



Intro to Radios for new Hams

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What radio should I get?

- Not a simple question
 - What do you **need** to do with it?
 - What do you **want** to do with it?
 - What **might** you do with it?
 - What **are** you going to do with it?



What car should I get?



Not every car fits everyone



Some cars fit most



Radio Bands

- VHF/UHF - Full privileges for Techs
 - 6M, **2M**, 1.25M(220MHz)
 - **70cm**, 33cm(900MHz), 23cm(1200MHz)
- HF - None to very limited privileges for Techs
 - 10M, 12M, 15M, 17M, 20M, 30M, 40M, 60M, 80M

Radio Types

- Handie-Talkie (HT) -
 - Typically 5W power
 - Internal Battery, Mike, Speaker
- Mobile
 - Typically 40-50W power
 - 12V externally powered
 - Handheld mike, speaker jacks
- Base
 - Usually just a mobile with a power supply



HT's

- Cheap - \$30-\$100
 - Mostly Chinese manufacturers - Baofeng, TYT, Wouxun
 - Basic features, 2M&70cm, questionable manuals, lower quality
- Mid-Range - \$100-250
 - Quality manufacturers - Yaesu, ICOM, Kenwood, Alinco, etc.
 - Basic+ features, 2M&70cm, good manuals, good support, sometimes DMR
- High-End - \$250-\$600
 - Advanced features - APRS/GPS, Digital modes (DMR, DStar, Fusion)
 - Additional bands

HT's

Baofeng UV-5R
Wouxun KG-UV3D
Yaesu FT-65
Alinco DJ-VX50T
TYT MD-UV380
Yaesu FT-60
Yaesu FT-70
Icom ID-52A
Kenwood TH-D74A



HT package

- Radio
- Speaker/Mike
- Better antenna
- Second Battery
- External Antenna - optional



Mobile

- Super Cheap - sub \$150
- Low end - \$150-300
 - Single VFO w/ basic features
- Mid-Range - \$300-400
 - Dual VFO, crossband
- High-End - \$400+
 - More bands
 - Digital modes
 - APRS/GPS/TNC



Mobile

Alinco DR-735T

Icom IC-2730A

Kenwood TM-281A

Connect Systems CS800D

Kenwood TM-V71A

Icom ID-5100A

Yaesu FTM-300DR

Yaesu FTM-400XDR

Kenwood TM-D710G



Mobile package

- Mobile Radio
- Power connectors
- External Speaker
- Antenna
 - NMO Magnetic mount
 - NMO Antenna
- Power Supply or Battery for operation outside vehicle



Features of interest

- Detachable head
- APRS/GPS
- Crossband repeat
- Number of memories
- Power levels
- Battery size / current draw
- Speaker volume and clarity
- Bluetooth
- DMR
- TNC
- Dual VFO
- V+V, V+U, U+U

Antennas

A good antenna is well worth the cost!!

- 3dB = double the power

Upgrade your 'rubber duck' and you'll be amazed.

Great solution for using an HT from your car too!

Antennas - Mobile mount

NMO is a widely adopted standard

Mag-mounts are widely available

Also work well with a cookie sheet at home or away from vehicle

Can also be drilled into car, or attached with a bracket for situations:

Aluminum/plastic body cars

Jeeps, etc

Usually ~\$25-50



Antennas

Simple vertical is great all around choice

- Size
 - Wavelength: $\frac{1}{4}$, $\frac{5}{8}$, $\frac{1}{2}$
 - Pattern
 - Height
- Bands

Usually ~\$25-\$100 for antenna



Antennas - other

Jetstream JTB3 / Diamond X50 - A great home station antenna for \$60/120

N9TAX - portable and great performance for < \$30

Arrow Yagi - one of the best portable yagi's, and run ~\$100

