

WINTER FIELD DAY CONTACT SUGGESTIONS: PSK31

Alachua County ARES(R) / NFARC

Revised: 1/12/2025

GETTING READY

#1

Enter yourself as the operator into the Logging System -- click "Operator" and enter call and initials:
(Of course, if you wish to "donate" all your contacts to ME, that's fine also! ;-)

Contest Log 6.5 www.n3fjp.com

Mode View Network **Operator** Help

Find Recent Contacts Last 20

Class	Sec	Date / Time	Bnd	Mode	Country	Initials
1D	SF	06/28 17:01	40	DIG	USA	LG
3D	NC	06/28 17:00	40	DIG	USA	LG
1E	AL	06/28 16:59	40	DIG	USA	LG
1E	GA	06/28 16:53	40	DIG	USA	LG
1D	TN	06/28 16:47	40	DIG	USA	LG
1D	NC	06/28 16:44	40	DIG	USA	LG
1D	NFL	06/28 16:40	40	DIG	USA	LG
1E	NC	06/28 16:38	40	DIG	USA	LG
1D	NC	06/28 16:36	40	DIG	USA	LG

Class Section

Operator: W4UFL
Initials: JC
Done

CT
EMA VT
ME WMA AL SC
GA SFI

gin! Please select your band and mode from the menu!
ring waiver rule enabled (from Settings).

#2

Set your BAND and MODE in N3FJP -- Click on BAND to pick the band, and click on MODE to select DIGITAL. All Digital modes are equivalent for points and duplicates. Only SSB and CW are different modes. .

ACTUALLY OPERATING

Operating and logging (with N3FJP Field Day Contest Log) is similar to FT8/FT4, but you have to be a bit more "involved" and "active."

PSK31 OPERATION COMPARED TO FT8/FT4		
1	There are "suggested" frequencies for PSK31 but no hard and fast frequencies. SEE BELOW.	You may need to "look around" for the characteristic narrow PSK31 signals.
2	<p>Unlike FT8/FT4, most people get right on the same frequency ("zerobeat") as the person they are talking to. There are TWO WAYS you can do this if you are "hunt and pounce" (calling CQ others will come to YOU)</p> <p>a) Click on the "CQ call" in the browser pain upper left -- it will take you right to their frequency -- probably the EASIEST</p> <p>b) If you click around in the Waterfall, you can click on people and see what they are saying. I don't think you'll need this much</p>	Operating "run CQ" is SO EASY. You probably don't want to use AFC (automatic frequency control) while running CQ; if you are "hunt and pounce" you probably DO want to use AFC.
3	Unlike FT8/FT4, the conversation is not "automatic" -- you actually have to either hit buttons or type yourself and respond to what the other guy sends. So keep your head in the game!	This is real person-to-person communication.
4	In the video below, the fellow is being really really "WORDY" in his communication. You can certainly add all that extra stuff...but it shows you down. Our stock MACROS ("canned text") are stripped to the bone so you make contacts lickety-split just like FT8	You don't have to use them and you can type yourself if you prefer.
5	Need your INPUT on whether or not I should add the "LOG" right into the 4th button so it is automatic for the RUN CQ folks.	Not sure which is best.
6	FT8/FT4 automatically pick out the CALL, CLASS and SECTION for you -- in PSK31 you must either pick them out by LEFT CLICKING in that exact order (call, class, section) in what shows up on the receive pane -- or else type them in.	<p>Obviously clicking on them is easier! You don't have to do them all at once.</p> <p>When someone answers, you click on their call and it goes into the CALL box.</p> <p>Later on, when they send their CLASS and SECTION, you click on those and they go into the proper boxes also.</p>

YOUTUBE EXAMPLE

This is a bit LONG (30 minutes) but there are some important points, especially at 16:30

Here is a youtube with some unintentional (and funny!) errors that shows you a LOT about how FLDGI and N3FJP work together. The ham making the video doesn't realize his FLDGI is sending his frequency to N3FJP all the time...until later in the video. So it does a GREAT job of showing you not only how all this is set up -- but also what it is doing in the background.

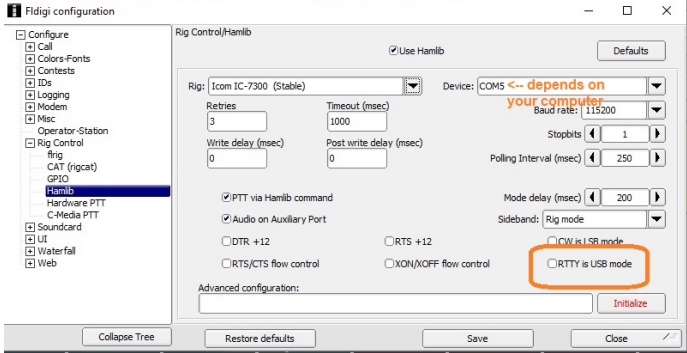
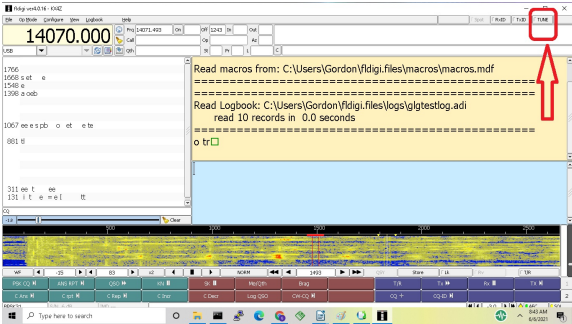
The "clicking on CALL, CLASS, SECTION begins at 16:30 in the tape" This guy is using elongated communications that are a lot wordier than our standard macros.

<https://www.youtube.com/watch?v=A8zMu8WKPVM>

Suggested Frequencies for PSK31

MODE	TYPICAL FREQ	Comments
PSK31	1.838. 3.580. 7.070 or 7.080 14.070-14.072 21.080 28.120 50.290	see https://www.qsl.net/darn/PSK31.htm see https://bpsk31.com/operation/ The JS8 folks may claim 7.080
RTTY	3.560-3.600 7.080-7.100 14.080.5 - 14.150 21.080.5 - 21.150 28.080.5 - 28.200	See: https://www.aa5au.com/rtty/rtty-sub-bands/

Setting up the Transmitter

ICOM SETTINGS FOR RTTY WSJT-X		
ITEM	CHOICE	COMMENT
<p>MODE</p>	<p>FLDGI: pick BPSK31</p> <p>Normally we use USB-D If you use LSB-D then you should not click the button for RTTY = USB in the Hamlib setup for 7300</p> <p>If you use USB-D you must click the button for the USB RTTY.</p> <p>I think either way works..</p> <p>Select USB-D. Touch the current mode (USB LSB, whatever it is) on the screen and you'll get the options</p>	<p>HAMLIB is currently working, in FLDGI 4.1.26</p>  <p>Settings Rig: IC-7300 Serial Port: as appropriate (Device Manager) We normally use 115200 for BAUD Baud: 9600 or 19200 (it is autobauding) Also consider 115200</p> <p>PTT via CAT</p>
<p>To get a solid tone (if you need it for something, like watching your power output)</p>	<p>Use TUNE button on FLDGI</p>	 <p>Upper Right of FLDGI</p>
<p>Adjusting Modulation</p>	<p>Hopefully this will be set properly, but you want the FLDGI drive set so that you are JUST BELOW WHERE ANY ALC SHOWS</p>	<p>Important to avoid any SPLATTER</p>

RIG CONTROL:

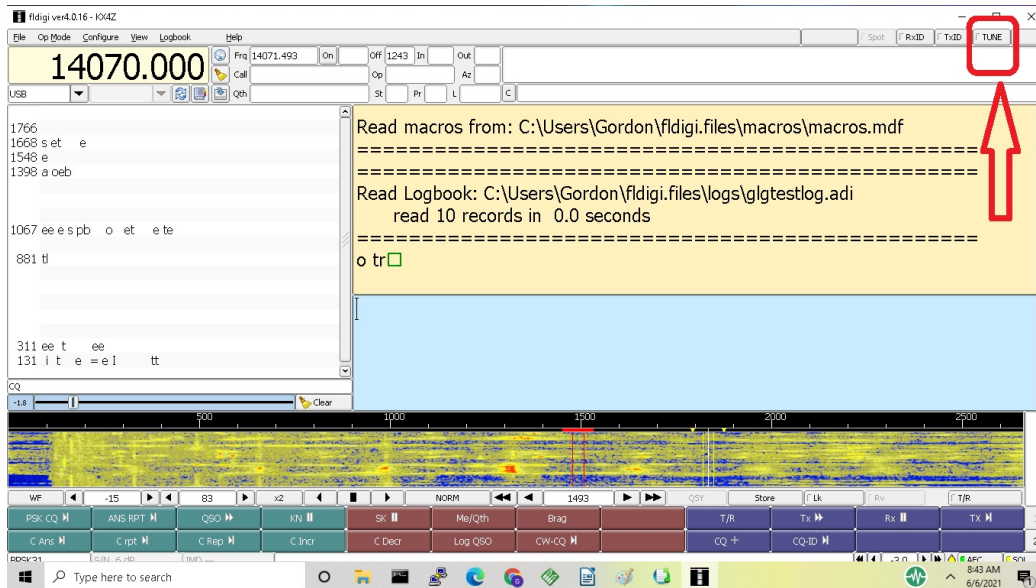
FLDGI 4.1.26: I am now able with current software to control using HAMLIB @ 115200

TYPICAL POWER SETTINGS		
Total Output Power	Set the 7300 for 100 Watts!! Then control the actual output power by adjusting the output modulation from FLDGI (by hitting the TUNE button and adjusting the control at the bottom) Set for 75- 90W	This is the power class we are using for our operation. Our power measurements are inexact and only accurate when the TUNER is tuned to present 50 ohms to the station.

TYPICAL TUNE UP SEQUENCE

(Try to do this with your transmitted signal in a clear spot so you don't QRM other users)

❑ **Tune the Antenna Tuner** using the Icom 7300 alone (*amplifier in barefoot mode*) Now the station sees 50 ohms.



CHECK FOR NO ALC AND ADEQUATE OUTPUT POWER

❑ Proceed to make PSK31/RTTY contacts normally.

CONTEST SAVVY

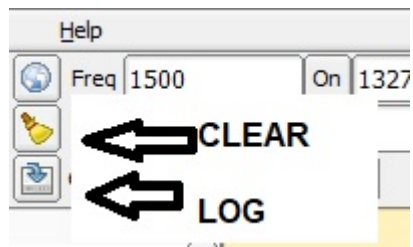
When RUNNING, do not use AFC (Auto frequency control)
When POUNCING, probably DO use AFC

PSK31

NOTE: Our Macros may be somewhat more TERSE than what you see in this table

Memory	Send (numbering synchronized with other modes)	Comment
RUN CQ	<TX> CQ WFD <MYCALL> <MYCALL> WFD <RX>	RUN CQ
ANS	<TX> <CALL> DE <MYCALL> 3I NFL <RX>	use to answer person responding to your run CQ
EXCH	<TX> 3I 3I NFL NFL <RX>	in case needed to send exchange again
QSL-QRZ	<TX> QSL QSL TU QRZ WFD <MYCALL> WFD <RX>	answering an exchange
Pounce	<TX> NF4AC NF4AC <RX>	responding to a run CQ'er
Exchange	<TX> QSL 3I 3I NFL NFL NF4AC <RX>	
LOG CLRL	<LOG> <CLRLOG>	(logs immediately if required fields are entered)

There are also buttons that will LOG and CLEAR the log:



APPENDIX: CONNECTIONS TO N3FJP

IN N3FJP:

- Click **Settings | Application Program Interface (API)**.
- **Verify that TCP/API Enabled (Server) is clicked and set to 1100.**

FLDGI

Click on Configure | Configure Dialog | Contests | Field Day and be certain that the proper call sign, class and section are entered.

then Click on Logging | N3FJP

Address = 127.0.0.1 (loopback address for your computer)

Port = 1100

Click to Connect and verify connects

If you had to set anything, click SAVE and CLOSE

Rig Control and Audio are covered on a separate page.

RIG CONTROL

The Icom USB driver must be installed for this to work.

TYPICALLY HamLib will work and Rigcat will not be necessary-- but this sometimes changes with different updates on FLDGI. Whatever works, works!

Click on CONFIGURE | CONFIGURE DIALOG

Click on RIG CONTROL | HAMLIB

Click on Use HamLib

Rig: ICOM 7300

Device: <you will need to pick the properr COM port for the ICOM 7300>

Retries is ok at 3

Timeout is typically ok at 1000

Write delay 0

Post write delay 0

BaudRate = 115200 (typically this works. If not, try 9600 or 19200)

Click PTT via Hamlib command

If you are using USB on the radio for RTTY, click the button RTTY is USB mode

I think we click "audio on auxiliary port"

Click Initialize when you have it set properly.

AUDIO SOUND CARD CONNECTION

Click on CONFIGURE | CONFIGURE DIALOG

Click on SOUND CARD | DEVICES

Click on PortAudio to enable it.

Set your Capture to the USB CODEC from the icom7300

Set your Playback to the USB CODEC from the icom7300

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

2,200 Meters (135 kHz)
135.7 kHz 1 W EIRP maximum 137.8 kHz E.A.G

630 Meters (472 kHz)
5 W EIRP maximum, except in Alaska within 496 miles of Russia where the power limit is 1 W EIRP.
472 kHz E.A.G

160 Meters (1.8 MHz)
Avoid interference to radiolocation operations from 1.900 to 2.000 MHz
1.800 2.000 MHz E.A.G

80 Meters (3.5 MHz)
Avoid interference to radiolocation operations from 3.525 to 3.600 MHz
3.500 3.600 3.700 4.000 MHz E A G N.T (200 W)

60 Meters (5.3 MHz)
CW, 5332 5348 5358.5 5373 5405 kHz E.A.G (100 W)
Dig 2.8 kHz
USB 5330.5 5346.5 5357.0 5371.5 5403.5 kHz
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.

40 Meters (7 MHz)
7.000 7.075 7.100 7.300 MHz E A G N.T (200 W)
ITU 1.3 and FCC regions 2 west of 132° west or below 30° north
7.175 N.T outside region 2
7.125
See Sections 97.305(c), 97.307(h)(1) and 97.301(e). These exemptions do not apply to stations in the continental US.

30 Meters (10.1 MHz)
Avoid interference to fixed services outside the US.
10.100 10.150 MHz E.A.G
200 Watts PEP

20 Meters (14 MHz)
14.000 14.150 14.350 MHz E A G
14.175

17 Meters (18 MHz)
18.068 18.110 18.168 MHz E.A.G

15 Meters (21 MHz)
21.000 21.200 21.450 MHz E A G N.T (200 W)
21.225
21.275

12 Meters (24 MHz)
24.860 24.930 24.960 MHz E.A.G

10 Meters (28 MHz)
28.000 28.300 29.700 MHz E.A.G N.T (200 W)
28.500

6 Meters (50 MHz)
50.1 50.0 MHz E.A.G.T

2 Meters (144 MHz)
144.1 144.0 MHz E.A.G.T

1.25 Meters (222 MHz)
219.0 220.0 222.0 225.0 MHz E.A.G.T N (25 W)

70 cm (420 MHz)*
420.0 450.0 MHz E.A.G.T

33 cm (902 MHz)*
902.0 928.0 MHz E.A.G.T

23 cm (1240 MHz)*
1240 1300 MHz E.A.G.T N (5 W)
1270 1295

All licensees except Novices are authorized all modes on the following frequencies:
2300-2310 MHz 10.0-10.5 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

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.
Text 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

ARRL We're At Your Service
ARRL Headquarters:
660-594-0200 (Fax 660-594-0259)
email: hq@arrl.org
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email: membership@arrl.org
Getting Started in Amateur Radio:
704-Free 1-800-326-3942 (660-594-0355)
email: news@arrl.org
Exams: 660-594-0300 email: wec@arrl.org

See APRRLWeb at www.arrl.org for detailed band plans.

***Geographical and power restrictions may apply to all bands above 420 MHz. See The ARRL Operating Manual for information about your area.**

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