

Adaptation of the PAiA 9506 for Mid-Side outputs from Stereo Fx and Mono Source inputs.

The PAiA 9506 MS Stereo Mic kit normal picks-up sounds from microphones facing forward and to the sides and combines them for a choice of an exaggerated stereo image and/or a mono output signal. With the following changes to the kit, the input signals can be from a stereo signal source with them combined and output as Mid-Side signals to be sent to a one unit with two amps and speakers pointing to the front and side. Referencing the revised schematic, a split from the mono signal source being input to a stereo effects unit is accepted too and can be combined with the stereo effects unit with its mix adjustment set to full effect. A switch is added to select the polarity of the mono source to match the output of the stereo effects unit. Another switch mutes the effect signal, effectively bypassing or eliminating it from the mid and side outputs. Connectors can be added for taps to take the Mono Source and Stereo Effect Unit signals on through to other equipment.

Signals input to the SL, SR, and M (external signal inputs) get a lot of boost through the op-amp stages that follow them. Substituting greater value resistors at the 330ohm positions on these stages will lower the gain. It is about 30x as is. With 10k resistors sub'ed for the 330ohms, it will be about 1x, providing a buffered copy of the applied stereo effect and mono source inputs.

Connections to the IC2A buffered Mono Source signal can be accessed at circuit board wiring point E. It will take a new course over to an opened IC3A section and also be split off to an added Mono Source Thru connector and an added Mono Source Polarity (Norm/Inv) switch. This polarity switch selects the signal that wires over to the R36-3 terminal. This control has a new function of Mono Source Level sent to the outputs.

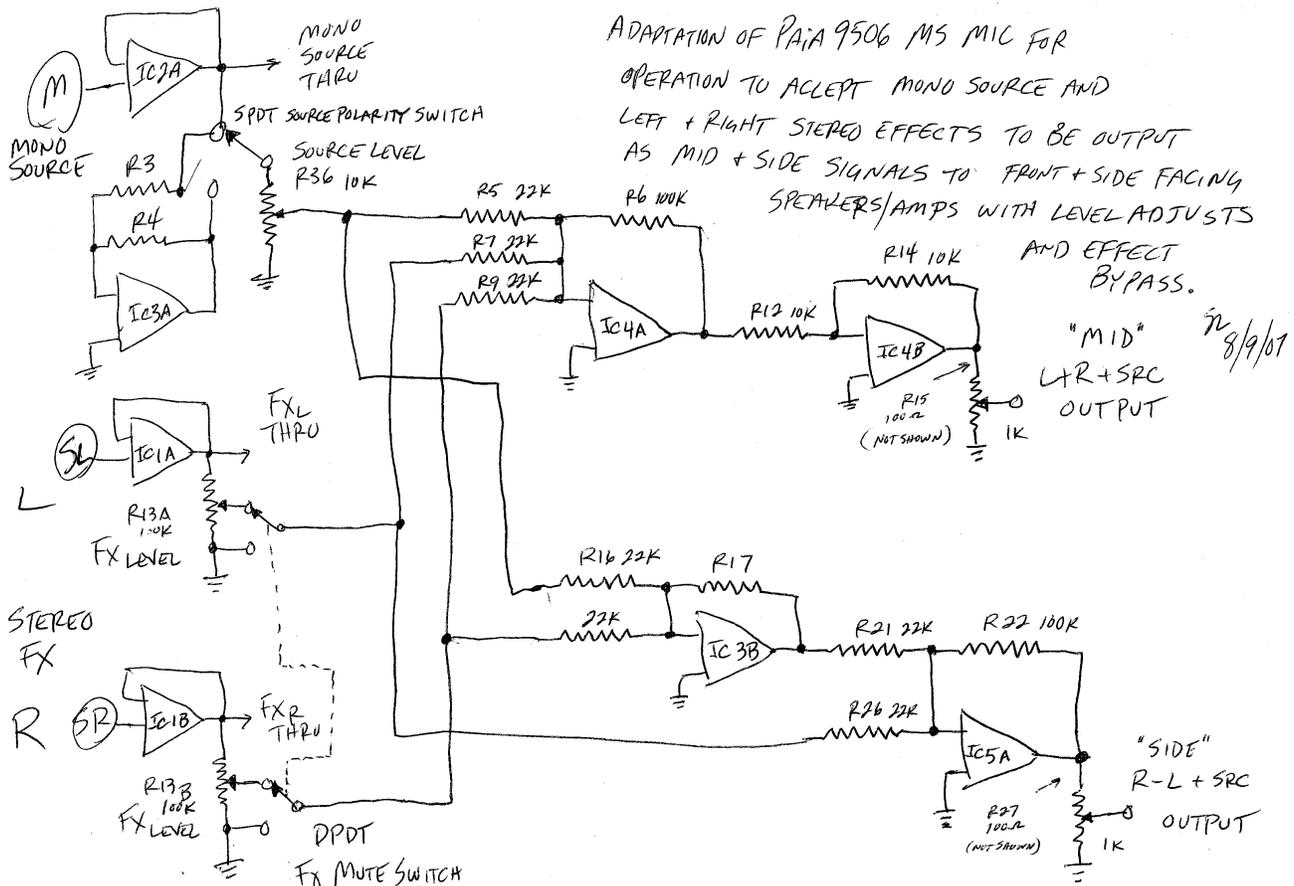
To open and access the input to IC3A, desolder and lift the "R" end of R3 to open it's former circuit and add a wire to connect the point E circuit node to the free end of this resistor (or use a new resistor for R3 to connect the "0" end of R20 to the "3" end of R3). To open and access the output of IC3A desolder and lift the "R" end of R5 and the empty solder point provides a wiring point for the added connection to the spdt polarity switch. The free end of R5 will later connect with the mono source level control.

Left and Right channel inputs are through IC sections IC1A and IC1B and these wire through points A and C to the dual-control R13 as usual. Wiring taps can be made at these connections to R13 for the added thru connectors. The wires from points B and D must disconnect from R13-2 and R13-5. New wires go from these now empty terminals to the two end terminals of an added dpdt switch that will serve to mute the stereo signal. The middle terminal of the section associated with B is wired to desoldered/lifted ends of resistors R7 ("R" end) and R26 ("R" end). The middle terminal of the section associated with D is wired to the desoldered/lifted end of resistor R9 ("9" end) and through an added 22k resistor to the circuit node that is the junction of resistors R16 ("R" end) and R17 ("7" end).

Now the path from input to output through the circuit has been rearranged to perform the new

function. To complete the changes, open the output circuits by desoldering/lifting resistors R15 ("R" end) and R27 ("R" end). The free ends of these resistors wire to added 1k output level controls for the Mid and Side outputs. Make these wire connections to the terminal at the clockwise end of the control rotation. Connect the other ends of these two controls to circuit-ground/common. The new output signals are then available at the center terminals of these two controls. The one from IC4B is the MID output level (L+R+Source) and the one from IC5A is the SIDE output level (R-L+Source). These new output points can go to the existing TRS phone connector Tip terminals (J1-T and J2-T) after the wires from the former output points H and J have been removed. Wire H and can be removed from the board. Wire K should be removed from J2-R and the board). Mono TS phone plugs should be used to access these new MID (J1) and SIDE (J2) output signals.

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Modified 9506 MS Stereo Microphone Circuit