW36,SW38,SW39,SW47,SW37
517	SA00053	L.E.D	φ3 round(red)long foot 26mm	LD3,LD4,LD20,LD21,LD22
518	HI00161	relay	RY-5W-K,5V	RL1
519	HC00403	RCA jack	SCP6873NS3232T2 4P	X11
520	HI00195	rotary switch	SDB161PVB15.5F-1-4-16-16PC	EN1,EN2
521	HI00379	slide switch-RS	2stage 6P 6mm SKA-22-06B	SW43
522	HI00381	slide switch-RS	3stage 8P 6mm SKA-23-06B	SW42
523	HI00384	slide switch-RS	2stage 3P 4mm SBA-12CN-04RB	SW40
524	RC00625	slide potentiometer-RS	W100KΩ RF30H12KD107-100K(4B)*2(SAS)	VR97,VR98,VR99,VR100,VR101,VR102,VR103,VR104,VR105
525	RC00359	potentiometer	W50KΩ RD09F113A224-50K4BT(SAS1);30F-C	VR57,VR58,VR59,VR60,VR68,VR69,VR70,VR71,VR72,VR73,VR74,VR76,VR77,VR78,VR80,VR81,VR82,VR94,VR95,VR96
526	RC00361	potentiometer	W50KΩ RD12L12CA60B-50K4BT*2(SAS1);30F-C	VR50,VR61,VR75,VR79,VR83,VR84,VR85,VR92
527	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD1,LD2,LD24,LD46,LD47
528	SA00073	L.E.D	φ3 yellow L VY2340/A	LD5,LD7
529	HK07637	PC board	P-DSP-PRE-DIP(APM120)	CN5
530	HC00697	connector	2.0 90° 16P(gold-pated)2.5/9.5mm 2mm	CN1
531	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
532	HK07638	PC board	P-DSP-PRE-SMD(APM120)	
533	HB01916	PCB-RS	DSP-PRE_VER051020	
534	SG00306	SMD integrated circuit	LM393DR(TI)/(MEXICO)	U47
535	SG00469	SMD integrated circuit-RS	SN74HC109DR(SO16)/(TI)	U48
536	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	U49
537	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR17
538	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R420,R421
539	SE00007	SMD rectifier diode	RB400D(D3A)	D10
540	SE00009	SMD rectifier diode	DAN202K/T-146	D16
541	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D7,D15
542	SG00122	SMD integrated circuit-RS-ACT	NJM4580M-TE3(SOP8)/(JRC)	U44,U45,U46
543	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R1
544	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R426
545	RD00083	SMD fixed resistor 1/10W	1.0KΩ ±5% 0603	R418
546	RD00099	SMD fixed resistor 1/10W	8.2KΩ ±5% 0603	R422,R423
547	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R397,R398,R399,R400,R401,R402,R403,R404,R405,R406,R407,R408,R410,R411,R412,R413,R414
548	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R416
549	RD00098	SMD fixed resistor 1/10W	7.5KΩ ±5% 0603	R419
550	RD00111	SMD fixed resistor 1/10W	47KΩ ±5% 0603	R415
551	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R424
552	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R417
553	RD00124	SMD fixed resistor 1/10W	820KΩ ±5% 0603	R431
554	RD00126	SMD fixed resistor 1/10W	2.2MΩ ±5% 0603	R425
555	CI00129	SMD ceramic capacitor 0603	0.0015uF/50V X7R ±10%	C345,C346,C347
556	CL00002	SMD tantalum capacitor-RS-ACT	1.0uF/16V case A	C352,C353
557	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C348,C349
558	CL00006	SMD tantalum capacitor-RS-ACT	10uF/16V case B2	C350,C351
559	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C329,C330,C331,C332
560	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C333,C334,C336,C337,C338,C339,C340,C341
561	SE00085	SMD zener diode-RS	1/2W 2.4V ZMM55-C2V4	ZD1,ZD2
562	AE00449	solder material without lead	9308/Sn Ag Cu	
563	SG00243	SMD integrated circuit	NE555DR(SO8)/(TI)	U43
564	NI02384	LED spacer support	LEDS-4 4mm	

No.	Part No.	Description	Specification	Remark
565	NI01773	LED spacer support	LEDS-13	
566	HA04363	wire-RS	2P-2P 300mm UL1007 26AWG red/white	
567	HA00829	wire-RS	304mm brown L3R3	
568	HA00010	wire-RS	150mm black L5R5	
569	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
570	HK07696	PC board	P-APM120 STEREO-SMD	
571	RD00129	SMD fixed resistor 1/4W	0.0Ω ±5% 1206	R488
572	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R466,R467
573	RD00224	SMD precise resistor 1/10W	100KΩ ±1% 0603	R464,R465
574	CI00059	SMD ceramic capacitor 0603	100PF/50V NPO ±5%	C232,C233
575	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C169,C170,C171,C172,C173,C174,C175,C176,C177,C178,C179,C180,C181,C182,C183,C184,C185,C186,C187,C188,C189,C190,C191,C192,C193,C194,C195,C196,C197,C198,C199,C200,C201,C202,C203,C204,C205,C206,C207,C208,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C219,C220,C221,C222,C225,C226,C227,C228,C230,C231,C288,C289,C291,C292,C293,C294,C229
576	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R87,R88,R89,R90,R91,R92,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R135,R136,R137,R138,R139,R140,R142,R143,R144,R146,R147,R148,R149,R150,R151,R152,R153,R154,R155,R233,R234,R304,R305,R329,R355,R356,R376,R388,R389,R455,R484,R485,R486,R487,R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30,R31,R32,R33,R34,R35,R36,R37,R38,R39,R40,R308,R314,R331,R336,R368,R369,R382,R383,R386,R387,R390,R391,R475,R476,R477,R478
577	RD00275	SMD precise resistor 1/10W	110Ω ±1% 0603	R444,R445
578	RD00334	SMD precise resistor 1/10W	11.0KΩ ±1% 0603	R501,R502
579	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R342,R343,R344,R345,R346,R347,R348,R349,R350,R351,R352,R357,R358,R359,R360,R363,R364,R365
580	RD00007	SMD fixed resistor 1/8W	120Ω ±5% 0805	R361,R362,R366,R367
581	RD00102	SMD fixed resistor 1/10W	12KΩ ±5% 0603	R206,R207,R208,R209,R223,R224,R227,R228
582	RD00118	SMD fixed resistor 1/10W	150KΩ ±5% 0603	R446,R447
583	RD00218	SMD precise resistor 1/10W	15.0KΩ ±1% 0603	R221,R222,R225,R226,R472,R473,R474,R511
584	RD00276	SMD precise resistor 1/10W	169Ω ±1% 0603	R434,R435
585	RD00293	SMD precise resistor 1/10W	17.4KΩ ±1% 0603	R273,R274,R275,R276,R277,R278,R279,R280,R281,R282,R283,R284,R285,R286,R287,R288,R289,R290,R291,R292,R296,R297,R298,R299,R300,R301,R302,R303,R306,R307,R309,R310,R317,R318,R334,R335,R337,R338,R339,R377
586	RD00104	SMD fixed resistor 1/10W	18KΩ ±5% 0603	R503,R504,R505,R506
587	RD00062	SMD fixed resistor 1/10W	18Ω ±5% 0603	R438,R439,R440,R441,R442,R443
588	RD00420	SMD precise resistor 1/10W	19.1KΩ ±1% 0602	R371,R373,R374
589	RD00282	SMD precise resistor 1/10W	1.00KΩ ±1% 0603	R319,R320
590	RD00201	SMD precise resistor 1/10W	1.50KΩ ±1% 0603	R160,R161,R219,R220
591	RD00086	SMD fixed resistor 1/10W	1.8KΩ ±5% 0603	R162,R163,R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R177
592	RD00292	SMD precise resistor 1/10W	1.00MΩ ±1% 0603	R198,R199,R200,R201,R202,R203,R204,R205
593	RD00318	SMD precise resistor 1/10W	200KΩ ±1% 0603	R186,R187,R188,R189
594	RD00277	SMD precise resistor 1/10W	200Ω ±1% 0603	R428,R429,R430,R431,R432,R433

No.	Part No.	Description	Specification	Remark
595	RD00219	SMD precise resistor 1/10W	20.0K $\Omega$ $\pm$ 1% 0603	R50,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80,R81,R82,R83,R84,R85,R86,R141,R145,R239,R240,R241,R242,R246,R247,R295,R353,R354,R384,R385,R452,R453
596	RD00119	SMD fixed resistor 1/10W	220K $\Omega$ $\pm$ 5% 0603	R178,R179,R180,R181
597	RD00073	SMD fixed resistor 1/10W	220 $\Omega$ $\pm$ 5% 0603	R436,R437,R457,R458
598	RD00105	SMD fixed resistor 1/10W	22K $\Omega$ $\pm$ 5% 0603	R156,R157,R182,R183,R184,R185,R468,R469,R470,R471
599	CI00266	SMD ceramic capacitor-RS 0603	22PF/50V NPO $\pm$ 5%	C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C167,C168,C269,C284,C285,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36,C37,C38,C39,C40
600	RD00063	SMD fixed resistor 1/10W	22 $\Omega$ $\pm$ 5% 0603	R497,R498
601	RD00074	SMD fixed resistor 1/10W	270 $\Omega$ $\pm$ 5% 0603	R489,R490
602	RD00106	SMD fixed resistor 1/10W	27K $\Omega$ $\pm$ 5% 0603	R41,R42,R43,R44,R45,R46,R47,R48,R237,R238,R244,R245
603	RD00203	SMD precise resistor 1/10W	2.00K $\Omega$ $\pm$ 1% 0603	R481
604	RD00089	SMD fixed resistor 1/10W	2.7K $\Omega$ $\pm$ 5% 0603	R49,R51,R52,R53,R54,R55,R56,R57
605	RD00268	SMD fixed resistor 1/10W	300K $\Omega$ $\pm$ 5% 0603	R248,R249
606	CI00062	SMD ceramic capacitor 0603	330PF/50V NPO $\pm$ 5%	C277,C278
607	CI00267	SMD ceramic capacitor-RS 0603	33PF/50V NPO $\pm$ 5%	C295,C296,C297,C298,C299,C300,C301,C302
608	RD00304	SMD fixed resistor 1/10W	33 $\Omega$ $\pm$ 5% 0603	R499,R500
609	RD00407	SMD precise resistor 1/10W	36.0K $\Omega$ $\pm$ 1% 0603	R378,R379,R380,R381
610	SF00053	transistor	MMBT3906(SOT23)/(PHI)	TR29,TR30,TR31
611	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D2,D3,D8,D9,D10,D11,D12
612	SE00016	SMD zener diode	1/2W 5.1V(RLZ5.1B) LL-34	ZD4,ZD5,ZD6,ZD7
613	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U20,U21,U22,U23,U24,U25,U26,U27,U28,U29,U30,U31,U32,U33,U34,U35,U36,U37,U38,U39,U40,U41,U42,U43,U44,U45,U46,U49,U50,U57,U58,U59
614	RD00078	SMD fixed resistor 1/10W	470 $\Omega$ $\pm$ 5% 0603	R456
615	RD00339	SMD precise resistor 1/10W	47.0K $\Omega$ $\pm$ 1% 0603	R210,R211,R212,R213,R214,R215,R216
616	RD00298	SMD precise resistor 1/10W	47.0 $\Omega$ $\pm$ 1% 0603	R482,R483,R495,R496
617	RD00223	SMD precise resistor 1/10W	49.9K $\Omega$ $\pm$ 1% 0603	R372
618	RD00341	SMD precise resistor 1/10W	4.70K $\Omega$ $\pm$ 1% 0603	R448,R449,R450,R451
619	RD00209	SMD precise resistor 1/10W	4.99K $\Omega$ $\pm$ 1% 0603	R370
620	RD00347	SMD fixed resistor 1/10W	510 $\Omega$ $\pm$ 5% 0603	R462,R463
621	RD00471	SMD precise resistor 1/10W	56.2K $\Omega$ $\pm$ 1% 0603	R322,R323,R324,R325,R326,R327,R332,R333,R340,R341
622	RD00094	SMD fixed resistor 1/10W	5.1K $\Omega$ $\pm$ 5% 0603	R229,R230,R231,R232,R235,R236,R243,R250,R251,R252,R253,R254,R255,R256,R257,R258,R259,R260,R261,R262,R263,R264,R265,R266,R267,R268,R269,R270,R271,R272,R293,R294,R311,R312,R313,R315,R316,R328,R330,R375
623	RD00297	SMD precise resistor 1/10W	60.4 $\Omega$ $\pm$ 1% 0603	R491,R492,R493,R494
624	CI00064	SMD ceramic capacitor 0603	680PF/50V NPO $\pm$ 5%	C237,C238
625	RE00011	SMD resistor networks 1/16W	680 $\Omega$ *4 $\pm$ 5% 8P 0603	AR1,AR2
626	RD00114	SMD fixed resistor 1/10W	68K $\Omega$ $\pm$ 5% 0603	R58,R59,R392,R393,R394,R395,R396,R397,R398,R399,R400,R401,R402,R403,R404,R405,R406,R407,R408,R409
627	RD00394	SMD precise resistor 1/10W	68.0 $\Omega$ $\pm$ 1% 0603	R507,R508,R509,R510
628	RD00096	SMD fixed resistor 1/10W	6.2K $\Omega$ $\pm$ 5% 0603	R410,R411,R412,R413,R414,R415,R416,R417,R418,R419,R420,R421,R422,R423,R424,R425,R426,R427
629	RD00097	SMD fixed resistor 1/10W	6.8K $\Omega$ $\pm$ 5% 0603	R190,R191,R192,R193,R194,R195,R196,R197,R158,R159,R217,R218
630	RD00328	SMD precise resistor 1/10W	8.66K $\Omega$ $\pm$ 1% 0603	R479,R480
631	SF00031	SMD transistor-RS-ACT	BC847B(SOT23)/(PHI)	TR11,TR12,TR13,TR14,TR15,TR16,TR17,TR18,TR19,TR20,TR21,TR22,TR23,TR24,TR25,TR26,TR27,TR28
632	SE00008	SMD rectifier diode	DA204K/T-146	D1

No.	Part No.	Description	Specification	Remark
633	AE00449	solder material without lead	9308/Sn Ag Cu	
634	HK07697	PC board	P-APM120 STEREO-AI	
635	HB02186	PCB-RS	APM120 STEREO_REV 1.10_VER060828	
636	RA01112	fixed resistor 1/4W	100Ω	R321
637	CB00120	electrolytic capacitor	100uF/16V φ5*11mm	C80,C81,C82,C83
638	CC00060	mylar capacitor	0.1uF/100V 3%	C245,C246,C247,C248
639	CB00189	electrolytic capacitor	1.0uF/50V φ4*5mm	C241,C242
640	RA01260	fixed resistor 1/4W	120Ω	R454,R459
641	CC00075	mylar capacitor	0.012uF/100V 3%	C141,C142,C143,C145,C146,C148,C263,C264,C265,C266
642	CC00076	mylar capacitor	0.015uF/100V 3%	C253,C254,C255,C256,C257,C258
643	CF00238	metallized polyester-RS	0.18uF/63V 5% CASE01	C249,C250
644	CC00052	mylar capacitor	0.001uF/100V 10%	C151,C153
645	CC00068	mylar capacitor	0.027uF/100V 10%	C261,C262
646	CC00058	mylar capacitor	0.0033uF/100V 3%	C155,C156,C157,C159,C160,C161,C270,C271
647	CB00268	electrolytic capacitor	330uF/16V φ8*11mm 5mm	C279
648	CC00063	mylar capacitor-RS	0.0039uF/100V 10%	C272,C273
649	CB00018	electrolytic capacitor	4.7uF/25V φ4*7mm	C274,C275,C276
650	CC00078	mylar capacitor	0.047uF/100V 3%	C234,C235,C236,C290,C163,C164,C165,C166
651	CB00246	electrolytic capacitor	0.47uF/50V φ4*7mm	C243,C244
652	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C223,C224,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C94,C95,C96,C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112,C113,C114,C115,C116,C117,C118,C119,C120,C121,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C137,C138,C139,C140,C280,C281,C282,C283,C286,C287,C303,C304,C305,C306
653	CB00260	electrolytic capacitor	47uF/35V φ5*11mm 2.5mm	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20
654	CC00071	mylar capacitor	0.068uF/100V 10%	C259,C260
655	CC00072	mylar capacitor	0.0082uF/100V 10%	C267,C268
656	CB00238	electrolytic capacitor	0.22uF/50V φ5*11mm	C149,C150,C239,C240
657	CF00138	metal-film capacitor MSC	0.012uF/63V ±5% CASE01	C144,C147
658	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10
659	CF00052	metal-film capacitor	0.0033uF/63V 5% CASE01	C158,C162
660	CF00001	metal-film capacitor MSC	0.001uF/63V 5% CASE01	C152,C154
661	HK07709	PC board	P-APM120SPEAK	
662	HB02230	PCB-RS	APM120SPEAK_VER060721	
663	HC00371	MIC jack	SCJ-0658-1-Y	
664	MJ00942	fixed bracket	CS12/600_V1.3	
665	MJ00061	iron board	1*2135*1220 20.45kg	
666	HC00949	speaker socket-RS-C	LD4015	
667	HA04876	wire-RS	4P 160*2/150*2mm UL1015 16AWG	
668	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
669	HK07707	PC board	P-APM120-OUTPUT CN	
670	HC00945	terminal block-RS	2ESDCR-02P PH5.08mm	JACK5,JACK6
671	HC00947	terminal block-RS	2ESDCR-05P PH5.08mm	JACK8,JACK9
672	HC00077	connector(male)	3P 2.5mm 180°	CN1,CN4
673	HC00174	connector(male)	4P 3.96mm 180°	CN5
674	HB02257	PCB-RS	DIGMOD OUTPUT-JK_VER061107	
675	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
676	NA00657	cardboard-RS	APM120 up_V1.0	
677	NA00656	cardboard-RS	APM120 down_V1.0	
678	HD00019	glass tube fuse	4A 250V φ5.2*20mm CSA/S/UL/VDE	
679	NB05285	carton-RS	APM120 ALTO_V1.0	
680	NB05253	carton-RS	APM120 ALTO_V1.0	
681	HA05019	wire-RS	2P/1P 160mm UL1007 24AWG	

No.	Part No.	Description	Specification	Remark
682	MG00645	copper nut	M3*16*0.5PH_V1.0	
683	MI04055	fixed bracket-RS	APM120 1.5t*25.5*34*487.5 right_V1.0	
684	AE00055	solvent	solvent	
685	AE00235	paint-RS	5249	
686	MI04054	fixed bracket-RS	APM120 1.5t*25.5*34*487.5 right_V1.0	
687	MJ00069	iron board	1.5*2135*1220 30.67kg	
688	NA00210	PE bag	0.04t*200*430mm	
689	MI04053	fixed bracket-RS	APM120 1.5t*25.5*34*487.5 left_V1.0	
690	AE00055	solvent	solvent	
691	AE00235	paint-RS	5249	
692	MI04052	fixed bracket-RS	APM120 1.5t*25.5*34*487.5 left_V1.0	
693	MJ00069	iron board	1.5*2135*1220 30.67kg	

# APM160

No.	Part No.	Description	Specification	Remark
1	MA06242	panel-RS	APM160 ALTO_V2.0	
2	MA06205	panel-RS	APM160	
3	AE00055	solvent	solvent	
4	AE00235	paint-RS	5249	
5	MA06204	panel-RS	APM160 1.2t*40*535*505_V1.2	
6	MJ00063	iron board	1.2*2135*1220 24.54kg	
7	MB05007	chassis-RS	APM160_V1.3	
8	MB04976	chassis-RS	APM160	
9	AE00055	solvent	solvent	
10	AE00235	paint-RS	5249	
11	MB04975	chassis-RS	APM160 1.0t*488.28*535*99.5_V1.1	
12	ME00041	iron pillar	hexagon6.35*M3*6	
13	ME00001	screw pillar	M4*10*0.7PH	
14	ME00048	iron pillar	hexagon6.35*M3*3.5	
15	MJ00058	single light board	1*2135*1220 20.45kg	
16	MI03813	side cover board-RS	APM-120_V1.0	
17	AE00055	solvent	solvent	
18	AE00235	paint-RS	5249	
19	MI03812	side cover board-RS	APM-120 1t*129.57*505_V1.0	
20	MJ00058	single light board	1*2135*1220 20.45kg	
21	MI03811	side cover board-RS	APM-120 1t*129.57*505 right_V1.0	
22	AE00055	solvent	solvent	
23	AE00235	paint-RS	5249	
24	MI03810	side cover board-RS	APM-120 1t*129.57*505_V1.0	
25	MJ00058	single light board	1*2135*1220 20.45kg	
26	MI03820	barrier-RS	APM160 0.8t*484.48*535*10_V1.0	
27	MI03914	separating shade-RS	APM-120 0.8t*5*89.6*121.6_V1.0	
28	MJ00068	iron board	0.8*2135*1220 16.35kg	
29	MJ00068	iron board	0.8*2135*1220 16.35kg	
30	NI04460	handle-RS	APM-120 25.5*134.3*559_V1.0	
31	NI04461	handle-RS	APM-120 25.5*134.3*559_V1.0	
32	MI03815	caushion-RS	APM-120 1.5t*61.5*123*128_V1.0	
33	MJ00069	iron board	1.5*2135*1220 30.67kg	
34	NI04462	handle cover-RS	APM-120 12*58.47*134.3_V1.0	
35	NI04463	handle cover-RS	APM-120 12*58.47*134.3_V1.0	
36	HA00861	power cord Europe 3P	LT-312+LT-501	
37	NI04004	knob	φ10*16.5 90°_V1.0	
38	NI01147	knob cover-RS	φ7*3.5_V1.3	
39	NI02678	knob cover	φ7*3.5 534C blue	
40	NI02692	knob cover	φ7*3.5 black	
41	NI04601	knob-RS	φ7*3.5 3298U_V1.0	
42	NI04602	knob-RS	φ7*3.5 123U_V1.0	
43	NI02386	konb	φ14*13mm	
44	NI03701	knob-RS-C	24*9.5*10_V1.2	
45	NI03055	knob-RS-C	24*9.5*10 TYPHOON 187_V1.1	
46	NI03056	knob-RS-C	24*9.5*10 TYPHOON 282_V1.1	
47	NI03043	knob-RS-C	24*9.5*10 TYPHOON_V1.1	
48	NI03192	acrylic panel	TYPHOON_V1.0	
49	NI02926	button	13.9*10*24mm TYPHOON_V1.4	
50	NI03140	knob	5*5*9 TYPHOON_V1.0	
51	NI04090	fixed board	TYPHOON1600 3.5*47*81 black_V1.0	
52	HC00206	BNC jack	WJ-7031(28*12.7)	
53	MG00041	screw	M3*6	
54	MG00025	screw-RS	M3*6	
55	MG00268	screw	M5*12	
56	HE00113	fan-RS-CT	DC24V/67mA 80*80*25mm 125mm	

No.	Part No.	Description	Specification	Remark
57	MD00444	protective cover	80*80mm(K-G08A05-4HA)	
58	MG00027	screw	M3*12	
59	MG00063	screw	M3*12	
60	MG00045	screw	M3*7	
61	MG00061	screw-RS	M3*10	
62	MG00243	copper pillar	M3*5*0.5PH	
63	MG00572	copper pillar	M3*12.5*0.5PH 17mm 9mm	
64	MG00036	screw	M3*4	
65	ME00015	color nut	3m/m	
66	MF00037	washer	φ3.2*φ5.5*1t	
67	ME00060	MIC jack	JY-6351G-02-250	
68	MF00061	MIC jack	φ9.6*φ13*0.5t	
69	HI00120	slide switch	L21-22A	
70	HA00056	wire	90mm black L5R5	
71	NI00252	sleeve	φ4*20mm	
72	NI00248	sleeve	φ4*1000mm	
73	MG00057	screw	M3*8	
74	NI03205	protective cover	0.5*44*15_V1.0	
75	HC00876	terminal block-RS	7ESDP-02P	
76	HA02276	wire-RS	70mm 0.75A*3C(H05VV-F)	
77	HA02278	wire-RS	70mm 0.75A*3C(H05VV-F)	
78	HI00022	power switch-RS	4p black frame red key	
79	HC00331	AC socket	RF-2004	
80	HD00098	glass tube fuse	T6.3A 250V φ5.2*20mm CCC/BSI/C-UR/VDE	
81	HA04877	wire-RS	3P 180*2/65/55mm UL1015 22AWG	
82	HA04878	wire-RS	130/110mm UL1015 18AWG	
83	HA04829	wire-RS	20P*4 110*2/95mm UL1007 28AWG	
84	HA04853	wire-RS	6P-3P*2 720mm UL1007 24AWG	
85	HA04855	wire-RS	8P-4P*2 650/110*5/340/200 UL1007 28AWG	
86	MF00048	washer	φ4*φ8*0.5t	
87	MF00038	washer	φ4*φ7*1t	
88	ME00016	color nut	4m/m	
89	NI04569	rubber cushion-RS	M6*φ23.5*20.5mm black	
90	NA00235	PE bag	0.05t*650*550mm	
91	NF00061	assurance card	ALTO	
92	HJ00006	dessicant	30g	
93	NE05004	label	ALTO	
94	NH00334	cone paper	0.040*1m	
95	NE16530	lable-RS	APM160_V1.0	
96	NI00014	membrane	0.035*1M	
97	NH00012	bond paper	0.04*1M	
98	NI00218	cable tie	ALT-102SB	
99	NC00131	washer	1*φ11.3*φ15.3 red	
100	MJ00808	fixed clip	WL3-32T	
101	NC00080	washer	φ3.17*φ8.2*1	
102	NC01112	black foil white board	1.0t*65mm(+0.1)*60M	
103	HC00034	short circuit connector	NO.2700 2.54mm/6mm OPEN	
104	HK01409	PC board-RS	P-313123-DIP(AMX-140FX)	
105	SC00004	crystal oscillator	16.00MHZ	XT1
106	HC00484	connector	2.54 180° 2*8P(gold-plated) 13.5/19mm	CN2
107	SG00193	SMD integrated circuit	AT27LV010A-90JC/L-8	IC4
108	SG00168	SMD integrated circuit-RS	HT27LC010-90J(PLCC32)/(HOLTEK)	
109	HK03894	PC board-RS-ACT	P-313123-SMD(L-8)	
110	HB00895	PCB	313123/2(1*6)	
111	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C17,C15,C18,C6,C10,C22,C20,C13,C14,C1,C3,C4,C11
112	RD00061	SMD fixed resistor 1/10W	10Ω ±5% 0603	R22

No.	Part No.	Description	Specification	Remark
113	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R12,R14,R7,R8,R34,R17,R13,R33
114	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R3
115	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R16,R15,R21,R20,R4,R19,R10,R18,R9,R5
116	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R28,R27,R23,R24,R29,R30,R25,R26
117	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R32,R31,R1
118	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R2
119	RE00006	SMD resistor networks 1/16W	100Ω*4 ±5% 8P 0603	AR1,AR2
120	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
121	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	IC1
122	SG00410	SMD integrated circuit	IC41LV16256-35KG(SOJ40)/(ICSI)	IC6
123	SG00166	SMD integrated circuit	TY-2 ALTO(GMCODE:105022)	IC3
124	SG00147	SMD integrated circuit	CHEF DSP(GMCODE:105022)	
125	SG00037	SMD integrated circuit	LD1117DT33C(TO252)/(ST)	IC2
126	HC00611	IC socket (SMD)	PLCC32 (AMP S/N:822516-7)	IC4
127	SG00016	SMD integrated circuit	UDA1345TS(SSOP28)/(PHI)	IC5
128	AE00449	solder material without lead	9308/Sn Ag Cu	
129	CI00264	SMD ceramic capacitor-RS 06	15PF/50V NPO ±5%	C8,C9
130	NE11475	label	L-8	
131	NH00221	paper	0.055*1M	
132	NI00016	membrane	0.05*1M	
133	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
134	CB00166	electrolytic capacitor	100uF/16V φ6*5mm	C19,C12,C5,C2,C24,C16,C21,C25,C26,C28,C7
135	HK07846	PC board	DIGIMOD1500(APM160)-DIP	
136	SD00066	integrated circuit	L7812CV(TO220)/(ST)	U13/B
137	NI00280	sleeve	φ15*25mm	
138	NI00278	sleeve	φ15*1000mm	
139	MG00161	screw	M3*6	
140	HC00359	connector	2.54 180° 4P(gold-plated) 6/11.6mm	CN17,CN18
141	HC00389	connector(male)	16P 2.54mm180°	CN13
142	HC00082	connector(male)	8P 2.5mm 180°	CN16
143	HD00018	glass tube fuse	6.3A 250V φ5.2*20mm CCEE/CSA/S/UL/VDE	F1A
144	HC00276	connector(male)	3P 2.54mm 180°	CN4,CN10
145	HC00034	short circuit connector	NO.2700 2.54mm/6mm OPEN	JR1,JR2,JR3,JR4
146	CF00016	metal-film capacitor MSC	0.01uF/100V 5% CASE01	C10
147	HA01919	jump	5mm	JP5
148	HA02249	wire	φ0.6	
149	CB00038	electrolytic capacitor	47uF/16V φ5*7mm	C84,C85
150	MK00115	spring-RS-C	1.0T*7.6*13*34.2(ML00004)_V 1.2	ML1,ML2,ML3,ML4,ML5,ML6,ML7,ML8
151	MC00801	top cover	DigiMod 1.0*48*116*136.8(ME000156)_V1.1	MEC2
152	MJ01323	hot gradual zinc	1.0t*2135*1220 20.45kg_V1.0	
153	ME00222	iron pillar	M3*4*0.5PH	
154	HC00859	terminal block-RS	2P 7EHDV-02P male	CN1,CN2
155	HC00858	terminal block-RS	2P 2EHDV-02P male	CN3,CN7
156	HC00857	terminal block-RS	4P 2EHDV-04P male	CN14
157	HC00856	terminal block-RS	5P 2EHDV-05P male	CN11,CN12
158	HC00866	row-wire header(MICRO-EDGE)	72P 1.27mm 180°(AMP:5822021-4)	CN9
159	NC00980	Silicone insulator-RS	1.0t*25mm*30mm	GAPAD1
160	CN00180	common inductance-RS	1.90uH~2.30uH/T50-2(TO000061)	L1,L2
161	SD00318	integrated circuit-RS-C	TC4423EPA(PDIP8)/(MICROCHIP)	U7,U8,U9,U10,U15
162	SD00317	integrated circuit	NJM7912FA(TO220F)/(JRC)	U14/B
163	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
164	RA01620	cement resistor-RS	4.7Ω 5% SQM(TYCO P/N:1-1623788-6)	R73,R79
165	MG00692	screw-RS	M3*12*0.5PH	VT3,VT4,VT8,VT7,VT13,VT14,VT15,VT16,VT20,VT24,VT28
166	ME00226	screw-RS	M3*0.5PH	DD2,DD3,DD4,DD5,DD6,DD7,DD8,DD9,DD10,DD11,DD12
167	MG00694	screw-RS	M2.9*9.5	VT2,VT6,VT11,VT18,VT22,VT26
168	MG00693	screw-RS	M3*6*0.5PH	VT1,VT5,VT9,VT10,VT17,VT21,VT29,VT30

No.	Part No.	Description	Specification	Remark
169	SA00316	bridge rectifier-RS	8A GBU-8K/(PANJIT)	D1
170	NE16112	lable	K-SERIES_V1.0	
171	NI00020	membrane	0.07*1M	
172	NH00015	bond paper	0.075*1M	
173	MB04842	rear board	DIGI MOD(ME000286)_V1.0	MEC1
174	ME00220	iron pillar	M4*8*0.7PH_V1.0	
175	ME00221	iron pillar	M3*4*0.8PH_V1.0	
176	MB04840	rear board	DIGI MOD(ME000286)	
177	MB04654	chassis	DigiMod 3.0*51*122*216(ME000155)_V1.1	
178	MJ00057	AL plate-RS	3.0*2000*1000mm 16.32kg	
179	NC01179	insulator spacer-RS	0.13t*40mm*55mm(HI-FLOW-625)	SPAD1,SPAD2,SPAD3
180	NI04389	plastic washer-RS	TW-20N	
181	CF00226	metal-film capacitor-RS MKP	0.33uF/160V±5%(BFC237934334)	C63,C64,C65,C66
182	CG00079	X1/Y2 capacitor-RS	0.0047uF/250V(S472M59Z5US63K7)	C7,C6,C8,C9
183	CG00078	X2 capacitor-RS MKT	1.0uF/275V ±5%(BFC233620105)	C1
184	CF00224	metal-film capacitor-RS MKP	0.1uF/630V±5%(BFC238320104)	C4,C5
185	CF00222	metal-film capacitor-RS MKT	1.0uF/250V ±5%(BFC237341105)	C68,C67
186	SB00221	transistor-RS-CT	BD237(SOT32)/(ST)	Q7
187	SB00222	transistor-RS-CT	HGTG12N60A4D(TO247)/(FAIRCHILD)	Q1,Q2
188	RA01654	wirewound resistor 5W	0.1Ω±5%/(AC05000001007JAC00)	R69,R70,R75,R76
189	RH00032	thermistor-RS-NTC	10K±5%(NTCLE100E3103JB0)	R43,R44
190	SB00227	Pohtotriode-RS-CT	CNY17F-2BNC(DIP6)/(FAIRCHILD)	U16
191	CN00200	common inductance-RS-CT	2.3mH/4A EV28-4.0-02-2M3/(SCHAFFNER)	T1,T2
192	CB00344	electrolytic capacitor-RS-AC	820uF/25Vφ10*30mm/(NICHICON)	C47,C49,C50
193	RA01659	metal-oxide-film resistor-RS 1	240K±5% VR37(VR37000002403JA100)	R1
194	SB00228	transistor-RS	MURF1660CTG(TO220)/(ON)	D11,D12,D13
195	CG00081	Y-type capacitor-RS-ACT	S20-K300(B72220301K101)/(EPCOS)	RV1
196	CG00082	X2 capacitor-RS-ACT	0.1uF/275V±20% R46-KI3100-JP M1M(ARC)	C137
197	CF00240	metal-film capacitor-RS-C	0.022uF/250V (MMK5 223K250J01L4)	C14,C20,C99,C100
198	RH00034	thermistor-RS-CT	2.5Ω B57237S259M/(EPCOS)	R10
199	NE16810	lable-RS	DIGIMOD1500_V1.0	
200	NI00017	membrane	0.055*1M	
201	NI00039	adhesive label	0.06*1M	
202	NE16808	lable-RS	DIGIMOD1500_V1.0	
203	NI00017	membrane	0.055*1M	
204	NI00039	adhesive label	0.06*1M	
205	HK07313	PC board	P-DGM1500(PowerSoft)-SMD	
206	CI00046	SMD ceramic capacitor 1206	1uF/16V Y5V-1206(3216)	C30,C37,C38,C41,C42,C45,C55,C56,C57,C58,C78,C79,C90,C91,C96,C97,C98,C129,C130,C131,C132,C133,C134
207	CI00095	SMD ceramic capacitor 1206	0.1uF/50V X7R	C31,C33,C34,C39
208	CI00103	SMD ceramic capacitor 1206	100PF/50V NPO ±5%	C136
209	CI00041	SMD ceramic capacitor 1206	470PF/50V NPO	C43
210	CI00042	SMD ceramic capacitor 1206	0.001uF/50V NPO	C73,C74,C75,C76,C80,C81,C82,C83,C92,C93,C94,C95
211	CI00263	SMD ceramic capacitor-RS 1206	0.0047uF/200V X7R ±10%	C12,C13,C15,C18,C19,C21
212	CI00135	SMD ceramic capacitor 1206	33PF/50V NPO ±5%	C44
213	HB01989	PCB-RS	DGMMAIN19_VER060411	CS1
214	SE00097	SMD diode-RS-CT	1A/400V US1G(DO214AC)/(VISHAY)	D3,D4,D22,D23,D24,D25,D28
215	SE00095	SMD diode-RS-CT	ES3D(DO214AB)/(VISHAY)	D8,D9,D10
216	SE00025	SMD diode	0.45A/85V BAV99	D18,D19,D20,D21,D26
217	SE00089	SMD zener diode-RS	1/2W 5.1V(MMSZ5231B)(SOD-123)/(PANJIT)	D14,D15,D16,D17
218	SG00495	SMD integrated circuit-RS-C	IR2156SPBF(SO14)/(IR)	U1
219	SG00465	SMD integrated circuit-RS	M24C16WMN6TP(SO8)/(ST)	U12
220	SG00466	SMD integrated circuit-RS-AC	HCPL-0611#060(SO8)/(AGILENT)	U3,U4,U5,U6
221	SF00101	voltage stabilized transistor-	L4941BDT-TR-PB FREE(DPAK)/(ST)	U11
222	RD00245	SMD precise resistor 1/4W	1.00KΩ ±1% 1206	R25,R28,R29,R34,R49,R50,R87
223	RD00140	SMD fixed resistor 1/4W	4.7KΩ ±5% 1206	R12

No.	Part No.	Description	Specification	Remark
224	RD00399	SMD precise resistor 1/4W	10.0KΩ ±1% 1206	R11,R48,R47,R57
225	RD00255	SMD precise resistor 1/4W	100KΩ ±1% 1206	R14,R15,R16,R17,R18,R19,R51,R52,R53,R54,R84,R85,R88,R89
226	RD00608	SMD precise resistor-RS 1/4W	33.0KΩ± 1% 1206	R13
227	RD00615	SMD precise resistor-RS 1/8W	1.50Ω± 5% 0805	R22,R23,R45
228	RD00607	SMD precise resistor-RS 1/4W	330Ω± 1% 1206	R26,R27,R30,R31,R32,R33,R35,R36,R83,R80,R81,R82
229	RD00606	SMD precise resistor-RS 1/4W	15.0Ω± 1% 1206	R20,R21
230	RD00605	SMD precise resistor-RS 1/4W	4.70Ω± 1% 1206	R58,R59,R60,R61
231	RD00604	SMD precise resistor-RS 1/4W	47.0Ω± 1% 1206	R86
232	AE00449	solder material without lead	9308/Sn Ag Cu	
233	CI00279	SMD ceramic capacitor-RS 1206	0.0022uF/200Vx7R±10%	C135
234	SE00098	SMD zener diode-RS-C	1W 15V DL4744A MELF/(SJ)	D2,D27
235	CO00138	SMD fixed inductance-RS-C	4*0.47mH(B82792-C2474-N315)/(EPCOS)	T10
236	HK07198	PC board-RS	P-DGMFILT14(TO000062)	SM1,SM2
237	HC00855	connector-RS	2.54 90° 2*2P (gold-plated) 6/14.4/19.5	J1,J2
238	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
239	NI00218	cable tie	ALT-102SB	
240	CN00179	common inductance-RS	25.344uH±15%/T130-2(TO000062)	
241	HB02094	PCB-RS	DGMFILT14_VER060411	
242	SB00231	transistor-RS	IRFP264PBF(TO-247AC)/(IR)	Q3,Q4,Q5,Q6
243	CB00354	electrolytic capacitor-RS	330UF/200V 105℃ φ18*35.5mm/(NICHICON)	C24,C25,C26,C27,C28,C29
244	CB00355	electrolytic capacitor-RS	330UF/200V 105℃ φ 16*35.5mm/(NICHICON)	C51,C52,C53,C54
245	TC00380	transformer-RS	EE42/20(TO000082)	T3
246	NI04468	creel stand-RS-ACT	FE0252(MILES PLATTS)	
247	TC00387	transformer-RS	EE42/20(TO000082)	
248	HK07314	PC board	P-DGM500-1000/CNTRL17(DGM1500)-DIP	
249	SC00319	crystal oscillator	12.288MHZ	Y1
250	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
251	HK07274	Photodiode	P-photosensitive resistance+φ3lled	D5,D105
252	RH00020	photosensitive resistance	VT90N1	
253	SA00305	L.E.D-RS	φ3 circle red high intensity	D5,D105
254	NI02405	sleeve	φ5*15mm	GU1,GU2
255	NI00258	sleeve	φ5*1000mm	
256	HK07315	PC board	P-DGM500-1000/CNTRL17(DGM1500)-SMD	
257	CI00201	SMD ceramic capacitor 0603	0.01uF/50V ±10%(C1608X7R1H103KT)/TDK	C15,C41,C42,C43
258	CI00185	SMD ceramic capacitor 0603	0.1uF/50V X7R±10%(C1608X7R1H104KT)/TDK	C6/B,C4,C2,C9,C11/B,C14,C17/B,C19/B,C20/B,C21/B,C24/B,C25/B,C27/B,C39,C49,C102,C104,C106/B,C117/B,C119/B,C120/B,C121/B,C124/B,C125/B,C127/B
259	CI00220	SMD ceramic capacitor 0603	220PF/50V C0G ±5%(C1608C0G1H221JT)/TDK	C1,C33,C133
260	CI00234	SMD ceramic capacitor 0603	0.0033uF/50VC0G±5%(C1608C0G1H332JT)/TDK	C13
261	CI00228	SMD ceramic capacitor 0603	0.001uF/50V C0G±5%(C1608C0G1H102JT)/TDK	C5,C28,C105,C128
262	CI00222	SMD ceramic capacitor 0603	330PF/50V C0G ±5%(C1608C0G1H331JT)/TDK	C3,C32,C103,C132
263	CI00224	SMD ceramic capacitor 0603	470PF/50V C0G ±5%(C1608C0G1H471JT)/TDK	C26,C36,C37,C126,C136,C137
264	CI00083	SMD ceramic capacitor 0603	3.9PF/50VC0G±0.25PF(C1608C0G1H3R9CT)/TDK	C23,C123
265	CI00216	SMD ceramic capacitor 0603	82PF/50V C0G ±5%(C1608C0G1H820JT)/TDK	C7,C8,C107,C108
266	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C10,C12
267	CI00105	SMD ceramic capacitor 1206	0.0022uF/50V NPO ±5%	C30,C130
268	CI00125	SMD ceramic capacitor 1210	10uF/16V Y5V-1210(3225)	C16,C31,C40,C116,C131
269	CI00084	SMD ceramic capacitor 0603	4.7PF/50VC0G±0.25PF(C1608C0G1H4R7CT)/TDK	C52/B
270	HB01991	PCB-RS	DGMCNTRL17_VER060411	CS1
271	SE00025	SMD diode	0.45A/85V BAV99	D6,D7,D106,D107
272	SE00026	SMD diode	0.45A/85V BAV70	D4,D9,D10,D11,D109,D110,D111
273	SE00027	SMD diode	0.45A/85V BAW56	D1,D2,D3,D101,D102
274	SE00090	SMD zener diode-RS	1/2W 6.8V(MMSZ5235B)(SOD-123)/(PANJIT)	D12,D14,D112,D114
275	SG00502	SMD integrated circuit-RS	NE5532DR(SO8)/(TI)	U1/B,U2/B,U101/B,U102/B
276	SG00504	SMD integrated circuit-RS-C	ATmega8-16AU(TQFP32)/(ATMEL)	U8/B
277	SG00496	SMD integrated circuit-RS	LF412CDR(SO8)/(TI)	U4/B,U104/B

No.	Part No.	Description	Specification	Remark
278	SG00045	SMD integrated circuit	BU4081BF(SOT73)/(PHI)	U6/B
279	SG00509	SMD integrated circuit-RS	HEF4069UBT(SO14)/(PHI)	U5/B,U105/B
280	SG00001	SMD integrated circuit	TL074CDT(SO14)/(ST)	U3/B,U103/B
281	SE00077	SMD L.E.D-RS	red KPTC-2012EC	D19,D119
282	SE00078	SMD L.E.D-RS	green KPTC-2012SGC	D16,D17,D18
283	CO00137	SMD inductance-RS	1.0mH $\pm 5\%$ (NL453232T-102J)/(TDK)	L1,L101
284	RD00298	SMD precise resistor 1/10W	47.0K $\pm 1\%$ 0603	R17,R19,R22,R34,R41,R87,R117,R119,R134,R141,R187
285	RD00214	SMD precise resistor 1/10W	10.0K $\pm 1\%$ 0603	R1,R5,R14,R24,R28,R30,R32,R39,R47,R48,R49,R50,R51,R52,R53,R54,R57,R55,R56,R69,R114,R128,R130,R132,R139,R147,R148,R149,R150,R151,R152,R153,R154,R155,R156,R157,R169,R201,R202,R219,R301,R302,R319,R1001,R1003
286	RD00282	SMD precise resistor 1/10W	1.00K $\pm 1\%$ 0603	R2,R21,R44,R61,R62,R63,R64,R66,R67,R92,R93,R95,R102,R144,R161,R162,R163,R164,R166,R167
287	RD00224	SMD precise resistor 1/10W	100K $\pm 1\%$ 0603	R31,R35,R58,R59,R131,R135,R158,R159,R208,R308
288	RD00506	SMD precise resistor 1/10W	3.30K $\pm 1\%$ 0603	R23,R27,R36,R81,R82,R136,R181,R182
289	RD00399	SMD precise resistor 1/4W	10.0K $\pm 1\%$ 1206	R215/B,R216/B,R315/B,R316/B
290	RD00320	SMD precise resistor 1/4W	12.0K $\pm 1\%$ 1206	R74/B,R85/B,R174/B,R185/B
291	RD00341	SMD precise resistor 1/10W	4.70K $\pm 1\%$ 0603	R3,R45,R90,R103,R145,R1002
292	RD00201	SMD precise resistor 1/10W	1.50K $\pm 1\%$ 0603	R6,R13,R65,R113,R165
293	RD00292	SMD precise resistor 1/10W	1.00M $\pm 1\%$ 0603	R10,R60,R98,R99,R100,R110,R200,R209,R210
294	RD00392	SMD precise resistor 1/10W	2.20K $\pm 1\%$ 0603	R15,R26,R46,R78,R115,R146,R178
295	RD00322	SMD precise resistor 1/10W	2.70K $\pm 1\%$ 0603	R7,R8,R16,R75,R79,R80,R83,R107,R108,R116,R175,R179,R180,R183
296	RD00301	SMD precise resistor 1/10W	12.1K $\pm 1\%$ 0603	R11,R111
297	RD00218	SMD precise resistor 1/10W	15.0K $\pm 1\%$ 0603	R9,R12,R86,R109,R112,R186
298	RD00339	SMD precise resistor 1/10W	47.0K $\pm 1\%$ 0603	R4,R43,R33,R42,R104,R133,R142,R143
299	RD00390	SMD precise resistor 1/10W	10.0M $\pm 1\%$ 0603	R97,R96
300	RD00592	SMD precise resistor-RS 1/10W	10.0K $\pm 0.1\%$ 0603	R89,R72,R73,R88,R172,R173,R188,R189
301	RD00591	SMD precise resistor-RS 1/10W	82.0K $\pm 0.1\%$ 0603	R70,R71,R170,R171
302	RD00332	SMD precise resistor 1/10W	680K $\pm 1\%$ 0603	R68,R168
303	RD00525	SMD precise resistor 1/10W	33.0K $\pm 1\%$ 0603	R29,R129
304	RD00590	SMD precise resistor-RS 1/10W	1.50K $\pm 0.1\%$ 0603	R76,R77,R176,R177
305	RD00129	SMD fixed resistor 1/4W	0.0 $\pm 5\%$ 1206	C34,C134
306	RD00342	SMD precise resistor 1/10W	1.50M $\pm 1\%$ 0603	R38,R138
307	RD00105	SMD fixed resistor 1/10W	22K $\pm 5\%$ 0603	R94
308	RD00509	SMD fixed resistor 1/10W	24K $\pm 5\%$ 0603	R25
309	SF00030	SMD transistor-RS-ACT	BC817(SOT23)/(PHI)	Q1,Q2/B
310	AE00449	solder material without lead	9308/Sn Ag Cu	
311	CI00278	SMD ceramic capacitor-RS 1206	0.0018uF/50V NPO $\pm 5\%$	C29,C129
312	CI00225	SMD ceramic capacitor 0603	560PF/50V C0G $\pm 5\%$ (C1608C0G1H561JT)/TDK	C22,C122
313	NE16833	lable-RS	DIGIMOD1000_V1.0	
314	NI00017	membrane	0.055*1M	
315	NH00035	bond paper	0.06*1M	
316	NE16888	lable-RS	DIGIMOD1500_V1.0	
317	NI00017	membrane	0.055*1M	
318	NH00035	bond paper	0.06*1M	
319	NE16885	lable-RS	DIGIMOD1500(SM381)_V1.0	
320	NI00034	membrane	0.045*1M	
321	NH00014	bond paper	0.05*1M white	
322	NE16887	lable-RS	POWERMOD_V1.0	
323	NI00015	membrane	0.04*1M	
324	NH00013	bond paper	0.045*1M	
325	HC00941	fuse drawer-RS-ACT	520101(5.2mm) PCB LITTLEFUSE	F1
326	CH00027	laminated capacitor	0.1uF/100V X7R PH5mm	C59,C60,C71,C72
327	HK07395	PC board	P-PSM-50Wd-DIP	
328	SD00074	integrated circuit	L7805CV(TO220)/(ST)	U2

No.	Part No.	Description	Specification	Remark
329	SD00079	integrated circuit	L7915CV(TO220)/(ST)	TR1
330	SD00077	integrated circuit-RS	L7815CV(TO220)/(ST/MOROCCO)	U6
331	SD00066	integrated circuit	L7812CV(TO220)/(ST)	U1
332	SB00015	Pohtotriode	4N33.300	U4
333	SA00223	zener diode	3.6W 36V KA431AZ(TO-92)	U5
334	SA00221	bridge rectifier	2A/600V KBP206	BD1
335	SA00222	diode	2.2A/274V P6KE200A	Z1
336	SA00093	rectifier diode	1N4148 0.5A	D5
337	SB00073	transistor-RS-ACT	2N5550/2N5551(TO92)/(HSMC)	Q1
338	SB00064	transistor-RS-ACT	TIP41C(TO220)/(ST)	Q2
339	SA00130	diode	1A/600V/35ns BYV26C	D4,D3
340	SA00144	diode	3.5A/200V BYV28-200,113	D6,D7
341	SA00127	zener diode	1/2W 47V 1N5261	Z2
342	SA00004	high speed diode	2A/100V BYV27-200,113	D2,D1
343	NI02249	plastic washer	TW-1(TO-220)	
344	NC00005	mica	SB-9500DSP 18*13*0.1t_V1.0	
345	MI00257	heat-sink	25*34.6*12*1.5 DX26	
346	MI00256	heat-sink	25*15*10.6-1PIN SCL-2020	
347	MG00161	screw	M3*6	
348	MG00163	screw	M3*8	
349	MF00037	washer	φ3.2*φ5.5*1t	
350	ME00015	color nut	3m/m	
351	MF00014	washer	φ3*φ6.5*0.5t	
352	HC00172	connector(male)	3P 3.96mm 180°	CON1
353	HC00076	connector(male)	2P 2.5mm 180°	J2,J1
354	HC00082	connector(male)	8P 2.5mm 180°	J3
355	CG00042	Y-type capacitor	0.01uF/400V	C37,C36
356	CB00132	electrolytic capacitor	330uF/25V 105°C LZ φ8*15mm	C46,C45,C1
357	CB00006	electrolytic capacitor	1uF/50V φ4*5mm	C41
358	CB00195	electrolytic capacitor	100uF/16V φ6*7mm	C18,C33
359	CB00034	electrolytic capacitor	33uF/16V φ5*11mm	C43
360	CF00113	metal-film capacitor MPX	0.047uF/275V ±10% CASEC2	C21,C22
361	CB00221	electrolytic capacitor	10uF/63V ±20% φ5*11mm	C34,C35
362	CG00035	Y-type capacitor	4.7nF/400V	C24,C42
363	CG00033	metal oxide varistors	B57237-S100-M	RTH1
364	CB00254	electrolytic capacitor	47uF/100V φ10*12mm 5mm	C31
365	HA01925	jump	10mm	J5,J6,J9
366	HA02249	wire	φ0.6	
367	HA01930	jump	15mm	J4
368	HA02249	wire	φ0.6	
369	HA01921	jump	7mm	J7
370	HA02249	wire	φ0.6	
371	CB00201	electrolytic capacitor	47uF/25V φ6*7mm	C40
372	CB00072	electrolytic capacitor	1000uF/25V φ10*20mm	C29,C28
373	CB00056	electrolytic capacitor	220uF/25V φ8*11mm	C20
374	CN00153	inductance-RS-ACT	3mH UT20-H125NP	L4
375	TC00341	transformer-RS	ETD29_230V	T1
376	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
377	SD00319	integrated circuit-RS	TOP248YN(TO220)/(PI)	U3
378	CB00337	electrolytic capacitor-RS	220uF/400V φ30*31mm	C23
379	HK07396	PC board	P-PSM-50Wd-SMD	
380	RD00015	SMD fixed resistor 1/8W	560Ω ±5% 0805	R13
381	RD00141	SMD fixed resistor 1/4W	6.8KΩ ±5% 1206	R6
382	RD00025	SMD fixed resistor 1/8W	3.3KΩ ±5% 0805	R12
383	RD00235	SMD precise resistor 1/8W	4.70KΩ ±1% 0805	R15
384	RD00515	SMD precise resistor 1/4W	4.7Ω ±1% 1206	R11

No.	Part No.	Description	Specification	Remark
385	RD00254	SMD precise resistor 1/4W	68.0KΩ ±1% 1206	R80
386	RD00149	SMD fixed resistor 1/4W	220KΩ ±5% 1206	R4,R2,R3
387	RD00142	SMD fixed resistor 1/4W	10KΩ ±5% 1206	R10,R100
388	RD00146	SMD fixed resistor 1/4W	47KΩ ±5% 1206	R8
389	CI00100	SMD ceramic capacitor 0805	0.1uF/50V X7R ±10%	C13,C11
390	CI00028	SMD ceramic capacitor 0805	0.01uF/50V Y5V	C12
391	CI00154	SMD ceramic capacitor 1206	0.1uF/100V X7R ±10%	C6,C2,C7,C5,C8,C17,C16
392	RD00585	SMD precise resistor -RS	820.00Ω ±1% 0805	R14
393	RD00617	SMD fixed resistor-RS 1/4W	2.0MΩ ±5% 1206	R1
394	HB02120	PCB-RS	PSM-50Wd_VER060821	
395	RD00521	SMD fixed resistor 1/8W	750Ω ±5% 0805	R7
396	MI03891	separating shade-RS	XM-24 0.33t*37.6*37.6*28.3_V1.0	
397	MJ00116	tinplate	0.33*1000*1000 2.59kg	
398	MI03847	heat-sink-RS	2.9*77*30*15_V1.0	
399	HK07692	PC board	P-APM120 MONO-DIP	
400	RC00366	potentiometer	C500KΩRD12L123A43D-500K15C*2(SAS1);30F-C	VR5,VR15,VR26,VR37
401	RC00358	potentiometer	B50KΩ-RD09F113A223-50K2BT(SAS1);30F-C	VR2,VR3,VR4,VR13,VR14,VR16,VR24,VR25,VR27,VR35,VR36,VR38
402	RC00465	potentiometer	B5KΩ RD09F113A225-5K2BT(SAS1);30F-C	VR7,VR18,VR29,VR40
403	SB00062	transistor-RS-ACT	BC337-25(TO92)/(PHI)	Q1
404	RC00284	slide potentiometer	D10KΩ RF6011YP600F-10KD(SAS1)	VR6,VR17,VR28,VR39
405	SA00071	L.E.D	φ3 green LVG2340/A	LD11,LD13,LD15,LD17
406	HC00125	MIC jack-RS	JY-6351G-02-250	X5,X6,X7,X8,X9,X10,X11,X12
407	RC00356	potentiometer	Z10KΩ RD09F1130042-10KZ(SAS1);30F	VR1,VR12,VR23,VR34
408	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW8,SW9,SW10,SW11,SW12,SW13,SW14,SW15,SW16,SW17,SW18,SW19,SW20
409	SA00053	L.E.D	φ3 round(red)long foot 26mm	LD5,LD6,LD7,LD8,LD9
410	HC00126	balance MIC jack-RS	JY-5042-030G female plug 180°	X1,X2,X3,X4
411	HI00380	slide switch-RS	2stage 3P 12mm SBA-12-12	SW33
412	RC00359	potentiometer	W50KΩ RD09F113A224-50K4BT(SAS1);30F-C	VR8,VR9,VR10,VR11,VR19,VR20,VR21,VR22,VR30,VR31,VR32,VR33,VR41,VR42,VR43,VR44
413	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD1,LD2,LD3,LD4
414	SA00073	L.E.D	φ3 yellow LVY2340/A	LD10,LD12,LD14,LD16
415	NI02384	LED spacer support	LEDS-4 4mm	
416	NI01773	LED spacer support	LEDS-13	
417	NI04453	LED spacer support-RS	LEDS-21 21mm	LD9
418	HC00982	connector-RS	2.0mm 180° 2*10P 4/9.4	CN2
419	HC00984	connector-RS	2.0mm 180° 2*2P 4/9.4	CN1
420	HC00983	connector-RS	2.0mm 180° 2*4P 4/9.4	CN3
421	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
422	HK07693	PC board	P-APM120 MONO-SMD	
423	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152
424	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R61,R62,R63,R64,R65,R66,R67,R68,R126,R127,R128,R129,R234
425	RD00334	SMD precise resistor 1/10W	11.0KΩ ±1% 0603	R25,R26,R27,R28,R29,R30,R31,R32
426	RD00102	SMD fixed resistor 1/10W	12KΩ ±5% 0603	R219,R221,R223,R225
427	RD00218	SMD precise resistor 1/10W	15.0KΩ ±1% 0603	R218,R220,R222,R224
428	RD00293	SMD precise resistor 1/10W	17.4KΩ ±1% 0603	R145,R146,R148,R149,R158,R160,R161,R162,R171,R172,R173,R174,R184,R185,R186,R187
429	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R73,R74,R75,R76
430	RD00201	SMD precise resistor 1/10W	1.50KΩ ±1% 0603	R106,R107,R108,R109,R110,R111,R112,R113
431	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R130,R131,R132,R133
432	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R81,R82,R83,R84,R85,R86,R87,R88,R89,R141,R142,R143,R144
433	RD00105	SMD fixed resistor 1/10W	22KΩ ±5% 0603	R90,R91,R92,R93

No.	Part No.	Description	Specification	Remark
434	CI00266	SMD ceramic capacitor-RS 06	22PF/50V NPO ±5%	C37,C38,C39,C40,C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C109,C110,C111,C112,C113,C114,C115,C116
435	RD00106	SMD fixed resistor 1/10W	27KΩ ±5% 0603	R139,R140,R152,R153,R165,R166,R178,R179
436	RD00265	SMD fixed resistor 1/10W	27Ω ±5% 0603	R41,R42,R43,R44
437	RD00089	SMD fixed resistor 1/10W	2.7KΩ ±5% 0603	R226,R227,R228,R229,R230,R231,R232,R233
438	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10,TR11,TR12,TR13,TR14,TR15,TR16
439	RD00406	SMD precise resistor 1/10W	3.60KΩ ±1% 0603	R33,R34,R35,R36,R37,R38,R39,R40
440	RD00092	SMD fixed resistor 1/10W	3.9KΩ ±5% 0603	R122,R123,R124,R125
441	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1,D2,D3,D4,D5,D6,D7,D8,D9,D10,D11,D12,D13,D14,D15,D16,D17,D18
442	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14
443	CI00063	SMD ceramic capacitor 0603	470PF/50V NPO ±5%	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12
444	RD00339	SMD precise resistor 1/10W	47.0KΩ ±1% 0603	R210,R211,R212,R213
445	CI00268	SMD ceramic capacitor-RS 06	47PF/50V NPO ±5%	C29,C30,C31,C32
446	RD00298	SMD precise resistor 1/10W	47.0Ω ±1% 0603	R1,R2,R3,R4,R5,R6,R7,R8
447	RD00371	SMD precise resistor 1/10W	51.1KΩ ±1% 0603	R9,R10,R11,R12,R13,R14,R15,R16
448	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R150,R151,R163,R164,R175,R176,R188,R189,R206,R207,R208,R209,R214,R215,R216,R217
449	RD00210	SMD precise resistor 1/10W	5.11KΩ ±1% 0603	R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60
450	RD00095	SMD fixed resistor 1/10W	5.6KΩ ±5% 0603	R114,R115,R116,R117,R118,R119,R120,R121
451	RD00113	SMD fixed resistor 1/10W	62KΩ ±5% 0603	R69,R70,R71,R72
452	RD00539	SMD precise resistor 1/10W	68.0KΩ ±1% 0603	R94,R95,R96,R97
453	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R77,R78,R79,R80,R134,R135,R136,R137,R138,R147,R159,R177,R190,R191,R192,R193,R194,R195,R196,R197,R98,R99,R100,R101,R102,R103,R104,R105
454	AE00449	solder material without lead	9308/Sn Ag Cu	
455	HK07694	PC board	P-APM120 MONO-AI	
456	HB02185	PCB-RS	APM120 MONO_REV1.20_VER061103	
457	CB00238	electrolytic capacitor	0.22uF/50V φ5*11mm	C57,C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C68
458	CB00255	electrolytic capacitor	1000uF/10V φ8*11mm 5mm	C33,C34,C35,C36
459	RA01112	fixed resistor 1/4W	100Ω	R235
460	CB00051	electrolytic capacitor	100uF/63V φ10*12mm	C153
461	RA01115	fixed resistor 1/4W	20KΩ	R440
462	CB00242	electrolytic capacitor	22uF/35V φ5*11mm	C13,C14,C15,C16,C17,C18,C19,C20
463	CC00067	mylar capacitor	0.0027uF/100V 10%	C121,C122,C123,C124
464	CC00059	mylar capacitor	0.033uF/100V 3%	C93,C94,C95,C96,C97,C98,C99,C100
465	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92
466	CB00334	electrolytic capacitor-RS	47uF/50V φ6.3*11mm	C21,C22,C23,C24,C25,C26,C27,C28
467	CC00077	mylar capacitor	0.0047uF/100V 3%	C117,C118,C119,C120
468	RA01262	precise resistor 1/4W	6.81KΩ	R17,R18,R19,R20,R21,R22,R23,R24
469	CC00079	mylar capacitor	0.0068uF/100V 3%	C101,C102,C103,C104,C105,C106,C107,C108
470	HA01919	jump	5mm	J1,J2,J3,J4,J5,J6,J7,J8,J9,J10,J11,J12,J13,J14,J15,J16,J17,J18,J19,J20,J21,J22,J23,J24,J25,J26,J27,J28,J29,J30,J31,J32,J33,J34,J35,J36,J37,J38,J39,J40,J41,J42,J43,J44,J45,J46,J47,J48,J49,J50,J51,J52,J53,J54,J55,J56,J57,J58,J59,J60,J61,J62,J63,J64,J65,J66,J67,J68,J69,J70,J71,J72,J73,J74,J75,J76,J77,J78,J79,J80,J81,J83,J84,J85,J86,J87,J88,J89,J90,J91,J92,J93,J94,J95,J96,J97,J98,J99,J100,J101,J143,J218,J219
471	HA02249	wire	φ0.6	
472	HA01930	jump	15mm	J196,J201,J202,J203,J204,J205,J206,J207,J208,J209,J210,J211,J212,J213,J214,J215,J216,J217,J222,J223
473	HA02249	wire	φ0.6	

No.	Part No.	Description	Specification	Remark
474	HA01935	jump	12.5mm	J138,J162,J176,J189,J190,J191,J192,J193,J194,J197,J198,J199,J200
475	HA02249	wire	φ0.6	
476	HA01925	jump	10mm	J149,J150,J151,J152,J153,J154,J155,J156,J157,J158,J159,J160,J161,J164,J166,J167,J168,J169,J170,J171,J172,J173,J174,J175,J177,J178,J179,J180,J181,J182,J183,J184,J185,J186,J187,J188,J220,J221
477	HA02249	wire	φ0.6	
478	HA02441	jump	7.5mm	J82,J102,J103,J104,J105,J106,J107,J108,J109,J110,J111,J112,J113,J114,J115,J116,J117,J118,J119,J120,J121,J122,J123,J124,J125,J126,J127,J128,J129,J130,J131,J132,J133,J134,J135,J136,J137,J139,J140,J141,J142,J144,J145,J146,J147,J148,J163,J165,J195
479	HA02249	wire	φ0.6	
480	HK07695	PC board	P-APM120 STEREO-DIP	
481	CC00041	mylar capacitor	0.12uF/100V 10%	C251,C252
482	HK04376	PC board	P-12VMETER-DIP(AMX-220)	CN7,CN8
483	HC00698	connector	2.0 90° 17P(gold-pated)2.5/9.5mm 2mm	CN6
484	HK04377	PC board	P-12VMETER-SMD(AMX-220)	
485	HB01285	PCB	12VMETER(2*5)_VER040611	
486	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R2
487	RD00076	SMD fixed resistor 1/10W	330Ω ±5% 0603	R4,R6
488	RD00078	SMD fixed resistor 1/10W	470Ω ±5% 0603	R3,R5,R7
489	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R8
490	RD00348	SMD fixed resistor 1/10W	620Ω ±5% 0603	R9
491	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R10
492	RD00087	SMD fixed resistor 1/10W	2.0KΩ ±5% 0603	R11
493	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R12
494	RD00115	SMD fixed resistor 1/10W	82KΩ ±5% 0603	R13
495	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C2
496	SG00210	SMD integrated circuit	LM339DT/(ST)	U1,U2,U3
497	AE00449	solder material without lead	9308/Sn Ag Cu	
498	RD00346	SMD fixed resistor 1/10W	56Ω ±5% 0603	R1
499	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
500	HC00125	MIC jack-RS	JY-6351G-02-250	X1,X2,X3,X4,X5,X6,X7,X8,X9,X10,X12,X13,X14,X15,X16,X17,X18,X21,X22,X23,X24,X25,X28
501	RC00626	potentiometer-RS	B100KΩ RD12L12C0217-100K3B*2(SAS);15F	VR87
502	RC00360	potentiometer	B50KΩ RD12L12CA23A-50K3BT*2(SAS1);30F-C	VR51,VR52,VR53,VR54,VR62,VR63,VR64,VR65
503	RC00465	potentiometer	B5KΩ RD09F113A225-5K2BT(SAS1);30F-C	VR56,VR67
504	SD00007	integrated circuit	BA15218N(M5218L)(SIP8)/(ROHM)	U47,U48
505	SB00062	transistor-RS-ACT	BC337-25(TO92)/(PHI)	Q1
506	HC00253	connector(male)	2P 2.0mm 180°	CN9,CN10
507	HC00070	connector(male)	6P 2.5mm 90°	CN4
508	RC00285	slide potentiometer-dual unit	D10KΩ RF60112P600G-10KD*2(SAS1)	VR55,VR66,VR86,VR93
509	RC00284	slide potentiometer	D10KΩ RF60111YP600F-10KD(SAS1)	VR88,VR89,VR90,VR91
510	SA00052	L.E.D	φ3 round(green)long foot 26	LD23,LD25,LD26,LD27,LD28,LD29,LD30,LD31,LD32,LD33,LD34,LD35,LD36,LD37,LD38,LD39,LD40,LD41,LD42,LD43,LD44
511	SA00071	L.E.D	φ3 green LVG2340/A	LD6,LD8,LD9,LD10,LD11,LD12,LD13,LD14,LD15,LD16,LD17,LD18,LD19
512	HC00887	connector(male)-RS	10P 2.0mm 180°(A2004WV-2*10P)	CN2
513	HC00932	connector(male)-RS	4P 2.0mm 180°(A2004WV-2*4P)	CN3,CN6
514	HC00473	connector-RS-ACT	2.45mm 180° 2*8P B25-2*8BG1(B)H=5mm	CN1
515	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW27,SW28,SW31,SW32,SW41,SW44,SW45,SW46
516	HI00238	push-button switch-RS	2 6P PS-92 26A(NON-LOCK)	SW11
517	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW25,SW26,SW29,SW30,SW33,SW34,SW35,SW36,SW38,SW39,SW47,SW37
518	SA00053	L.E.D	φ3 round(red)long foot 26mm	LD3,LD4,LD20,LD21,LD22

No.	Part No.	Description	Specification	Remark
519	HI00161	relay	RY-5W-K,5V	RL1
520	HC00403	RCA jack	SCP6873NS3232T2 4P	X11
521	HI00195	rotary switch	SDB161PVB15.5F-1-4-16-16PC	EN1,EN2
522	HI00379	slide switch-RS	2stage 6P 6mm SKA-22-06B	SW43
523	HI00381	slide switch-RS	3stage 8P 6mm SKA-23-06B	SW42
524	HI00384	slide switch-RS	2stage 3P 4mm SBA-12CN-04RB	SW40
525	RC00625	slide potentiometer-RS	W100KΩ RF30H12KD107-100K(4B)*2(SAS)	VR97,VR98,VR99,VR100,VR101,VR102,VR103,VR104,VR105
526	RC00359	potentiometer	W50KΩ RD09F113A224-50K4BT(SAS1);30F-C	VR57,VR58,VR59,VR60,VR68,VR69,VR70,VR71,VR72,VR73,VR74,VR76,VR77,VR78,VR80,VR81,VR82,VR94,VR95,VR96
527	RC00361	potentiometer	W50KΩ RD12L12CA60B-50K4BT*2(SAS1);30F-C	VR50,VR61,VR75,VR79,VR83,VR84,VR85,VR92
528	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD1,LD2,LD24,LD46,LD47
529	SA00073	L.E.D	φ3 yellow LVY2340/A	LD5,LD7
530	HK07637	PC board	P-DSP-PRE-DIP(APM120)	CN5
531	HC00697	connector	2.0 90° 16P(gold-pated)2.5/9.5mm 2mm	CN1
532	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
533	HK07638	PC board	P-DSP-PRE-SMD(APM120)	
534	HB01916	PCB-RS	DSP-PRE_VER051020	
535	SG00306	SMD integrated circuit	LM393DR(TI)/(MEXICO)	U47
536	SG00469	SMD integrated circuit-RS	SN74HC109DR(SO16)/(TI)	U48
537	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	U49
538	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR17
539	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R420,R421
540	SE00007	SMD rectifier diode	RB400D(D3A)	D10
541	SE00009	SMD rectifier diode	DAN202K/T-146	D16
542	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D7,D15
543	SG00122	SMD integrated circuit-RS-ACT	NJM4580M-TE3(SOP8)/(JRC)	U44,U45,U46
544	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R1
545	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R426
546	RD00083	SMD fixed resistor 1/10W	1.0KΩ ±5% 0603	R418
547	RD00099	SMD fixed resistor 1/10W	8.2KΩ ±5% 0603	R422,R423
548	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R397,R398,R399,R400,R401,R402,R403,R404,R405,R406,R407,R408,R410,R411,R412,R413,R414
549	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R416
550	RD00098	SMD fixed resistor 1/10W	7.5KΩ ±5% 0603	R419
551	RD00111	SMD fixed resistor 1/10W	47KΩ ±5% 0603	R415
552	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R424
553	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R417
554	RD00124	SMD fixed resistor 1/10W	820KΩ ±5% 0603	R431
555	RD00126	SMD fixed resistor 1/10W	2.2MΩ ±5% 0603	R425
556	CI00129	SMD ceramic capacitor 0603	0.0015uF/50V X7R ±10%	C345,C346,C347
557	CL00002	SMD tantalum capacitor-RS-ACT	1.0uF/16V case A	C352,C353
558	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C348,C349
559	CL00006	SMD tantalum capacitor-RS-ACT	10uF/16V case B2	C350,C351
560	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C329,C330,C331,C332
561	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C333,C334,C336,C337,C338,C339,C340,C341
562	SE00085	SMD zener diode-RS	1/2W 2.4V ZMM55-C2V4	ZD1,ZD2
563	AE00449	solder material without lead	9308/Sn Ag Cu	
564	SG00243	SMD integrated circuit	NE555DR(SO8)/(TI)	U43
565	NI02384	LED spacer support	LEDS-4 4mm	
566	NI01773	LED spacer support	LEDS-13	
567	HA04363	wire-RS	2P-2P 300mm UL1007 26AWG red/white	
568	HA00829	wire-RS	304mm brown L3R3	
569	HA00010	wire-RS	150mm black L5R5	
570	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
571	HK07696	PC board	P-APM120 STEREO-SMD	
572	RD00129	SMD fixed resistor 1/4W	0.0Ω ±5% 1206	R488

No.	Part No.	Description	Specification	Remark
573	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R466,R467
574	RD00224	SMD precise resistor 1/10W	100KΩ ±1% 0603	R464,R465
575	CI00059	SMD ceramic capacitor 0603	100PF/50V NPO ±5%	C232,C233
576	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C169,C170,C171,C172,C173,C174,C175,C176,C177,C178,C179,C180,C181,C182,C183,C184,C185,C186,C187,C188,C189,C190,C191,C192,C193,C194,C195,C196,C197,C198,C199,C200,C201,C202,C203,C204,C205,C206,C207,C208,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C219,C220,C221,C222,C225,C226,C227,C228,C230,C231,C288,C289,C291,C292,C293,C294,C229
577	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R87,R88,R89,R90,R91,R92,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R135,R136,R137,R138,R139,R140,R142,R143,R144,R146,R147,R148,R149,R150,R151,R152,R153,R154,R155,R233,R234,R304,R305,R329,R355,R356,R376,R388,R389,R455,R484,R485,R486,R487,R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30,R31,R32,R33,R34,R35,R36,R37,R38,R39,R40,R308,R314,R331,R336,R368,R369,R382,R383,R386,R387,R390,R391,R475,R476,R477,R478
578	RD00275	SMD precise resistor 1/10W	110Ω ±1% 0603	R444,R445
579	RD00334	SMD precise resistor 1/10W	11.0KΩ ±1% 0603	R501,R502
580	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R342,R343,R344,R345,R346,R347,R348,R349,R350,R351,R352,R357,R358,R359,R360,R363,R364,R365
581	RD00007	SMD fixed resistor 1/8W	120Ω ±5% 0805	R361,R362,R366,R367
582	RD00102	SMD fixed resistor 1/10W	12KΩ ±5% 0603	R206,R207,R208,R209,R223,R224,R227,R228
583	RD00118	SMD fixed resistor 1/10W	150KΩ ±5% 0603	R446,R447
584	RD00218	SMD precise resistor 1/10W	15.0KΩ ±1% 0603	R221,R222,R225,R226,R472,R473,R474,R511
585	RD00276	SMD precise resistor 1/10W	169Ω ±1% 0603	R434,R435
586	RD00293	SMD precise resistor 1/10W	17.4KΩ ±1% 0603	R273,R274,R275,R276,R277,R278,R279,R280,R281,R282,R283,R284,R285,R286,R287,R288,R289,R290,R291,R292,R296,R297,R298,R299,R300,R301,R302,R303,R306,R307,R309,R310,R317,R318,R334,R335,R337,R338,R339,R377
587	RD00104	SMD fixed resistor 1/10W	18KΩ ±5% 0603	R503,R504,R505,R506
588	RD00062	SMD fixed resistor 1/10W	18Ω ±5% 0603	R438,R439,R440,R441,R442,R443
589	RD00420	SMD precise resistor 1/10W	19.1KΩ±1% 0602	R371,R373,R374
590	RD00282	SMD precise resistor 1/10W	1.00KΩ ±1% 0603	R319,R320
591	RD00201	SMD precise resistor 1/10W	1.50KΩ ±1% 0603	R160,R161,R219,R220
592	RD00086	SMD fixed resistor 1/10W	1.8KΩ ±5% 0603	R162,R163,R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R177
593	RD00292	SMD precise resistor 1/10W	1.00MΩ ±1% 0603	R198,R199,R200,R201,R202,R203,R204,R205
594	RD00318	SMD precise resistor 1/10W	200KΩ ±1% 0603	R186,R187,R188,R189
595	RD00277	SMD precise resistor 1/10W	200Ω ±1% 0603	R428,R429,R430,R431,R432,R433
596	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R50,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80,R81,R82,R83,R84,R85,R86,R141,R145,R239,R240,R241,R242,R246,R247,R295,R353,R354,R384,R385,R452,R453
597	RD00119	SMD fixed resistor 1/10W	220KΩ ±5% 0603	R178,R179,R180,R181
598	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R436,R437,R457,R458
599	RD00105	SMD fixed resistor 1/10W	22KΩ ±5% 0603	R156,R157,R182,R183,R184,R185,R468,R469,R470,R471
600	CI00266	SMD ceramic capacitor-RS 0603	22PF/50V NPO ±5%	C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C167,C168,C269,C284,C285,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36,C37,C38,C39,C40

No.	Part No.	Description	Specification	Remark
601	RD00063	SMD fixed resistor 1/10W	22Ω ±5% 0603	R497,R498
602	RD00074	SMD fixed resistor 1/10W	270Ω ±5% 0603	R489,R490
603	RD00106	SMD fixed resistor 1/10W	27KΩ ±5% 0603	R41,R42,R43,R44,R45,R46,R47,R48,R237,R238,R244,R245
604	RD00203	SMD precise resistor 1/10W	2.00KΩ ±1% 0603	R481
605	RD00089	SMD fixed resistor 1/10W	2.7KΩ ±5% 0603	R49,R51,R52,R53,R54,R55,R56,R57
606	RD00268	SMD fixed resistor 1/10W	300KΩ ±5% 0603	R248,R249
607	CI00062	SMD ceramic capacitor 0603	330PF/50V NPO ±5%	C277,C278
608	CI00267	SMD ceramic capacitor-RS 0603	33PF/50V NPO ±5%	C295,C296,C297,C298,C299,C300,C301,C302
609	RD00304	SMD fixed resistor 1/10W	33Ω ±5% 0603	R499,R500
610	RD00407	SMD precise resistor 1/10W	36.0KΩ ±1% 0603	R378,R379,R380,R381
611	SF00053	transistor	MMBT3906(SOT23)/(PHI)	TR29,TR30,TR31
612	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D2,D3,D8,D9,D10,D11,D12
613	SE00016	SMD zener diode	1/2W 5.1V(RLZ5.1B) LL-34	ZD4,ZD5,ZD6,ZD7
614	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U20,U21,U22,U23,U24,U25,U26,U27,U28,U29,U30,U31,U32,U33,U34,U35,U36,U37,U38,U39,U40,U41,U42,U43,U44,U45,U46,U49,U50,U57,U58,U59
615	RD00078	SMD fixed resistor 1/10W	470Ω ±5% 0603	R456
616	RD00339	SMD precise resistor 1/10W	47.0KΩ ±1% 0603	R210,R211,R212,R213,R214,R215,R216
617	RD00298	SMD precise resistor 1/10W	47.0Ω ±1% 0603	R482,R483,R495,R496
618	RD00223	SMD precise resistor 1/10W	49.9KΩ ±1% 0603	R372
619	RD00341	SMD precise resistor 1/10W	4.70KΩ ±1% 0603	R448,R449,R450,R451
620	RD00209	SMD precise resistor 1/10W	4.99KΩ ±1% 0603	R370
621	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R462,R463
622	RD00471	SMD precise resistor 1/10W	56.2KΩ ±1% 0603	R322,R323,R324,R325,R326,R327,R332,R333,R340,R341
623	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R229,R230,R231,R232,R235,R236,R243,R250,R251,R252,R253,R254,R255,R256,R257,R258,R259,R260,R261,R262,R263,R264,R265,R266,R267,R268,R269,R270,R271,R272,R293,R294,R311,R312,R313,R315,R316,R328,R330,R375
624	RD00297	SMD precise resistor 1/10W	60.4Ω ±1% 0603	R491,R492,R493,R494
625	CI00064	SMD ceramic capacitor 0603	680PF/50V NPO ±5%	C237,C238
626	RE00011	SMD resistor networks 1/16W	680Ω*4 ±5% 8P 0603	AR1,AR2
627	RD00114	SMD fixed resistor 1/10W	68KΩ ±5% 0603	R58,R59,R392,R393,R394,R395,R396,R397,R398,R399,R400,R401,R402,R403,R404,R405,R406,R407,R408,R409
628	RD00394	SMD precise resistor 1/10W	68.0Ω ±1% 0603	R507,R508,R509,R510
629	RD00096	SMD fixed resistor 1/10W	6.2KΩ ±5% 0603	R410,R411,R412,R413,R414,R415,R416,R417,R418,R419,R420,R421,R422,R423,R424,R425,R426,R427
630	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R190,R191,R192,R193,R194,R195,R196,R197,R158,R159,R217,R218
631	RD00328	SMD precise resistor 1/10W	8.66KΩ ±1% 0603	R479,R480
632	SF00031	SMD transistor-RS-ACT	BC847B(SOT23)/(PHI)	TR11,TR12,TR13,TR14,TR15,TR16,TR17,TR18,TR19,TR20,TR21,TR22,TR23,TR24,TR25,TR26,TR27,TR28
633	SE00008	SMD rectifier diode	DA204K/T-146	D1
634	AE00449	solder material without lead	9308/Sn Ag Cu	
635	HK07697	PC board	P-APM120 STEREO-AI	
636	HB02186	PCB-RS	APM120 STEREO_REV 1.10_VER060828	
637	RA01112	fixed resistor 1/4W	100Ω	R321
638	CB00120	electrolytic capacitor	100uF/16V φ5*11mm	C80,C81,C82,C83
639	CC00060	mylar capacitor	0.1uF/100V 3%	C245,C246,C247,C248
640	CB00189	electrolytic capacitor	1.0uF/50V φ4*5mm	C241,C242
641	RA01260	fixed resistor 1/4W	120Ω	R454,R459
642	CC00075	mylar capacitor	0.012uF/100V 3%	C141,C142,C143,C145,C146,C148,C263,C264,C265,C266
643	CC00076	mylar capacitor	0.015uF/100V 3%	C253,C254,C255,C256,C257,C258
644	CF00238	metallized polyester-RS	0.18uF/63V 5% CASE01	C249,C250
645	CC00052	mylar capacitor	0.001uF/100V 10%	C151,C153
646	CC00068	mylar capacitor	0.027uF/100V 10%	C261,C262
647	CC00058	mylar capacitor	0.0033uF/100V 3%	C155,C156,C157,C159,C160,C161,C270,C271

No.	Part No.	Description	Specification	Remark
648	CB00268	electrolytic capacitor	330uF/16V $\phi 8 \times 11$ mm 5mm	C279
649	CC00063	mylar capacitor-RS	0.0039uF/100V 10%	C272,C273
650	CB00018	electrolytic capacitor	4.7uF/25V $\phi 4 \times 7$ mm	C274,C275,C276
651	CC00078	mylar capacitor	0.047uF/100V 3%	C234,C235,C236,C290,C163,C164,C165,C166
652	CB00246	electrolytic capacitor	0.47uF/50V $\phi 4 \times 7$ mm	C243,C244
653	CB00194	electrolytic capacitor	47uF/25V $\phi 5 \times 11$ mm	C223,C224,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C94,C95,C96,C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112,C113,C114,C115,C116,C117,C118,C119,C120,C121,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C137,C138,C139,C140,C280,C281,C282,C283,C286,C287,C303,C304,C305,C306
654	CB00260	electrolytic capacitor	47uF/35V $\phi 5 \times 11$ mm 2.5mm	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20
655	CC00071	mylar capacitor	0.068uF/100V 10%	C259,C260
656	CC00072	mylar capacitor	0.0082uF/100V 10%	C267,C268
657	CB00238	electrolytic capacitor	0.22uF/50V $\phi 5 \times 11$ mm	C149,C150,C239,C240
658	CF00138	metal-film capacitor MSC	0.012uF/63V $\pm 5\%$ CASE01	C144,C147
659	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10
660	CF00052	metal-film capacitor	0.0033uF/63V 5% CASE01	C158,C162
661	CF00001	metal-film capacitor MSC	0.001uF/63V 5% CASE01	C152,C154
662	HK07709	PC board	P-APM120SPEAK	
663	HB02230	PCB-RS	APM120SPEAK_VER060721	
664	HC00371	MIC jack	SCJ-0658-1-Y	
665	MJ00942	fixed bracket	CS12/600_V1.3	
666	MJ00061	iron board	1*2135*1220 20.45kg	
667	HC00949	speaker socket-RS-C	LD4015	
668	HA04876	wire-RS	4P 160*2/150*2mm UL1015 16AWG	
669	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
670	HK07707	PC board	P-APM120-OUTPUT CN	
671	HC00945	terminal block-RS	2ESDCR-02P PH5.08mm	JACK5,JACK6
672	HC00947	terminal block-RS	2ESDCR-05P PH5.08mm	JACK8,JACK9
673	HC00077	connector(male)	3P 2.5mm 180°	CN1,CN4
674	HC00174	connector(male)	4P 3.96mm 180°	CN5
675	HB02257	PCB-RS	DIGMOD OUTPUT-JK_VER061107	
676	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
677	NB05284	carton-RS	APM160 ALTO_V1.0	
678	NB05254	carton-RS	APM160 ALTO_V1.0	
679	NA00659	cardboard-RS	APM160 up_V1.0	
680	NA00658	cardboard-RS	APM160 down_V1.0	
681	HA05019	wire-RS	2P/1P 160mm UL1007 24AWG	
682	MG00645	copper nut	M3*16*0.5PH_V1.0	