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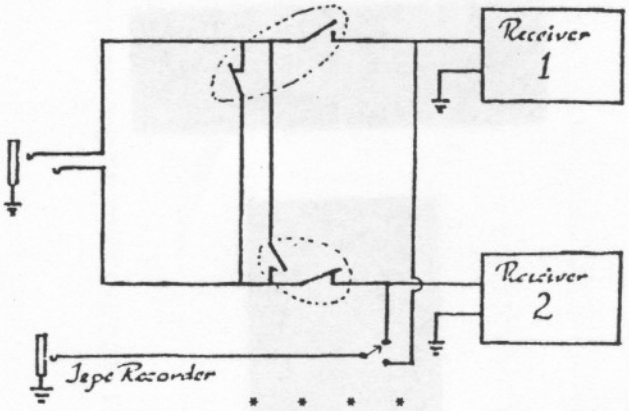
A headphone switching unit
by Derek Claridge

This headphone control employs two DPDT switches. They are wired so that when one half is open, the other half is closed. Using a stereo headset allows each receiver to be heard in both ears when either receiver is "on".

Switching both receivers "on" provides receiver 1 in the left ear, and receiver 2 in the right ear. In the diagram on the next page, receiver 2 in "on" and heard on both sides of the stereo headset, while receiver 1 is "off".

This arrangement is not suitable for tube receivers unless an appropriate (same value as the impedance of the headphones) can be switched in across the audio output of either receiver when the output is not otherwise connected to a load. The arrangement is fine for my two DX-160's with their solid state audio amplifiers.



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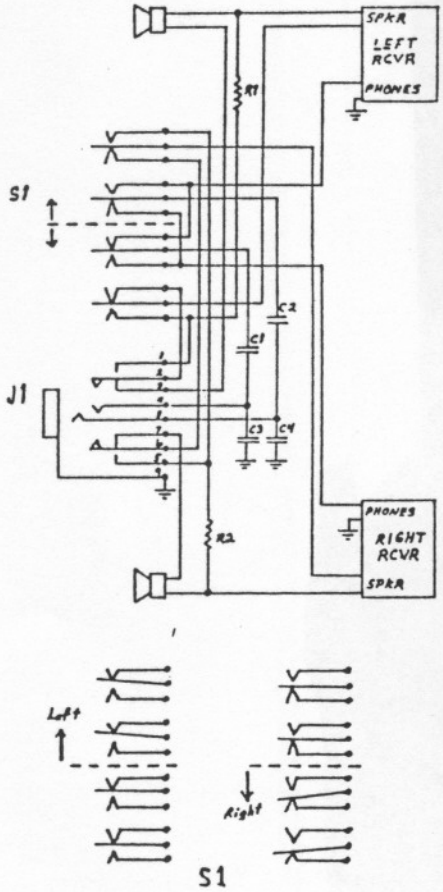
A speaker/headphone switching unit
by Michael G. Worst



Over the past few years some tips have appeared in the various club bulletins for switching two speakers and headphone outputs. The diagram is one I have worked out in steps during this time for use with a stereo headphone.

The jack is a stereo type with contacts for cutting off speakers. The one illustrated is available from Radio Shack for around $1.50. It is listed as Cat. no. 274-277 stereo phone jack --3 conductor double closed circuit.

The switch is a four pull double throw (4PDT) with on-on-on contacts. The one made by C&K Components, Inc. appears to be the most easily available. Their catalog number is 7411-SYZQ and costs around $8.

With the switch in the center "normal" position both speakers are on. When switched to the left the right speaker is turned off, and when switched to the right, the left speaker is turned off. When using headphones, in the normal position the right receiver is on the right headphone, and the left receiver on the left headphone. With the switch thrown to the left, the left receiver is on both headphones, and when thrown to the right, the right receiver is on both headphones.

The resistors are to terminate the receiver output when the speaker is cut off. They should be the same value as the output impedance of the receivers. In my case R1 is 600 ohms and R2 is 4 ohms. The capacitors C1 and C2 are to reduce the low frequency response of the headphones , so rumbles and such are reduced. They should be around 10 uF or so. C3 and C4 are to compensate for the inductance of the headphones and should be about 16 uF. In my set-up, the speakers are mounted in a speaker box that a friend made for me, and the switch and jack are mounted below them on the center line.

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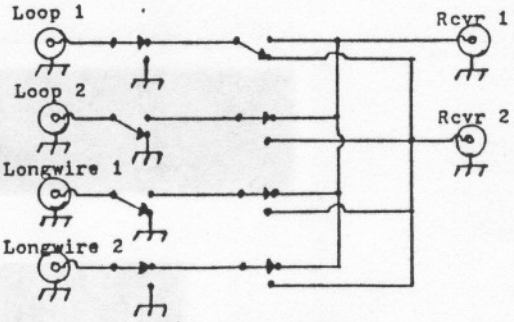
An antenna switching unit

After building a second loop antenna and another receiver, I began to find it very tedious comparing loops and receivers by reaching behind the radios to change the antenna lead-ins. Constructing this switching unit and placing it off to one side from my receivers has lowered my blood pressure considerably. I can now choose which of two loops and two random wires to feed to either of two radios.

The circuit is enclosed in an aluminum mini-box. When an antenna is not being used, it is switched to the ground position on the SPDT switch. (Note that this ground isn't intended to be protection from lightning discharges through your random wire antenna. A grounding switch for this purpose should be outside a building.) An SP3T switch (with the third position grounded) could be used instead of the the two SPDT ones connected to each antenna input, if such a switch is available. If you are using a loop in which the circuitry has been painstakingly balanced to allow for accurate direction finding, you may have to run that loop directly to a receiver when direction finding; the mess of wires in the switching box may have an effect on the loop's balance even if all other antenna inputs are grounded. Not having a well balanced loop at present, I haven't been able to find out if this is the case. Oh yes, the wires connecting the loops and receivers to the unit are shielded.



Since building this, I've added switching positions for another receiver or two, as well as for connecting phasing units between antennas and receivers, but the additional circuitry is simply more of the same.

73, NHP

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