

1214 AUDIOPHILE INPUT SELECTOR FOR STEREO PRE-AMPLIFIERS

(6 INPUTS – OUTPUTS, LINE AND RECORDING)

Description

Quasar kit No. 1214 is part of a new line of projects that form a full stereo system which consists of the following kits

Quasar kit No.1215	Stereo pre-amplifier with pre-amplifying and recording outputs
Quasar kit No.1216	Power supply for pre-amplifiers (audiophile)
Quasar kit No.1217	Power supply for final amplifiers (audiophile)
Quasar kit No.1218	Stereo amplifier with mosfet integrated circuit

These may be used on their own or all together to create the stereo system you want at very low cost when compared to commercial devices and quality equal to the best of them.

This kit has been developed in the Quasar Electronics laboratories, following the demand of many music lovers and sound professionals for a passive selector, specially designed for high fidelity audio applications, that will have excellent performance, will be easy to use and at a low cost.

The result of this design is a selector that fulfills all the above technical specifications and is destined to collaborate with all pre-amplifiers. The printed circuit on which it is assembled is especially designed so that its soldered paths do not introduce parasitic noises and produce negligible ohm resistance.

Technical Characteristics

Number of inputs	6 stereo with RCA plugs
Number of outputs	1 stereo with RCA plugs
Number of recording outputs	1 stereo with RCA plugs
Inputs selection	With multi-switch
Dimensions	According to U1 type
Other facilities	No wiring

The circuit

The circuit does not need powering (passive circuit) and consists only of the resistances, input and output plugs, and a multi-switch that leads the various signals of the inputs to the pre-amplifier.

Due to this particularity of the circuit no further analysis is needed as the signal simply passes through the selector without undergoing any pre-amplifying or other processing.

The appropriate selection of resistances in combination with the input resistance of the pre-amplifier consists of the adjustment circuit of the combined resistance of the source applied each time with the first stage of pre-amplifying.

Also, the construction on a printed circuit board has the advantage of doing away with the wirings which create hums, interferences and other undesirable signals which distort the signal.

The circuit has 6 same inputs which you can select with the help of multi-switch S1. The inputs are in plugs K1...K11 for the left channel and K2...K12 for the right

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channel. By connecting with pre-amplifier 1215 or any other similar amplifier, you may get the output of the amplifier from plug 19 for the left channel and plug 20 for the right channel. A couple of plugs for a recording output is on the same board. All the above presuppose the use of boards 1216, 1217 and 1218.

The KIT can also function on its own as a selector of a passive pre-amplifier following a combination with a logarithmic double potentiometer, typically **2X100 ? O/LOG**.

Construction

The construction of the kit is easy provided the instructions are followed carefully.

The only tools needed will be a soldering iron and small cutter. The soldering is included in the packaging.

Use a 15-25 Watt soldering iron. Do not use “solderin” as contemporary soldering wires contain all the materials necessary for effective soldering. Heat the soldering point (pad) together with the pins of the component for 3-5 seconds and approach the wire. The soldering material melts and stretches out around the soldering point creating a small shining cone. Remove the soldering tool and do not move the board for 5-10 seconds until the soldering point stabilizes.

A correctly soldered point is shiny and uniform around the conductor. The cold soldering point is not uniform. It is dim and creates problems to the circuit.

Cut the excess wire with the cutter. Begin the construction by soldering the resistances in the way shown in the plans. Look at the printed plan on the upper side of the board as well as the plans that accompany the kit. Solder all the pins and then all the plugs in the way shown on the plans. Screw them tightly. Finally solder the multi-switch.

If to be used as a passive pre-amplifier consult the couplings diagrams (PASSIVE PREAMPLIFIER MODE). The ‘inputs’ of the potentiometer are taken from pins 13 and 14 for the left and right channels respectively. The “outputs” of the potentiometer result directly in the positive pole of the RCA plugs (K15 and K16) for the left and right channels respectively.

If a recording output is required then 2 jumpers are used. One from PIN 13 to PIN 17 for the left channel and one from PIN 14 to PIN 13 for the right channel. If a recording output is not required components R13, R14, C1 and C2 as well as plugs RCA, K13 and K14 are not used.

Special care should be given to the wiring of the potentiometer (2X100K/LOG) which regulates the volume of the passive pre-amplifier.

In particular, the wires of the potentiometer are shielded. Especially the wire that is led to the ‘input’ of the potentiometer is of symmetric type (double), for a microphone, where the negative conductor is connected with the shield and then grounded by PINS 19 and 20 respectively.

If it doesn't work...

To check whether it is working you must connect with any pre-amplifier or ideally with Kit 1215 in order to connect the selector with the pre-amplifier. If the pre-amplifier is working but none of the inputs of the selector is feeding its inputs with a signal then most probably you have either created a short-circuit or have not made the connections of the inputs with the resistances. As this is a passive circuit if all the

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materials have been correctly soldered the cases are from negligible to non-existent. In practice if the pre-amplifier is functioning, the selector should too as it does nothing more than select inputs and convey the signal from the input chosen each time to the pre-amplifier.

Have you soldered all the components ? Turn the board upside down and check all the soldering points one by one. If any one seems cold then heat it once again with the soldering tool. The cold soldering point does not shine and is dim. It creates a knot around the conductor and problems to the circuit. Carefully check the position and direction of each component, comparing it to the topographic diagram, the table of the materials and the theoretic circuit.

It is possible that while soldering you may have short-circuited 2 adjacent pads of the printed circuit together, especially the pads of the signal to the earth. Carefully check all the soldered points and adjacent pads of the printed circuit.

Make sure you have made all the connections correctly. If not, look at the external connections diagram which accompanies the construction instructions. The connections, position and direction of the components on the board are found on the diagram.

If the above instructions have been correctly followed the circuit should function.

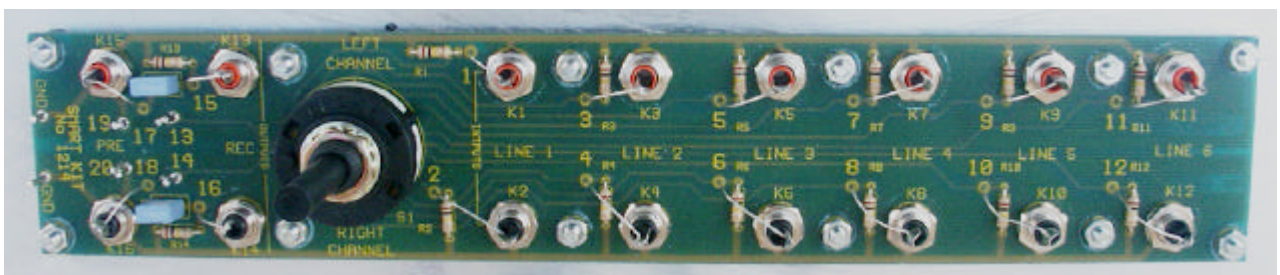
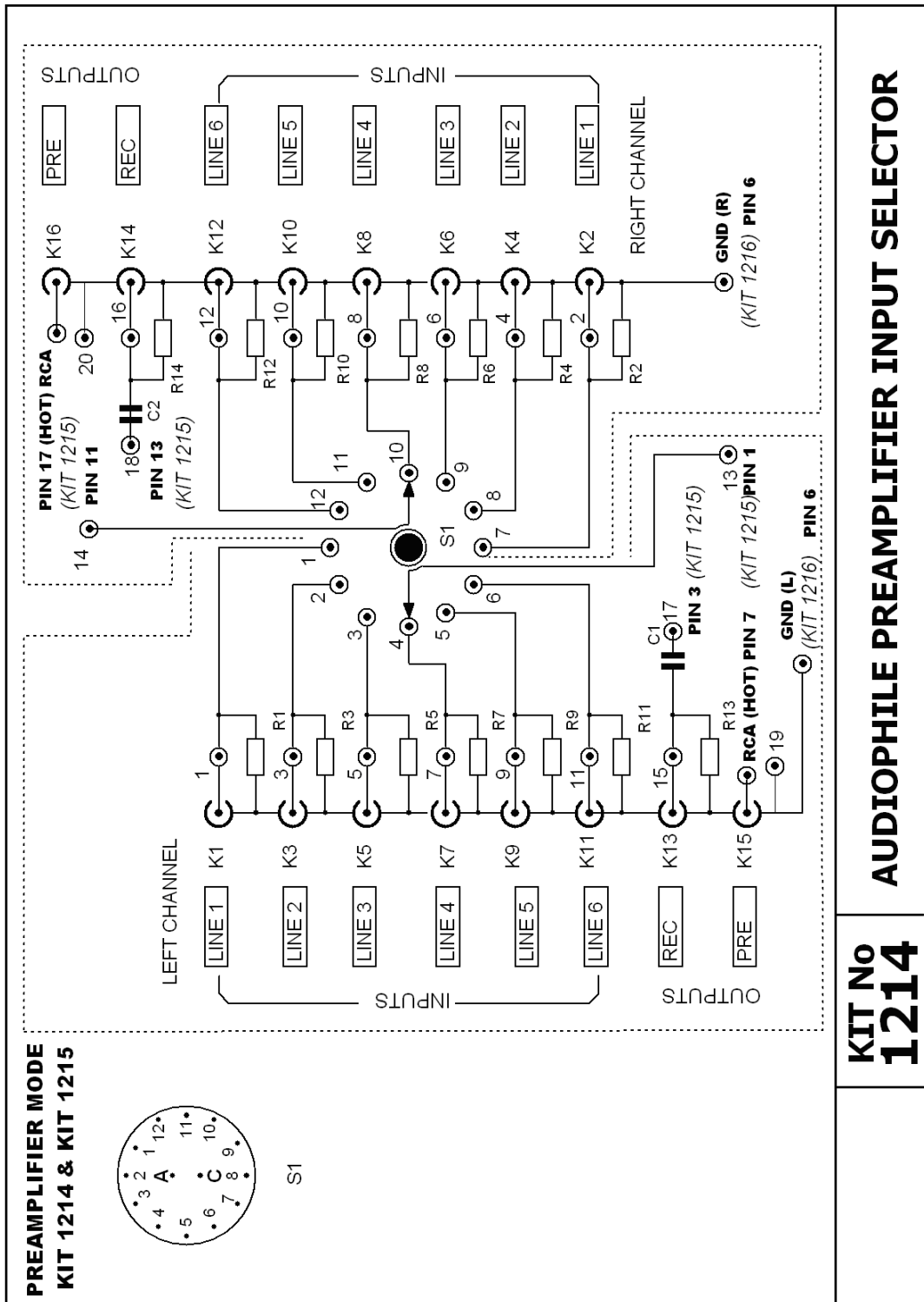
The materials

R1...R12	47? O-1/4W	(yellow, purple, orange)
R13, R14	100? O-1/4W-5%	(brown, black, yellow)
C1, C2	470nF (0,47? f or .47 or 474	Polyester capacitor
S1	2 X 6	Multi-switch
K1...K16	Positive RCA	Plugs for the board

Various Quasar kit No. 1214 board, 20 pins, solder

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