

PDF File: On Various Aspects of the XS-801 Kit / April 08. 2008

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Hello Fellow Crystal Set Enthusiasts.

The following pages include some mechanical aspects of the XS-801 Crystal Radio Kit. These pages are provided for kit builders who need full-scale mechanical drawings as a template for marking and punching holes for the chassis and front panel.

The full text of an article about the XS-801 can be found in the May 08 XSS Newsletter, which will be sent to Society Members on our about May 1, 2008. The Kit will be offered on or before that date via our website.

Here's the announcement placed on the wrapper of the May 08 issue:

XS-801 Kit

The XS-801 is an ideal transition kit for those who've finished an Oat-Box or other starter kit and desire to learn more and hear more stations. This kit features a built-in air-variable capacitor for antenna tuning, a low-high band switch for dividing the AM band, separate station-tuning capacitor, a bias circuit to reduce audio distortion for strong signals, a large 4.2 inch diameter by 5.2 inch long coil form with 60 feet of #18 insulated coil wire, and includes a 1N34A detector diode. The front panel is shown in the photo.

The kit comes ready to assemble. Most components mount on the 8 by 10 inch hard board chassis and 6 by 10 inch front panel, and all holes are pre-punched. The coil form is held above the chassis with ¼-20 2.5 inch nylon bolts and hex nuts. Wiring connections are via solder lugs mounting on inverted 6-32 screws with the hex nuts on top; so, it's easy to rewire to explore the various circuits included in the manual. Wiring can accommodate an earpiece (shipped with the kit), hi-z headphones (not included), and space has been left to add a 3:1 inter-stage audio transformer, should you wish to obtain one later. The chassis footprints for the antenna tuner and station tuning caps also fit our 365 variable capacitor with 8:1 reduction drive, a new catalog item (but not shipped with the kit). That's an added bonus for future experimentation.

Why use a bigger coil? In general, bigger coil forms and the larger wire diameter produce better selectivity. The kit manual includes plans for three different coils you can wind, starting with the #18 wire included with the kit. Increasing spacing between turns on a coil can increase selectivity (and Q) in many cases; the coil plan uses the # 18 wire's insulation as a natural spacer, thus providing a better performing coil. Once you've tried the coils listed, use the coil calculator, found on our website, to explore other variations.

The XS-801 Crystal Ratio kit. Price @ \$49.95. See the society web pages for more details.

Figure 1
Chassis
Drawing

D1, R1, C2
and C3 are
not shown.
See text &
schematic for
wiring and
location.

04/22/08
COIL
XSS-801 CRYSTAL SET

CHASSIS SIZE: 8 BY 10
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Coil Form:
D=4.2, Len=5.2
Standoffs:
1/4-20 by 2.5 Inch
Nylon Bolts

COLD TAP#1 TAP#2 HOT

Opt. xfmr

CUT HERE

GND



A

B

C

D



ANT

E

Sw1

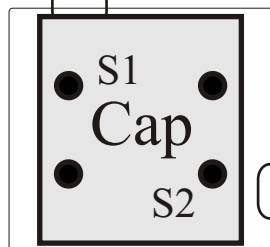
G

C1

I

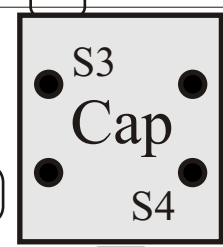
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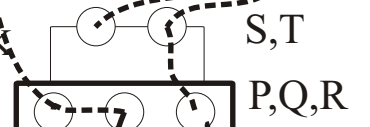
F

H



JACK

POT



C4

CUT HERE

Ref

O



R1

N



M

L

K

J

4

1

3

2

4

04-22-08

Panel size = 10 by 6 inches. Sell dimensions next page.

XSS-801

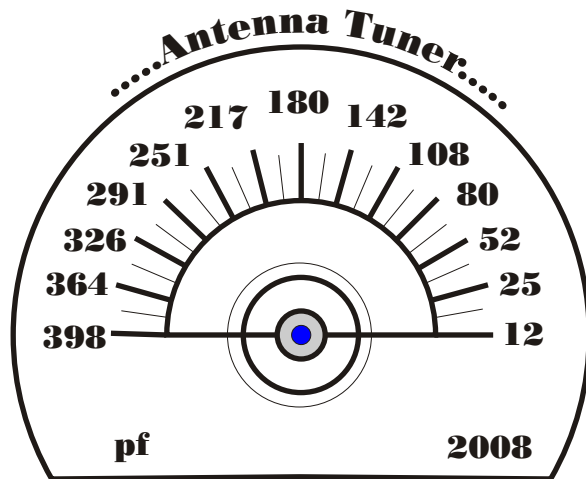
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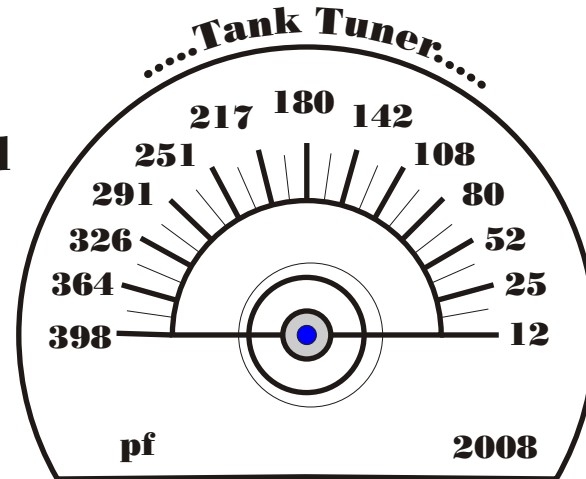
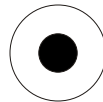
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band



Bias



phones



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Panel size = 10 by 6 inches
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