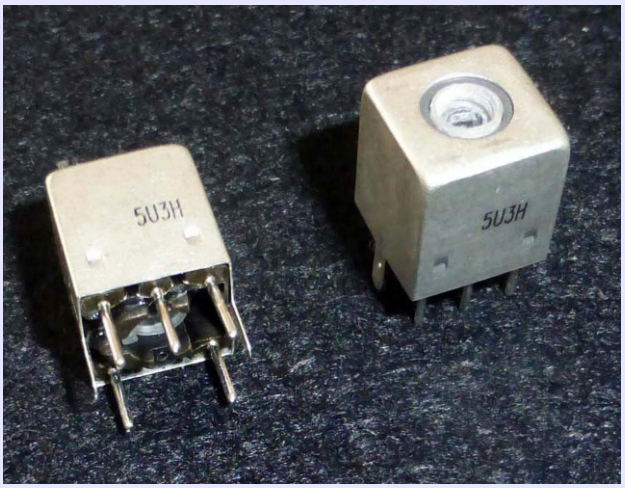
AMX10.v6 RF Condenser Microphone Project
• INDUCTORS •



The Spectrum type 5u3HH coils, which were originally specified as the nearest 'off the shelf' inductors for this project are only really effective within a fairly limited range of capsule capacitive values.

If the capsule values are smaller than 65pF – or greater that 80pF - these inductors tend to perform less well, although useful results can still be obtained.

To combat these problems, it is possible to construct your own inductors using an almost identical coil former which is available cheaply from Aliexpress. See here:

https://www.aliexpress.com/item/1005003604363316.html

These can be used in conjunction with 0.1mm enamelled copper wire (magnet wire) which is widely available from a number of sources…. Like here for example:

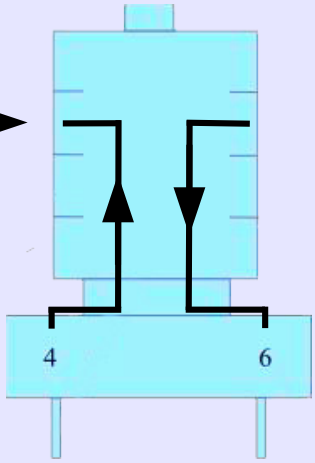
https://www.aliexpress.com/item/1005002084489140.html

The notes below show how a range of inductors can be constructed, to enable a better 'match' for a wider range of capsule capacitive values.

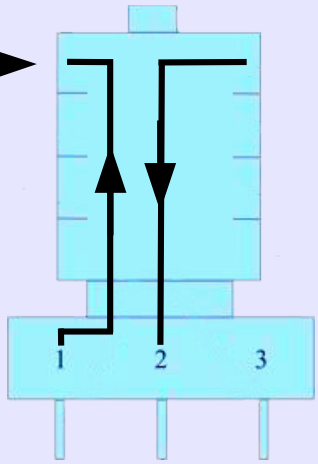
The tables attached to the RF.AMX.v6 schematic show the appropriate component values best suited to match specific capsule capacitances.

AMX10 COIL WINDING DETAILS

Primary winding
(FIT FIRST)
(*2nd tier of bobbin*)
* x turns clockwise



Secondary winding
(1st half)
*x turns clockwise
(*top tier of bobbin*)



** Number of turns for each winding for different value inductors (turns ratio c.1:5)*

6uH -
Primary: 4
Secondary: 10+10

8uH
Primary: 5
Secondary: 12+12

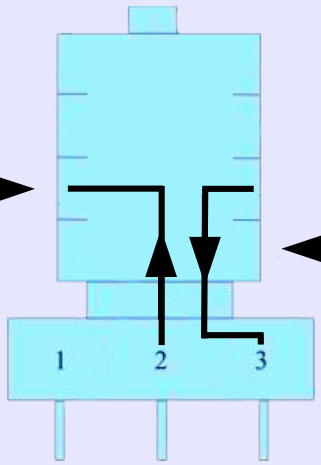
12uH
Primary: 6
Secondary: 15+15

16uH -
Primary: 7
Secondary: 17+17

21uH -
Primary: 8
Secondary: 20+20

Solder start of this second winding to pin 1
- wind *x turns clockwise -
Solder exit of winding to pin 2, and continue that winding to second half shown below

Secondary winding
(2nd half)
*x turns clockwise
(*3rd tier of bobbin*)



(4th (lowest) tier of bobbin is not used)

Continue winding from pin 2, and terminate final exit of secondary winding to pin 3