

HF 101

AN INTRODUCTION TO HF OPS

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CRHRC Tech Net #13

December 2, 2024

SOLAR CYCLE 25

The **solar cycle**, also known as the **solar magnetic activity cycle**, **sunspot cycle**, or **Schwabe cycle**, is a nearly periodic 11-year change in the [Sun's](#) activity measured in terms of [variations](#) in the number of observed [sunspots](#) on the [Sun's surface](#). Over the period of a solar cycle, levels of [solar radiation](#) and ejection of solar material, the number and size of [sunspots](#), [solar flares](#), and [coronal loops](#) all exhibit a synchronized fluctuation from a [period of minimum activity](#) to a [period of a maximum activity](#) back to a period of minimum activity.

WITHOUT THE PRESENCE OF THE CURRENT SOLAR CYCLE, LONG DISTANCE HF CONTACTS ARE ARE HARD TO COME BY.

HF BANDS

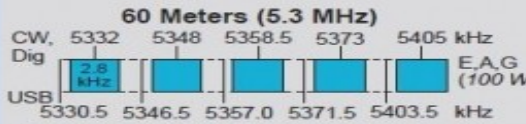
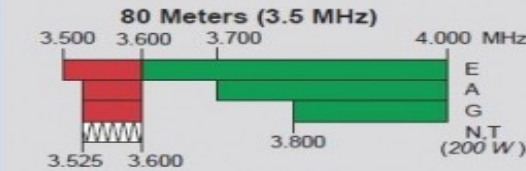
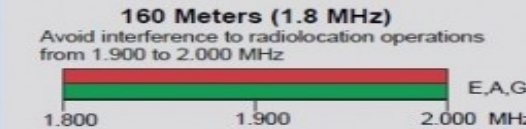
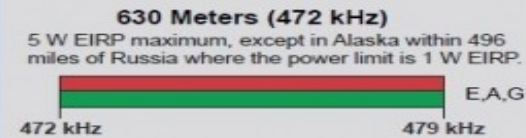
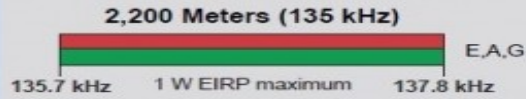
US Amateur Radio Bands

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.

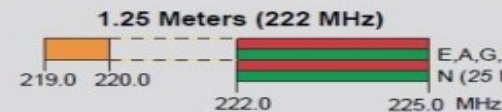
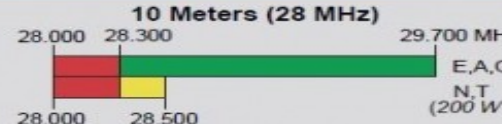
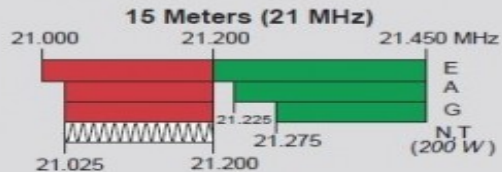
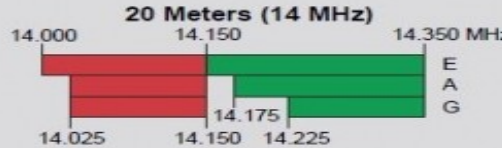
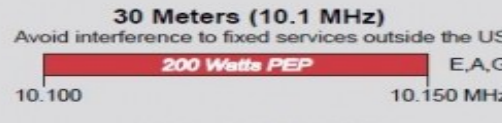
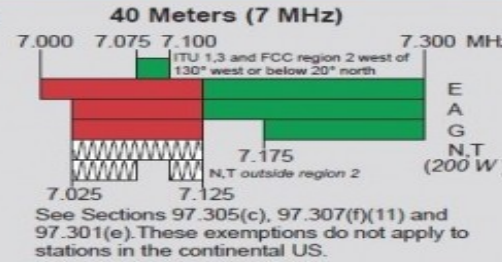


ARRL The national association for AMATEUR RADIO®

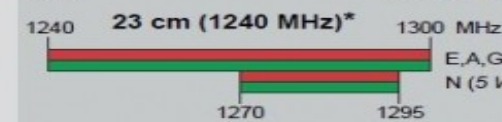
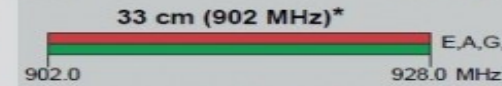
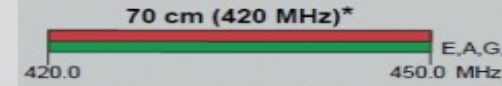
Amateurs wishing to operate on either 2,200 or 630 meters must first register with the Utilities Technology Council online at <https://utc.org/plc-database-amateur-notification-process/>. You need only register once for each band.



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 420 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 for detailed band plans.

ARRL We're At Your Service

- ARRL Headquarters:
 860-594-0200 (Fax 860-594-0259)
 email: hq@arrl.org
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 Toll-Free 1-888-277-5289 (860-594-0338)
 email: membership@arrl.org
- Getting Started in Amateur Radio:
 Toll-Free 1-800-326-3942 (860-594-0355)
 email: newham@arrl.org
- Exams: 860-594-0300 email: vec@arrl.org

CALLING CQ/STARTING A QSO

- FIND A CLEAR FREQUENCY...REMEMBER, YOU WANT TO BE AT LEAST 3KHz AWAY FROM ANOTHER SIGNAL. BOTH SIDES.
- LISTEN FOR A FEW MINUTES
- CALL "WHISKEY FIVE CHARLIE PAPA OSCAR, IS THIS FREQUENCY IN USE?" **ALWAYS USE PROPER PHOENETICS.** IF NOTHING HEARD, IT'S TIME TO ROCK AND ROLL. IF SOMEONE COMES BACK TO YOU AND SAYS "YES, THE FREQ IS IN USE" , REPLY "THANKS 73, I'LL FIND ANOTHER.

OK, YOU'VE CALLED CQ AND A STATION COMES BACK TO YOU.

IT'S A GOOD IDEA TO HAVE PEN AND PAPER HANDY.

THE FIRST THING YOU WILL HEAR IS THEIR CALLSIGN AND MAYBE THERE NAME.

YOU SHOULD HAVE QRZ OPEN SO YOU CAN LOOK AT THEIR QRZ PAGE. WHY? BECAUSE THAT'S WHAT THEY'RE DOING. AND...ALL CONTACTS SHOULD BE LOGGED USING A LOGGING SOFTWARE OF YOUR CHOICE. Ie., QRZ, N3FJP, LOTW ALL 3 INTERACT WITH EACH OTHER.

YOU'RE GOING TO HEAR "Q" CODES....QSL, QTH, QRM AND SO ON

YOU'LL PROBABLY GET ASKED FOR A SIGNAL REPORT. TRY TO BE SOMEWHAT ACCURATE. NOT EVERYONE IS 5/9. AUDIO QUALITY/SIGNAL STRENGTH

THIS MIGHT SOUND LIKE A LOT OF STUFF TO DO OR REMEMBER, BUT AFTER YOU SPEND SOME TIME ON HF IT ALL BECOMES SECOND NATURE.

THE #1 REASON FOR KEEPING A LOGEMERGENCY COMMUNICATIONS.
THERE MAY COME A DAY WHEN YOU HAVE HANDLE EMERGENCY TRAFFIC OVER THE REPEATERS OR
ON HF. KNOWING HOW TO KEEP A LOG WILL BE TO YOUR ADVANTAGE.

HERE ARE A FEW GROUPS/NETS YOU CAN LISTEN TO ON HF TO GET AN IDEA OF HOW HF TRAFFIC
IS HANDLED

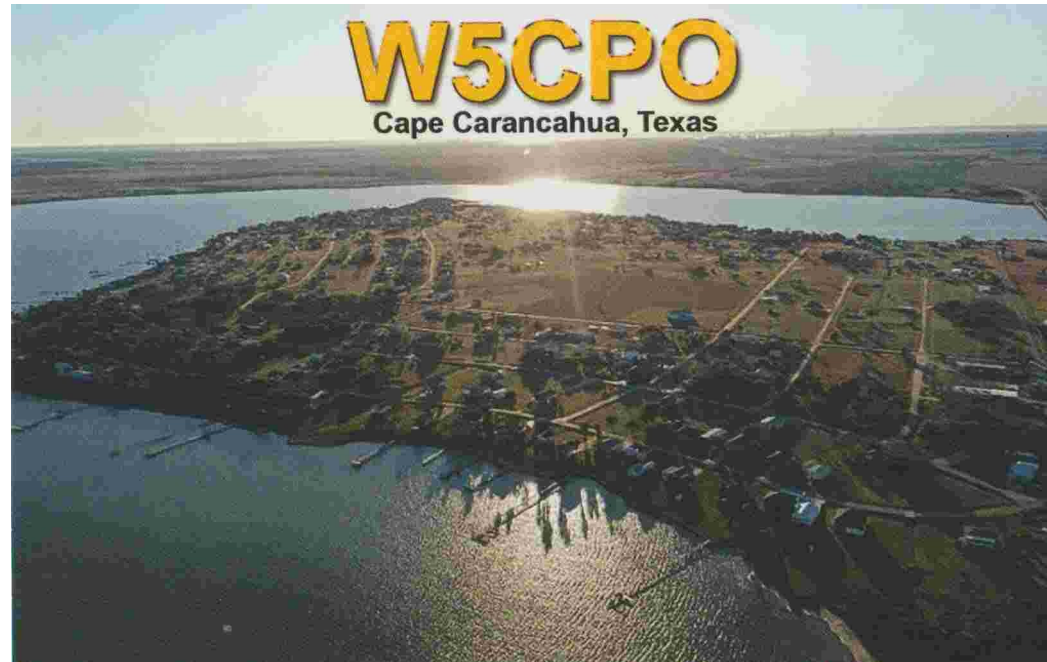
WWW.OMISS.NET OLD MENS INTERNATIONAL SIDEBAND SOCIETY

Ttn7285.NET TEXAS TRAFFIC NET

WWW.TAILGATERSNET.COM 3.916MHz

NETLOGGER CHECK OUT ALL THE NETS THAT ARE ON THE AIR WEEK NIGHTS
OR JUST TUNE AROUND THE BANDS....SEE WHAT YOU RUN ACROSS.

QSL CARDS



W5CPO



cRHRc
CROSS ROADS HAM RADIO CLUB
WSLOR Jackson Co., TX

Phil Rossi
1115 Bayview Dr
Palacios, TX 77465
USA

PLARC

Confirming QSO with:

Day

Month

Year

Time (UTC)

Band

Mode

RST

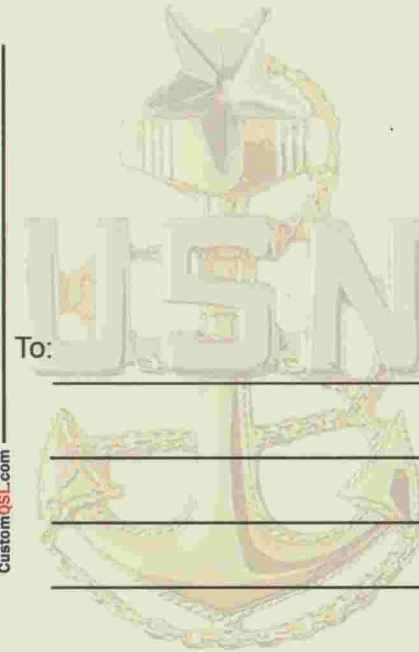
QSL

PSE

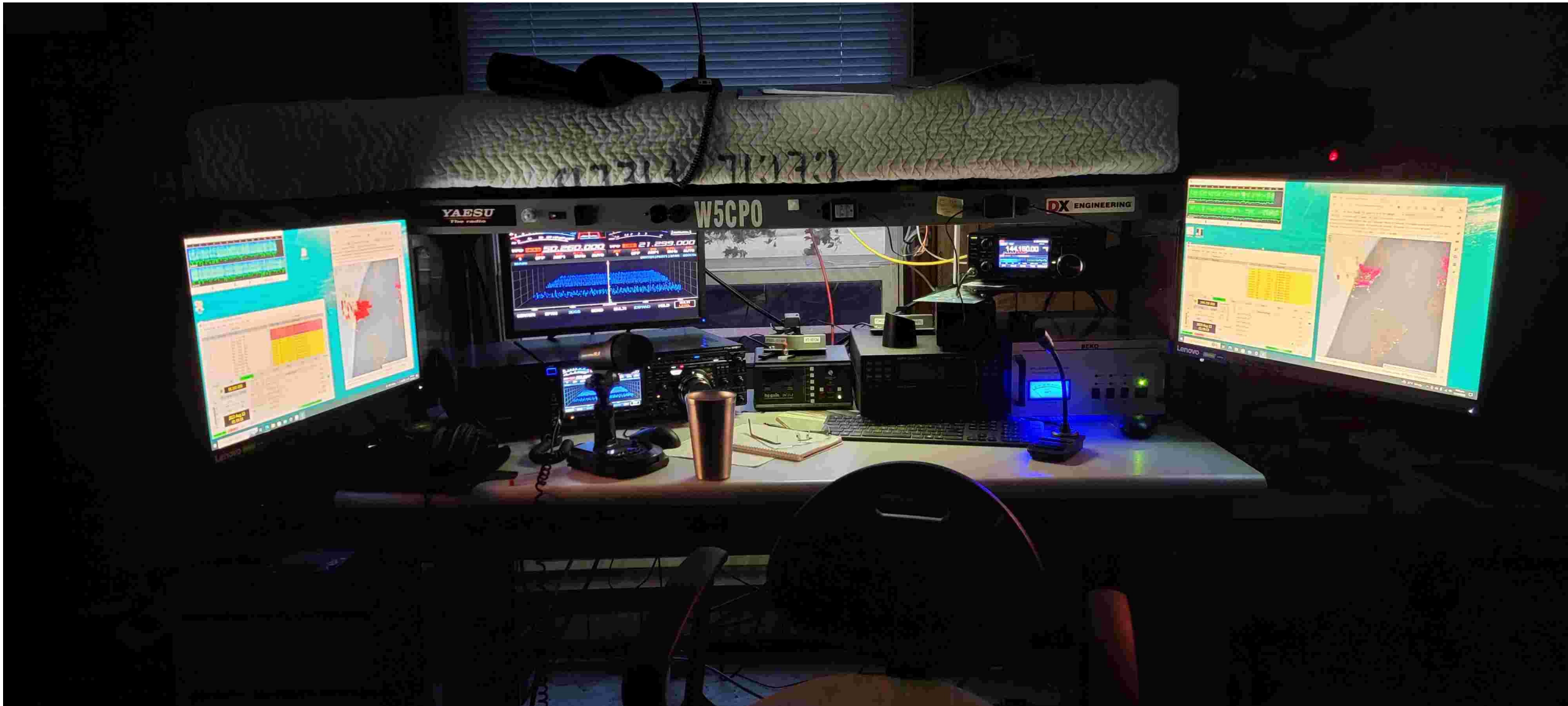
TNX

Jackson County | Grid EL18sr | CQ zone 4 | ITU zone 7

To:



CustomQSL.com



YAESU
The radio

W5CPO

DX ENGINEERING

