
# AMIS250 Series Service Manual

## Product Description
## Set-Up/Test Procedures
## Component Lists
## Full Schematics
## PCB Overlays

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# AMIS250
# Circuit Description

The AMIS250 mixer amplifier is designed for commercial installations. It operates on [230/240 VAC, 50Hz] (240V version)/[115VAC, 60Hz] (115V version) and may be desk or rack mounted (rack mount kit supplied). The AMIS250 delivers 250 watts into a load of 4 ohms, [70 or 100 volt line] (240V version)/ [25 or 70 volt line] (115V version). As standard, the AMIS250 is supplied self standing with rubber feet. It features 6 microphone/line input channels as well as a host of unique features including multiple levels of muting and 24 VDC make the AMIS250 a very flexible amplifier. [The 115V version also has a transformer balanced, 600 ohm telephone input] (115V version).

## Power Switch

This switch controls the switching of AC power to the amplifier. A blue 'On' LED will indicate whether the amplifier is switched on or off. This switch will not switch DC power on or off in DC operation. In DC operation mode, the amplifier is always on and the blue power LED will always be illuminated.

## Protect LED

A feature of the AMIS250 is high temperature protection. In most applications, the internal cooling fan will most probably never switch on. When used with demanding speaker loads or in difficult operating environments, the fan may regularly switch on to cool the amp down and then switch off again. This switching on and switching off is quite normal. The "Protect" function is there to protect the amplifier from high temperature problems which would only occur if the fan stopped working or became clogged up. In this very rare occurrence, the amplifier will shut down and the protect LED will illuminate. The amplifier will automatically restart once it's internal temperature has fallen below the fan switch on temperature.

The fan switch on temp is preset at 60degC by the trimmer on the power amp board R58 (10k) and the NTC R25 (10k@25degC).
The high temperature trip point is set at the factory by trimmer R58. Turning the trim pot clockwise will cause the amplifier to trip and mute at a lower temperature.

## AC Power Inlet

The operating voltage is [230/240 VAC @ 50 Hz] (240V version)/[115 VAC @ 60Hz] (115V version). The 3 pin IEC power inlet is located on the bottom left of the rear panel and accepts a standard mains power lead fitted with an IEC connector. Before plugging in a power lead, please check the rear panel of the amplifier to ensure that the voltage switch is set correctly for your part of the world.

The inlet is equipped with an in-built AC fuse holder fitted with a [6.3 amp] (240V version)/[8 amp] (115V version) fuse plus a spare within the holder. Power consumption is 550 VA.

## 24 Volt DC Power Inlet

The AMIS250 features optional 24VDC power to run off a battery supply if required. This is connected via the rear terminal strip. The front panel Power Switch will not switch DC power 'on' or 'off' in DC operation. In this mode the amplifier is always 'on'.

## [230V/240V Slide Switch] (240V version)

The operating voltage of the amplifier is user selectable between 230V and 240V via a slide switch located on the right of the AC inlet. This switch should be set to match the AC voltage of your country. The mains transformer is wound with a 230V winding plus a 10V winding internally connected.

## Power Amp

The power amp is a push pull single supply amplifier driving a centre tapped transformer. The amplifier has an overall gain of approximately x10 and the transformer has a turns ratio of approximately [x7] (240V version)/[x5] (115V version). The sensitivity of the amp is approximately 2.7V.

A particularly good aspect of this amplifier is the current limiting circuit. The sensing circuit is a standard rail load line limiting circuit but it is the drive circuit that is important. As transistors V12 & V6 (BC640) turn on transistor V11 (BC639), it pulls bias current away from the amp through diodes D1 & D4 (BAV21) and pulls drive away from the op amp IC1 (LM1458) through the diode/resistor pair D2/R12 (BAV21/3k3) & D3/R23. Individually each topology acts to limit the current in the amp but it is the combination of the two and the fine tuning of there interaction that produces the characteristic soft limiting without the harsh crossover distortion. It is not until the amp is in hard clip does the amp produce the high freq crossover distortion. This makes for nice sounding current limit that allows for soft distorted peaks to get through but limits continuous excessive current while maintaining thermal stability.

## Speaker Output Terminal Strip

## (240V version)

The screw terminals on the left hand side of the strip allow access to the direct speaker outputs of the amplifier. Reading from left to right the terminals are:

| | |
|---|---|
| COM | Common or "-" for low impedance speaker loads (4 ohms) |
| 4 | Positive "+" for 4 ohm speaker loads (use with common) |
| | |
| COM | Common or "-" for 70v or100v speaker loads (maximum load of 40 ohms at 100v) |
| 70 | Positive "+" for 70v line speaker loads (use with common) |
| 100 | Positive "+" for 100v line speaker loads (use with common) |

Please ensure that the correct "Common" is used. Low impedance and 70/100v loads can be used simultaneously but please pay careful attention to the overall speaker load.
Note: The minimum impedance (or maximum load) at 100 volt line should be no less than 40 Ohms.

## (115V version)

The screw terminals on the left hand side of the strip allow access to the direct speaker outputs of the amplifier. Reading from left to right the terminals are:

| | |
|---|---|
| COM | Common or "-" for low impedance speaker loads (4 ohms). |
| 4 | Positive "+" for 4 ohm speaker loads (use with common) |
| | |
| COM | Common or "-" for 25v or 70v speaker loads (maximum load of 20 ohms at 70v) |
| 25 | Positive "+" for 25v line speaker loads (use with common) |
| 70 | Positive "+" for 70v line speaker loads (use with common) |

Please ensure that the correct "Common" is used. Low impedance and 25/70v loads can be used simultaneously but please pay careful attention to the overall speaker load.
Note: The minimum impedance (or maximum load) at 70 volt line should be no less than 20.

## Terminal Strip

The remaining terminals read as:

Spare
Tone Generator Common (use with one of the 4 tones listed below)
Pre-Announce Chime
Alert Tone
Bell Chime
Evacuation Tone
[600 Ohm Telephone Input] (115V version)

## Phantom Power

This button enables or disables the 15 volts DC phantom power to all microphone inputs XLR's. Do not plug an unbalanced microphone in any amplifier or mixer when phantom power is switched on.

The phantom voltage is connected through 4k7 1/4W resistors. The maximum current draw available per microphone is approximately 3mA.

## Line Output

The balanced XLR line level output provides a maximum of 700mV to allow for the connection of up to 6 power amplifiers. Pin connections are: pin 1-earth; pin 2-signal (hot +); pin 3-signal (cold -).

The output is electronically balanced with an inverting op-amp and buffered with voltage follower op amps. Neither hot nor cold output should be grounded when connecting as unbalanced.

## Tape Output

Dual RCA output connectors provide a line level output with a maximum of 350mV into 10k Ohms. This output is sourced before the master gain control so the tape output level is not influenced by the operation of the master gain control.

## Microphone Inputs

All four inputs are dual mic/line with microphone inputs being via a 3 pin XLR connector per channel. The mic input sensitivity is 1mV @ 200 ohms. Pin connections are: pin 1-earth; pin 2-signal (hot +); pin 3-signal (cold -). Phantom power of +15 volts is available on all microphone inputs. Reading from left to right across the rear panel, the inputs are 6,5,4, 3, 2, & 1.

## Line Inputs

Line inputs 1, 2, 3, 4, & 5 have an input sensitivity of 150mV @ 100K ohms. Input 6 has an input sensitivity of 300mV @ 220K ohms making it suitable for high level inputs such as a CD player. Reading from left to right across the rear panel, the connections are for inputs 6, 5, 4, 3, 2, & 1 respectively.

## [600 Ohm Telephone Input] (115V version)

The 600 ohm transformer balanced Telephone Input is summed with input 2 through 100k ohms.

The input sensitivity is 150mV (driving the amp to full power)

## Insert Point

The Insert Point is located electronically after the master volume pot and before the balancing circuit for the power amp and line output.

The Insert Point is a 3 conductor (Tip, Ring, Sleeve) phone socket which accepts a standard stereo 6.35mm (1/4") jack. The connections are:

| | |
|---|---|
| Tip | Amplifier in. |
| Ring | Mix Output. |
| Sleeve | Ground |

The switched contacts are used to break the signal internally.

When an external processor is used via the insert point, it only affects the power amplifier section and line output of the AMIS60 &AMIS120. The tape output remains unprocessed.

## Tone Generators

Four separate tones are available from the in-built tone generator board. All four tones can be activated individually via a contact closure connected to the screw terminals on the rear of the amplifier. When any tone is activated, all inputs (except for inputs 1 and 2) will automatically mute. The level of the tone generator is controlled by the pot labeled R6 (located behind the Bass adjustment pot). This pot adjusts the level for all 4 tones.

Tones available on the AMIS250 include:

- Evacuation Tone
- Alert Tone
- Bell Tone
- Pre-Announce Chime

Theses inputs are pulled up to 5VDC internally through 1k resistors.

The tones are generated through a combination of digital frequency modulation and analogue amplitude modulation. The output of the microcontroller IC7 (PIC16C55A) on pin 6 is a 0-5V square wave of varying frequency (depending on the tone selected). This signal is amplitude modulated using a VCA IC8 (M5222P). The envelope is controlled by the charging and discharging of the electrolytic capacitor C40 with the sink and sourcing of current on the microcontroller outputs pins 8, 9 & 17.

# VOX Muting

This feature provides automatic muting channels 3 & 4 when signal is applied to either channels 1 or 2. It is normally used so that a paging microphone can have priority (by muting) over background music. The muted channels will automatically ramp back up to normal volume when the signal on channels 1 and/or 2 is no longer active. The amplifier ships with the VOX muting function enabled. To disable the VOX muting move the jumper (labeled JP2, located just to the left and behind the level pot for channel 1) to the middle and rear pins. (Factory setting is with VOX enabled with the jumper on the middle and front pins).

Channels 3, 4, 5 & 6 are summed through IC1A (LM1458 or equivalent) to the VCA IC4 (M5222P) which does the muting. The VCA is held on (i.e. no attenuation) by R22 (10k) pulled to the reference voltage and the reverse biasing of diode D2 (BAV21 or equivalent) by R20 and R21. This is to eliminate any attenuation by the op amp IC1B (LM1458 or equivalent) and its ½ supply which may be different to the internal reference voltage of the VCA.
The control pin of the VCA is pulled down by op amp IC1B. This op amp runs at very high gain to activate on even very small signal. The jumper JP2 shorts out the feedback resistor thus removing the sensitivity. The attack of the muting circuit is controlled by the charging of C13 (47uF) through R20 (100k) and the release by the discharge if C13 through R16 (2k2). Note that VCA will mute at 250mV (-80dB) below the reference voltage so the muting will occur only over the range of approximately (depends on VCA production batch) 7.2V to 7.5V. The charging of the capacitor occurs from approximately 1V to 8.1V.

VCA M5222P pin out
1 – Output1
2 – Input1
3 – Reference voltage (½ Vcc)
4 – Gnd
5 – Control
6 – Input2
7 – Output2

Note: The M5222P is a current in, current out device. Voltage conversion is done through resistors. The maximum input current is 50uA rms. Current gain is 0.5.

# Fuse Sizes

(240V version)
Mains: 230 VAC 6.3 Amperes Slow Blow

DC: 10 Amperes Slow Blow

(115V version)
Mains: 230 VAC 8 Amperes Slow Blow
DC: 10 Amperes Slow Blow

# TEST PROCEDURE MODEL - AMIS 250 (US)

1. **Perform physical inspection (Visual Inspection stage).**
   **1.1 Check:**
   - All screws for tightness (esp. bridge rectifier and transistor bolts),
   - Earth connection for good contact (XLR GND to AC earth),
   - All wiring points for good contacts (soldering and crimping)

## PRETESTING

## PRE TESTING SETUP REQUIREMENT

a. Oscilloscope.
b. Variac
c. Multimeter.
d. Load [4Ω]
e. Signal generator

2. **Set up amplifier for test :**
   **2.1 Check :**
   - AC fuses (8A), 20mm
   - DC fuses (10A), 20mm
   -

   **2.2 Connect amplifier to :**
   - Variac (0 VAC),
   - Signal generator (mic1, no signal),
   - Resistive load ( 4Ω on 4Ω terminal ).
   - Connect 24V DC supply externally for the relay on amplifier PCB. (Optional test for 24V DC operation)

   **2.3 Reset controls :**
   - Volume controls to minimum,
   - Bass/treble control to center,
   - R33 & R34 (Bias adjust pots) Amplifier PCB fully anticlockwise.

**3 Power up :**

3.1 Turn on the power switch and adjust the variac voltage to 115VAC . Watch current meter for excess current draw. Current should not exceed 0.5A.
3.2 Check DC power supply at the fuses, the measurement should be approximately. 40V (±1.5V)
3.3 Check DC voltage on the mixer board, the measurement should be approximately. 15V (± 0.5V).
3.4 Check 1/2 VCC on mixer board, the measurement should be 8VDC (± 0.5).
3.5 Measure the DC voltages on the IC's of the mixer & input PCB's, Pin 8, 15V (±5%), Pin 4 0V (±100mV),
Pin l, 8V (± 5%) but on power it should be P8 18V (± 5%) other remain same.
3.6 Put a multimeter across R47, the meter should read 0.3 mV (± 5%). Slowly adjust the preset R 33 so that you measure 2.5mVin addition to the base reading
3.7 Repeat 3.7 for R55 adjusting preset R34.

**4 AC Check:**

4.1 Set signal generator to 1mV. Turn up Mic1 volume control to full. Watch for irregularities in the output waveform.

4.2 Set output voltage to 35V using the master volume control. Check voltages across the Emitter resistors (on the output power devices)

4.3 Voltage should be between 150mV – 200mV. Min. and Max. values should be between 33% of the average value ( i.e. min/max = 0.5mV ).

4.4 Turn the master up to full. Check sensitivity of the microphone inputs. – MIC 1mV (± 1mV) 32V in a 4Ω load.

4.5 Check the output level of the amplifier using each of the input channels.

4.6 Measure 25V line 70V LINE.

4.7 Check tape outputs (L and R) 300mV (±50mV) (Measure on RCA socket).

4.8 Check line outputs. Approx. (2.0V ± 25mV).

**5. Function Checks :**

5.1 check the position of header links.

a. Vox muting enabled.
b. VCA Con. Disabled.

5.2 Keep signal in CH1 insert 'INSERT-PLUG' having external signal of different frequency the out put should cut off and switch over to applied insert signal, check signal on inset plugs ring terminal with respective ground should be 300mV. Remove insert plug .

5.3 Check Phantom Switch for on/off operation. Measure Phantom voltage on an XLR inputs ( the measurement should be 14.5VDC) (Reset the phantom switch)

5.4 Switch off the set connect battery (24V) check for rated out put power (out put signal will clip up to 2% on battery power)

# FINAL TESTING

## Requirements for final testing

a. Load 40Ω.
b. Multimeter
c. Oscilloscope
d. Microphone
e. Variac

**6 Check sensitivity of all channels.**

6.2 Mic input (CH1-CH4) = 1mV out put =70V (± 5V)

6.3 AUX input (CH1-CH5) = 150mV out put =70V (± 5V)

6.4 AUX input (CH6) = 150mV out put = 32.5V (± 1.5V)

6.5 Check the Power bandwidth of CH 1 MIC input. – (68Hz ±5Hz – 15KHz ± 2KHz).

6.6 Check Bass control @ 100HZ = ± 10dB (TOL. ±1dB), MID Control ± 10dB (TOL. ±1dB) and treble @ 10kHz = ± 10dB (TOL. ± 1dB)

6.7 Check that input signal and output signal are in same phase by comparing CH 1 AUX Input and all other Outputs ( 25V, 70v, 4Ω , 8Ω )

**7 Priority check**

7.2 Plug microphone into input 1 and oscillator to input 3. Check for muting of channel 3.
7.3 Plug microphone into input 2. Check for muting of channel 3.
7.4 Check 'Mute Disable' function. Insert Disable / Enable link (Factory set – ENABLE).

8 Check 4 tone switched inputs. Set output level of tones to approx. 14Vrms (± 2V) using Evac tone. Make sure channel 3 – 6 mutes with any of the tone's.

9 Check telephone input sensitivity for CH2
Tel input =180 mV output =70V (± 5V).

10 Increase the signal such that you get 76V & you can see the overload protection coming on with a kink visible on the sine wave if it is there then reduce the voltage to 35V out and then short output. Release the shorting and check for the return of output waveform

11 Remove input signal and check for Hum & Noise (<20mVrms).

12 Reset volumes to minimum.

## THERMAL CHECK

13 Connect load to the amplifier apply signal such that you get 42Vat out put. Set for thermal shut off at 110°C (± 5°C)

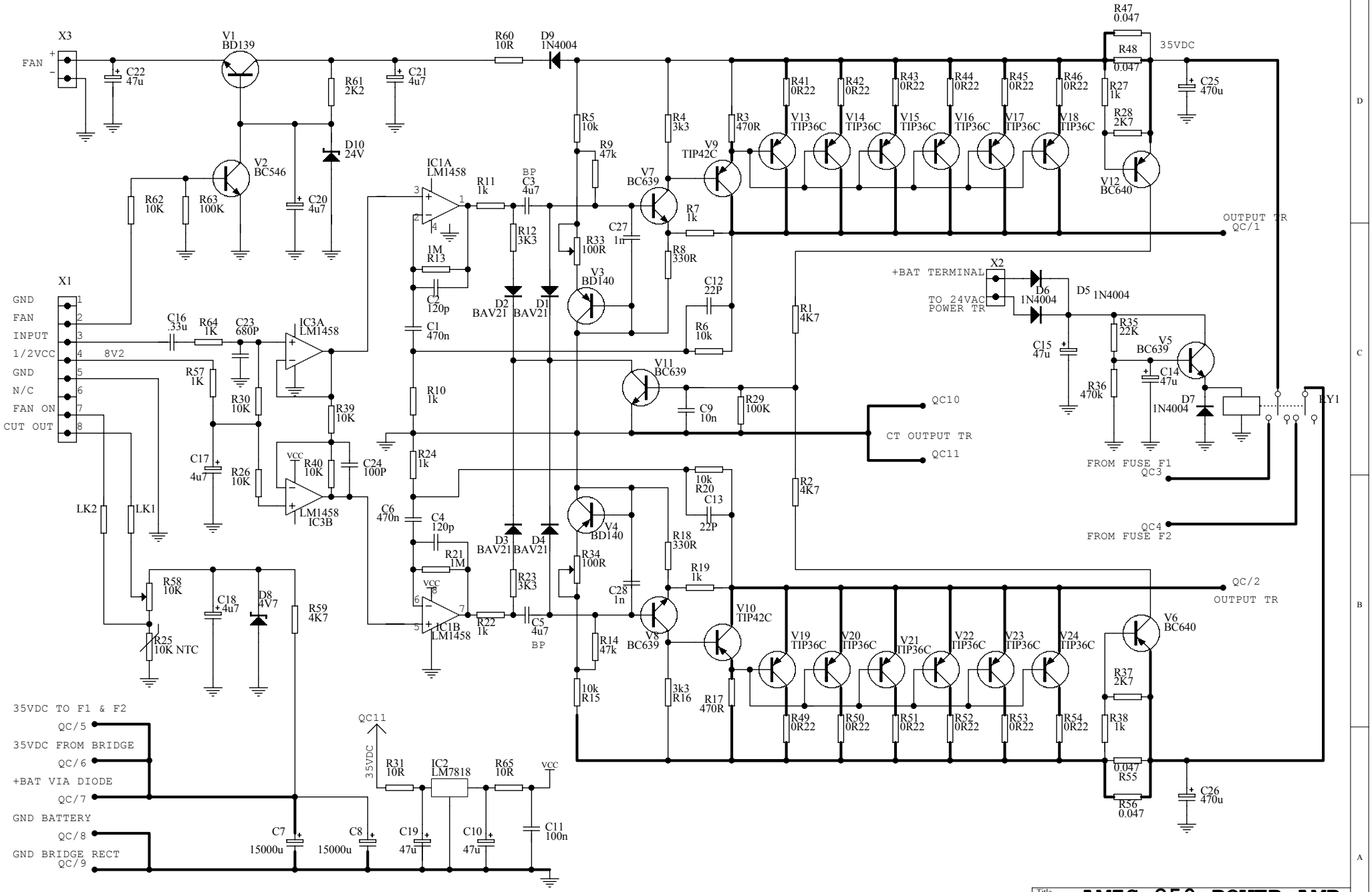
## LISTENING TEST

### Requirements for Listening Test Setup :

a. CD Player
b. Speaker
c. Microphone

**14 Connect amplifier to the program source and speaker**

14.2 Set all input pots at minimum and all tone pots to the centre (12 o'clock) position and check for turn on thump
14.3 Check CD Player (AUX) inputs each channel and tone controls for each channel
14.4 Check Priority functions: CH 1 over CH 3 – CH 6, CH 2 over CH 3 – CH 6.
14.5 Check that all generated (alert, evacuation) tones function

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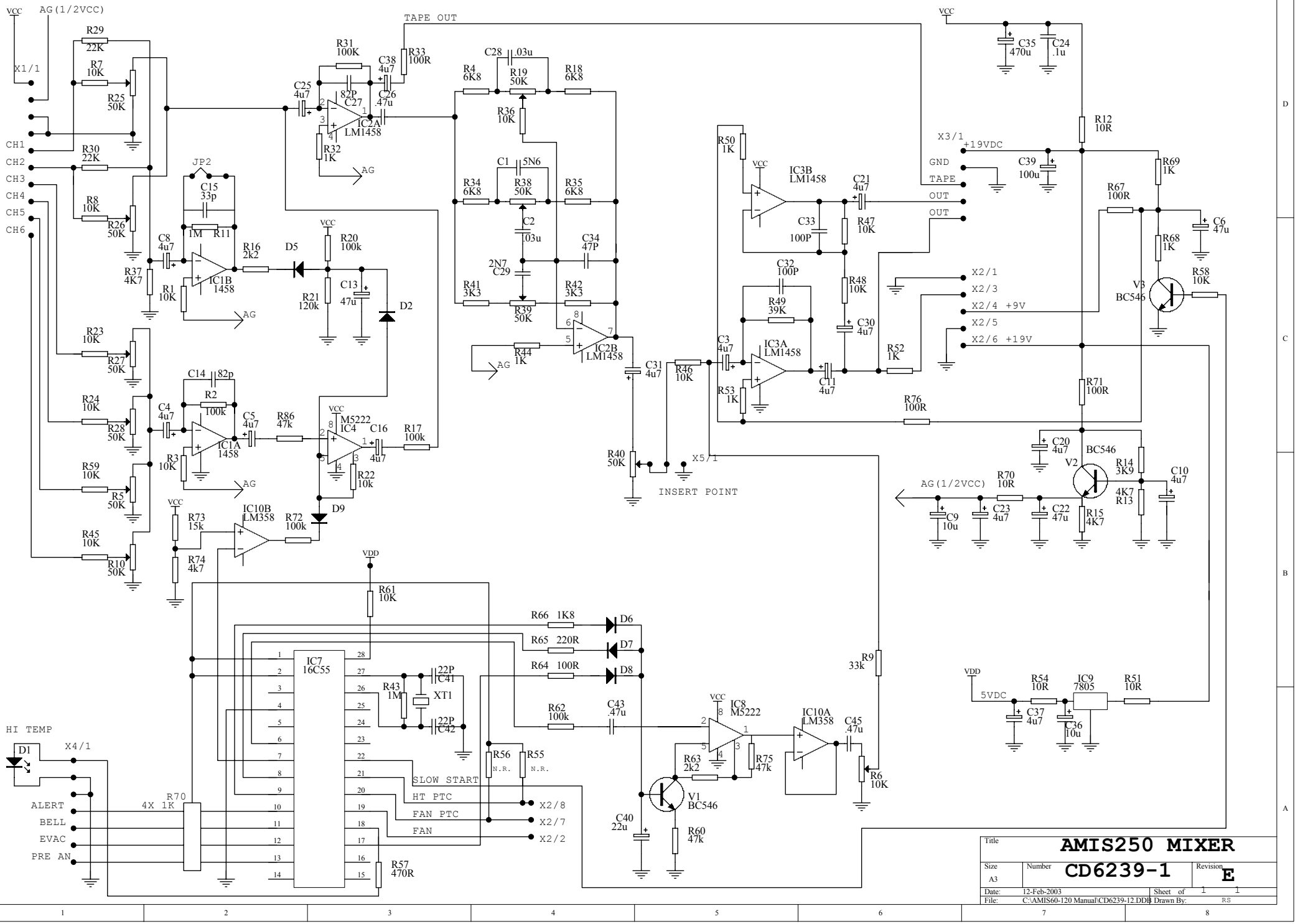
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AG(1/2VCC)
TAPE OUT
X1/1
CH1
CH2
CH3
CH4
CH5
CH6
R29 22K
R7 10K
R25 50K
R30 22K
R8 10K
R26 50K
R23 10K
R27 50K
R24 10K
R28 50K
R59 10K
R5 50K
R45 10K
R10 50K
JP2
C15 33p
1M R11
C8 4u7
R16 2k2
D5
R20 100k
R21 120k
C13 47u
D2
R37 4K7
R1 10K
IC1B 1458
AG
C14 82p
R2 100k
C4 4u7
C5 4u7
R86 47k
IC1A 1458
R3 10K
M5222 IC4
C16 4u7
R17 100k
R22 10k
D9
R73 15k
R74 4k7
IC10B LM358
R72 100k
R31 100K
C38 4u7
R33 100R
C25 4u7
82P C27
C26 .47u
IC2A LM1458
R32 1K
R4 6K8
C28 .03u
R19 50K
R18 6K8
R36 10K
C1 5N6
R34 6K8
R38 50K
R35 6K8
C2 .03u
C34 47P
2N7 C29
R41 3K3
R42 3K3
R39 50K
IC2B LM1458
R44 1K
C31 4u7
R46 10K
R40 50K
X5/1
INSERT POINT
R50 1K
IC3B LM1458
C21 4u7
C33 100P
R47 10K
C32 100P
R49 39K
R48 10K
C30 4u7
C3 4u7
IC3A LM1458
C11 4u7
R52 1K
R53 1K
X2/1
X2/3
X2/4 +9V
X2/5
X2/6 +19V
C35 470u
C24 .1u
X3/1
+19VDC
GND
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OUT
C39 100u
R12 10R
R69 1K
R67 100R
R68 1K
C6 47u
V3 BC546
R58 10K
R71 100R
R76 100R
C20 4u7
BC546
V2
R14 3K9
4K7 R13
C10 4u7
AG(1/2VCC)
R70 10R
C9 10u
C23 4u7
C22 47u
R15 4K7
VDD
5VDC
R54 10R
IC9 7805
R51 10R
C37 4u7
C36 10u
R9 33k
R6 10K
IC7 16C55
R61 10K
R66 1K8
D6
R65 220R
D7
R64 100R
D8
R62 100k
C43 .47u
R43 1M
XT1
22P C41
22P C42
R56 N.R.
R55 N.R.
SLOW START
HT PTC
FAN PTC
FAN
X2/8
X2/7
X2/2
R57 470R
IC8 M5222
IC10A LM358
C45 .47u
R63 2k2
R75 47k
V1 BC546
C40 22u
R60 47k
HI TEMP
D1
X4/1
ALERT
BELL
EVAC
PRE AN
R70 4X 1K
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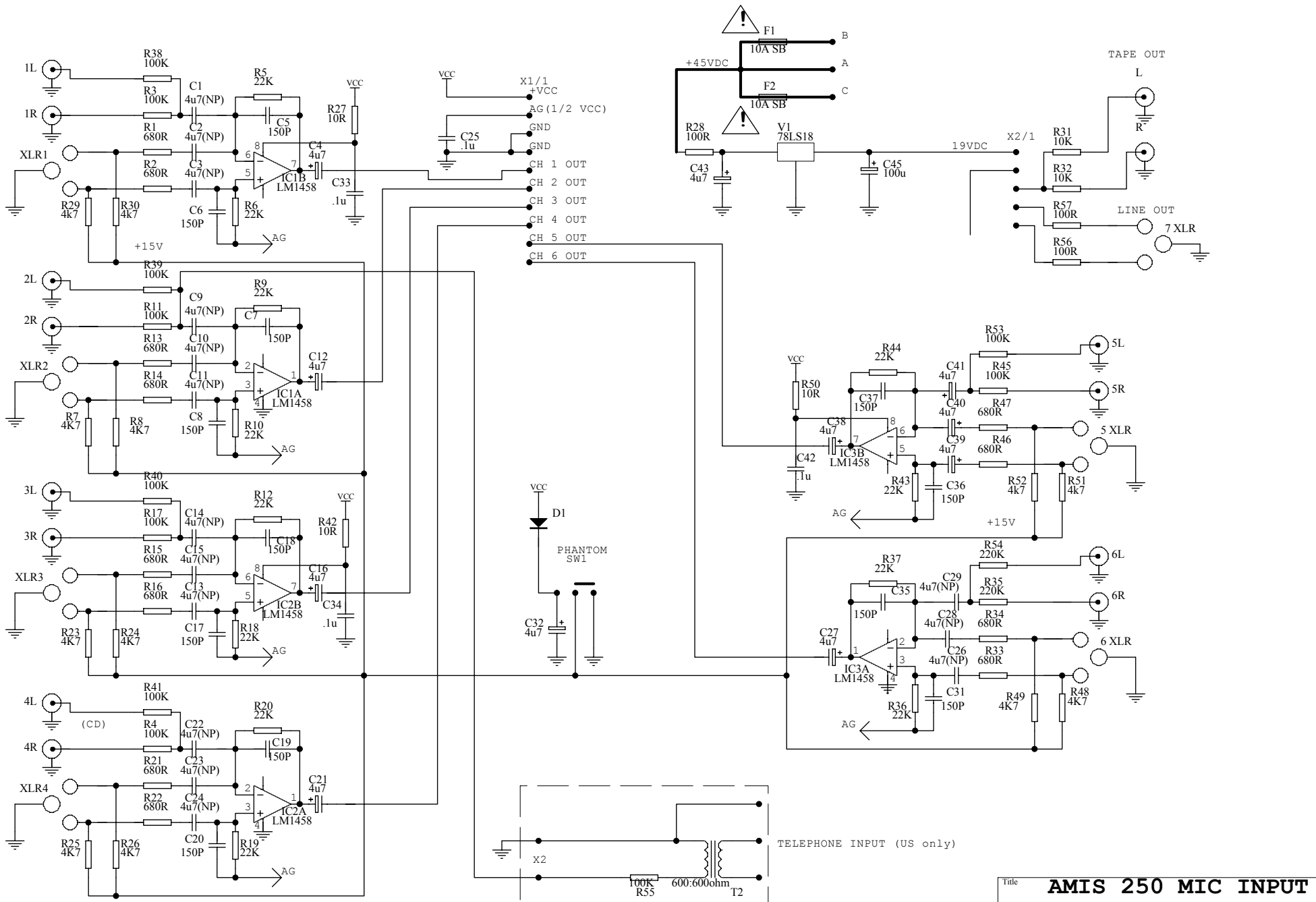


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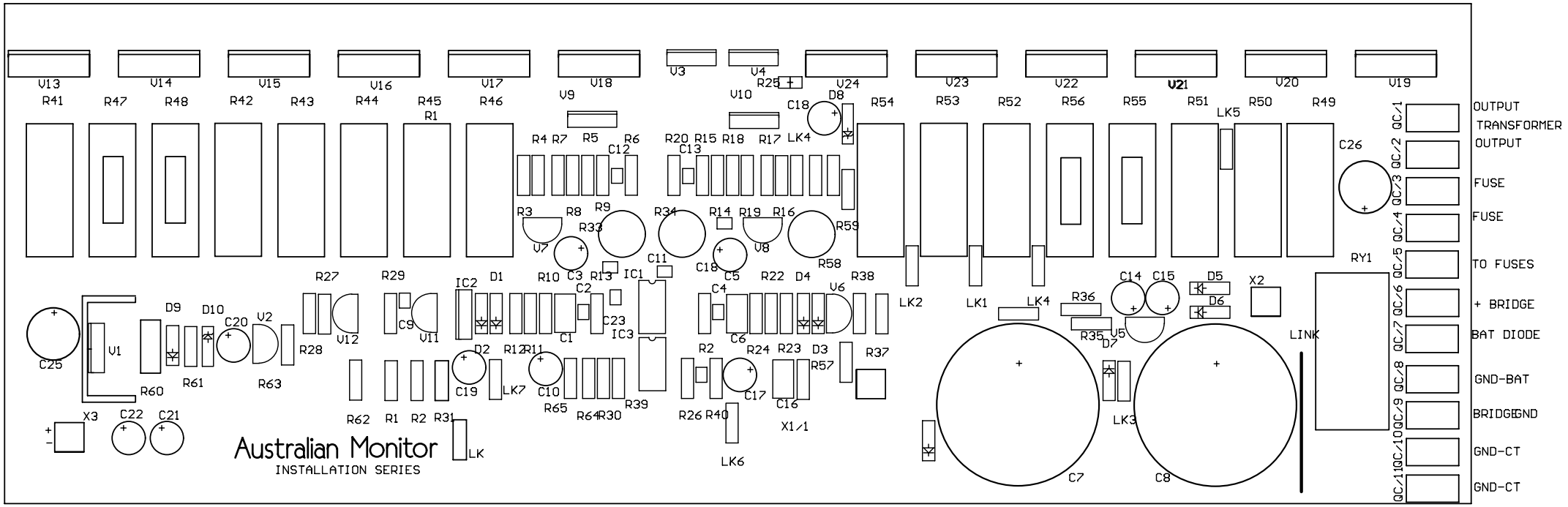
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FUSE
TO FUSES
+ BRIDGE
BAT DIODE
GND-BAT
BRIDGEGND
GND-CT
GND-CT
LINK
RY1
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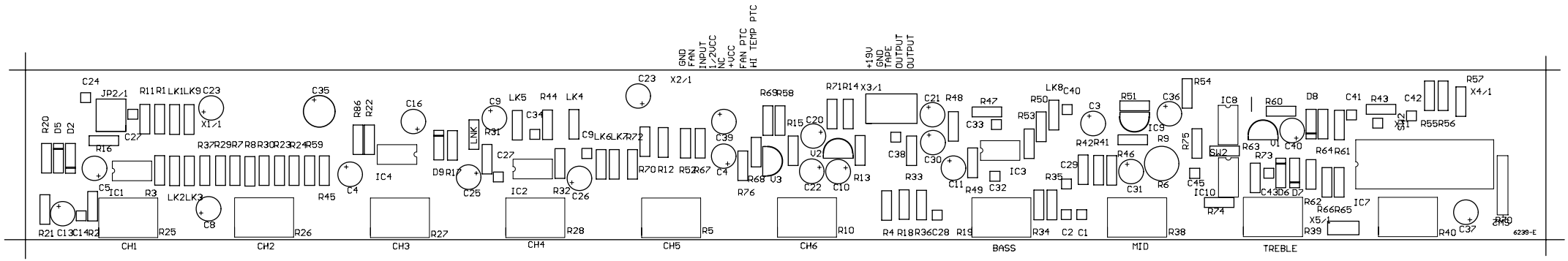
X2
X3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1/2VCC
NC
+VCC
FAN PTC
HI TEMP PTC
+19V
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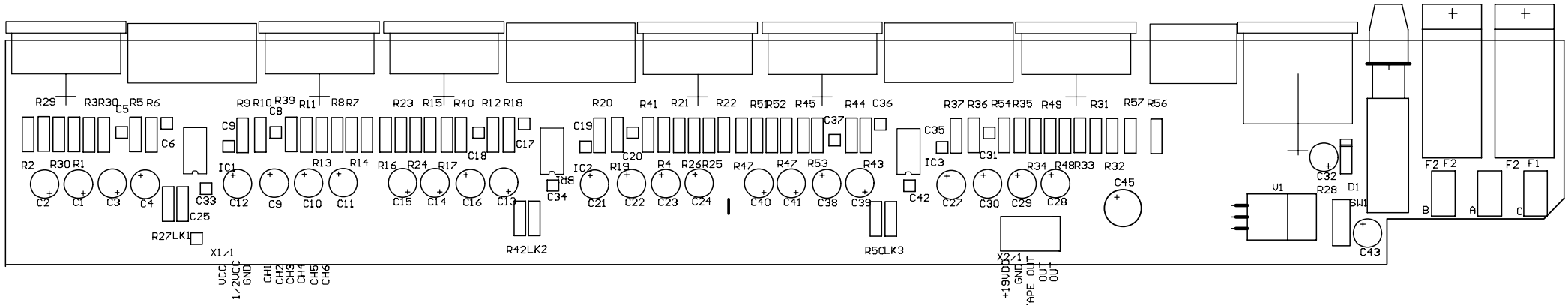
6239-E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C6
R9 R10 R39 C8 R11 R8 R7
C9
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C18 C17
R20 R41 R21 R22 R51 R52 R45 R44 C36
C37
R37 R36 R54 R35 R49 R31 R57 R56
C35
C31
R2 R30 R1
C2 C1 C3 C4
C25
R27LK1
C33
IC1
C12
R13 R14
C9 C10 C11
R16 R24 R17
C15 C14 C16 C13
R42LK2
C34
BPL
IC2
C21
R19
C20
R4 R26 R25
C22 C23 C24
R47 R47 R53 R43
C40 C41 C38 C39
R50LK3
IC3
C42
C27 C30 C29 C28
R34 R48 R33 R32
C45
C32
V1
R28
D1
SW1
C43
F2 F2 F2 F1
B A C
X1/1
VCC
1/2VCC
GND
CH1
CH2
CH3
CH4
CH5
CH6
X3/1
+19VDC
GND
TAPE OUT
OUT
OUT

# AMIS250 Power amp Component List

| Designator | Part Type | Description | Manufacturer's Code |
|---|---|---|---|
| C1 | 470n | Metalised Poly 100V | 2124262472 |
| C10 | 47u | Electrolytic 35V | 2121250470 |
| C11 | 100n | Metalised Poly 100V | 2124282101 |
| C12 | 22P | Multi Layer Ceramic 100V | 2127181220 |
| C13 | 22P | Multi Layer Ceramic 100V | 2127181220 |
| C14 | 47u | Electrolytic 35V | 2121250470 |
| C15 | 47u | Electrolytic 35V | 2121250470 |
| C16 | .33u | Metalised Poly 100V | 2124282331 |
| C17 | 4u7 | Electrolytic 35V | 2121230479 |
| C18 | 4u7 | Electrolytic 35V | 2121230479 |
| C19 | 47u | Electrolytic 35V | 2121250470 |
| C2 | 120p | Multi Layer Ceramic 100V | 2127180121 |
| C20 | 4u7 | Electrolytic 35V | 2121230479 |
| C21 | 4u7 | Electrolytic 35V | 2121230479 |
| C22 | 47u | Electrolytic 35V | 2121250470 |
| C23 | 680P | Multi Layer Ceramic 100V | 2127181681 |
| C24 | 100P | Multi Layer Ceramic 100V | 2127181101 |
| C25 | 470u | Electrolytic 50V | 2121250470 |
| C26 | 470u | Electrolytic 50V | 2121250470 |
| C27 | 1n | Multi Layer Ceramic 100V | 2122250017 |
| C28 | 1n | Multi Layer Ceramic 100V | 2122250017 |
| C3 | 4u7 | Electrolytic 35V | 2121230479 |
| C4 | 120p | Multi Layer Ceramic 100V | 2127180121 |
| C5 | 4u7 | Electrolytic 35V | 2121230479 |
| C6 | 470n | Metalised Poly 100V | 2124262472 |
| C7 | 15000u | Electrolytic 50V | 2121250153 |
| C8 | 15000u | Electrolytic 50V | 2121250153 |
| C9 | 10n | Metalised Poly 100V | 2124182100 |
| D1 | BAV21 | Small Signal Diode | 2133400201 |
| D10 | 24V | Zener Diode 1Watt | 2136010240 |
| D2 | BAV21 | Small Signal Diode | 2133400201 |
| D3 | BAV21 | Small Signal Diode | 2133400201 |
| D4 | BAV21 | Small Signal Diode | 2133400201 |
| D5 | 1N4004 | Rectifier Diode | 2133440004 |
| D6 | 1N4004 | Rectifier Diode | 2133440004 |
| D7 | 1N4004 | Rectifier Diode | 2133440004 |
| D8 | 4V7 | Zener Diode 1Watt | 2136010479 |
| D9 | 1N4004 | Rectifier Diode | 2133440004 |
| IC1A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC1B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC2 | LM7818 | Regulator T0220 | 2151370815 |
| IC3A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC3B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| LK1 | | Link | |
| LK2 | | Link | |
| R1 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R10 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R11 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R12 | 3K3 | Resistor, metal film 1/2 watt | 9111590332 |
| R13 | 1M | Resistor, metal film 1/2 watt | 9111590105 |
| R14 | 47k | Resistor, metal film 1/2 watt | 9111590473 |
| R15 | 10k | Resistor, metal film 1/2 watt | 9111590103 |
| R16 | 3k3 | Resistor, metal film 1/2 watt | 9111590332 |

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|---|---|---|---|
| R17 | 470R | Resistor, metal film 1/2 watt | 9111590471 |
| R18 | 330R | Resistor, metal film 1/2 watt | 9111590331 |
| R19 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R2 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R20 | 10k | Resistor, metal film 1/2 watt | 9111590103 |
| R21 | 1M | Resistor, metal film 1/2 watt | 9111590105 |
| R22 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R23 | 3K3 | Resistor, metal film 1/2 watt | 9111590332 |
| R24 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R25 | 10K NTC | Thermistor | 2111911103 |
| R26 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R27 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R28 | 2K7 | Resistor, metal film 1/2 watt | 9111590272 |
| R29 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R3 | 470R | Resistor, metal film 1/2 watt | 9111590471 |
| R30 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R31 | 10R | Metal oxide resistor 2W | 2111221100 |
| R33 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R34 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R35 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R36 | 470k | Resistor, metal film 1/2 watt | 9111590474 |
| R37 | 2K7 | Resistor, metal film 1/2 watt | 9111590272 |
| R38 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R39 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R4 | 3k3 | Resistor, metal film 1/2 watt | 9111590332 |
| R40 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R41 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R42 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R43 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R44 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R45 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R46 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R47 | 0.047 | Wire wound 5 watt resistor | 2111450177 |
| R48 | 0.047 | Wire wound 5 watt resistor | 2111450177 |
| R49 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R5 | 10k | Resistor, metal film 1/2 watt | 9111590103 |
| R50 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R51 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R52 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R53 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R54 | 0R22 | Wire wound 5 watt resistor | 2111450228 |
| R55 | 0.047 | Wire wound 5 watt resistor | 2111450177 |
| R56 | 0.047 | Wire wound 5 watt resistor | 2111450177 |
| R57 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R58 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R59 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R6 | 10k | Resistor, metal film 1/2 watt | 9111590103 |
| R60 | 10R | Metal oxide resistor 2W | 2111221100 |
| R61 | 2K2 | Resistor, metal film 1/2 watt | 9111590222 |
| R62 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R63 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R64 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R65 | 10R | Resistor, metal film 1/2 watt | 9111590100 |
| R7 | 1k | Resistor, metal film 1/2 watt | 9111590102 |
| R8 | 330R | Resistor, metal film 1/2 watt | 9111590331 |

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|---|---|---|---|
| R9 | 47k | Resistor, metal film 1/2 watt | 9111590473 |
| RY1 | | 2P2T Relay | 2523120001 |
| V1 | BD139 | Transistor | 2141400139 |
| V10 | TIP42C | Transistor | 2141300042 |
| V11 | BC639 | Transistor | 2144200639 |
| V12 | BC640 | Transistor | 2144200640 |
| V13 | TIP36C | Transistor TOP-3 | 2141600036 |
| V14 | TIP36C | Transistor TOP-3 | 2141600036 |
| V15 | TIP36C | Transistor TOP-3 | 2141600036 |
| V16 | TIP36C | Transistor TOP-3 | 2141600036 |
| V17 | TIP36C | Transistor TOP-3 | 2141600036 |
| V18 | TIP36C | Transistor TOP-3 | 2141600036 |
| V19 | TIP36C | Transistor TOP-3 | 2141600036 |
| V2 | BC546 | Transistor | 2144200546 |
| V20 | TIP36C | Transistor TOP-3 | 2141600036 |
| V21 | TIP36C | Transistor TOP-3 | 2141600036 |
| V22 | TIP36C | Transistor TOP-3 | 2141600036 |
| V23 | TIP36C | Transistor TOP-3 | 2141600036 |
| V24 | TIP36C | Transistor TOP-3 | 2141600036 |
| V3 | BD140 | Transistor | 2141400140 |
| V4 | BD140 | Transistor | 2141400140 |
| V5 | BC639 | Transistor | 2144200639 |
| V6 | BC640 | Transistor | 2144200640 |
| V7 | BC639 | Transistor | 2144200639 |
| V8 | BC639 | Transistor | 2144200639 |
| V9 | TIP42C | Transistor | 2141300042 |
| X1 | SIL8 | | |
| X2 | SIL2 | | |
| X3 | SIL2 | | |

# AMIS250 Mixer Component list

| Designator | Part Type | Description | Manufacturer's Code |
|---|---|---|---|
| C1 | 5N6 | Metalised Poly 100V | 2124180562 |
| C10 | 4u7 | Electrolytic 35V | 2121230479 |
| C11 | 4u7 | Electrolytic 35V | 2121230479 |
| C13 | 47u | Electrolytic 35V | 2121250470 |
| C14 | 82p | Multi Layer Ceramic 100V | 2127181820 |
| C15 | 33p | Multi Layer Ceramic 100V | 2127280336 |
| C16 | 4u7 | Electrolytic 35V | 2121230479 |
| C2 | .03u | Multi Layer Ceramic 100V | 2127280336 |
| C20 | 4u7 | Electrolytic 35V | 2121230479 |
| C21 | 4u7 | Electrolytic 35V | 2121230479 |
| C22 | 47u | Electrolytic 35V | 2121230479 |
| C23 | 4u7 | Electrolytic 35V | 2121230479 |
| C24 | .1u | Metalised Poly 100V | 2128280019 |
| C25 | 4u7 | Electrolytic 35V | 2121230479 |
| C26 | .47u | Metalised Poly 100V | 2124262472 |
| C27 | 82P | Multi Layer Ceramic 63V | 2127181820 |
| C28 | .03u | Multi Layer Ceramic 100V | 2127280336 |
| C29 | 2N7 | Multi Layer Ceramic 100V | 2127181279 |
| C3 | 4u7 | Electrolytic 35V | 2121230479 |
| C30 | 4u7 | Electrolytic 35V | 2121230479 |
| C31 | 4u7 | Electrolytic 35V | 2121230479 |
| C32 | 100P | Multi Layer Ceramic 100V | 2127180155 |
| C33 | 100P | Multi Layer Ceramic 100V | 2127180155 |
| C34 | 47P | Multi Layer Ceramic 100V | 2127181470 |
| C35 | 470u | Electrolytic 35V | 2121230471 |
| C36 | 10u | Electrolytic 35V | 2121220100 |
| C37 | 4u7 | Electrolytic 35V | 2121230479 |
| C38 | 4u7 | Electrolytic 35V | 2121230479 |
| C39 | 100u | Electrolytic 35V | 2121220101 |
| C4 | 4u7 | Electrolytic 35V | 2121230479 |
| C40 | 22u | electrolytic 35V | 2121250220 |
| C41 | 22P | Multi Layer Ceramic 100V | 2127181220 |
| C42 | 22P | Multi Layer Ceramic 100V | 2127181220 |
| C43 | .47u | Metalised Poly 63V | 2124262472 |
| C45 | .47u | Metalised Poly 63V | 2124262472 |
| C5 | 4u7 | Electrolytic 35V | 2121230479 |
| C6 | 47u | Electrolytic 35V | 2121250470 |
| C8 | 4u7 | Electrolytic 35V | 2121230479 |
| C9 | 10u | Electrolytic 35V | 2121220100 |
| D1 | LED | 3.0mm Red Led | 2137200003 |
| D2 | BAV21 | Small Signal Diode | 2133400201 |
| D5 | BAV21 | Small Signal Diode | 2133400201 |
| D6 | BAV21 | Small Signal Diode | 2133400201 |
| D7 | BAV21 | Small Signal Diode | 2133400201 |
| D8 | BAV21 | Small Signal Diode | 2133400201 |
| D9 | BAV21 | Small Signal Diode | 2133400201 |
| IC10A | LM358 | Dual op-amp DIP 8 Pin | 2152800358 |
| IC10B | LM358 | Dual op-amp DIP 8 Pin | 2152800358 |
| IC1A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC1B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC2A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC2B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC3A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |

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|---|---|---|---|
| IC3B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC4 | M5222 | VCA  DIP 8 Pin | 2153850222 |
| IC7 | 16C55 | PIC-16C55X1,TP,28PIN | 2159601655 |
| IC8 | M5222 | VCA  DIP 8 Pin | 2153850222 |
| IC9 | 7805 | Regulator, T092 | 2151270805 |
| R1 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R10 | 50K | Potentiometer Linear | 2021000503 |
| R11 | 1M | Resistor, metal film 1/2 watt | 9111590105 |
| R12 | 10R | Resistor, metal film 1/2 watt | 9111590100 |
| R13 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R14 | 3K9 | Resistor, metal film 1/2 watt | 9111590392 |
| R15 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R16 | 2k2 | Resistor, metal film 1/2 watt | 9111590222 |
| R17 | 100k | Resistor, metal film 1/2 watt | 9111590104 |
| R18 | 6K8 | Resistor, metal film 1/2 watt | 9111590682 |
| R19 | 50K | Potentiometer Linear | 2021000503 |
| R2 | 100k | Resistor, metal film 1/2 watt | 9111590104 |
| R20 | 100k | Resistor, metal film 1/2 watt | 9111590104 |
| R21 | 120k | Resistor, metal film 1/2 watt | 9111590124 |
| R22 | 10k | Resistor, metal film 1/2 watt | 9111590103 |
| R23 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R24 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R25 | 50K | Potentiometer Linear | 2021000503 |
| R26 | 50K | Potentiometer Linear | 2021000503 |
| R27 | 50K | Potentiometer Linear | 2021000503 |
| R28 | 50K | Potentiometer Linear | 2021000503 |
| R29 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R3 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R30 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R31 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R32 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R33 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R34 | 6K8 | Resistor, metal film 1/2 watt | 9111590682 |
| R35 | 6K8 | Resistor, metal film 1/2 watt | 9111590682 |
| R36 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R37 | 4K7 | Resistor, metal film 1/2 watt | 9111590473 |
| R38 | 50K | Potentiometer Linear | 2021000503 |
| R39 | 50K | Potentiometer Linear | 2021000503 |
| R4 | 6K8 | Resistor, metal film 1/2 watt | 9111590682 |
| R40 | 50K | Potentiometer Linear | 2021000503 |
| R41 | 3K3 | Resistor, metal film 1/2 watt | 9111590332 |
| R42 | 3K3 | Resistor, metal film 1/2 watt | 9111590332 |
| R43 | 1M | Resistor, metal film 1/2 watt | 9111590105 |
| R44 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R45 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R46 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R47 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R48 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R49 | 39K | Resistor, metal film 1/2 watt | 9111590393 |
| R5 | 50K | Potentiometer Linear | 2021000503 |
| R50 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R51 | 10R | Resistor, metal film 1/2 watt | 9111590100 |
| R52 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R53 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R54 | 10R | Resistor, metal film 1/2 watt | 9111590100 |

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|---|---|---|---|
| R55 | | Not Required | |
| R56 | | Not Required | |
| R57 | 470R | Resistor, metal film 1/2 watt | 9111590470 |
| R58 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R59 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R6 | 10K | Cermet Horizontal | 2002211103 |
| R60 | 47k | Resistor, metal film 1/2 watt | 9111590473 |
| R61 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R62 | 100k | Resistor, metal film 1/2 watt | 9111590104 |
| R63 | 2k2 | Resistor, metal film 1/2 watt | 9111590222 |
| R64 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R65 | 220R | Resistor, metal film 1/2 watt | 9111590221 |
| R66 | 1K8 | Resistor, metal film 1/2 watt | 9111590182 |
| R67 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R68 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R69 | 1K | Resistor, metal film 1/2 watt | 9111590102 |
| R7 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R70 | 1k RN | Resistor network | 9111590100 |
| R71 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R72 | 100k | Resistor, metal film 1/2 watt | 9111590104 |
| R73 | 15k | Resistor, metal film 1/2 watt | 9111590153 |
| R74 | 4k7 | Resistor, metal film 1/2 watt | 9111590473 |
| R75 | 47k | Resistor, metal film 1/2 watt | 9111590473 |
| R76 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R8 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R86 | 47k | Resistor, metal film 1/2 watt | 9111590473 |
| R9 | 33k | Resistor, metal film 1/2 watt | 9111590333 |
| V1 | BC546 | Transistor | 2144200546 |
| V2 | BC546 | Transistor | 2144200546 |
| V3 | BC546 | Transistor | 2144200546 |
| XT1 | | Resonator 4.00 MZ | 2171400000 |

| | AMIS250 Input PCB component list | | |
|---|---|---|---|
| **Designato** | **Part Type** | **Description** | **Manufacture's Code** |
| 1 | XLR | XLR Connector female | 2587210266 |
| 2 | XLR | XLR Connector female | 2587210266 |
| 3 | XLR | XLR Connector female | 2587210266 |
| 4 | XLR | XLR Connector female | 2587210266 |
| 5 | XLR | XLR Connector female | 2587210266 |
| 6 | XLR | XLR Connector female | 2587210266 |
| 7 | XLR | XLR Connector male | 2587110227 |
| 1L | RCA | RCA Connector Female | 2581420102 |
| 1R | RCA | RCA Connector Female | 2581420102 |
| 2L | RCA | RCA Connector Female | 2581420102 |
| 2R | RCA | RCA Connector Female | 2581420102 |
| 3L | RCA | RCA Connector Female | 2581420102 |
| 3R | RCA | RCA Connector Female | 2581420102 |
| 4L | RCA | RCA Connector Female | 2581420102 |
| 4R | RCA | RCA Connector Female | 2581420102 |
| 5L | RCA | RCA Connector Female | 2581420102 |
| 5R | RCA | RCA Connector Female | 2581420102 |
| 6L | RCA | RCA Connector Female | 2581420102 |
| 6R | RCA | RCA Connector Female | 2581420102 |
| C1 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C10 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C11 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C12 | 4u7 | Electrolytic 35V | 2121230479 |
| C13 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C14 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C15 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C16 | 4u7 | Electrolytic 35V | 2121230479 |
| C17 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C18 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C19 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C2 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C20 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C21 | 4u7 | Electrolytic 35V | 2121230479 |
| C22 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C23 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C24 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C25 | .1u | Metalised Poly 100V | 2124182100 |
| C26 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C27 | 4u7 | Electrolytic 35V | 2121230479 |
| C28 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C29 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C3 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| C31 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C32 | 4u7 | Electrolytic 35V | 2121230479 |
| C33 | .1u | Metalised Poly 100V | 2124182100 |
| C34 | .1u | Metalised Poly 100V | 2124182100 |
| C35 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C36 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C37 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C38 | 4u7 | Electrolytic 35V | 2121230479 |
| C39 | 4u7 | Electrolytic 35V | 2121230479 |
| C4 | 4u7 | Electrolytic 35V | 2121230479 |
| C40 | 4u7 | Electrolytic 35V | 2121230479 |

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|---|---|---|---|
| C41 | 4u7 | Electrolytic 35V | 2121230479 |
| C42 | .1u | Metalised Poly 100V | 2124182100 |
| C43 | 4u7 | Electrolytic 35V | 2121230479 |
| C45 | 100u | Electrolytic 25V | 2121220101 |
| C5 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C6 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C7 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C8 | 150P | Multi Layer Ceramic 100v | 2127180155 |
| C9 | 4u7(NP) | Non Polar Electrolytic 50V | 2120250479 |
| D1 | | | |
| F1 | 10A SB | | |
| F2 | 10A SB | | |
| IC1A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC1B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC2A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC2B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC3A | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| IC3B | LM1458 | Dual op-amp DIP 8 Pin | 2152810458 |
| L | RCA | RCA Connector Female | 2581420102 |
| R | RCA | RCA Connector Female | 2581420102 |
| R1 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R10 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R11 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R12 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R13 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R14 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R15 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R16 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R17 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R18 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R19 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R2 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R20 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R21 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R22 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R23 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R24 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R25 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R26 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R27 | 10R | Resistor, metal film 1/2 watt | 9111590100 |
| R28 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R29 | 4k7 | Resistor, metal film 1/2 watt | 9111590472 |
| R3 | 100K | Resistor, metal film 1/2 watt | 9111590474 |
| R30 | 4k7 | Resistor, metal film 1/2 watt | 9111590472 |
| R31 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R32 | 10K | Resistor, metal film 1/2 watt | 9111590103 |
| R33 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R34 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R35 | 220K | Resistor, metal film 1/2 watt | 9111590224 |
| R36 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R37 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R38 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R39 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R4 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R40 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R41 | 100K | Resistor, metal film 1/2 watt | 9111590104 |

| | | | |
|---|---|---|---|
| R42 | 10R | Resistor, metal film 1/2 watt | 9111590100 |
| R43 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R44 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R45 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R46 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R47 | 680R | Resistor, metal film 1/2 watt | 9111590681 |
| R48 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R49 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R5 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R50 | 10R | Resistor, metal film 1/2 watt | 9111590100 |
| R51 | 4k7 | Resistor, metal film 1/2 watt | 9111590472 |
| R52 | 4k7 | Resistor, metal film 1/2 watt | 9111590472 |
| R53 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R54 | 220K | Resistor, metal film 1/2 watt | 9111590224 |
| R55 | 100K | Resistor, metal film 1/2 watt | 9111590104 |
| R56 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R57 | 100R | Resistor, metal film 1/2 watt | 9111590101 |
| R6 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| R7 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R8 | 4K7 | Resistor, metal film 1/2 watt | 9111590472 |
| R9 | 22K | Resistor, metal film 1/2 watt | 9111590223 |
| T2 | 600:600Ω | Isolation Transformer US only | 2651280253 |
| V1 | 78LS18 | Regulator 18V | 2151370818 |

| AMIS 250 Major Components price list | | | | |
|---|---|---|---|---|
| **Part** | **Description** | **Manufacturer code** | **in house** | **AUD$** |
| | | | | |
| **PCB's** | | | | |
| **Mixer** | **Mixer PCB** | S5728MAMIS250S16 | | **$75.54** |
| **Input** | **Input PCB assy** | S5728MAMIS250S17 | | **$26.26** |
| **Output** | **Output PCB assy** | S5728MAMIS250S18 | | **$114.43** |
| **LED** | **Display PCB** | S5728MAMIS250S21 | | **$5.13** |
| | | | | |
| | | | | |
| **Transformers** | | | | |
| **230/240VAC** | **Mains 230/240V** | 2651983262 | | **$56.76** |
| **120VAC** | **Mains 120V** | | | |
| **Output** | **Output** | 2651983264 | | **$42.66** |
| **FUSE 12 Amp** | **DC rail fuse** | 2541201125 | | **$0.33** |
| | | | | |
| **Semiconductors** | | | | |
| | | | | |
| **TIP36C** | PNP TO3P transistor | 2141600036 | TIP36C | **$3.59** |
| **TIP42C** | PNP TO220 transistor | 2141300042 | TIP42C | **$2.00** |
| **BC639** | NPN TO92 | 2144200639 | S7007 | **$0.16** |
| **BC640** | PNP TO92 | 2144200640 | S7008 | **$0.16** |
| **BD140** | PNP TO92 | 2141400140 | | **$0.22** |
| **BD139** | NPN TO92 | 2141400139 | S7009 | **$0.22** |
| **LM1458** | IC Dual Op amp | 2152801048 | LM1458 | **$0.26** |
| **LM833N** | IC Dual Op amp | 2157800833 | LM833 | **$1.05** |
| **LM358** | IC Dual Op amp | 2152800358 | LM358 | **$1.05** |
| **LM78L05** | IC Regulator | 2151270805 | LM7805 | **$0.17** |
| **LM7815** | IC Regulator | 2151370815 | LM7815 | **$0.52** |
| **LM7818** | IC Regulator | 2151370818 | LM7818 | **$0.52** |
| **PIC16C54-XTP** | Program IC | 2159601654 | 120PIC | **$4.17** |
| **LM5222** | IC VCA | 2153850222 | | **$0.57** |
| **10k Thermistor** | | 2111911103 | | **$0.29** |
| | | | | |
| **Switches & Pots** | | | | |
| | | | | |
| **Volume Pot** | channel & master | 2021000503 | | **$0.56** |
| **Power switch** | Round rocker switch | 2511213112 | | **$1.39** |
| | | | | |
| **Hardware** | | | | |
| | | | | |
| **Front Panel** | | S600000151 | | **$3.61** |
| **Lid** | | S600000149 | | **$14.45** |
| **Rack ears** | | S600000137 | | **$4.35** |
| **Chassis** | | S600000152 | | **$16.15** |

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|---|---|---|---|---|
| **Barrier Strip 6** | 6 way barrier connector | 2583528306 | | **$2.51** |
| **Phono connector** | 1/4" socket | 2582110645 | | **$0.86** |
| **XLRF** | | 2587210266 | | **$1.34** |
| **XLMR** | | 2587110227 | | **$1.08** |
| **Screw + washer** | Black screw w/star | 2316420308 | | **$0.04** |
| **Screw** | Black screw wo/star | 2316421306 | | **$0.04** |
| **Knob** | volume & master | 9346110015 | | **$0.12** |
| **Acrylic cover for** | | 9347560006 | | **$0.31** |
| **6 way terminal** | | | | |