

I have just received my license or upgrade. Where do I go from Here?

Radio(s)?

Bands?

Activities?

Nets?

Where do I get help?



I have Just received my technician license, now what

- **Radios?**
 - Hand held
 - Base/Mobile
- **Antennas?**
 - Home
 - Vehicle
- **Power supplies?**
- **Help/Mentors/Clubs?**



You Just Passed Your Technician License Exam

- **You can not transmit until your license appears on the FCC Universal License System web page.**
- **Decide if you want a handheld radio, Base station or mobile radio.**
 - **Simplest and least expensive is a hand held radio**
 - **A mobile radio can be mounted in a vehicle or operated at home as a base station.**
 - **Do not buy used unless you have an experienced operator help you find a good one.**

Choosing a Handheld

- **Most hand held radios have a 4 to 7 watt output.**
- **They are available in single band or dual band (2 meter and 70 cm) versions**
- **They usually come with rechargeable battery packs, charger and antenna.**
- **They can be simple or have options like built in GPS (Global Positioning System) and APRS (Automatic Packet Reporting System).**

Choosing a Handheld

(continued)

- The simplest and least expensive radio the BaoFeng UV-5RV2+.



- Dual Band (2 meter and 70 cm)
- Five watt output
- Can operate outside the amateur bands so use caution when entering frequencies.
- Comes with rechargeable battery, drop in charger and antenna.
- Can be programmed from a computer (programming cable not supplied).
- **Cost \$38 or less** on line shipped from China and US distributors.

Choosing a Handheld

(continued)

- Another in-expensive radio is the BaoFeng BF-F8HP



- Dual Band (2 meter and 70 cm)
- Eight watt output Selectable 1,4 or 8 Watts)
- Can operate outside the amateur bands so use caution when entering frequencies.
- Comes with rechargeable battery, drop in charger and antenna.
- Can be programed from a computer (programing cable not supplied).
- **Cost \$80** on line from many sellers and shipped from China and US distributors.

Choosing a Handheld

(continued)

- A better radio is the Yaesu FT60R



- Dual Band (2 meter and 70 cm).
- Five watt output.
- Easier to manually program.
- Comes with rechargeable battery, charger and antenna.
- Can be programed from a computer (programing cable not supplied).
- Rugged construction.
- **Cost \$150** on line from Ham Radio Outlet.

Choosing a Handheld

(continued)

- A more featured radio is the Kenwood TH D72



- Dual Band (2 meter and 70 cm).
- Five watt output.
- Integrated GPS and APRS.
- Easy to manually program.
- Comes with rechargeable battery, charger and antenna.
- Can be programed from a computer.
(programing cable not supplied)
- **Cost \$450** on line from Ham Radio Outlet.

Useful Hand Held Accessories

- **Speaker Microphone**

Around \$40



- **Alkaline battery holder**

Around \$35



- **Gain Antenna**

Around \$19



A Mobile or Base Station

- **You will need a single or dual band transceiver.**
- **You will need an external antenna.**
- **You will need coaxial cable to connect the antenna to the radio.**
- **You will need a 12 volt 12 amp power supply to power the radio (or a battery).**

Base or Mobile Radios

(Single Band)

- **Yaesu FT 1900R**



- Two meter only.
- Fifty Five watt output.
- Includes Microphone and power leads.
- Easy to manually program.
- Can be programed from a computer (programing cable not supplied).
- Requires external 12 volt power supply or 12 volt battery.
- Rugged construction.
- **Cost \$130** on line from Ham Radio Outlet.

Base or Mobile Radios

(Single Band)

- **Kenwood TM 281A**



- Two meter only.
- Sixty Five watt output.
- Includes Microphone and power leads.
- Can be programed from a computer with optional programing cable.
- Programing software free on the web.
- Requires external 12 volt power supply or 12 volt battery.
- **Cost \$135** from HRO

Base or Mobile Radios

(Single Band)

- **Icom 2300H**



- Two meter only.
- Sixty Five watt output.
- Includes Microphone and power leads.
- Can be programed from a computer with optional programing cable and Software.
- Rugged Construction.
- Requires external 12 volt power supply or 12 volt battery.
- **Cost \$ 170** from HRO (does not include mounting bracket)

Base or Mobile Radios

(Dual Band)

- **Kenwood TM VMV71A**



- Simultaneous two Meter and 70 cm receive
- dual band frequency displays.
- Fifty watt output.
- Includes Microphone and power leads.
- Can be programed from a computer with optional programing cable and Software.
- Can be configured for cross band repeat.
- Requires external 12 volt power supply or 12 volt battery.
- Built in Echo Link.
- **Cost \$345** from HRO

Base or Mobile Radios

(Dual Band)

- **Icom IC 2730**



- Simultaneous two Meter and 70 cm receive dual band frequency displays.
- Fifty watt output.
- Includes Microphone and power leads.
- Does not include mobile mounting bracket.
- Can be programed from a computer with optional programing cable and Software.
- Can be configured for cross band repeat.
- Requires external 12 volt power supply or 12 volt battery.
- **Cost \$315** from HRO (does not include mounting bracket)

Base or Mobile Radios

(Dual Band)

- **Yaesu FT 8900**



- 29 / 50 / 144 / 430 MHz Quad Band FM
Fifty watt output (35 W UHF).
- Includes Microphone and power leads.
- Can be programed from a computer with optional programing cable and Software.
- Can be configured for cross band repeat.
- Requires external 12 volt power supply or 12 volt battery. supply or 12 volt battery.
- **Cost \$330** from HRO

Base Station Power Supplies

- Astron RS12A
- Astron SL15R - 12 volt
15 amp Power supply
- Alinco DM 330MVT
12 volt 30 Amp PS
- MFJ 4128 – 12 volt
28 amp Switching Power
Supply

\$ 110



\$ 135



\$ 160



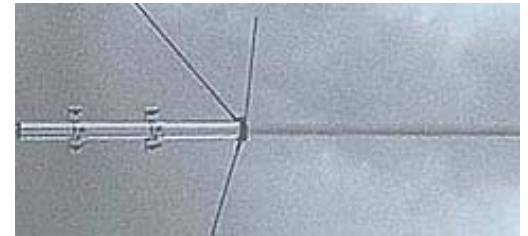
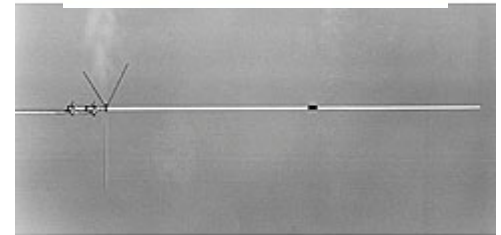
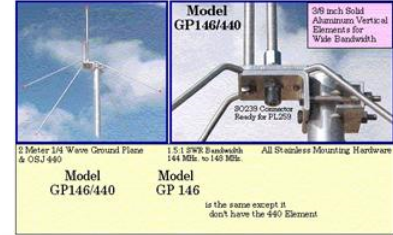
\$ 85



Base Station Antennas

- Arrow Antenna 2M/440 \$ 48
Base Antenna
- Comet NCG CX-333 \$ 170
2M/220/440 Base Antenna
- MFJ 1526 2M/440 Base \$140
Antenna

Dual Band Ground Plane



Now It Is time To Get On The AIR

- **There are many local amateur radio operators (referred to as Elmer's) out there to help:**
 - **To assist you in selecting the right radio, antenna and power supply.**
 - **To assist you in assembling your station.**
 - **Answer your questions.**
 - **Help you make your first contact.**

Now It Is time To Get On The AIR

- **Look for local nets that you can check into:**
 - **The 7:30 Bunch net – every weekday morning on the 147.300 repeater, + 600 KHz offset, 100 Hz tone**
 - **The ARES/RACES net – every Tuesday evening at 8:00 PM on the 147.300, repeater + 600 KHz offset, 100 Hz tone.**
 - **The VHF Club net – every Wednesday evening at 7:30 PM on the 146.880 repeater, - 600 KHz offset, 123 HZ tone.**

Now It Is time To Get On The AIR

- **KABARA (Kamiak Butte Amateur Repeater Association) has the following nets:**
 - **7:00 am NW regional/international net weekdays**
 - **Wednesday Evening net 7:00 pm**
 - **Thursday : 6:30PM Whitman/Latah County ARES Net**
 - **Saturday 7:00AM Stanley Steamer Net**
 - **Sunday 7:00AM Road Runners' Net**

**Check the KABARA web page
<http://kbara.org/index.php> for more
information and frequencies.**

Now It Is time To Get On The AIR

- **Try tuning into these nets and becoming familiar with their operation.**
- **Join in the nets, they are always happy to have new participants.**
- **Don't worry about making mistakes on the air all the nets will gladly help you.**

Attend Local Club Meetings

- **Inland Empire VHF club meets the second Thursday of the month (except July and August) at the Spokane Community College (Check web site for building and room number) starting at 6:30 pm.**
- **Spokane County ARES/RACES meets the third Thursday of the month at the Fire Training Center at 1618 North Rebecca Street.
*Spokane, WA 99217.***

Attend Local Club Meetings

- **Kootenai Amateur Radio Society (KARS) Meetings are held the 2nd Monday of each month @ 7:00 pm except in June and December at the Kootenai County Sheriff Volunteer Search and Rescue building in Hayden ID located at 10865 N. Ramsey near the Coeur d'Alene airport. More information at <http://www.k7id.org/>**

Congratulations On Your Promotion To General

Now that you have passed the General license exam you can experience more Amateur Radio fun and start talking around the world.



Now You're a General

- You now have phone privileges on the HF Bands.
- You will need a new radio for the HF bands.
- You need a higher current power supply for your 100 watt radio (most HF Radios are 100 watt) requiring 12 Volts at approximately 22 amperes.
- You will need a new antenna(s).
- You may need an antenna tuner.

Choosing HF Radios

- **Your Budget - Radios start at \$ 600.**
- **Base or mobile operation?**
- **Which Bands will you operate?**
- **Type of communication?**
 - **Phone (voice) Filters, DSP?**
 - **Many modern transceivers have built in DSP.**
- **Digital or CW operation**
 - **Do you want optional CW Filters?**
 - **Do you need a digital I/O port?**

Choosing HF Radios

- **Built in antenna tuner or external antenna tuner?**
 - Built in tuners have limited range but are convenient.
 - External tuner (manual or automatic) have a wider VSWR range.

Entry Level Radios for HF



Alinco DX-SR8T

\$550

- Coverage of All short-wave and HF amateur bands
Covers the 160m to 10m amateur in SSB, CW, AM and FM modes.
- Output power is 100W SSB/CW and FM, 40W in AM with low power settings for QRP operation.
- General coverage receiver covers 135KHz to 30MHz in all modes.
- Detachable front control panel.

Entry Level Radios for HF

(continued)



Alinco DX-SR8T

- Direct DATA entry via the key pads or tuning knob
- Reject unwanted signals with the IF shift.
- Choose a narrow filter, a noise-blanker or use RIT/TXIT to stay out of QRM.
- An electronic keyer unit is standard for CW, Semi or Auto break-in, split, narrow filter, AGC and RF gain.
- A dynamic microphone and a speech compressor come standard for sharp, clear and powerful transmit audio.

Entry Level Radios for HF



Icom IC 718

\$600

- Coverage of All short-wave and HF amateur bands
Covers the 160m to 10m.
- Output power is 100W SSB, and CW, 40W in AM
- General coverage receiver covers 500KHz to 30MHz in all modes.
- Front mounted speaker.
- Minimum number of controls for easy operation.

Entry Level Radios for HF

(continued)



Icom 718

\$670

- Adjustable level noise blanker.
- A double-conversion system to help minimize image and spurious responses.
- Optional built in DSP.
- Noise reduction, pull desired AF signals from noise.
- IF Shift Function.
- Microphone speech compressor.
- Built in VOX.

Entry Level Radios for HF

(continued)



Yaesu FT 450D

\$850

- Coverage of All short-wave and HF amateur bands Covers the 160m to 6m amateur bands in SSB, CW, AM and FM modes.
- Output power is 100W SSB/CW and FM, 40W in AM
- Comes with an Automatic Antenna Tuner
- Illuminated Key Buttons
- Main Dial and Knobs give "Big Radio" feel.
- 400 MHz built-in fast and robust IF DSP.
- 10 kHz bandwidth Roofing Filter in the 67.899 MHz 1st IF.
- Adjustable IF Width and IF Shift
- Contour filtering system

Entry Level Radios for HF



Yaesu FT 450D

\$850

- IF Notch filter allows you to eliminate interfering beat note or carrier signals from inside the receiver passband.
- The Digital Noise Reduction (DNR), utilizes mathematical algorithms to analyze and suppress noise
- Manual Notch Filter to reduce interfering beat tone/signal.
- Digital Voice Recorder to Record and playback up to 20 seconds of audio.
- Internal built-in 300Hz, 500Hz and 2.4kHz CW IF Filters.
- Built-In Electronic Keyer

Additional HF Radios



Kenwood TS 480 HX

\$1,120



Icom IC 7100

\$ 1,1 00



Yaesu FT 991

\$1,600



Elecraft KX3 (QRP)

\$1,000

HF Radio Power Supplies



Alinco DM-330MVT

\$160



MFJ-4225MV

\$90



Astron SS30M

\$149

HF Radio Antennas

Wire antennas are the simplest and least expensive for base stations.

- They can be single or multiband**
- They are long ($1/2$ wavelength) on lowest band**
- If built properly do not need an antenna tuner**
- Require trees, buildings or poles to string between.**
- Should be $1/4$ wave above the ground**

HF Wire Antennas

- The Carolina Windom \$100
160 to 6 Meters
- The G5RV \$50
160 to 6 meters



HF Wire Antennas

(continued)

- Alpha Delta DX 20 (20 Meter dipole) \$60

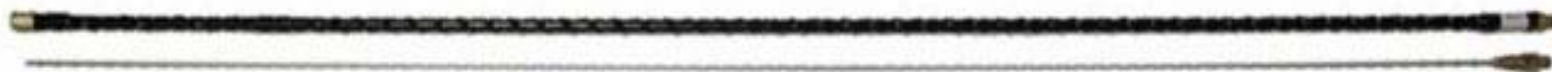


Available for most bands

- Home Built
 - Simple dipoles can be built for low cost

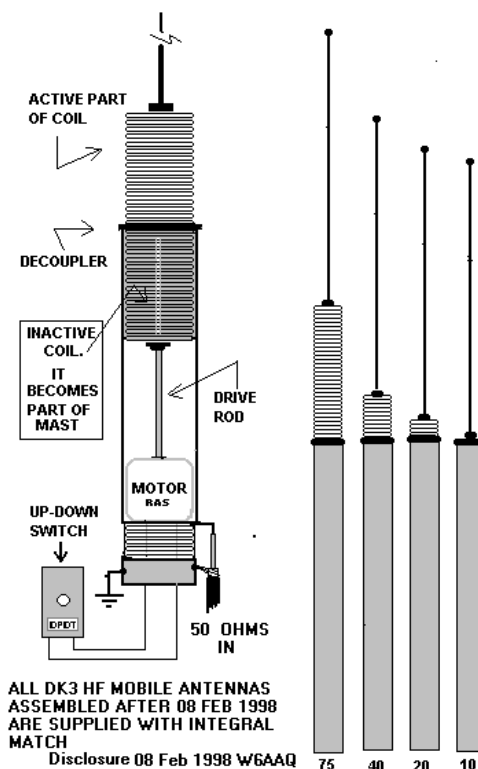
HF Mobile Antennas

- Single band Ham Sticks around \$ 30



- Multiband Screwdriver antennas \$400

(note) Both antennas require a base for mounting



HF Field Antennas

- Budi-Pole

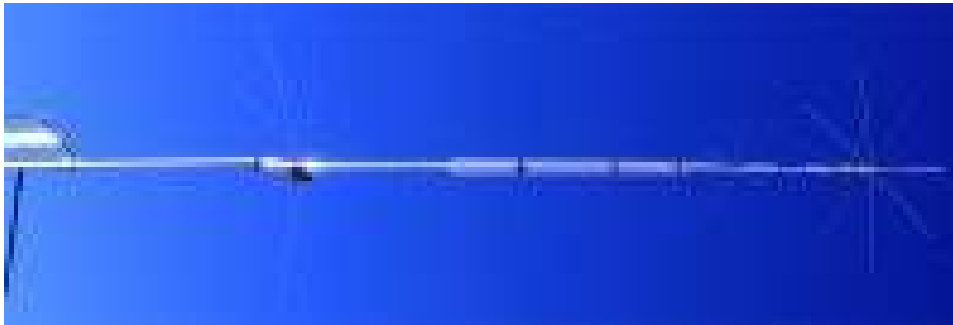
\$200 -\$400



HF Base Antennas

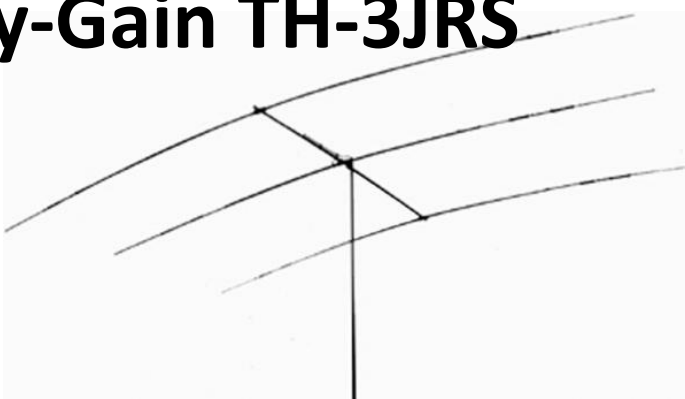
- Cushcraft R9

\$700



- Hy-Gain TH-3JRS

\$324



Now You Have Passed the Extra Exam

- **You passed the most difficult license test with 50 questions from a 700+ question pool.**
- **You have learned a lot on many subjects related to amateur radio.**
- **You will be able to help other hams through your knowledge.**
- **Just because you passed the exam you will still have a lot to learn.**

Now You Have Passed the Extra Exam

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Now You Have Passed the Extra Exam

- **The Extra license gives you prestige and access to a extra portions of the bands. Extra gives you twice as much of the 80M band and a more modest gain on 40, 20, and 15M.**
- **If the bands are crowded, the extra class sections will be less so. This could be an advantage in a contest.**
- **Extra License is also required to be a Volunteer Examiner for all license classes.**

As an Extra You Do Not Need Additional Equipment

- **The station you have for HF communication for your general privileges will be all you need to operate in the extra band segments.**

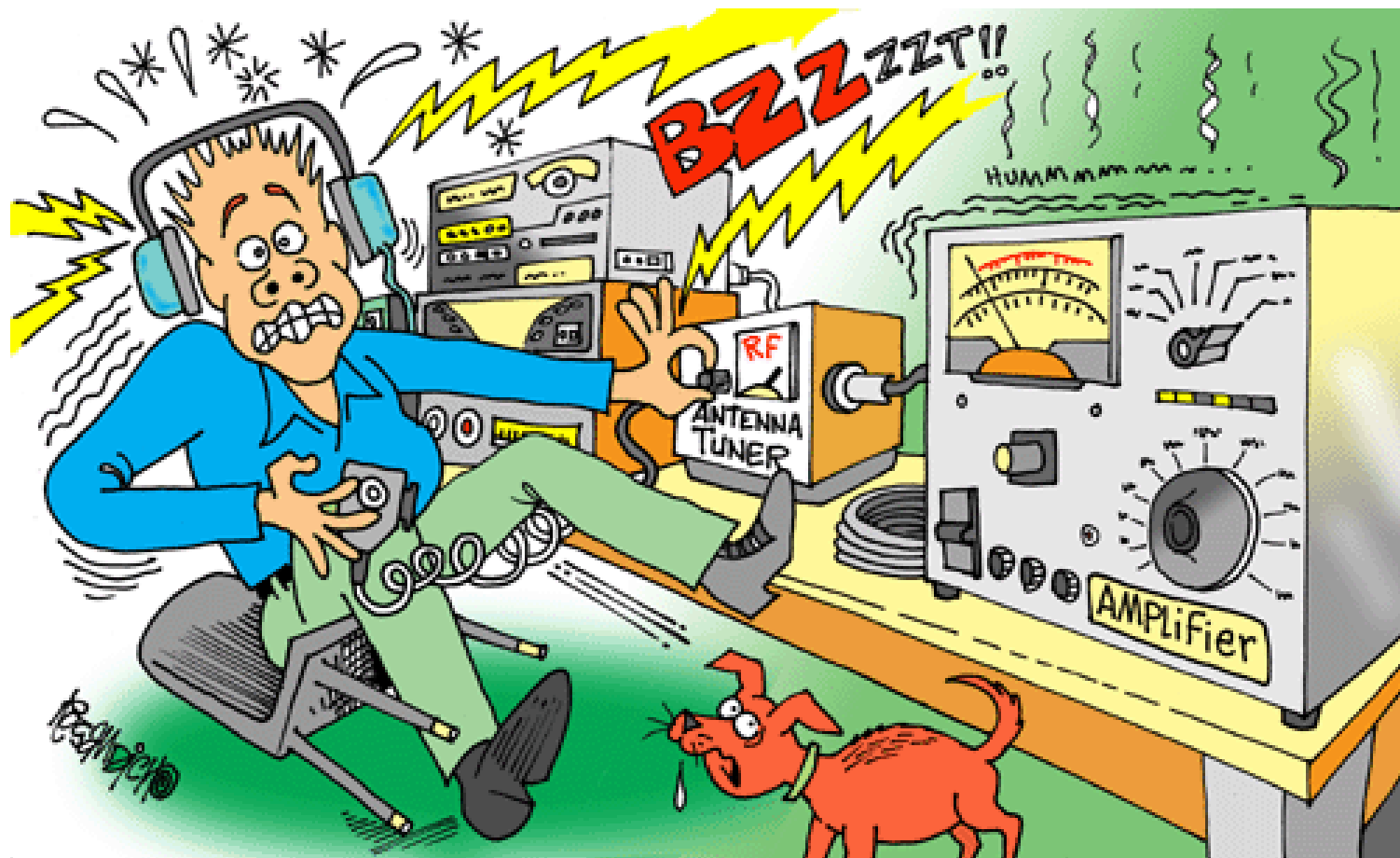
Use Your New Knowledge

- **Become Volunteer Examiner (VE) and assist in conducting license test sessions.**
- **Be an “Elmer” and help others in the hobby.**
- **Become an ARRL registered instructor and Teach a Technician or General license class.**
- **Become an ARRL Technical Specialist and help other hams in your area.**

Use Your New Knowledge

- **Present training for your local amateur radio club and help promote interest in the hobby.**
- **There are many short amateur radio presentations available from ARRL and on the web that you can use.**
- **Develop your own training on an aspect of amateur radio you are passionate about.**

It Is Time To Enjoy The Hobby Whatever Your License Class



Ham Radio Dealers

Radios/Antennas/Power supplies:

- Ham Radio Outlet <http://www.hamradio.com/>
- DX Engineering www.dxengineering.com
- Austin Amateur radio Supply www.aaradio.com
- CheapHam.com www.cheapham.com
- Ham Station www.hamstation.com
- Giga-Parts www.gigaparts.com

Antennas

- Arrow Antenna www.arrowantennas.com
- Radio Works www.radioworks.com

Ham Radio Dealers

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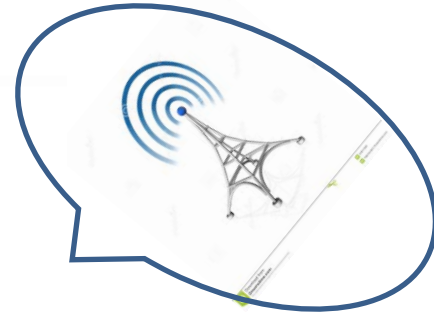
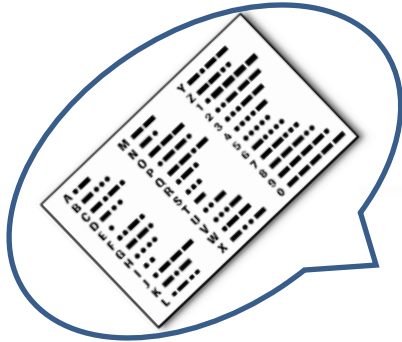
Miscellaneous (Coax Cables, Connectors, etc)

- DC Power LLC (power pole connectors) www.sales@dcpwr.com
- Wired Communications roger@wiredco.com
- Powerwerx <https://powerwerx.com>
- The Wireman www.thewireman.com

Electronic Parts:

- Digikey www.digikey.com
- Allied Radio www.alliedelec.com
- Jameco Electronics www.jameco.com
- Mouser Electronics www.mouser.com

Questions?



IF I LEFT ENGINEERING AND
BECAME A MANAGER WOULD
I BE AS SEXY AS I AM
NOW, LIZ?



S. Adams E-Mail: SCOTTADAMS@aol.com

I THINK IT WOULD
DECREASE YOUR SEX
APPEAL BY 17%. BUT
THAT'S JUST A
PLANNING NUMBER.



WHAT IF I GOT
MY HAM RADIO
LICENSE TO
COMPENSATE FOR
THE LOSS?

LOOK AT MY
ARM: GOOSE
BUMPS.



