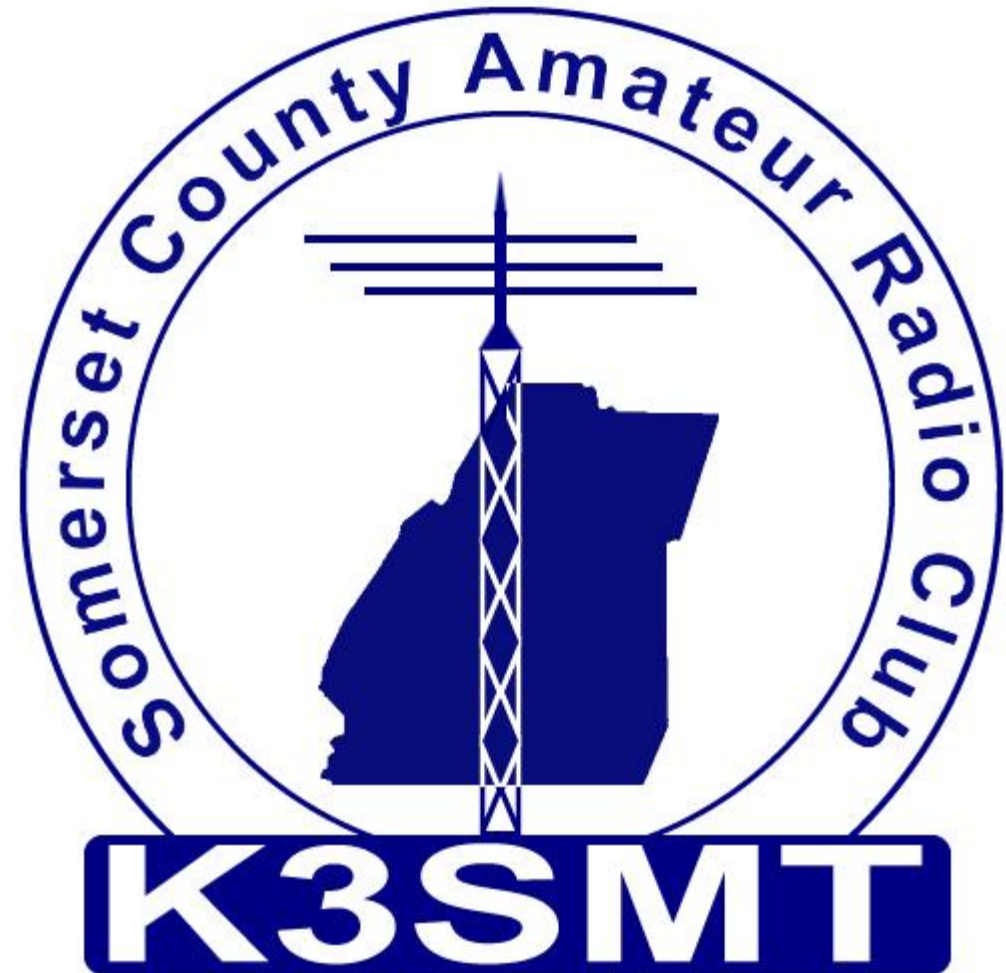


# AMATEUR RADIO 2024 TECHNICIAN CLASS

Somerset County Amateur Radio Club  
K3SMT



# GETTING STARTED

**Lead Instructor: Stew Saylor, AK3J**

**Amateur Extra since January 1980**

**170 VE test sessions administered**

**Background:**

**Somerset Area Senior High School 1963**

**West Virginia University 1963 - 1967**

**US Army - MP Vietnam 1968 - 1970**

**Commercial Bank Accounting 1970 - 2001**

**Retired from PNC Management VP December 2001**

**Returned to Somerset 2002**

**Primary Hobby:**

**Family History** [Home \(ecsaylor.org\)](http://ecsaylor.org)

# GETTING STARTED

**Tell me about you**

**Background**

**What brought you to Amateur Radio**


**What would you like to do with Amateur Radio**

**I know there are vacation plans in August  
When would you like the last class**



# GETTING STARTED

## Purpose of Amateur Radio – Federal Communications Commission

- 1) Voluntary noncommercial communications service
  - 2) Extension of the amateur's proven ability to advance the radio art
  - 3) With rules to advance skills
  - 4) Expansion of trained operators, technicians and electronic experts
  - 5) Continuation of the amateur's unique ability to enhance international good will
- 

GETTING STARTED

AND



AND "FUN"

# GETTING STARTED

## Three Licenses

Technician

35 Questions - short distance

General

35 Questions - long distance

Amateur Extra

50 Questions – bragging rights

# GETTING STARTED

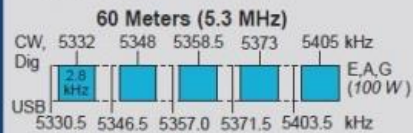
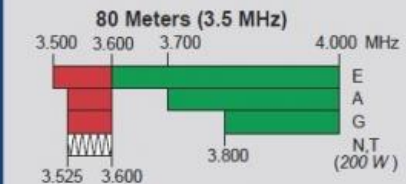
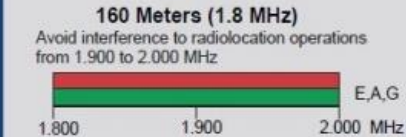
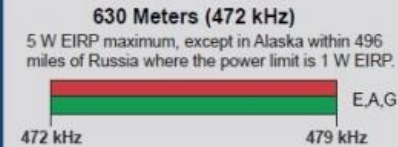
## US Amateur Radio Bands

**US AMATEUR POWER LIMITS — FCC 97.313** An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

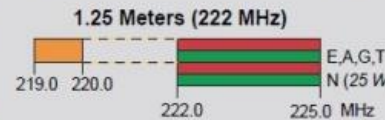
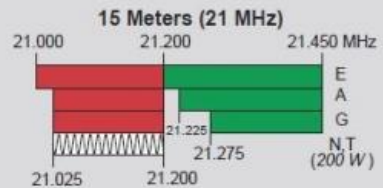
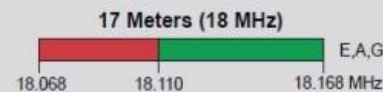
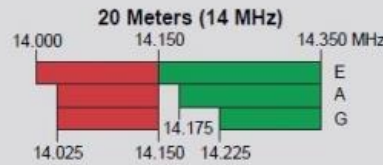
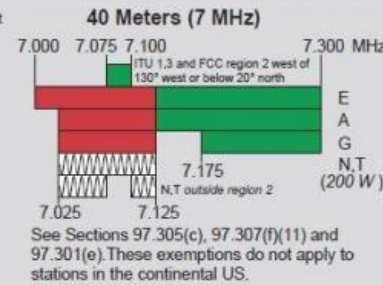


The national association for  
**ARRL AMATEUR RADIO®**

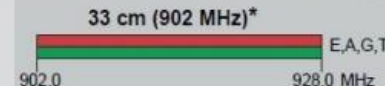
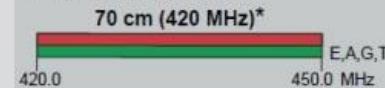
Amateurs wishing to operate on either 2,200 or 630 meters must first register with the Utilities Technology Council online at <https://utc.org/plc-database-amateur-notification-process/>. You need only register once for each band.



General, Advanced, and Amateur Extra licensees may operate on these five channels on a secondary basis with a maximum effective radiated power (ERP) of 100 W PEP relative to a half-wave dipole. Permitted operating modes include upper sideband voice (USB), CW, RTTY, PSK31 and other digital modes such as PACTOR III. Only one signal at a time is permitted on any channel.



\*Geographical and power restrictions may apply to all bands above 430 MHz. See *The ARRL Operating Manual* for information about your area.



All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	10.0-10.5 GHz ‡	122.25-123.0 GHz
2390-2450 MHz	24.0-24.25 GHz	134-141 GHz
3300-3500 MHz	47.0-47.2 GHz	241-250 GHz
5650-5925 MHz	76.0-81.0 GHz	All above 275 GHz

‡ No pulse emissions

### KEY

**Note:** CW operation is permitted throughout all amateur bands.

MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz. Test transmissions are authorized above 51 MHz, except for 219-220 MHz.

- = RTTY and data
- = phone and image
- = CW only
- = SSB phone
- = USB phone, CW, RTTY, and data
- = Fixed digital message forwarding systems only

- E = Amateur Extra
- A = Advanced
- G = General
- T = Technician
- N = Novice

See *ARRLWeb* at [www.arrl.org](http://www.arrl.org) for detailed band plans.

### ARRL We're At Your Service

ARRL Headquarters:  
860-594-0200 (Fax 860-594-0259)  
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Getting Started in Amateur Radio:  
Toll-Free 1-800-326-3942 (860-594-0355)  
email: [newham@arrl.org](mailto:newham@arrl.org)

Exams: 860-594-0300 email: [vec@arrl.org](mailto:vec@arrl.org)

# GETTING STARTED

What do you gain in usable frequencies by upgrading?

<b>BAND</b>	<b>NOVICE</b>	<b>TECHNICIAN</b>	<b>GENERAL</b>	<b>ADVANCED</b>	<b>EXTRA</b>
<b>2.200 Meters</b>			2.1	2.1	2.1
<b>630 Meters</b>			7.0	7.0	7.0
<b>160 Meters</b>			400.0	400.0	400.0
<b>80 Meters</b>			550.0	400.0	500.0
<b>60 Meters</b>			7.5	7.5	7.5
<b>40 Meters</b>	100.0	100.0	225.0	300.0	300.0
<b>30 Meters</b>			50.0	50.0	50.0
<b>20 Meters</b>			250.0	300.0	350.0
<b>17 Meters</b>			100.0	100.0	100.0
<b>15 Meters</b>	175.0	175.0	350.0	400.0	450.0
<b>12 Meters</b>			100.0	100.0	100.0
<b>10 Meters</b>	500.0	500.0	1,700.0	1,700.0	1,700.0
<b>6 Meters</b>		4,000.0	4,000.0	4,000.0	4,000.0
<b>2 Meters</b>		4,000.0	4,000.0	4,000.0	4,000.0
<b>1.25 Meters</b>	3,000.0	6,000.0	6,000.0	6,000.0	6,000.0
<b>70 cm</b>		30,000.0	30,000.0	30,000.0	30,000.0
<b>33 cm</b>		26,000.0	26,000.0	26,000.0	26,000.0
<b>23 cm</b>	25,000.0	60,000.0	60,000.0	60,000.0	60,000.0
<b>TOTAL Kilo Hertz</b>	<b>28,775.0</b>	<b>130,775.0</b>	133,741.6	133,766.6	133,966.6
<b>Increase Kilo Hertz</b>			<b>2,966.6</b>		<b>225.0</b>
<b>TOTAL Mega Hertz</b>	<b>28.8</b>	<b>130.8</b>	133.7	133.8	134.0
<b>Increase Mega Hertz</b>			<b>3.0</b>		<b>0.2</b>



# GETTING STARTED

All Amateurs must start with the Technician License

What can you do with the Technician License?

<b>Morse Code</b>	<b>Voice</b>	<b>Voice Digital Modes Using pc or cell phone</b>
<b>Fast Scan Television</b>	<b>Talk with Space Station and other satellites</b>	<b>EchoLink Voice using pc or your cell phone</b>
	<b>Use of all frequencies and modes on 6 Meters and above</b>	

# GETTING STARTED

American Radio Relay League

License Manual will be our primary resource



# GETTING STARTED

## Learning

**Dave Casler KE0OG YouTube videos that follow the ARRL Manual**

[\(1\) Dave Casler Technician License Series: T01 How to Get Your Ham Radio License](#)

## Free Practice Tests with Registration

**Ham Study**

[HamStudy.org: Cutting edge amateur radio study tools](#)

**QRZ.com**

[Callsign Database - QRZ.com](#)

# GETTING STARTED

What I will expect:

Read the assigned chapters before each class

Practice the questions for those chapters

Watch the YouTube sessions by KE0OG

Bring your questions about anything confusing

I will do my best to make it easy

**QUESTIONS?**

Now let's get a Federal Registration Number (FRN) for each of you