

## Transistor radio receiver

Written by Hans Summers

Saturday, 20 June 2009 15:45 - Last Updated Tuesday, 06 November 2018 10:35

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I built this simple regenerative short wave radio receiver in 1982 with a lot of help from my Dad. It ran on a 9 volt battery installed in the back of the box, on the right hand side. The box was made entirely of plywood. It worked well and when I tried it recently, I was happy to find that it still does!

As you can see from the ruler placed alongside in the photo, it was quite large. It was only later that I had this crazy idea of making all my circuits totally miniaturised!

Inside the box, you can see the tuning coil to the left, with the small circuit board suspended in the centre of the box. Aluminium kitchen foil was stuck all around the inside of the box for RF shielding purposes.

{gallery}transistor/photos{/gallery}

### Circuit Diagram

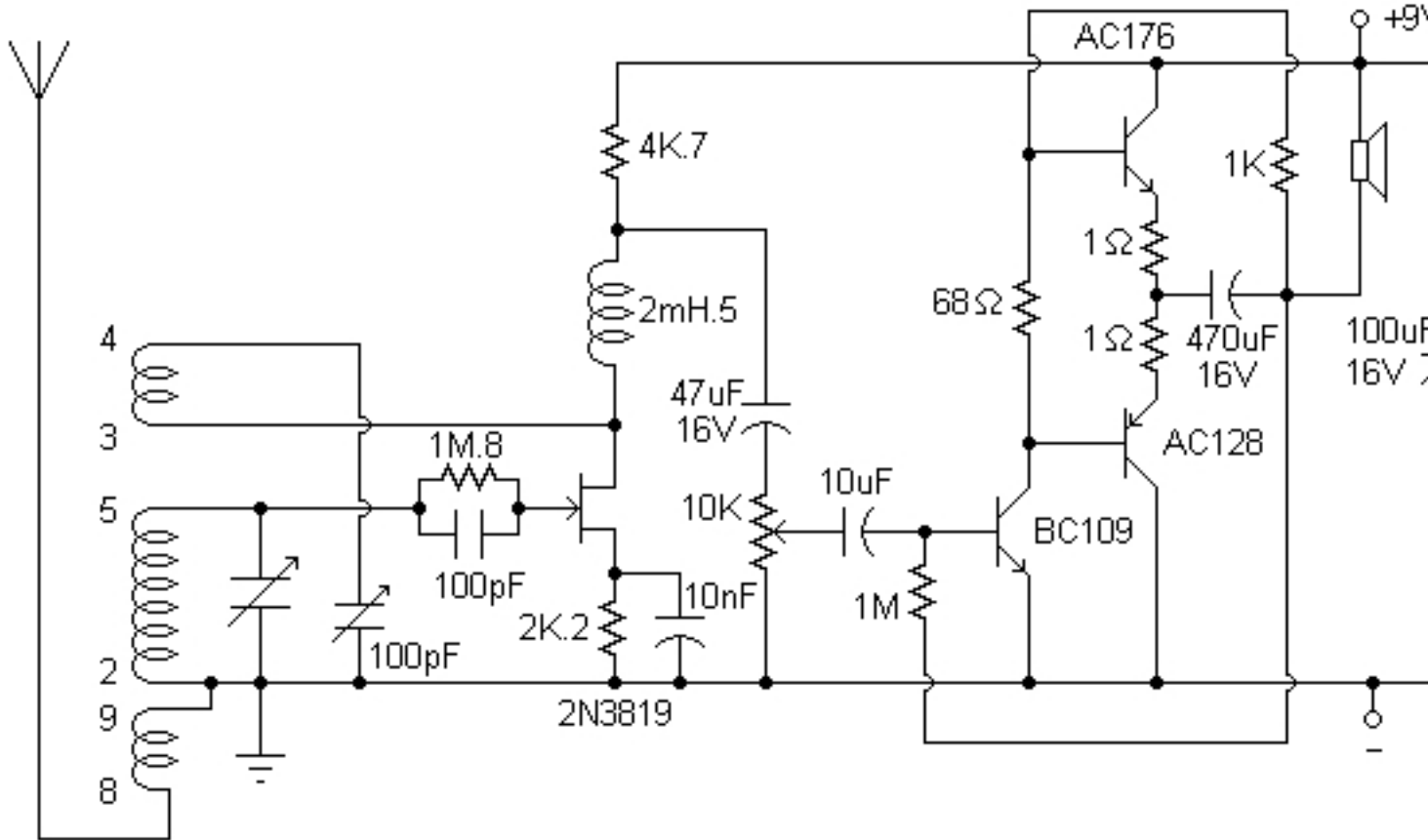
The design is by my [Father](#) . Aged nearly 11 at the time my transistor circuit design skills weren't quite there yet... The tuning capacitor is approximately 300pF. The tuning dial incorporates a reduction drive mechanism which is very useful since the receiver covers several MHz. The connections to the coil are to pin numbers (from top to bottom) 4, 3, 5, 2, 9 and 8. The aerial used was just a long piece of wire strung out in the garden.

Many thanks to Ted Lester, who sent me the nicely drawn schematic shown below. He created it using Paint by placing text and cutting and pasting component symbols.

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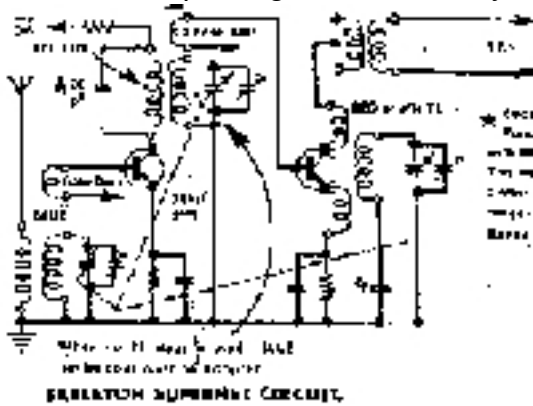
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## Denco Coil Data

{gallery}transistor/denco/566191 The tuning coil used in this receiver is a Denco One type. General data is available [here](#).

The coils were packaged in a small cylindrical tin, very similar in size to a 35mm film canister. If desired



Thanks to Howard Chadwell who sent me a more recent edition of the Denco datasheet, showing a sketch

[CLICK HERE](#) to download an Adobe Acrobat PDF version of the datasheet for \$0.71K, best view (1.10K) the

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[Download: Miniature Coil Handbook](#) (PDF) This book is a revision of the guide (555k) equivalent.



[Download: Transistor and Miniature/Dual Purpose Coils Technical Bulletin](#) (PDF) (thanks to [Dipak Mahapatra](#))