

## Specifications

### Features

- Superheterodyne circuit with 1N34A germanium diode detector
- Internal ferri-loopstick antenna with external vertical antenna
- RF amplification stage
- Internal 8-ohm 3-inch PM speaker
- 0.4 milliwatt audio output
- Copper clad control face secured to bakelite case

### Controls

- Power on/off DPDT pushbutton switch
- Volume control (500K ohm)
- Vernier-controlled tuning capacitor calibrated with broadcast band dial markings

### Connections

- Banana jack on top face accepts plug from extendible mast aerial
- Front-mounted 2-circuit headphone jack automatically disconnects internal speaker

### Tubes

- 2E32 untuned RF amplifier (fil 1.25 V @ 50 mA; plate 22.5 V @ 0.4 mA)
- 2G22 mixer/oscillator (fil 1.25 V @ 50 mA; plate 22.5 V @ 0.2 mA)
- 2E32 IF amplifier (fil 1.25 V @ 50 mA; plate 22.5 V @ 0.4 mA)
- 2E32 1st audio amplifier (fil 1.25 V @ 50 mA; plate 22.5 V @ 0.4 mA)
- 2E36 power amplifier (fil 1.25 V @ 30 mA; plate 45.0 V @ 0.4 mA)

### Power Supplies

- 1.5 VDC filament supply via 2 parallel-connected AA cells
- 36 VDC plate supply via 6 series-parallel connected #233A batteries

### Power Consumption

- "A" battery 230 mA
- "B" battery 2 mA

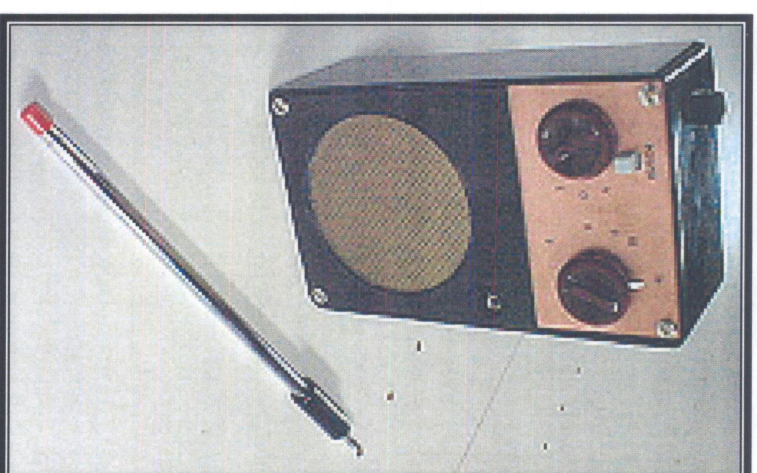
### Estimated Battery Life

- "A" battery 21.1 hrs using 2-2450 mAh Alkaline cells
- "B" battery 99 hrs using 6-33 mAh Alkaline cells

### Dimensions

- Width 3.75 in.
- Height 6.25 in.
- Depth 2.00 in.
- Weight (with batteries installed) 2 lbs.

## 5-Tube Micro-Superheterodyne Receiver

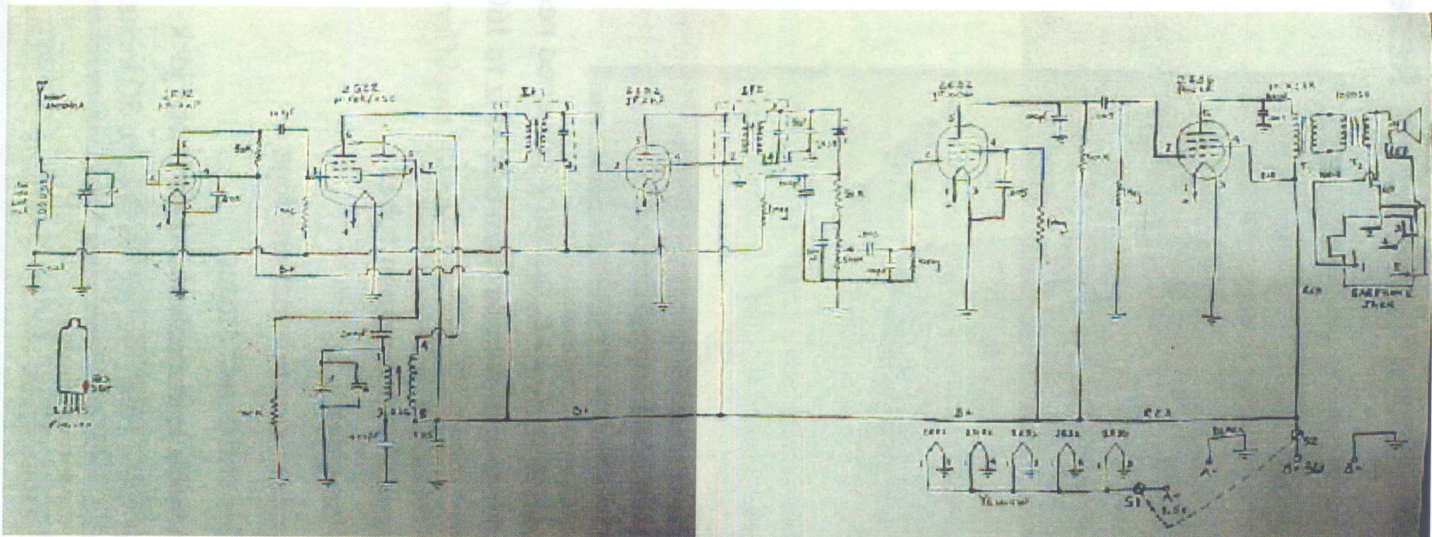


- Coathpocket-sized portable, battery-powered receiver
- Tunes the AM broadcast band from 640 KHz to 1600 KHz
- Superheterodyne circuit with untuned RF amplifier stage
- Uses five "pencil" type vacuum tubes
- IF amplification stage
- 1N34A Germanium diode detection stage
- Audio amplifier and power stages
- Internal 3-inch PM loudspeaker and earphone jack
- Detachable external antenna extendible to 30 inches

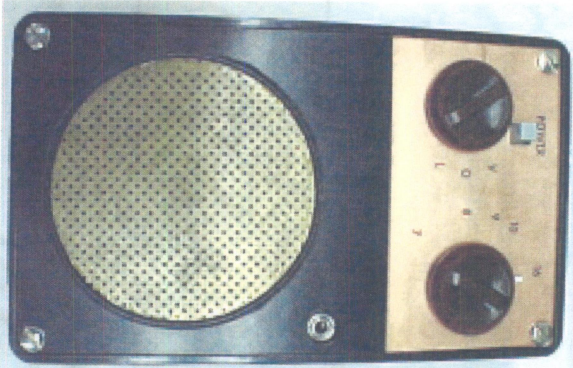
Manufactured for 2003 NJARC Contest



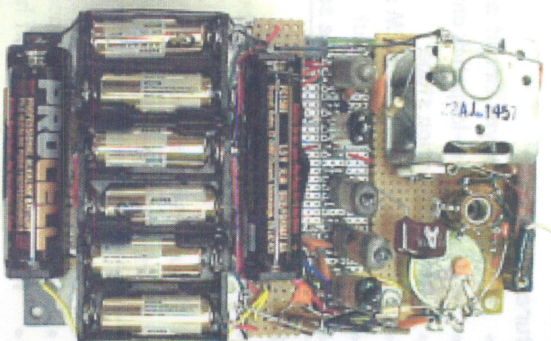
## Schematic



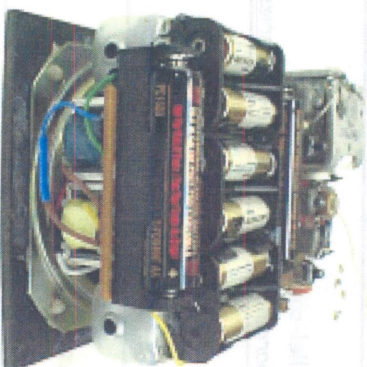
## Photo Gallery



Front panel controls for power, volume, tuning, and earphone jack. 3-inch PM speaker is behind gold baffle. Four machine screws secure the front panel to the bakelite case.



Rear view of chassis showing (from top) Ferri-loopstick, tuning cap, oscillator coil, volume control pot, (from left) 2E32 RF amp, 2E32 mixer /oscillator, 2E32 IF amp, 2E32 1st audio amp, and 2E36 power amp. Two parallel mounted AA batteries provide 1.5 VDC for tube filaments. Two parallel sets of three series-mounted #23A batteries (inserted into N-sized receptacles) provide 36 VDC for B+.



Bottom end view of chassis showing "sandwich" construction. All battery packs are bonded to obverse face of perforated circuit card. All transformers (interstage, audio, and IF), and 3-inch PM speaker are bonded to reverse face of perforated circuit card. Front face of instrument is bonded to speaker and 3-hole island circuit card.