

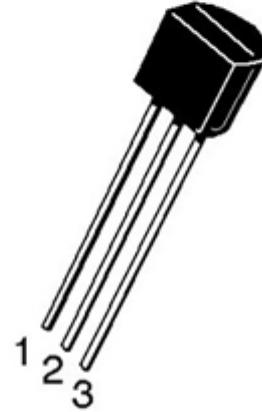


TA7642 AM Radio Chip

The TA7642 3 pin radio IC is a replacement for the now obsolete ZN414 chip that has been well known for many years. Very easy to use and only needs a small number of additional parts to build a fully working portable radio. This chip can and has been used as part of a superhet design radio to provide IF amplification and detection with built in AGC.

The circuit below is a typical one used by many. A google search will provide many other circuit ideas.

The circuit shown can be used with just about any general purpose transistor as an amplifier and Kanga recommends a 2N2222 instead of the suggested BC548 as it gives more gain (Volume)

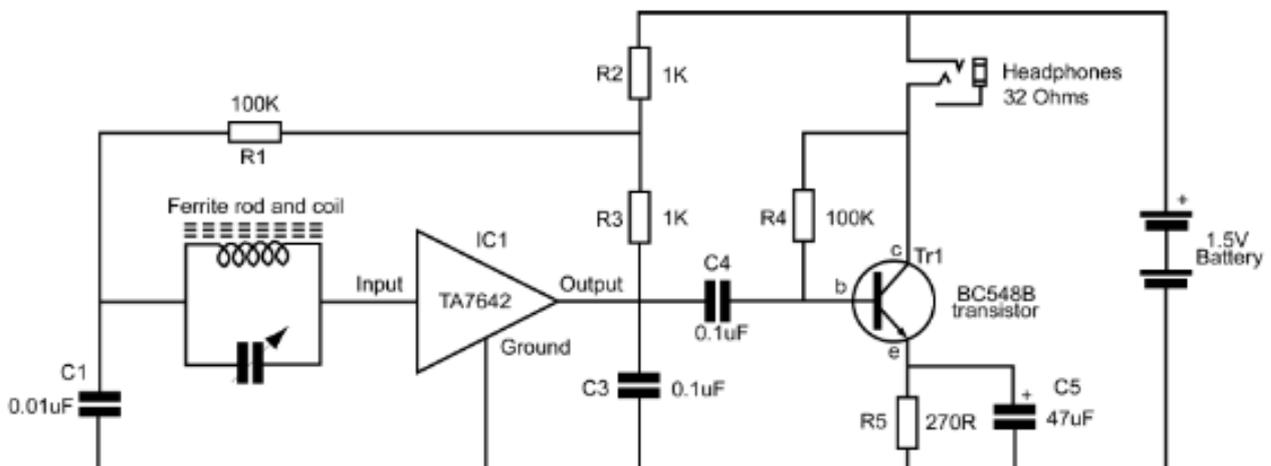


Pin no.	Symbol	Desc.
1	Vss	Gnd
2	I/P	Input
3	O/P	Output

Electrical Characteristics:

Parameters	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Supply voltage	V_{CC}		1.2	1.3	1.6	V
Quiescent current	I_{CCQ}	$V_I = 0$	0.14	0.20	0.30	mA
Input resistance	R_I		-	3	-	$M\Omega$
Maximum sensitivity	S_M	$V_{OD} = 3mV$	-	600	-	μV
Detector output voltage	V_{OD}	$V_I = 10mV$	5	15	30	mV
AGC Range	A		-	30	-	dB

Example circuit:



The Ferrite rod and coil can be a old one from a broken radio or approx. 60 turns of thin enameled wire on a 3-4 inch ferrite rod.