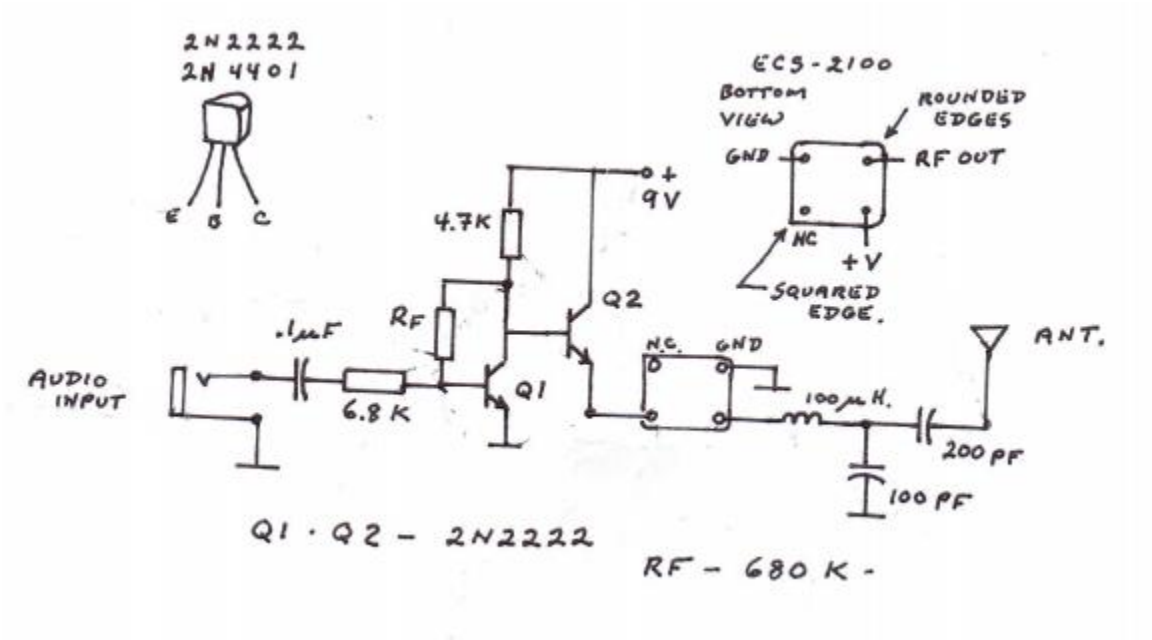
Broadcast Transmitter using ECS-2100 TTL Clock Oscillator 12 July 2016

Designed by Reed Fisher, this is a great improvement over our original design using an audio transformer. The heart of the broadcast transmitter is an ECS 2100 TTL clock chip running at 1 Mhz. It is series modulated by a 2N2222 transistor as shown in the schematic below.



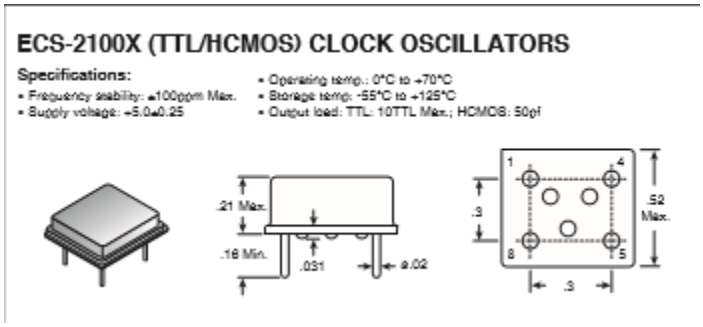
Audio may be from a CD player, an I-pad or microphone. Transistor Q1 provides voltage gain and transistor Q2 is the modulator.

The layout is not critical and may be constructed on a small perf board. Power is from a 9 volt battery.

Components:

Resistors R1 = 6.8K, Rf = 680K*, R3 = 4.7K Capacitors C1 = .1 uF, C2 = 100 pF, C3 = 200 pF

Inductor = 100 uH IC = ECS2100 Note: * adjust Rf for 4.5 volts on the IC with no modulation.



Specifications | Documents (1) | My Notes

Manufacturer:	ECS
Product Category:	Standard Clock Oscillators
RoHS:	RoHS Details
Product:	XO
Package / Case:	Half Size
Frequency:	1 MHz
Frequency Stability:	100 PPM
Load Capacitance:	50 pF
Termination Style:	Radial
Minimum Operating Temperature:	0 C
Maximum Operating Temperature:	+ 70 C
Height:	5.4 mm
Series:	ECS2100
Brand:	ECS
Current Rating:	25 mA
Length:	13.2 mm
Operating Supply Voltage:	5 V
Factory Pack Quantity:	40
Type:	XO - Crystal Clock Oscillators
Width:	13.2 mm

ECS INC. INTERNATIONAL

No Image

Mouser Part #:	520-TCH100-X
Manufacturer Part #:	ECS-2100AX-1.0MHZ
Manufacturer:	ECS
Description:	Standard Clock Oscillators DIP-8 5V 1MHz

Available in MultiSIM BLUE

Page 1,197, Mouser Online Catalog
Page 1,197, PDF Catalog Page

Lab Notes: Reed Fisher W2CQH