

HAM RADIO GUIDE 2026

Your First Radio

A Practical Guide for New General Class Operators

HF • VHF/UHF Mobile • Handhelds • Buying Strategies

Focus: Mobile Installations & Car Show 2026

Grayson County Amateur Radio Club • K5GCC

1. Section 1 — Top 5 HF Radios
2. Section 2 — Top 6 VHF/UHF Mobile Rigs
3. Section 3 — Top 5 Handheld Radios (HTs)
4. Section 4 — Bridge Radios (HF + VHF/UHF)
5. Section 5 — Buying Strategies & Where to Buy

Why HF? The General Class Opportunity

Technician gives limited HF — General unlocks everything



Global Range

Talk across the country and around the world — no internet, no infrastructure required.



New Bands

80m, 40m, 20m, 15m, 10m open up — the most active HF bands for DX, contests, and ragchewing.



Mobile HF

Take HF on the road. Mobile HF is one of the fastest growing areas in the hobby.



POTA / SOTA

Parks on the Air and Summits on the Air — portable HF activations loved by new and experienced hams alike.

SECTION 1

HF Radios

Top 5 picks for new General class operators

1. Yaesu FT-891
2. Icom IC-7300
3. Icom IC-7300 MK2
4. Yaesu FT-710 AESS
5. Yaesu FT-DX10

Yaesu FT-891

The Purpose-Built Mobile HF Champion

MSRP \$699.95

KEY SPECS

Power: **100W (HF) / 50W (6m)**

Bands: **HF + 6m**

ATU: **No (external rec.)**

SDR/Scope: **No waterfall**

Modes: **SSB, CW, AM, FM, RTTY**

Faceplate: **Detachable ✓**

✓ PROS

- Compact body — hides under seat or in trunk
- Detachable faceplate with long cable
- POTA / portable ops favorite
- 100W HF in a small package
- Purpose-built mobile design

★★★ BEST MOBILE

x CONS

- No built-in ATU
- No SDR waterfall
- No VHF/UHF
- Basic display by modern standards



Real-world: FT-891 body under back seat of 2018 Nissan Titan — custom 3D-printed dash mount for faceplate. The gold standard mobile HF install.

Icom IC-7300

The Gold Standard First HF Radio

MSRP \$1,399.95

★ **BASE STATION**

KEY SPECS

Power:	100W
Bands:	HF + 6m
ATU:	Yes — built-in ATU
SDR/Scope:	Excellent SDR waterfall
Modes:	SSB, CW, AM, FM, RTTY
Faceplate:	Non-detachable

✓ **PROS**

- Most recommended first HF radio on market
- Enormous online community & resources
- Excellent SDR waterfall — perfect for learning
- Built-in ATU
- Outstanding value
- Huge used resale market

x **CONS**

- No VHF/UHF coverage
- Face does not detach
- Full body mount required for mobile
- Modern vehicles make mobile installs tight



The safest first HF radio purchase. If you are not sure what to buy — buy this. Community support is unmatched.

Icom IC-7300 MK2

Updated Classic — Improvements and Trade-offs

MSRP \$1,499.95

★ **BASE STATION**

KEY SPECS

Power:	100W
Bands:	HF + 6m
ATU:	Yes — built-in ATU
SDR/Scope:	Improved SDR display
Modes:	SSB, CW, AM, FM, RTTY
Faceplate:	Non-detachable

✓ PROS

- Improved display over original IC-7300
- Enhanced receiver performance
- Network capable (wired)
- CI-V software compatible
- Icom support ecosystem

x CONS

- Face does not detach
- 'Sweet and sour' vs original — not a slam-dunk upgrade
- Newer model — fewer reviews
- No VHF/UHF
- Not mobile-friendly



Owner's take: 'Sweet and sour' — some genuine improvements, but compare carefully to the original before deciding to pay the premium.

Yaesu FT-710 AESS

Modern SDR HF — Compact and Feature-Rich

MSRP \$1,199.95

★ **CHALLENGING MOBILE**

KEY SPECS

Power:	100W
Bands:	HF + 6m
ATU:	Yes — built-in ATU
SDR/Scope:	Yes — SDR waterfall
Modes:	SSB, CW, AM, FM, RTTY
Faceplate:	Non-detachable

✓ PROS

- Excellent SDR waterfall
- Built-in ATU
- Compact for a full-featured radio
- Strong SDR receiver
- Good value for features

x CONS

- Face does not detach
- No VHF/UHF
- Some mobile installs exist but tight in modern vehicles
- Display smaller than IC-7300



A strong modern HF base radio. Some operators do mount these in vehicles but non-detachable face limits flexibility.

Yaesu FT-DX10

Contest-Grade Performance — The Serious DX Radio

MSRP \$1,499.95

KEY SPECS

Power:	100W
Bands:	HF + 6m
ATU:	Yes — built-in ATU
SDR/Scope:	Yes — SDR + spectrum scope
Modes:	SSB, CW, AM, FM, RTTY
Faceplate:	Non-detachable

✓ PROS

- Outstanding receiver — contest-grade
- Excellent spectrum scope
- Built-in ATU
- High dynamic range for crowded bands
- Great for serious DX and contesting

X BASE STATION ONLY

X CONS

- Premium price
- Face does not detach
- Larger — not mobile
- Best suited for experienced operators
- Step-up from beginner needs



Dream shack centerpiece for a ham ready to get serious about DX. Not a first choice for a brand new General — but worth the upgrade path discussion.

SECTION 2

VHF/UHF Mobile Rigs

Top 6 dual-band mobile transceivers for your vehicle

1. Yaesu FTM-500DR
2. Yaesu FTM-300DR
3. Yaesu FTM-200DR
4. Icom IC-2730A
5. Icom ID-5100A
6. Kenwood TM-V71A

VHF/UHF Mobile Rigs

Dual-band mobiles for vehicle installation

Yaesu FTM-500DR

Flagship Dual-Band — Best Audio in Class

MSRP \$449.95

Power: **50W VHF/UHF**

Digital: **C4FM + FM**

Faceplate: **Detachable ✓**

APRS/GPS: **Yes (GPS built-in)**

PROS

- Dual speaker system — 9W total audio
- C4FM digital + WIRES-X
- Dual receive V/V, U/U, V/U
- Built-in GPS & APRS
- Detachable face

CONS

- Priciest in Yaesu VHF line
- C4FM only — not DMR/D-STAR
- Menu system can be complex

Yaesu FTM-300DR

Popular Mid-Range with Dual Receive

MSRP \$459.95

Power: **50W VHF/UHF**

Digital: **C4FM + FM**

Faceplate: **Detachable ✓**

APRS/GPS: **Yes (GPS built-in)**

PROS

- Dual receiver — monitor two bands
- C4FM digital + WIRES-X
- GPS & APRS built-in
- Band scope (63 channels)
- Strong community support

CONS

- Menu navigation not intuitive
- Audio slightly tinny vs FTM-500DR
- No AM receive

VHF/UHF Mobile Rigs

Dual-band mobiles for vehicle installation

Yaesu FTM-200DR

Entry Level C4FM — Budget-Friendly APRS

MSRP \$279.95

Power:	50W VHF/UHF
Digital:	C4FM + FM
Faceplate:	Detachable ✓
APRS/GPS:	Yes (GPS built-in)

PROS

- Most affordable Yaesu C4FM mobile
- Detachable face
- GPS & APRS built-in
- 50W output
- WIRES-X capable

CONS

- Single receiver only
- APRS pauses during memory scan
- Smaller 2-inch display
- No dual-band simultaneous TX

www.yaesu.com | ~\$230 street

Icom IC-2730A

Analog Dual-Band — Clean Display, Solid Performance

MSRP \$309.95

Power:	50W VHF + 50W UHF
Digital:	Analog FM only
Faceplate:	Detachable ✓
APRS/GPS:	No (add TNC)

PROS

- 50W on both VHF AND UHF (rare)
- Large high-contrast white display
- Symmetrical dual-band controls
- Built-in duplexer
- Optional Bluetooth (UT-133A)

CONS

- Analog only — no C4FM or D-STAR
- Mounting bracket sold separately (~\$50)
- Optional Bluetooth add-on cost
- White background can wash out in sunlight

www.icomamerica.com | ~\$310 | Available at MTC — mtrcradio.com

VHF/UHF Mobile Rigs

Dual-band mobiles for vehicle installation

Icom ID-5100A

D-STAR Digital Mobile — Touchscreen & GPS

MSRP \$479.95

Power: **50W VHF/UHF**

Digital: **D-STAR + FM**

Faceplate: **Detachable ✓**

APRS/GPS: **Yes (D-PRS, GPS)**

PROS

- D-STAR digital voice & data
- 5.5-inch touchscreen display
- GPS built-in — near-repeater search
- Bluetooth capable
- 1000 memory channels

CONS

- D-STAR requires infrastructure
- Higher price point
- Requires D-STAR knowledge
- Bulkier control head than IC-2730A

www.icomamerica.com | ~\$500 street

Kenwood TM-V71A

The No-Frills Workhorse — Reliable & Proven

MSRP \$299.95

Power: **50W VHF/UHF**

Digital: **Analog FM only**

Faceplate: **Detachable ✓**

APRS/GPS: **No (add TNC)**

PROS

- Rock solid reliable — proven design
- Detachable face
- EchoLink capable (node mode)
- Amber or green backlight choice
- 1000 memory channels

CONS

- Analog only — no digital voice
- No GPS or APRS built-in
- Display not colorful by modern standards
- No C4FM or D-STAR

www.kenwood.com | ~\$270 street — good bang for buck

SECTION 3

Handheld Radios (HTs)

Top 5 handhelds for new operators

1. Yaesu FT-70DR
2. Yaesu FT5DR
3. Icom ID-51A Plus2
4. Baofeng UV-5R / UV-82
5. Quansheng UV-K5

Handheld Radios (HTs)

Portable VHF/UHF transceivers for new operators

Yaesu FT-70DR

Solid Entry-Level C4FM HT

MSRP \$174.95

Power:	5W
Digital:	C4FM + FM
Battery:	~10 hrs typical
IP Rating:	IPX5 splash-proof

PROS

- Affordable C4FM digital HT
- WIRES-X room access
- Compact and lightweight
- AMS auto-mode select
- Good beginner radio

CONS

- No color display
- No GPS
- No Bluetooth
- Limited scanning speed

 A great first HT. Covers local repeaters and C4FM digital.

Yaesu FT5DR

Flagship Yaesu HT — Color Display & GPS

MSRP \$279.95

Power:	5W
Digital:	C4FM + FM
Battery:	~11 hrs typical
IP Rating:	IPX5 splash-proof

PROS

- Large color touchscreen display
- GPS built-in
- APRS capable
- C4FM + WIRES-X
- Premium feel and build

CONS

- Higher price for an HT
- Complex menu system
- GPS increases battery drain
- Larger than FT-70DR

 The premium Yaesu HT — more features than most new hams will use initially, but no regrets long-term.

Handheld Radios (HTs)

Portable VHF/UHF transceivers for new operators

Icom ID-51A Plus2

D-STAR HT with Wide Receive & GPS

MSRP \$389.95

Power:	5W
Digital:	D-STAR + FM
Battery:	~8 hrs typical
IP Rating:	IPX7 waterproof

PROS

- D-STAR digital voice
- Wide band receive (100kHz-1.3GHz)
- GPS built-in
- IPX7 waterproof
- Premium Icom build quality

CONS

- D-STAR requires repeater/internet
- Most expensive HT on list
- Requires D-STAR registration
- Complex for a new ham

 Best choice if your local club and repeaters use D-STAR. Overkill otherwise for a first HT.

Baofeng UV-5R / UV-82

Budget Entry Radio — Learning Tool

~\$25-\$35

Power:	5-8W
Digital:	Analog FM only
Battery:	~8 hrs typical
IP Rating:	Limited splash resistance

PROS

- Extremely affordable (~\$25)
- Good for learning to program radios
- Wide receive coverage
- Large community / CHIRP support
- Backup/loaner radio

CONS

- Part 97 compliance concerns — verify
- Variable quality control
- No digital voice
- Not recommended as primary radio
- Support can be difficult

 **Controversial but popular.** Great for learning CHIRP programming. Verify FCC/Part 97 compliance before transmitting. Not a first choice — but a budget reality.

Handheld Radios (HTs)

Portable VHF/UHF transceivers for new operators

Quansheng UV-K5

Newer Budget Option — Wide Receive & Hackable

~\$20-\$30

Power:	5W
Digital:	Analog FM only
Battery:	~8 hrs typical
IP Rating:	Limited

PROS

- Ultra-budget price
- Extremely wide receive (18MHz-1.3GHz)
- Active firmware community
- NOAA weather receive
- Good CHIRP support

CONS

- Analog only
- Quality control varies
- Part 97 compliance — verify
- No digital voice
- Not a primary radio recommendation

 Like the Baofeng, treat as a learning tool and backup. The wide receive range makes it fun for scanning. Verify before transmitting.

Budget Radio Reality Check

- Baofeng and Quansheng radios are NOT recommended as a primary radio
- They ARE useful as: learning tools, backup radios, a way to try programming with CHIRP
- **Always verify Part 97 compliance before transmitting**
- Many experienced hams own one as a backup — just not as their main radio
- You get what you pay for — invest in a quality radio when budget allows

Bridge Radios — HF + VHF/UHF in One Box

A small but important category — for those who want it all

Radio	Price	HF	VHF/UHF	Digital	ATU	SDR	Mobile?
Yaesu FT-991A	MSRP \$1,299.95	HF+6m	2m+70cm	C4FM	Yes	No	★★ Possible
Icom IC-7100	MSRP \$1,299.95	HF+6m	2m+70cm	D-STAR	Yes	No	★★ Caution
Yaesu FTX-1 Field/Optima	~\$1,200– 1,600	HF+6m	2m+70cm	C4FM	Yes	Yes	★ Possible w/ Caveats
Icom IC-705	MSRP \$1,299.95	HF+6m	2m+70cm	D-STAR	Yes	Yes	★★★ POTA/Portable

FT-991A = best all-in-one mobile option | IC-7100 = face detaches but head is bulky | FTX-1 = Field unit remotes via 6'/10' cable from SPA-1 — creative installs possible, no mounting holes | IC-705 = QRP portable champion (10W max)

Honorable Mentions — Budget HF Worth Knowing

Not on the main list, but worth a look for the budget-conscious

Xiegu G90

~\$445

20W HF SDR, built-in ATU, detachable head. Excellent budget entry to HF. Popular for POTA and portable ops. Chinese manufacturer — smaller US support community than Japanese brands. Great value for new hams on a tight budget.

 www.radioddity.com / www.gigaparts.com

Xiegu X6100

MSRP \$479.95

10W portable HF SDR with built-in battery. Self-contained — no power supply needed in the field. Great for portable operations. Limited to 10W so not ideal as a primary home station. Strong POTA following.

 www.radioddity.com

Xiegu X6200

~\$550

Newest Xiegu — 8W, RF direct sampling, replaceable battery, built-in ATU. Most advanced Xiegu to date. Very new — limited long-term user experience. Watch this space.

 www.radioddity.com

Elecraft KX3

~\$1,000+

Ultra-portable QRP/100W capable HF radio. Highly regarded by experienced operators. Complex, expensive, but exceptional performance. Better as a second radio once you have HF experience under your belt.

 www.elecraft.com

SAFETY FIRST

Mobile Radio Installations & Vehicle Safety — This Could Save Your Life

AIRBAG DEPLOYMENT ZONES

Modern vehicles have airbags throughout the dashboard, steering wheel, A/B/C pillars, and seats. Any radio or heavy mount placed in an airbag deployment zone becomes a high-speed projectile in a crash — potentially fatal to driver or passenger.

MOUNT SECURITY

A radio that falls from its mount while driving can strike the driver, jam under the brake pedal, or cause loss of control. Test every mount before driving. Vibration, heat, and repeated stress can loosen mounts over time.

CABLE MANAGEMENT

Loose cables near the steering column, pedals, or gear shift can snag at a critical moment. Route all cables carefully, secure with proper automotive clips, and inspect regularly.

DRIVER DISTRACTION

Operating a radio while driving is a distraction and may violate local laws. Program your radio before you drive. Consider Bluetooth headsets for safer operation on the move.

Detachable Faceplate — The Key Mobile Feature

Why this matters more than almost anything else for mobile installs

A detachable faceplate lets you hide the radio body (trunk, under seat) and mount only the small control head at the dash. This is what separates a purpose-built mobile radio from a base station radio pressed into mobile service.

✓ WITH Detachable Face

- **FT-891 ★★★, FTM-200/300/500DR, IC-2730A, ID-5100A, TM-V71A**
- Radio body hidden — reduces airbag zone risk
- Only small face mounts at dash — less space needed
- Easier to find a secure mounting location
- Better theft deterrence — remove face when parked

✗ WITHOUT Detachable Face

- **IC-7300, IC-7300 MK2, FT-710, FT-DX10, FTX-1 Field/Optima***
- Entire radio must be visible and accessible in cab
- Requires significant cab space — challenging in modern vehicles
- Greater mass near driver = higher projectile risk in crash
- Can still be done — but requires careful planning and assessment



Real-world example: IC-7100 control head was too bulky — went through 3 windshield mount solutions before trading in. The FT-891 with a custom 3D-printed Titan dash mount is the right answer.

Buying Strategies — Find Your Path

Not every ham has the same budget, goals, or situation

Single Radio — Get It Right First Time

If budget is limited, invest in ONE solid mid-range radio and learn it well. FT-891 (mobile) or IC-7300 (base) will serve you for years. Don't buy cheap and replace — buy right and stay.

Buy Used First — Upgrade Later

Buy a used radio to learn the hobby at lower cost, then sell it and upgrade once you know what you want. Risk: condition unknowns, no warranty. Buy from club members or HRO with return policy.

Buy New — Warranty & Peace of Mind

New radios come with full manufacturer warranty. Recommended for those uncomfortable with used gear. Prices are stable and resale value is strong on quality brands. Hamfest deals happen — be patient.

Club Loaners & Elmers

Many clubs have loaner radios for new members. Borrow before you buy! Talk to an Elmer — let them show you their radio. This is the most underused and most valuable resource available.

Buying Used — Green Flags vs Red Flags

Protect yourself when shopping the used market

✓ GREEN FLAGS

- Purchased from a known club member or Elmer
- Sold through HRO or dealer with return policy
- Original box, accessories and manual included
- Seller demonstrates radio operating on air
- Recent model — parts and firmware still supported
- Price is fair — not suspiciously cheap

✗ RED FLAGS

- Seller won't power it up or demo on air
- Missing microphone, cables, or power cord
- Cosmetic damage suggesting rough handling
- eBay or Craigslist with no return policy
- Price seems too good to be true — it usually is
- 'Powers on' listed as the only test performed

Where To Purchase

New dealers, used markets, and a local favorite

NEW RADIO DEALERS

Ham Radio Outlet (HRO)

hamradio.com

DX Engineering

dxengineering.com

GigaParts

gigaparts.com

Universal Radio

universal-radio.com

Amateur Electronic Supply

aesham.com

Manufacturer Direct

yaesu.com / icomamerica.com / kenwood.com

USED & ONLINE MARKETS

QRZ Classifieds

qrz.com/hamclassifieds

eHam Classifieds

eham.net/classifieds

QTH.com

qth.com

eBay

ebay.com — highest risk, buyer beware

Local Hamfests

arrl.org/hamfests — inspect before you buy!

Club Members

Often the safest used purchase!



LOCAL SPOTLIGHT

Main Trading Company

Paris, TX

mtcradio.com

MTC is a semi-local ham radio dealer carrying a wide selection of new radios — including Icom, Yaesu, and Kenwood. They are also a generous supporter of our club, donating ham radio gifts for door prizes and events.

Support those who support us! 

Deals happen! Major hamfests, holidays, and end-of-year sales are the best times to buy.

Don't Forget the Rest of the Shack!

Budget for the whole setup — not just the radio



HF Antenna

Dipole or vertical

\$50–\$300

The antenna is AS important as the radio. Don't skimp!



Power Supply

25–30A regulated DC

\$80–\$200

Required for base station. Must handle full TX current draw.



Feedline / Coax

LMR-400 recommended

\$50–\$150

Quality coax matters — cheap coax loses signal you paid for.



Antenna Tuner

If no built-in ATU

\$100–\$300

Many radios include one. Verify before buying external.



Mobile Antenna

Screwdriver or HF whip

\$100–\$600

Mobile HF antennas are a significant separate investment.



Logging Software

YCAT, PoLo, N1MM+, WSJT-X

Free–\$50

For contests, POTA, FT8 & rig control. See software slide.



Headset / Mic

Desk mic or headset

\$30–\$150

Reduces fatigue on long sessions and improves audio.

Summary & Recommendations

Quick reference guide by use case and budget

MOBILE HF

Yaesu FT-891

Purpose-built mobile, detachable face, 100W, hides under seat. The mobile HF champion.

BASE STATION

Icom IC-7300

Most recommended first HF radio. Enormous community, excellent SDR. Buy this if unsure.

ALL-IN-ONE

Yaesu FT-991A

One radio for HF + VHF/UHF. Best single radio for a new ham wanting everything.

VHF/UHF MOBILE

Yaesu FTM-500DR

Best audio, dual speakers, C4FM, GPS/APRS, detachable face. Flagship mobile.

BEST VALUE HT

Yaesu FT-70DR

Affordable C4FM digital HT. Great starter handheld for new operators.

BUDGET HF

Xiegu G90

\$445 HF SDR with ATU and detachable head. Best value entry to HF.

Ham Radio Software Worth Knowing

Tools to enhance your operating, logging, and rig control experience



CHIRP

Win/Mac/Linux

Free radio programming software for HTs and VHF/UHF mobiles. Works with Baofeng, Yaesu, Icom and more.

chirp.danplanet.com



Log4OM

Windows

Full-featured general purpose logging suite. Popular with DX and contest operators.

log4om.com



N1MM+

Windows

The industry standard for contest logging. Free and incredibly powerful.

n1mm.hamdocs.com



PoLo

iOS / Android

Ham2K Portable Logger — POTA, SOTA, Field Day and more. The go-to mobile POTA logging app.

polo.ham2k.com



WSJT-X

Win/Mac/Linux

FT8, FT4 and other weak-signal digital modes. Practically required for modern HF operating.

physics.princeton.edu/pulsar/k1jt



YCAT

Windows

Yaesu rig control, programming & logging. Developed by a club member! v1.1.16 just released.

metirisystems.com

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Questions? Comments? Let's Talk Radio!

Grayson County Amateur Radio Club (GCARC) • K5GCC • 2026 Car Show Preparation Series

[eHam.net](#) • [QRZ.com](#) • [hamradio.com \(HRO\)](#) • [dxengineering.com](#) • [gigaparts.com](#) • [mtcradio.com](#) • [arrl.org](#)

Prices shown are approximate list prices. Street prices vary. Watch for hamfest deals, holiday sales, and dealer promotions.