OLED setup kits (lite)

for Soekris dam1021/1121 control

User Manual

Vers 0.1-May 2017

SPECIFICATION

DAM 1021 SK lite

1. MCU control DAM1021/1121 via isolate serial port. Real-time volume control, digital filter switching, input selection, PCM / DSD sample rate display.
2. 3.1 inch OLED display(256 * 64 resolution).
3. One key mute (IR Remote only).
4. Rotary encoder or IR Remote will be control full function.
5. IR Remote control support learning function, support most kinds of IR Remote.
6. Power-down memory, automatically load the last shutdown settings.
7. With two different styles of display window, the screen display can be turned off
8. Using ISO7421 isolation chip between MCU and dam1021 / 1121, to ensure that MCU noise will not be introduced dam1021 / 1121.
9. There is a onboard transformer for power supply, AC 115V / 230V switchable. The output is completely isolated from the double winding, one power supply for the MCU and display part. The other power supply for the ISO7421 isolation chip, And provides 5V (400ma) and 3.3V (200ma) output, easy for the USB module and 1021 isolation chip for independent power supply.
11. Using high-quality solid capacitors, tantalum capacitors, ultra low noise ADP151, rotary encoder using ALPS EC11 type.
12. Display screen with FPC connector. While retaining the 2.54mm display interface(suppose SSD1322 256*64).

Attention: The transformer is included in the kits.

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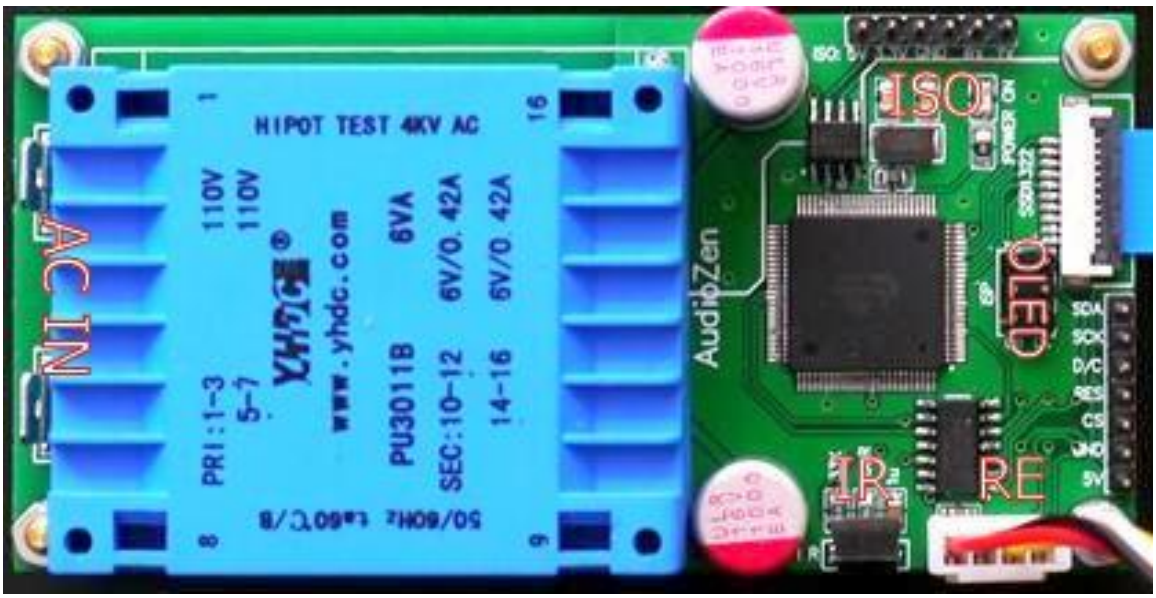
2. 3.1 inch OLED display(256 * 64 resolution).
3. One key mute (IR Remote only).
4. Rotary encoder or IR Remote full function control.
5. IR Remote control support learning function, support most kinds of IR Remote 6. Power-down memory, automatically load the last shutdown settings.
7. With two different styles of display window, the screen display can be turned off
8. Using SI8642 isolation chip between MCU and dam1021, to ensure that MCU noise will not be introduced dam1021.
9. Input support: Optical fiber，Coaxial, AES, USB（not included）, external I2S (LVDS mode).
10. RCA output can be switched between Buff and RAW.
11. Transformer board are detachable, support AC115V / 230V.
12. Use a separate winding transformer to power the USB module (amanero) and use ultra-low noise TPS7A47 for regulation.
13. Onboard TPS7A47 / TPS7A33 PSU.
14. A variety of DAM1021 power supply options.

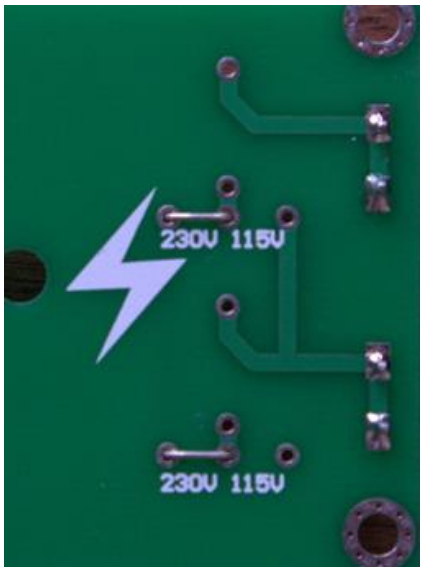
Attention: USB module (combo384), the transformers are not included in the kits. In order to be more compact, the official delivery of the PCB will be smaller than that of the photo, removing the extra edges.

CONNECTORES AND INDICATORS

DAM 1021 SK lite



AC IN

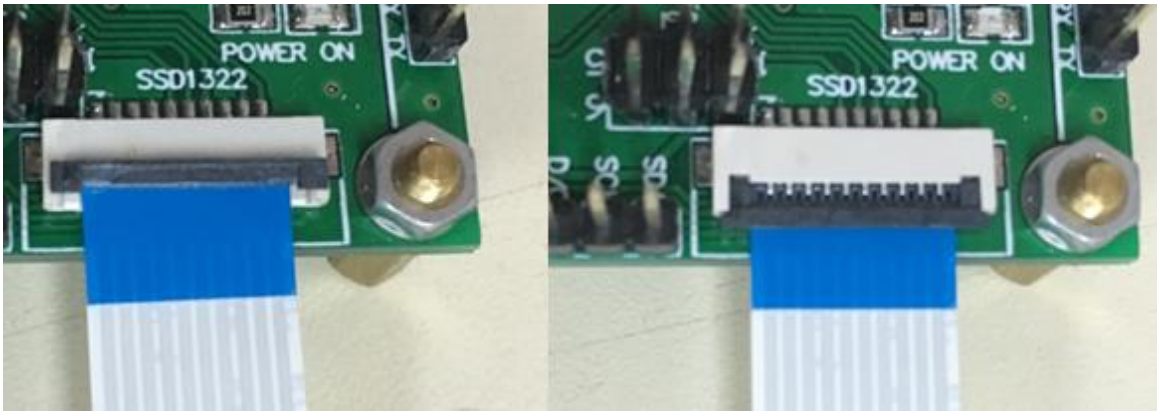


To connect AC 115⁄230V,switched by 2 jumpers on the bottom of PCB.

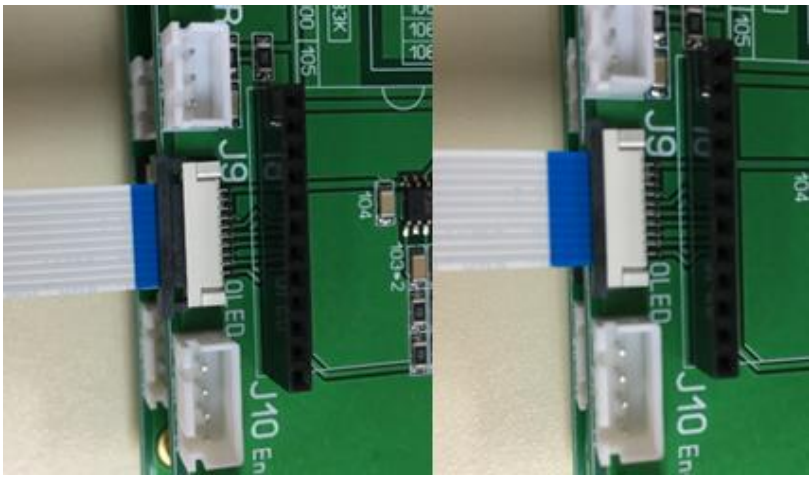
NOTE: In this picture the jumpers setting is AC 230V .

FPC connector

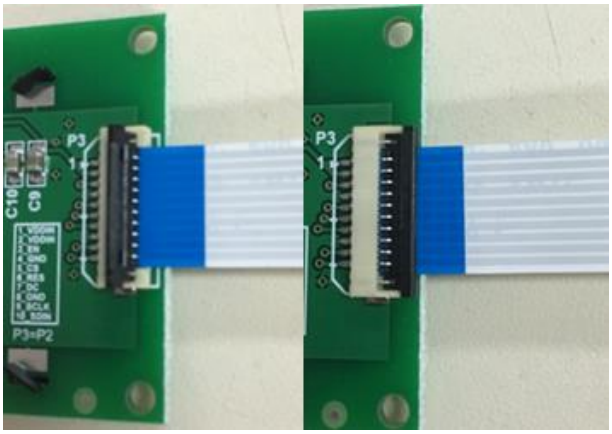
AZ1021 SK Lite
Upturned type connector



AZ1021 SK
Push-pull type connector



OLED
Upturned type connector



I2S over HDMI

	A	B
1	P1	DATA-
2	P2	GND
3	P3	DATA+
4	P4	BCK+
5	P5	GND
6	P6	BCK-
7	P7	LRCK-
8	P8	GND
9	P9	LRCK+
10	P10	NC
11	P11	GND
12	P12	NC
13	P13	NC
14	P14	NC
15	P15	NC
16	P16	NC
17	P17	GND
18	P18	NC
19	P19	GND
20		

CONNECTORES AND INDICATORS

ISO

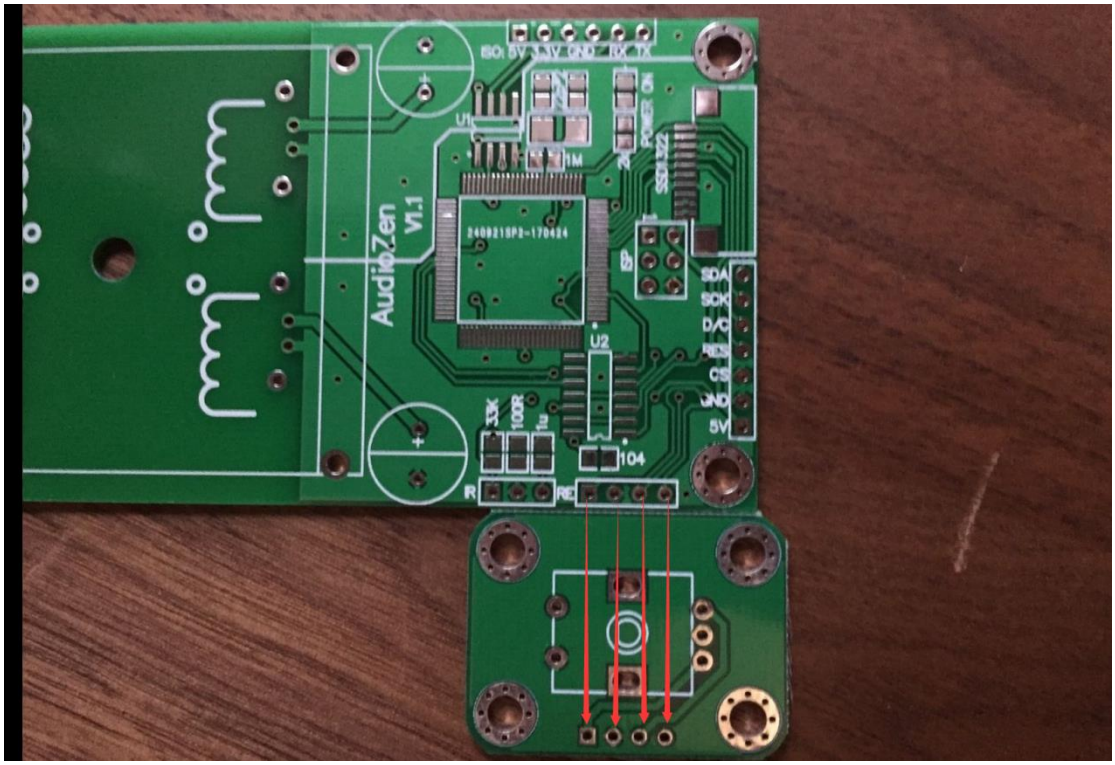
Pin 1	5V	ISO 5V/3.3V output. Be used for supply power to dam 1021 ISO and USB module.5V(400ma max),3.3V(200ma max).
Pin 2	3.3V	
Pin 3	GND	ISO GND.
Pin 4		
Pin 5	RX	Serials ISO RX with isolated, connect to dam1021 ISO TXD OUT.
Pin 6	TX	Serials ISO TX with isolated, connect to dam1021 ISO RXD IN.

OLED

Connect to OLED module via FPC cable (10P,1.0mm).

RE

Connect to Rotary encoder PCB like the picture.

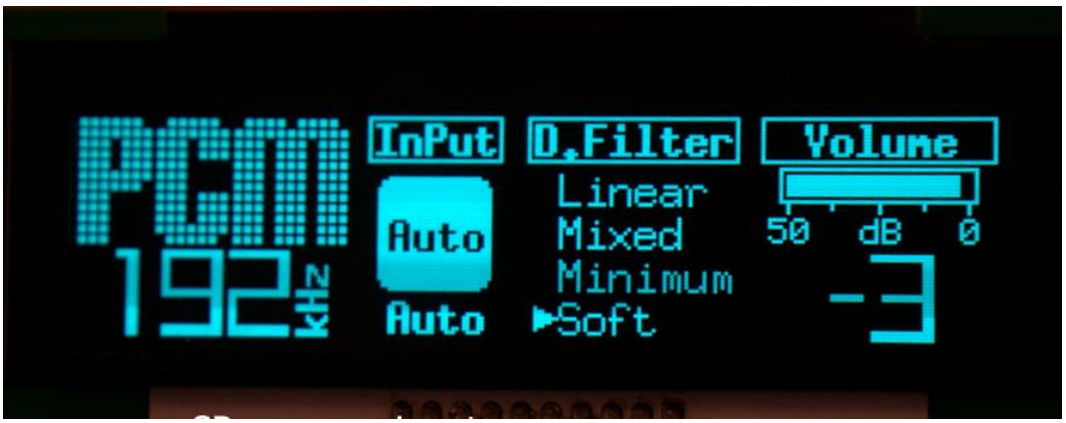


IR

Connect to IR receiving tube.

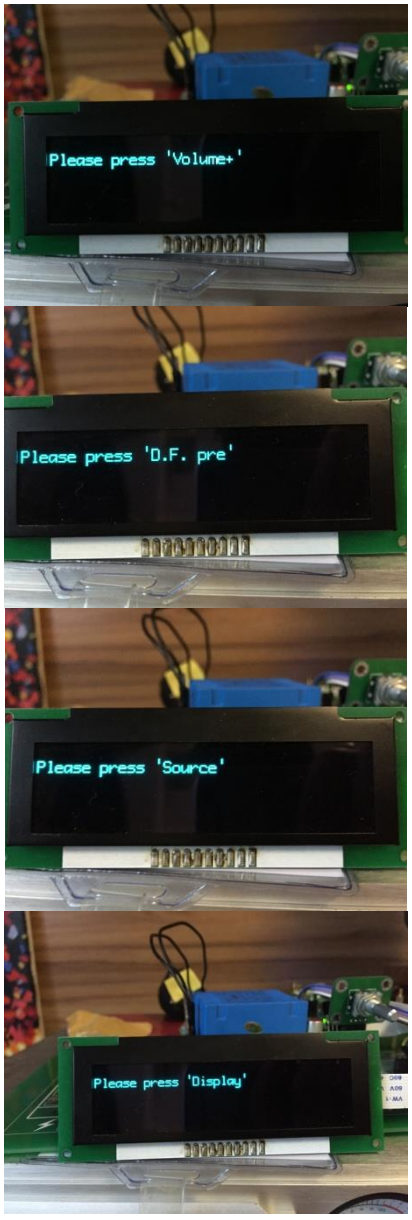
DISPLAY INTERFACE

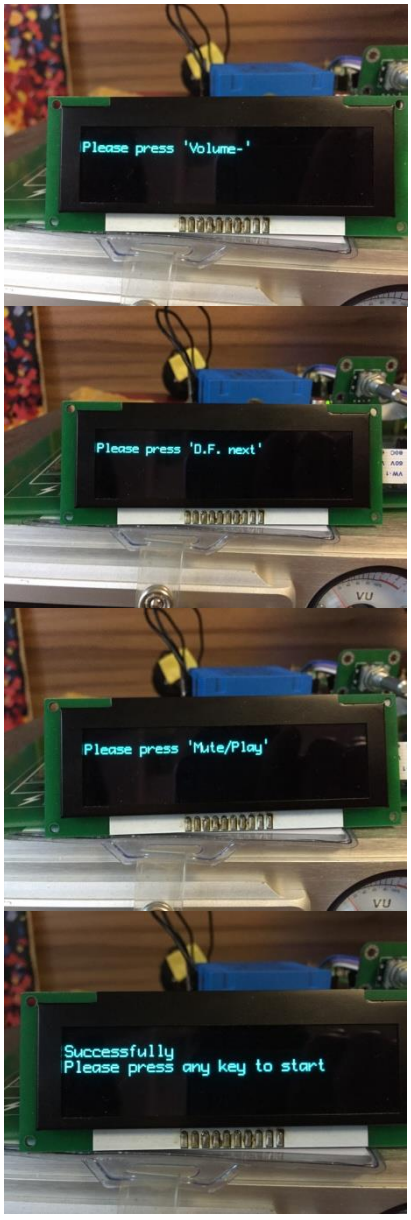
There are two different styles of display window, you can switching by press the "display" on IR remote or press the RE button.



IR CONTROL

The SK(lite) can be control by a IR remote. In the first time before use IR remote you need run the IR learn program: make sure the SK(lite) is turn off, press the RE button and keeping it, then turn on the SK(lite),the SK(lite) will running the IR learn program. Follow the prompts and complete the IR learn program with your IR remote.





IR CONTROL

The IR control functions follows:

"Volume+"	Volume increase, max 0 dB.
"Volume-"	Volume reduce, min -99dB.
"D.F. pre"	The previous Digital Filter.
"D.F. next"	The next Digital Filter.
"Source"	Switch the input source follows: AUTO-->SPDIF-->AES-->USB-->I2S-->Toslink-->AUTO
"Mute/Play"	Mute/Play
"Display"	Switch the display mode follows: Display mode 1-->Display mode 2--> Display off--> Display mode 1