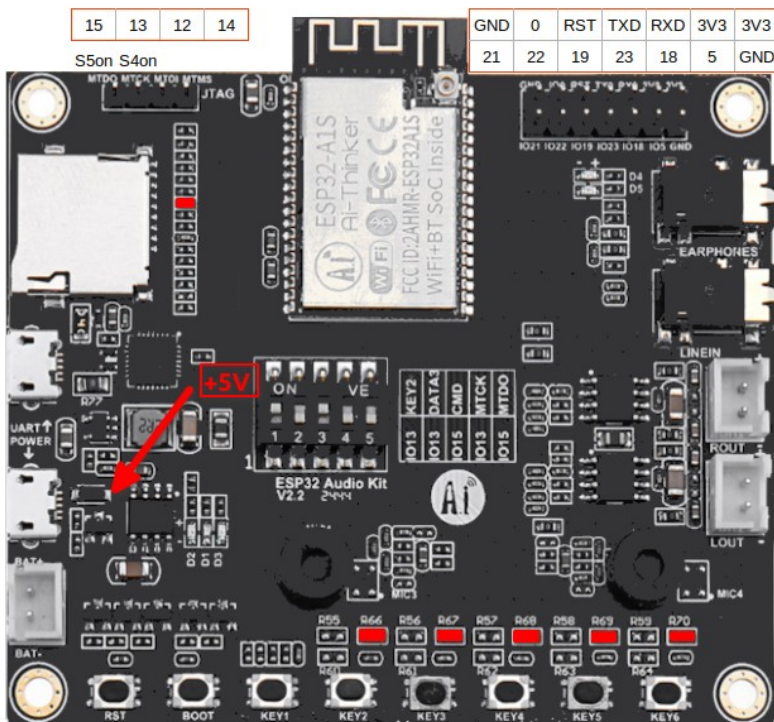
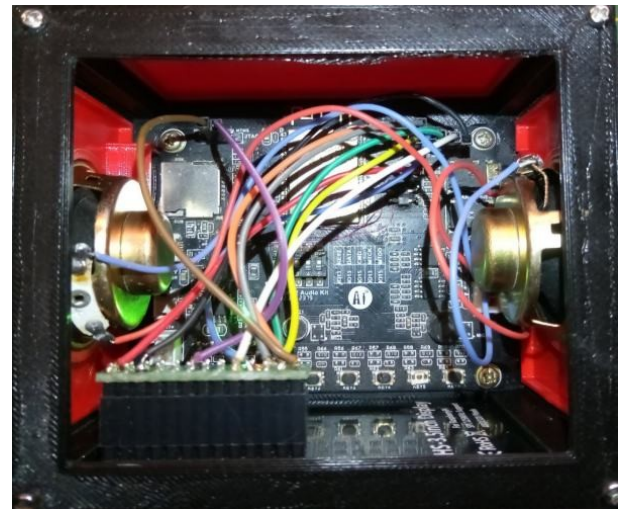


# MWR-V2 / AI Thinker A1S Board



GPIO		SD_MMC	SD_SPI	KEYS
0			At boot high	
1	TX0			
2		DATA0	MISO	At boot high
3	RX0			
4		DATA1		
5				
12		DATA2		MTDI At boot low
13		DATA3 S2 on	CS	MTCK S4 on
14		CLK	SCK	MTMS LED4 red
15		CMD S3 on	MOSI	MTDO S5 on
18				KEY5
19			LED5 red	KEY3
21	Amplifier ShutDown			
22				
23				KEY4
34	SD Detect		Input only	
36			SENSOR VP Input only	KEY1
39	Headphones Detect		SENSOR VN Input only	

Remove R66(IO13) R67(IO19) R68(IO23) R69(IO18) R70(IO5) and R32(IO2)

Schematic:

<https://github.com/schreibfaul1/ESP32-audioI2S/blob/master/examples/ESP32-A1S/A1S.pdf>

```
// Digital I/O used
```

```
#define TFT_CS 22
#define TFT_DC 5
#define TFT_BL -1
#define TP_IRQ 12
#define TP_CS 13
#define SD_MMC_D0 2 // cannot be changed
#define SD_MMC_CLK 14 // cannot be changed
#define SD_MMC_CMD 15 // cannot be changed
#define IR_PIN -1
#define SPI_MOSI 23 // TFT and TP (VSPI)
#define SPI_MISO 19 // TFT and TP (VSPI)
#define SPI_SCK 18 // TFT and TP (VSPI)
#if DECODER == 0
#define VS1053_CS -1
#define VS1053_DCS -1
#define VS1053_DREQ -1
#define VS1053_MOSI -1 // VS1053 (HSPI)
#define VS1053_MISO -1 // VS1053 (HSPI)
#define VS1053_SCK -1 // VS1053 (HSPI) (sometimes we need a 1k resistor against ground)
#else
#define I2S_DOUT 25
#define I2S_DIN 35 // pin not used
#define I2S_BCLK 27
#define I2S_LRC 26
#define I2S_MCLK 0
#endif
#define I2C_DATA 33
#define I2C_CLK 32
#define SD_DETECT 34 // some pins on special boards: Lyra, Olimex, A1S ...
#define HP_DETECT 39
#define AMP_ENABLED 21
```