



30 Meter Band

If you are asking these questions:

- **Where** on the 30 Meter Band is there activity?
- **What** different activity or modes are used on the 30 meter band?
- **How** do I find more information or links to the Internet for help on getting involved in different 30 Meter Activity or different modes?

Then please read on, jump in, and have some fun on this no contest WARC band that has propagation unlike any other. Since it sits between the 40 Meter and 20 Meter band it boasts paths open most anytime. At times acts Like 40 meters, yet also opens to DX like 20 meters. Not much going on 30 Meters? Think again! GL on the 30 Meter Band!

30 Meter Digital Group (30MDG)

All are welcome please Join in:

<http://www.30mdg.net>

Live Propagation

<http://www.hamspots.net/30mdg/>

(Special Thanks to Laurie VK3AMA-30MDG highly recommends when In the Shack sign on to meet other 30MDG Members or 30m DX)

<http://www.30mdg.net>

<http://www.propnet.org/>

<http://psk.gladstonefamily.net/pskmap.html>

<http://wsprnet.org/drupal/wsprnet/map>

<http://www.obriensweb.com/sked/>

<http://hfradio.org/propagation.html>

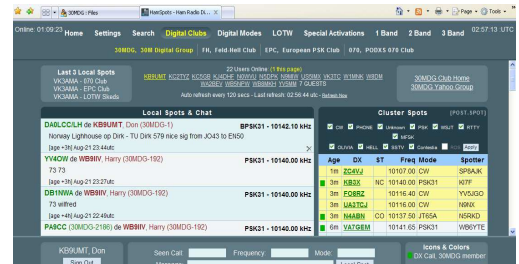
Prediction Propagation Software

<http://www.dxzone.com/catalog/Software/Propagation/>

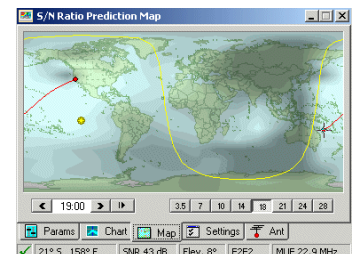
<http://www.g4ilo.com/voaprop.html>

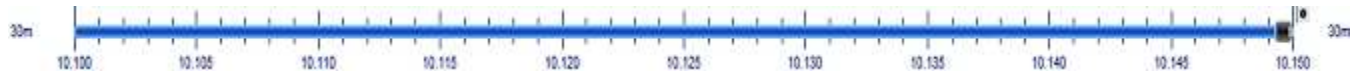
<http://www.voacap.com/hamcap-guide.html>

<http://www.dxlabsuite.com/propview/>



The Internet Portal to the PropNET Project





THE 30 METER BAND AT A GLANCE

(Note: We are **SECONDARY USERS** of the 30 Meter Band...the following information is **NOT official**, but based on observations from Internet sources and those active on 30 Meter Band.)

10.106 - 10.116	CW QRP
10.109	CW 30MDG
10.110	CW DXpeditions (of course varies with each)
10.115	CW IOTA
10.1175	CW HFPAck
10.118	CW FISTS
10.120	CW Straight Key Century Club (slow speed CW)
10.120	<i>SSB Calling Frequency (OC-VK,AS - AF)</i>
10.1225	CW County Hunting Net
10.1239	WINLINK-Pactor 1 & 2
10.129	EMCOMM
10.132	SSTV-N (MP73-N <500hz)
10.134 - 10.140	Feld HELL
10.1345	OLIVIA
10.136	CMSK
10.137	Feld HELL
10.138	Feld HELL Net 0000z to 0200z CDT Sundays
10.144	Feld HELL (Region I)
10.130 - 10.140	OLIVIA
10.1386	MEPT/WSPR (Beacons)
10.139	County Hunting Net
10.139	JT65 (WSJT)
10.140	QRP Digital Modes
10.1405	PROPNET (PSK)
10.139 – 10.141	WSPR (QSO MODE-WSJT)
10.140 - 10.142	PSK (DX)
10.142	30MDG Sunday Night PSK (possible Net soon)
10.142 – 10.143	MFSK (other Wider <500hz Digital Modes)
10.141	Dxpedition RTTY (of course varies with each)
10.140-10.145	DX RTTY
10.1412	WINLINK – Pactor 3 (WINLINK 10.140-10.150?)
10.142	SSTV-N (MP73-N <500hz)
10.142 – 10.144	CONTESTIA & OLIVIA
10.142 – 10.143	ALE-400hz
10.143 – 10.145	ROS (note: as of 8/29/10 not legal in USA on HF)
10.145	ARRL SkipNet
10.145.5 – 10.148	ALE-2Khz
10.147 – 10.148	PSKMail/APRS
10.1491 – 10.1495	APRS

IARU (10 MHz band)

Region-I:

10100-10140 = CW
 10116 = centre of QRP activity
 10140-10150 = narrow band modes, digimodes

Region-II:

10100-10130 = CW
 10116 = centre of QRP activity
 10130-10140 = narrow band digimodes
 10140-10150 = all digimodes (no phone)

Region-III:

10100-10157.3 = CW
 10116 = centre of QRP activity
 10140-10157.3 = narrow band activity (CW, RTTY, FAX, digi-modes).

Note:

CW QSO's are accepted across all bands, except beacon segments which are discouraged on 30 Meters since we are secondary users of this band. (Rec. DC05_C4_Rec.13).

Please Check Your Country's Rules/Regulations and/or BAND PLAN

(Make sure you are in compliance with your country's license rules and regulations)

<http://www.ac6v.com/frequencies.htm>

<http://hfink.com/bandplans/>

<http://hfink.com/bandplans/10mhz/>

30 Meter Live PSK Receivers

(Watch the PSK live action in other parts of the World or watch your own signal-Try it!)

<http://30mdg.pa3gwh.com/>

(PA3GWH – Voorburg Netherlands JO22eb)

<http://on7kei.no-ip.info:8080/Receiver.html>

(ON7KEI – Peer Belgium JO21re)

<http://ve1cdd.ham-radio-op.net/>

(VE1CDD – Canada NA – off line at the moment Aug2010)

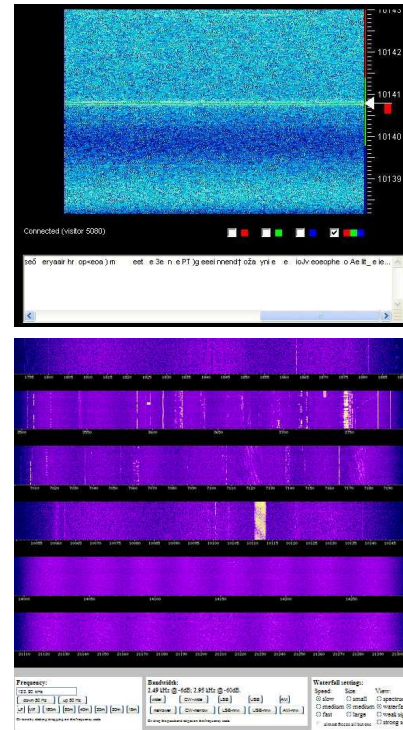
<http://websdr.ewi.utwente.nl:8901/>

(PI4THT Univ-PA3FWM-Enschede, Netherlands– JO32ka

This one has 8 bands! All modes including digital and 30 Meters)

<http://www.websdr.org/>

(More Online live Receivers)



THE 30 METER BAND IN MORE DETAIL *(with references links)*

CW 10.100 to 10.130

10.115 IOTA

<http://www.rsgbiota.org>

10.106-10.116 QRP

<http://www.qrparci.org/>

10.110 DXpeditions CW

10.1175 HFpack

<http://www.HFpack.com>

10.118 FISTS

<http://www.fists.org>

10.120 SSB Calling Frequency

(0c-VK,AS -AF)

10.1225 County Hunting Net

<http://ch.w6rk.com/>

10.119 EMCOMM

http://www.wrrl.org/n_e_t_s_.asp



CW Software:

<http://www.dxsoft.com/>

http://www.dxzone.com/catalog/Software/Morse_Code_Decoders/

<http://www.polar-electric.com/Morse/MRP40-EN/>

Best decode is the human ear



CW Help:

<http://www.arrl.org/learning-morse-code>

<http://www.netwalk.com/~fsv/CWguide.htm>

<http://morsecode.scphillips.com/jtranslator.html>

http://www.dxzone.com/catalog/Operating_Modes/Morse_code/

SSTV-N (MP73-N Narrow <500hz)

10.132 SSTV (MP73-N - NA)

10.142 SSTV (MP73-N – outside NA)

What does SSTV sound like?

<http://www.qsl.net/g4hbt/sounds.htm>



SSTV-N Software:

<http://mmhamsoft.amateur-radio.ca/mmsstv/index.htm>

(use MP73-N <500hz see Help Link)

SSTV-N Help:

http://amateur-radio-wiki.net/index.php?title=K3UK%27s_Quick_and_Dirty_Guide_to_Narrow_Bandwidth_SSTV

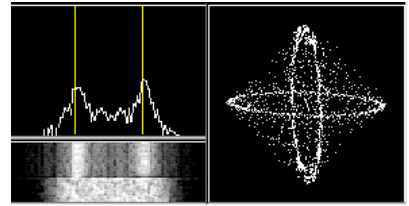
<http://groups.yahoo.com/group/30mSSTV/>

RTTY

10.130-10.140 RTTY

10.141 Dxpention RTTY

10.140-10.145 DX RTTY



What does RTTY sound like?

<http://www.kb9ukd.com/digital/>

RTTY Software:

<http://mmhamsoft.amateur-radio.ca/pages/mmtty.php>

<http://www.dxsoft.com/en/products/truerty/>

<http://www.dxzone.com/catalog/Software/RTTY/>

<http://www.rckrtty.de/>

RTTY Software (Multimode):

<http://www.mixw.net/>

<http://www.ham-radio-deluxe.com/Programs/DigitalMaster780/tabid/89/Default.aspx>

http://f6cte.free.fr/index_anglais.htm

<http://www.w1hkj.com/Fldigi.html>

<http://mmhamsoft.amateur-radio.ca/MMvari/>

<http://homepage.mac.com/chen/w7ay/cocoaModem/index.html>

<http://www.dxlabsuite.com/winwarbler/>

RTTY Help:

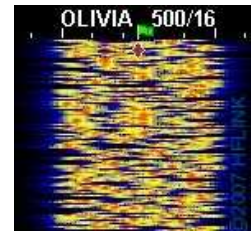
<http://www.aa5au.com/rtty.html>

http://www.dxzone.com/catalog/Operating_Modes/RTTY/

<http://groups.yahoo.com/group/MMTTY/>

OLIVIA *(great weak signal mode)*

10.134-10.140 and 10.142 – 10.144
10.1345



10134.5 USB dial freq [Olivia 500/16 Audio Center Freq=750 Hz] or [Olivia 1000/32 Audio Center Freq=1000Hz] (proposed Olivia calling freq for IARU Region 2 and Region 3)

What does OLIVIA sound like?

<http://www.w1hkj.com/FldigiHelp-3.12/Modes/olivia.htm>

OLIVIA Software (Multimode):

<http://www.mixw.net/>

<http://www.ham-radio-deluxe.com/Programs/DigitalMaster780/tabid/89/Default.aspx>

http://f6cte.free.fr/index_anglais.htm

<http://www.w1hkj.com/Fldigi.html>

<http://n1su.com/olivia/>

OLIVIA Help:

<http://hfink.com/olivia/olivia.html>

<http://groups.yahoo.com/group/digitalradio/>

<http://groups.yahoo.com/group/oliviadata/>

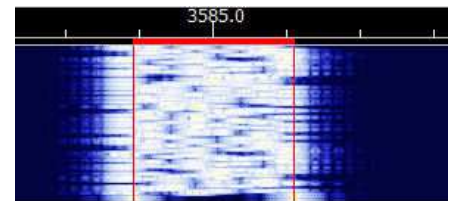
<http://forums.ham-radio.ch/index.php>

CONTESTIA *(great weak signal mode)*

10.142 – 10.144

What does OLIVIA sound like?

<http://www.w1hkj.com/FldigiHelp-3.20/Modes/index.htm>



CONTESTIA Software (Multimode):

<http://www.ham-radio-deluxe.com/Programs/DigitalMaster780/tabid/89/Default.aspx>

http://f6cte.free.fr/index_anglais.htm

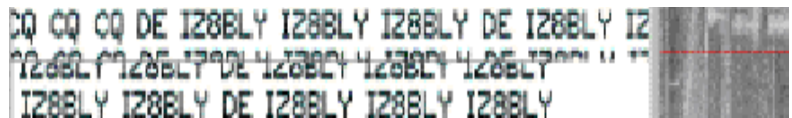
<http://www.w1hkj.com/Fldigi.html>

CONTESTIA Help:

<http://www.w1hkj.com/FldigiHelp-3.20/Modes/index.htm>

<http://www.oliviamode.com/Contestia.htm>

FELD HELL



10.137

10.138 NA Feld HELL Net 0000z to 0200z CDT Sundays

10.144 (Region I)

What does Feld HELL sound like?

<http://www.wb8nut.com/digital.html>

Feld HELL Software (Multimode):

<http://xoomer.alice.it/aporcino/>

<http://www.mixw.net/>

<http://www.ham-radio-deluxe.com/Programs/DigitalMaster780/tabid/89/Default.aspx>

http://f6cte.free.fr/index_anglais.htm

<http://www.w1hkj.com/Fldigi.html>

Feld HELL Help:

<http://sites.google.com/site/feldhellclub/Home>

http://xoomer.virgilio.it/aporcino/Hell/faq_hell.htm

<http://uk.groups.yahoo.com/group/feldhellclub/>



JT65 (WSJT – *Great Weak signal mode*)

10.139 JT65

What does JT65 sound like?

<http://www.kb9ukd.com/digital/>

JT65 Software:

<http://physics.princeton.edu/pulsar/K1JT/>

JT65 Help:

<http://groups.yahoo.com/group/wsjtgroup/>

<http://www.obriensweb.com/bozoguidejt65a.htm>

<http://www.hflink.com/jt65a/>

<http://www.para.org.ph/membersarticles/WSJT/>

WSPR (WSJT)

10.140 WSPR

What does WSPR sound like?

<http://sv2dcd.blogspot.com/2008/05/oy3je-4m-qso-now-online.html>

WSPR Software:

<http://physics.princeton.edu/pulsar/K1JT/>

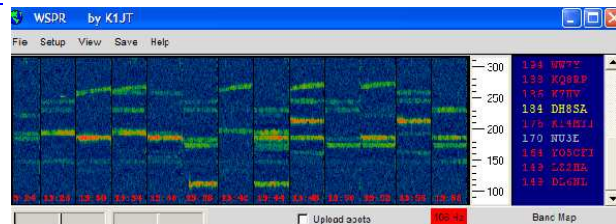
http://f6cte.free.fr/index_anglais.htm

WSPR Help:

http://physics.princeton.edu/pulsar/K1JT/WSPR_Quick_Start.TXT

<http://wsprnet.org/>

<http://wsprnet.org/olddb>



<http://wsprnet.org/drupal/wsprnet/map>

<http://www.pe2pe.eu/images/WSPR.htm>

<http://groups.yahoo.com/group/digitalradio/>

<http://groups.yahoo.com/group/multipsk/>

PROPNET-PSK

10.1405 PROPNET-PSK

i.e. $10.1389 + 0.001500 = 10.1404\text{MHz}$. NA

AF-OC = 10.1389 + 0.001300

AS-EU = 10.1389 + 0.001400

NA = 10.1389 + 0.001500

SA = 10.1389 + 0.001600

PROPNET Software:

<http://www.n7yg.com/propnetpsk/index.html>

PROPNET Decoder of string (power, height, etc):

http://www.pearhead.org/PropNET_PHG_decoder

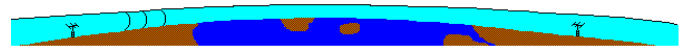
PROPNET Help:

<http://www.n7yg.com/propnetpsk/index.html>

<http://propnet.org/index3faq.shtml>

<http://propnet.org/index3rp.shtml>

<http://groups.yahoo.com/group/PropNET-Online/>

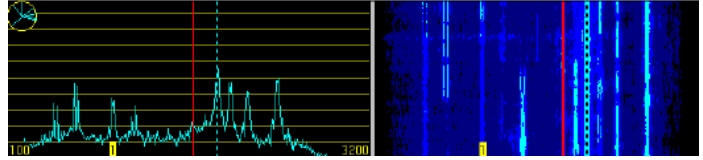


The Internet Portal to the PropNET Project



PSK

10.140 – 10.142 PSK



(All flavors of PSK, most used is BPSK31...but also BPSK63,QPSK31/63,etc and as another note as you will see below PSK seems to be the most popular mode used on the 30 Meter Band – it is NOT the best weak signal mode so have other modes at the ready)

What does PSK sound like?

<http://www.wb8nut.com/digital.html>

PSK Software (Multimode):

<http://www.digipan.net/> (those new to digital/psk try Digipan first-easy to use)

<http://www.dxlabsuite.com/winwarbler/>

<http://www.mixw.net/>

<http://www.ham-radio-deluxe.com/Programs/DigitalMaster780/tabid/89/Default.aspx>

http://f6cte.free.fr/index_anglais.htm

<http://www.w1hkj.com/Fldigi.html>

(PSK Software (Multimode) Continued)

<http://mmhamsoft.amateur-radio.ca/MMvari/>

<http://homepage.mac.com/chen/w7ay/cocoaModem/index.html>

<http://www.logger32.net/>

Too many to list go to larger sites or Google 'PSK Software'

<http://ac6v.com/software.htm>

<http://www.dxzone.com/catalog/Software/PSK31/>

<http://www.westmountainradio.com/links.htm>

http://www.hamradioexpress.com/windows_soundcard_software.htm

PSK Help:

<http://groups.yahoo.com/group/30MDG/>

<http://groups.yahoo.com/group/digitalradio/>

<http://www.aintel.bi.ehu.es/software.html>

<http://www.mymorninglight.org/ham/psk.htm>

<http://www.qsl.net/wm2u/psk31.html>

<http://groups.yahoo.com/group/psk31/>

<http://www.youtube.com/watch?v=ZaAXMzGIUGA> *(New to digital ? Watch This!)*

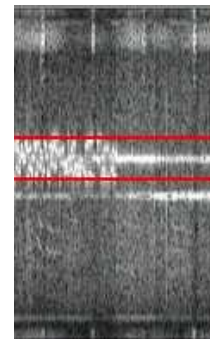
<http://www.youtube.com/watch?v=qHNvp7FfP6E>

MFSK *(good weak signal mode)*

10.142 – 10.143 MFSK

What does MFSK sound like?

<http://www.wb8nut.com/digital.html>



MFSK Software (Multimode):

<http://www.qsl.net/z11bpu/MFSK/>

<http://www.mixw.net/>

<http://www.ham-radio-deluxe.com/>

http://f6cte.free.fr/index_anglais.htm

<http://www.w1hkj.com/Fldigi.html>

<http://homepage.mac.com/chen/w7ay/cocoaModem/index.html>

Note: MFSK can send pictures (SSTV) too! *(Takes longer so adjust picture sizes to be smaller – see help link below)*

http://f6cte.free.fr/SSTV_IN_MFSK16_EASY_WITH_MULTIPSK.doc

MFSK Help:

<http://www.qsl.net/zl1bpu/MFSK/>

<http://www.qsl.net/wm2u/mfsk.html>

<http://groups.yahoo.com/group/MFSK/>

<http://sharon.esrac.ele.tue.nl/mirrors/zl1bpu/MFSK/software/help.htm>

http://www.dxzone.com/catalog/Operating_Modes/MFSK/

ARRL SkipNet

10.145 ARRL SkipNet

SkipNet Help:

<http://www.uspacket.org/hfnets.htm>

ALE (ALE2K and ALE400)

10.143 ALE400

10.1455 – 10.1481 ALE2k

What does ALE sound like?

<http://www.kb9ukd.com/digital/>

ALE Software:

http://f6cte.free.fr/index_anglais.htm

<http://hfink.com/pcale/>



MULTIPSK

ALE Help:

<http://groups.yahoo.com/group/multipsk/>

<http://groups.yahoo.com/group/HF-LINK/>

<http://hfink.com/>

<http://hfink.com/channels/>

<http://hfink.com/automaticlinkestablishment/>

<http://hfink.com/hardware/>

PSKMail/APRS/

10.1478 – 10.1482 PSKMail/APRS



PSKMail/APRS Software:

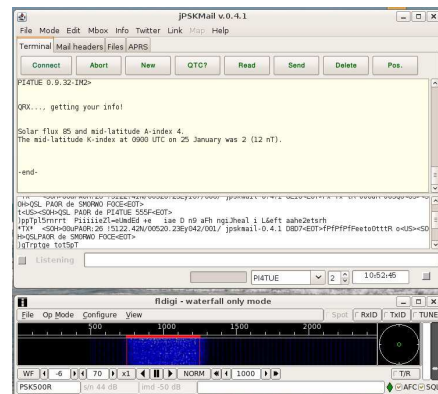
<http://pskmail.wikispaces.com/Download>

PSKMail/APRS Help:

<http://pskmail.wikispaces.com/>

<http://aprs.net/>

<http://www.pskmail.eu/>



WINLINK

10.1239 WINLINK Pactor 1 or Pactor 2

10.1412 WINLINK Pactor 3

10.140 – 10.150 WINLINK (?)



WINLINK Software and Help:

<http://www.winlink.org/>

<http://www.zerobeat.net/bandplan-dissent.html>

<http://groups.yahoo.com/group/wl2kemcomm/>

http://www.arwatch.com/watch/w_winlink.htm

APRS/PACKET

10.1491 – 10.1495 APRS

APRS/PACKET Software:

<http://www.agwtracker.com/>

<http://www.sv2agw.com/>

<http://www.ac6v.com/opmodes.htm#APRS>

http://f6cte.free.fr/index_anglais.htm

APRS/PACKET Help:

<http://www.ac6v.com/opmodes.htm#APRS>

<http://www.ac6v.com/software.htm#PACK>

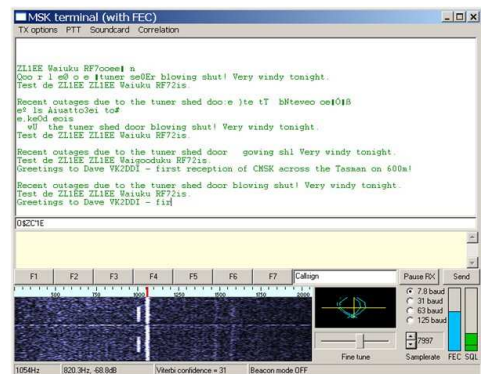
<http://www.scs-ptc.com/>

Other Digital Modes *(Experimenting Welcome-newer digital modes)*

CMSK ZL2AFP

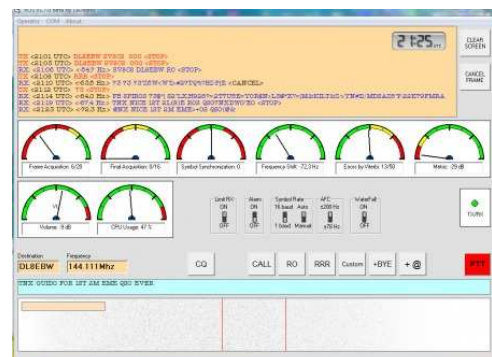
Narrow-band weak signal mode for LF/MF
*(designed for 160m, but try 80m too – experimenting on 30m
Also...no set frequency's to list yet for this mode but some
30MDG members have been using 10.136....please note
Changing sample rate in this software a must to decode)*

<http://www.qsl.net/zl1bpu/CMSK/cmsk.htm>



ROS

New weak signal mode but currently is **NOT legal** below 220mhz in the **USA** *(at this moment as of Aug2010)* but others In around the World are using this mode with success – on 30 Meters most traffic from EU Around 10.144 -10.146



-please 30 Meters is narrow/limited Band space so please use narrow width ROS modes on 30 Meters
-be kind to your other digital neighbors

<http://rosmodem.wordpress.com/>

http://ham2ham.com/room307_ros.php

<http://groups.yahoo.com/group/ROSDIGITALMODEMGROUP/>

Other Digital Mode Software:

<http://www.westmountainradio.com/links.htm>

<http://www.buxcomm.com/soundcardsoftware.html>

<http://xoomer.alice.it/aporcino/Chip64/index.htm>

<http://www.weaksignals.com/jason>

(Many others too! New Digital modes on the horizon all the time!)

Other Digital Mode Help:

<http://rv3apm.com/>

<http://www.bcar.us/Digital%20Signals.htm>

<http://www.eham.net/reviews/products/28>

Digital Mode Clubs that include 30 Meters

(Note: Member Count/Number as of Aug2010)



30MDG: 30 Meter Digital Group <http://www.30mdg.net>
Members = 3,960

30 Meter Digital Group (30MDG)	Established November 2007	Members 3937	DXCC 104	W.A.S 49	W.A.C 06
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EPC: European PSK Club <http://eu.srars.org/index.php>
Members = 12,400



070: PODXS 070 Club <http://www.podxs070.com/>
Members = 1,320



PODXS 070 Club

DMC: Digital Modes Club <http://www.digital-modes-club.org/index.htm>
Members = 3,320



FH: Feld-Hell Club <http://feldhellclub.org/index.php>
Members = 3,160



CDG: Croatian Digital Group <http://www.hamradio.hr/9a1epc/index.htm>
Members = 410



WCC: WARC Century Club <http://www.obriensweb.com/warc-cc.html>
Members = 610



OBC: Olivia Belgium Club <http://www.freewebs.com/on6cm1/index.htm>
Members = 246



BCS: Belgium Club SSTV <http://on8ga.qsl.nu/BelgiumClubSstv/belgiumclubsstv>
Members = 544



Below CW Clubs – Original Digital Mode

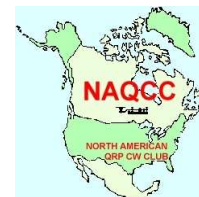
FISTS <http://www.fists.org/index.html>
Members = 5532



SKCC – Straight Key Century Club <http://www.skccgroup.com/index.html>
Members = 7012



NAQCC – North American QRP Cw Club <http://home.windstream.net/yoel/>
Members = 4730



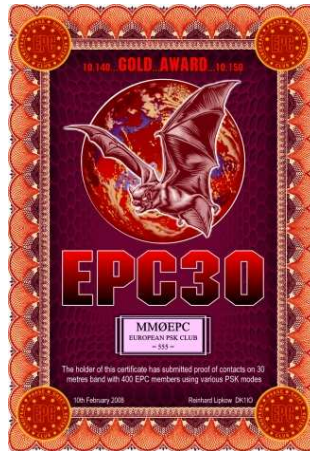
For current Club information please visit Laurie's VK3AMA site:

<http://www.hamclubs.info/index.php>

<http://www.hamclubs.info/memberlists.php>

AWARDS

(Get on the 30 Meter Band, participate, and have some fun! Please note these Awards are for FUN, contacts are NOT all confirmed, it is NOT a contest-no time limits/dates/etc, the only winners are those that have fun. Get on the band and promote the use of the 30 Meter Band and good will among other Digital Hams with like interests throughout the World...DX to Ragchew it is all here on 30 Meters)



http://www.30mdg.net/awards_01.html

http://www.30mdg.net/award_rules.html

http://www.30mdg.net/awards_02.php

<http://www.u30.hf-core.at/>

*(Special Thanks to **John OE3JPK** – Creator of Ultimate30MDG Award Software)*

http://eu.srars.org/index.php?option=com_content&task=view&id=101&Itemid=136

http://www.podxs070.com//endorsements/070_EndorsementRules.html

<http://sites.google.com/site/feldhellclub/Home/awards>

<http://www.obriensweb.com/warc-cc.html>

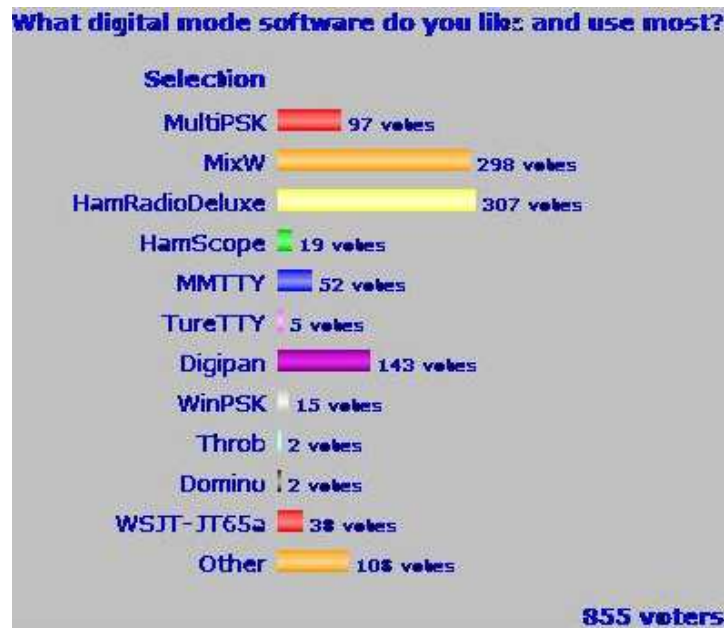
http://www.digital-modes-club.org/index.php?option=com_content&view=article&id=55&Itemid=53&lang=en

<http://www.arrl.org/awards/dxcc/>

<http://www.hamradio.de/cgi-local/award.pl?action=showaward&awardnr=235>

*** Please note all Surveys/Polls below are from the 30MDG website that started December 2007 to Current August 2008- Polls no longer active but interesting data at that time*

30M Survey - Digital Software



References below In Order as Rated by Digital Ops (top picks only):

#1 Rated DM780 with Ham Radio Deluxe

<http://www.ham-radio-deluxe.com/Programs/DigitalMaster780/tabid/89/Default.aspx>

#2 Rated MixW

<http://www.mixw.net/>

#3 Rated Digipan

<http://www.digipan.net/>

#4 Rated Multipsk

http://f6cte.free.fr/index_anglais.htm

Rated best for Linux (also now for Windows)...FLDIGI give it a try!

*(When Poll first introduced Linux was not in the Poll-our error only including Windows-FLDIGI for both Linux and now for Windows is very **highly recommended**)*

<http://www.w1hkj.com/Fldigi.html>

Winwarbler

<http://www.dxlabsuite.com/winwarbler/>

MMVARI

<http://mmhamsoft.amateur-radio.ca/MMvari/>

Rated best for MAC users...COCOAMODEM

(When Poll first introduced MAC was not in the Poll-our error only including Windows)

<http://homepage.mac.com/chen/w7ay/cocoaModem/index.html>

User Yahoo Help Groups on the above software:

<http://groups.yahoo.com/group/ham-radio-deluxe/>

<http://groups.yahoo.com/group/mixw/>

<http://groups.yahoo.com/group/digipan/>

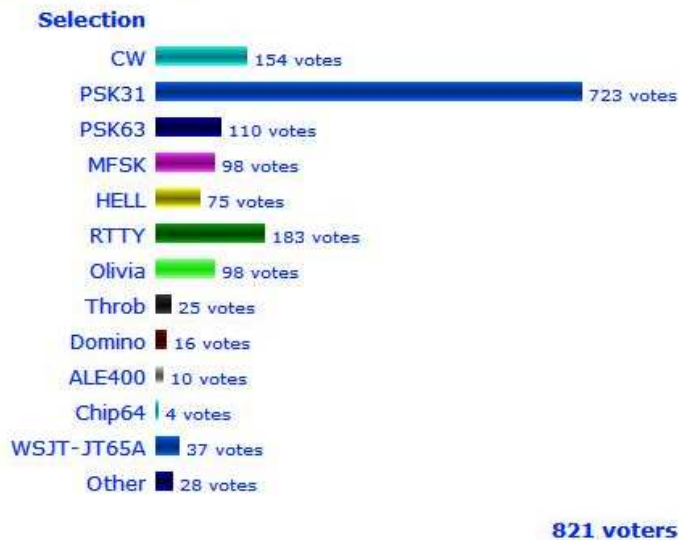
<http://groups.yahoo.com/group/multipsk/>

<http://rss.groups.yahoo.com/group/digitalradio/rss>

<http://groups.yahoo.com/group/linuxham/>

30 M Surveys on Most Used Digital Modes

What Digital Modes do you use the most on 30 Meters?



Top rated software and (most popular) supported modes

	HRD	MIXW	Digipan	Multipsk	FLDigi	MMVari	Cocoamodem
PSK	Supported	Supported	Supported	Supported	Supported	Supported	Supported
RTTY	Supported	Supported	Supported	Supported	Supported	Supported	Supported
CW	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Olivia	Supported	Supported	Supported	Supported	Supported	Supported	Supported
MFSK	Supported	Supported	Supported	Supported	Supported	Supported	Supported
HELL	Supported	Supported	Supported	Supported	Supported	Supported	Supported
WSJT(JT65)	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Throb	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Domino	Supported	Supported	Supported	Supported	Supported	Supported	Supported
ALE	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Chip64	Supported	Supported	Supported	Supported	Supported	Supported	Supported
SSTV	Supported	Supported	Supported	Supported	Supported	Supported	Supported
FAX	Supported	Supported	Supported	Supported	Supported	Supported	Supported
MT63	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Contestia	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Thor	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Runs on	Windows	Windows	Windows	Windows	Linux/Mac/Win	Windows	Mac

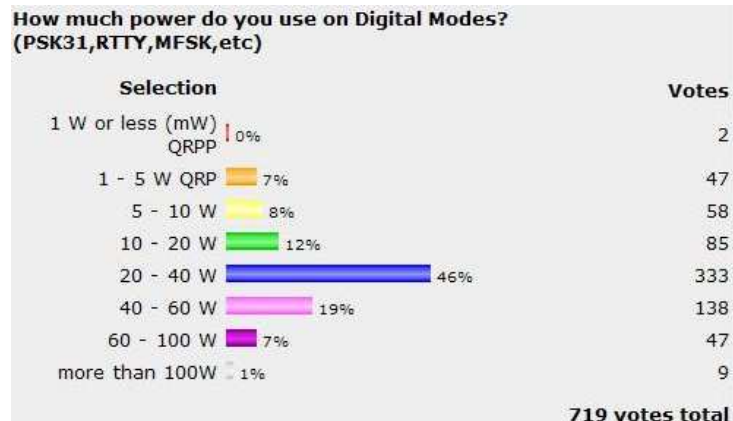
Supported = Supported

(Thanks to Richard PA3GWH for this software vs digital mode supported chart-Aug2010)

Some comparison numbers from Tony K2MO comparing different digital modes are toward the end of this document...this is a must read! Please experiment with different digital modes and 30 Meters is a great place to do just that and find others that are willing to experiment along with you!

30M Survey on Power Used

Note: Almost 75% of digital operators are using 40w or less power. Please do NOT harm your radio by running 100% power on a 100% duty cycle mode (50% power or 50w or lower advised not only for your rig but also for a clean signal on the band so all can use the band (no ALC!). If you experiment using 100w then compare copy to 40w or less you will find little to no difference in copy. Either the band is open for the current propagation/path using your current mode/antenna at hand or it's not and no copy. If you want to increase your chances of contacts on a poor propagation/path then switch to another mode and/or different antenna!



Don't transmit a poor signal on the band and if you see one please help each other and let others know of a poor quality signal (we would all want to know if our signal is of poor quality).

<http://www.psb-info.net/samples.html>

<http://www.ssiserver.com/info/pskmeter/>

<http://www.w1hkj.com/Modes/pskbad.htm>

Not everyone can have a 599 signal, please give proper and accurate signal reports:

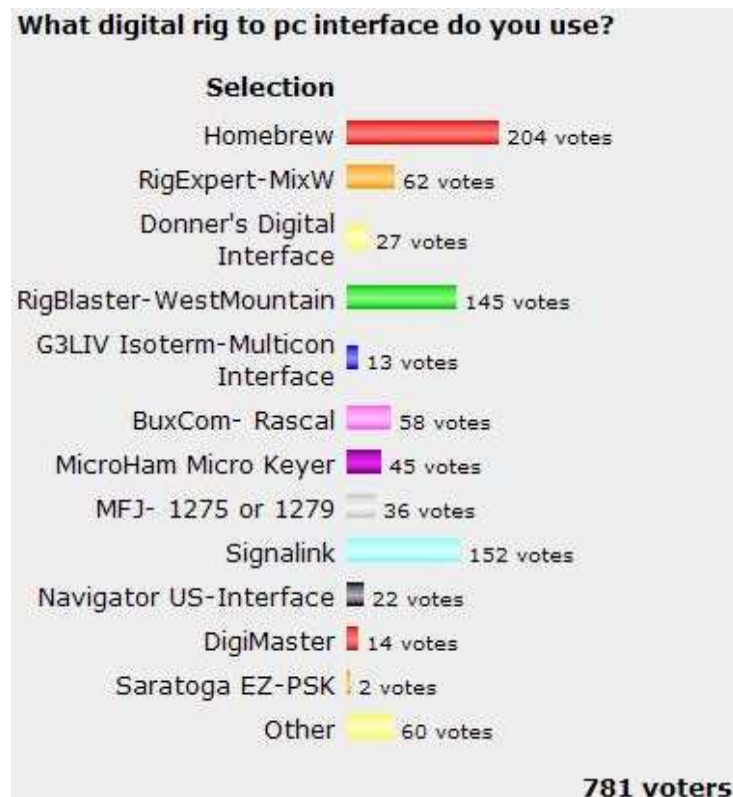
<http://www.hamuniverse.com/rst.html>

<http://www.radioing.com/hamstart/rst.html>

<http://www.psb-info.net/RSQ-discussion.html>

<http://www.psb-info.net/IMD-Measurement.html>

30M Survey on Rig to PC Interfaces



<http://www.qsl.net/wm2u/interface.html>

<http://www.tigertronics.com/>

<http://www.westmountainradio.com/>

<http://www.rigexpert.com/>

<http://buxcommco.com/>

<http://www.n3fjp.com/rigcw.htm>

http://www.waypoint.com/users/~discobay/Sound_Card_Presentation.htm

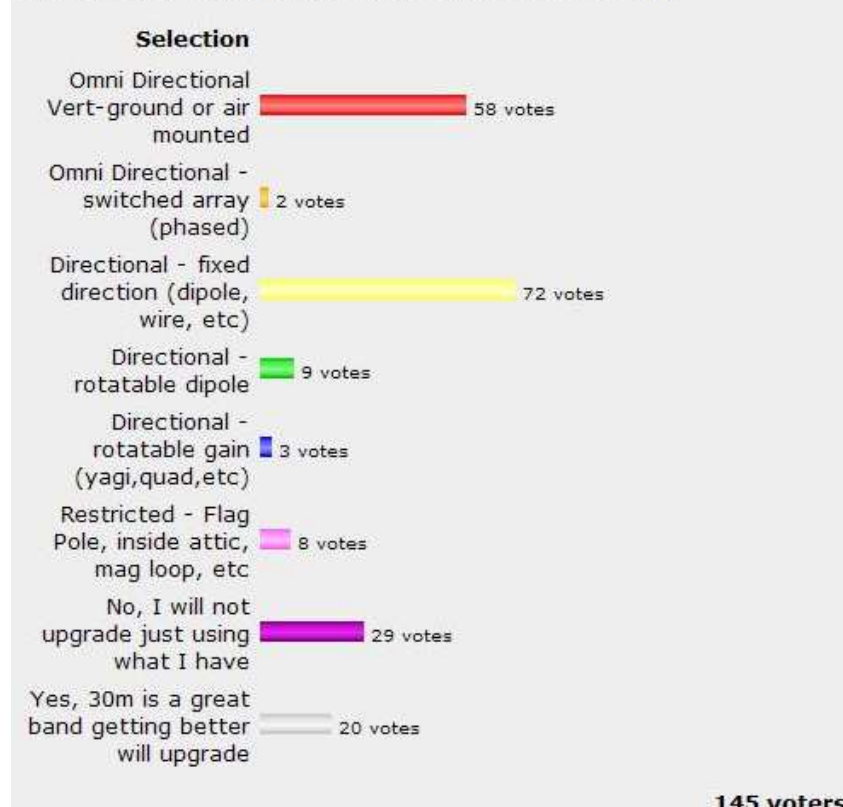
<http://www.mfjenterprises.com/Search.php?searchit=interface>

<http://www.eham.net/reviews/products/53>

(Many other interfaces homebrew or Commercial so please Google to search for more)

30M Survey on 30M Antennas

What antenna are you using for 30 Meters? And with better propagation will you upgrade your 30 Meter antenna?



30M Antennas

The most important part of your Amateur Radio Station is your ANTENNA! Your antenna can limit or increase your activity on a band (and depending on the distant of the contact wanted the antenna(s) used). We have folks that are having decent luck on the 30 Meter Band even those with restrictions using inside antennas to those that are upgrading to better antennas for more 30 Meter action. Please use what you have at hand and give 30 Meters a try....inside ant/loops/dipoles, low to the group wires, outback verticals, hamstick dipoles, G5RVs, OSF Windoms, etc all making contacts, so use what you have until you can upgrade to a better antenna. Those that want to increase their contacts/log and coverage might want to dedicate a couple antennas for 30 Meters for different coverage from a wire simple dipole for closer in propagation to a vertical for DX. There are too many antenna designs and ideas to cover here but we will give a few antenna links all the same... see you on the waterfall!

Dipoles work! Dedicate a 30 Meter Dipole cut to band and give it a try!

<http://www.hamuniverse.com/dipivcal.html>

<http://www.chem.hawaii.edu/uham/30.html>

<http://www.eham.net/articles/19877>

<http://www.eham.net/articles/19626>

Loops also work well:

<http://www.dxzone.com/catalog/Antennas/Loop/>

<http://www.dxzone.com/catalog/Antennas/30M/>

If you can't put up that Yagi or Quad for 30 Meters (which most of us can't) then get that **DX take off angle using a VERTICAL** that can fit in most any yard/garden:

<http://www.force12inc.com/>

<http://www.zerofive-antennas.com/>

<http://www.dxengineering.com/Parts.asp?ID=2219&PLID=274&SecID=113&DeptID=22&PartNo=DXE-30VE-1>

<http://www.k7su.com/verticalpage.html>

http://www.new-tronics.com/main/html/base_hf.html

http://www.bencher.com/ham/index.php?main_page=product_info&products_id=14

<http://www.gapantenna.com/>

A few other sites with loads of antennas ideas/links

<http://members.fortunecity.com/xelbef/hf-antennas.htm>

<http://www.ac6v.com/antprojects.htm>

If you can put up that 30 Meter Rotatable Dipole then do so if you are lucky like a few on the Band and can put up a 30 Meter Yagi or Quad then great! Those with those big stations will help the smaller stations pulling them in. If you are on the 30 Meter Digital Band much you will eventually hear or work Rob ZL3RG and others with 30 Meter Quads or larger antennas.

<http://zl3rg.com/quad.html>

30M VK3AMA Icons for Digital Mode Software

<http://www.hamclubs.info/mixwicons.php> (Special Thanks to Laurie VK3AMA)

Most Recent Update [4783 Callsigns]. 02-Feb-2008 04:52:37 UTC

The screenshot displays a software interface for digital mode software. On the left, there is a list of color-coded call sign icons with a 'Download' button and a '60 kB' size indicator for each. The colors are White, Black, Red, Green, Blue, Yellow, and Cyan. The main window shows a digital mode text stream with call signs and modes like 'EPC FH OMC 30M', 'de VK3AMA', and '+EPC 070 DMC FH KN'. At the bottom, there is a 'Sample Icons:' section showing a sequence of colorful call sign icons.

Color	Download	Size
White	Download	60 kB
Black	Download	60 kB
Red	Download	60 kB
Green	Download	60 kB
Blue	Download	60 kB
Yellow	Download	60 kB
Cyan	Download	60 kB

Sample Icons:

+EPC 070 FH EPC 070 +070 FH OMC 070 DMC OMC +DMC 30M +070 FH
EPC 070 DMC OMC 070 DMC FH 070 FH OMC 30M FH OMC EPC 070 DMC
070 +EPC 070 DMC 30M +OMC 30M EPC 070 DMC FH

30M Beacons

(Please note Beacons are discouraged on 30 Meters yet we seem to have a few operating on 30 Meters...remember we are Secondary Users and must yield to Primary Users)

http://www.dxzone.com/catalog/DX_Resources/Beacons/Beacon_stations/

30 meter beacons

10114 N4QA 18mw ?
10125 KL1IF Springfield MO EM37IE 10 1/4 GP Omni A1 PT
10130 OK1IF JO40HG 0.5 A1 ?
10132 VE3TO Nr Ottawa FN25EG 5 1/4 Vert Omni A1 24
10134 OK0EF Nr Kladno JO70BC .1/.2/.5 1/2 Vert Omni A1 24
10135.9 HP1RCP Cerro Jefe FJ09HD 2.5 SlopeDip Omni A1 24
10139.6 PY3PSI Porto Alegre GF49KX 1.6 Hor. Dip N-S A1 IRREG
10140.0 sub-audible QRPP/QRSS3 beacons around here
10140.1 including I1YRB, IW0HK, IK4IDP, G3ZJO, I1DFS,IQ4FJ
10140.6 DL5KZ Numbrecht JO30SU 0.1 Dipole A1 ?
10141.8 IK3NWX Nr MonselicePD JN55VF 4.2 Rot. Dip. E-W A1 24
10144.0 DK0WCY Scheggerott JO44VQ 30 Dipole A1,psk 24zz
rtty
10149.7 IZ8BZX Torre del GrecoJN70ES .1/.5/1 whip Omni hi/QRSSEXP

SWL – Yes we welcome ALL SWL'ers

<http://www.xs4all.nl/~nl9222/>

<http://www.hfradio.org.uk/>

http://www.n2ty.org/seasons/tara_dpx_swl.html

<http://www.ac6v.com/swl.htm>

http://www.dxzone.com/catalog/Ham_Radio/Clubs/Technical_Specialty/Digital_Modes_Clubs/

30M Digital Mode Help

Digital Operation Suggestions from 30 Meter Digital Group Ops:

**** Please remember that on 30 Meters we are SECONDARY USERS so we must give way to primary users of the band ****

Suggestion by Darin VE3OIJ

How about "allow enough time between cycles of your CQ macro that people can get a word in to let you know they're returning your call" ? One of the greatest frustrations of digital operation is the operator who has his CQ macro set for 5 second recycles so he spends his time transmitting right over top of your desperate attempts to call him.

Suggestion by Loren KC7CWQ

Whether using RST or RSQ, give and ask for valid signal reports. If I am wide, let me know, don't give me the standard 599. Good operators want to know how their signal appears on the waterfall. Loren 30MDG #0023 KC7CWQ

Suggestion by Don KB9UMT

Do NOT use mic processor, do NOT have any ALC

DO use low power...20w to 30w will do as well as 50w and your rig finals will thank you for it and run cooler

Do NOT use 100% full 100w power

Do give for TRUE/REAL signal reports and if your report is poor DO look into why you have a poor signal report

If the band is busy DO USE narrow digital modes (be kind to your neighbors)

DO HAVE FUN on 30m and take the time to ragchew and get to know others as we are here today and SK tomorrow

Suggestion by Cliff KU4GW

I think cutting the rig's mic gain or the PC soundcard output back til no ALC shows on the rig's ALC meter is the single most important thing to know operating PSK31." 73 de Cliff KU4GW 30MDG#865

Suggestion by Daithi GI7OMY

First of all - find an empty spot in the band, watch it for a while to make sure it is empty. If no station is calling CQ, but the band seems open, find a clear frequency and listen for a bit, if clear, then send QRL? QRL asks is the frequency busy? If someone responds with QRL, no need to respond and clutter up the frequency. If no response to your QRL, repeat a couple of times and then call CQ. Sending just QRL without your callsign is against the rules, but most do it anyway.

Suggestion by Jesse WB5NPW

“it's happened to me more than once but if I'm answering someone's cq with "his-call de my-call" don't call me. give me chance to work the person I'm working first..”

If you answer a CQ call, QSY off at the end - don't start calling CQ - the guy you just worked may have been there for some time and you're forcing him to hunt for an empty spot - he may have spent some time finding his spot at the start and he's not going to be happy if you push him off it.

If you see a call area that you want in QSO, do NOT call them as soon as they finish - wait for one of the two stations to send QRZ or CQ. The guy you want might not be the one operating on that spot and will have QSYed off (or should have)

Have a list of Abbreviations, Prefixes, and Q-Signals handy. Some DX stations cannot converse in English but you both can get the essentials across with Q-Signals.

Listen for a DX station calling CQ or wait until they have finished with a QSO.

Good operators will send KN as a turn over, which is “go ahead, over, others keep out.” Sending just K opens it for others to break in and this is OK if that is desired. SK is the signoff that should be used or CL (“clear”) or 'QRT' if closing your station.

Give a call DX11DX DE WZ9UUU WA9UUU AR (AR means that I am through with this transmission). The DX station knows their call, so send it once. Sending your call twice allows the other station to hear it, then confirm it. If you make the connection, the usual follow up is his or her signal report, repeated twice if the contact is shaky and weak, then your name and QTH. Don't send more than that on the first round. Turn it back to the DX with a K or KN. This will allow the two of you to evaluate if a QSO is sustainable or desirable. On the next over, ask about QSL information if you want it, before the band slips out. A signoff looks like this: DX11DX DE WF6TTT, FB VLAD TNX NICE QSO HPE CUL VY 73 GM SK DX11DX DE WF6TTT Use SK or CL (Closing Station) on your final transmission not AR or K (N)

Tail-ending. Wait until another QSO is complete, and then call the station you want to contact. If the frequency is being used by the other station, you'll find out fast because he will start to call CQ over your signals - always check first, transmit after. Also, if there is a pileup, don't fire up a call right on the heels of someone else - the originating station does need to be able to transmit and if everyone is calling him without a break, he isn't going to get a chance to call you or anyone else

Do not break into a QSO - even if you can't hear one of the stations involved, it doesn't mean they aren't there. Wait for the SK at the end of the one you can hear, wait a minute for the other station to sign off and then call in. Just make sure that the one you are calling is the one who was originally using the frequency.

If you hear a station calling another, it doesn't matter whether you are dying to have that prefix in your log - YOU are NOT the one being called so do NOT dive in with your call.

Do not give into the temptation to increase the RF power for a weak station. Even if you get him, remember that there are a lot of other stations operating inside that 3 KHz band and what you WILL do is to swamp their signals and, if they are operating a weak station, you are wiping them out. If you can't work him on 50 Watts max - forget it and try later.

Another suggestion - do NOT run a high power tuning signal in the middle of the band - low power and take it up to the 3KHz marker

***** Some tips for Digital Mode users:**

Power Level - for digital modes, limit your power output to one half ($\frac{1}{2}$) the radio's maximum rated output. Most sound card digital modes use a "100% duty cycle", which means that your radio will be transmitting at all times, even when characters are not being sent. Most radios were not designed for 100% duty cycles, especially at full power. So reduce your transmitter power.

HF Radio Settings

Tuning - PSK31 benefits from a radio that can tune in very small steps, e.g. 1 Hz. If your radio can't do this, use the RIT (receiver incremental tuning) feature of the radio. The automatic frequency compensation feature in PSK31 software also helps.

Filters – use them on a busy band or unwanted signal...more on this to come (will update soon)

Speech Compression -- should be OFF.

ALC (Automatic Level Control) - watch the ALC meter to make sure it is below the maximum. In general, you don't want to 'overdrive' the radio with sound card audio levels that would create 'splatter' (unintended signals) on adjacent frequencies.

AGC (Automatic Gain Control) - does not affect receive audio when it is being pulled from a fixed-level audio pin in the radio's ACC or DATA jack.

VOX - If you prefer, or if you don't have a spare serial / COM port on your PC, you can use the VOX feature of your radio for PTT control. Activate VOX in your transceiver, and set the level, delay and anti-trip controls, as you would when using microphone (voice) input. Remember

however that if you have your microphone connected to the radio, any incidental noise in the room can also be transmitted when using VOX.

Microphone - If you are using the ACC jack to control transmissions, you may need to disconnect your microphone from the radio to avoid sending room noise along with digital signals

**** I would not recommend using the speech compressor for digital modes....the mic gain on the rig along with the soundcard output adjustments work together to produce wattage out and correct levels-varies depending on soundcards/pc etc...So again NO SPEECH COMP, but YES you need some mic gain levels

<http://www.qsl.net/wm2u/psk31.html>

*** WM2U's TIP LIST

- Set sound card sampling rate to 11025Hz
- This must be at least a 16 bit sound card.
- No Signal observed? Check your WAVE slider is not zero.
- Set Rx and Tx frequencies to 1000Hz.

NOTE: This value will get you up and running but if you plan on using a filter change it to the center frequency.

- If using LSB check the "Inverted QPSK" box.
- Too much noise! Try using a narrow CW filter.
- Using a Word Processor, write your buffered messages and save them as .txt files, placing em! in a folder called 'buffers' created in the main PSK31 folder.

NOTE: This is NOT a form of type ahead of buffer. It is simply a method to pre write 'Standard' messages hence saving you keyboarding time.

*** MORE HELP TIPS

- o Your sound card output must NOT overdrive your Mic Input.
- o Do not overdrive the sound card input from the Radio.
- o Get used to the Waterfall/Phase indicators for tuning.
- o Do not use your Speech Processor.
- o Be patient. This is a new mode. You will not find all the features you are used to yet!

30 Meter Band Specific Digital Mode Help

- The 30 Meter Band is open 24x7 somewhere-be patient
- The 30 Meter Band doesn't die at night like some might think, paths are always changing (it is open somewhere it is just a matter if someone is on the air where it is open)
- Do have different digital mode software ready or use a multimode software so if other digital modes are seen/heard or needed you are ready
- If you don't have a specific 30 Meter antenna DO use what you have and give 30 Meters a try
- Once you decide to dedicate more time on the 30 Meter Band a better antenna cut for 30 Meters could prove helpful, or better yet having 2 antennas for different propagation paths (i.e. wire for domestic and vertical for DX)
- Do call CQ on the 30 Meter Band and not assume it is dead or no one is around....calling CQ is the first step to gain new contacts/friends on the band
- Do use the 30 Meter Digital HamSpots Page and have fun or experiment with other digital modes with other digital operators with the same interests
- If you are having no luck at the times you are operating then change your times of operation...many times openings follow the sun so a few hours before and a few hours after sunrise and sunset might be good times if you are looking for DX
- Use HRD DM780 and PSK Reporter if you don't seem to be finding any traffic on the band...a good idea would be to run HRD DM780 and let it run for several days 24x7 then look on the HRD DM780 spot history or DM780 World Map and discover what stations are on when and where opens are to at certain times – also these can be found or reported to PSK Reporter (one might also keep track or watch a PSK Reporter closest to you to see what they are reporting-just not they might had different coverage depending on antenna, band conditions, etc)
- Do try more than just a few times for contacts and be patient, this is not the 20 Meter Band with many years of known digital activity but then again 30 Meters we hope remains with good digital operators not over crowded like other bands...again casual use please
- Anyone is welcome to join the 30MDG Yahoo Reflector/Forum – you need not be a member so if you have a question about 30 Meters join in <http://groups.yahoo.com/group/30MDG/>

Digital Mode HF Path Simulations

Compiled by **Anthony Bombardiere, K2MO**
dxdx@optonline.net

Path Simulator by Moe Wheatley, AE4JY

Digital mode Software

Fldigi
MixW
MMVari
Multipsk
Jason

Baseline Sensitivity Test
Minimum SNR
(no Ionospheric distortion)

In this test, the minimum SNR is reached when all the text being fed through the simulator is decoded without error.

A direct path (no ionospheric distortion) was used to establish a baseline SNR for each mode.

The "Quick Brown Fox" Pangram was used for each test.

Jason Turbo (Fast).....	-25db
PSKAM10.....	-20db
PSK10.....	-18db
Contestia 500/32.....	-15db
DominoEX-4	-15db
FEC-31.....	-15db
THROBX-4.....	-15db
MFSK16.....	-14db
THOR11.....	-14db
RTTYM*.....	-13db
Contestia 500/16.....	-13db
CW 20 WPM**.....	13db
THOR16.....	-12db
Olivia 500/16	-12db
MFSK31*.....	-12db
Olivia 500/8.....	-10db
PSK31.....	-10db

CHIP-64.....8db
 DominoEX-11.....-8db
 MT63 1K.....-8db
 Olivia 500/4.....-8db
 PSK63.....-7db
 Feld Hell.....-7db
 CHIP-128.....-5db
 RTTY 45.....-5db
 PAX2.....-2db
 HFPacket (300baud).....+1db

* Intermittent "bug" with RTTYM MixW Software

** Subjective morse speed dictates SNR

Ionospheric Simulations

Simulation: High Latitude

Magnitude: Moderate

Path Delay: 3ms

Frequency Spread: 10Hz

SNR: -8db (weak signal)

Contestia 500/16.....100%
 CW 20 WPM.....100%
 MFSK16.....100%
 MFSK31**.....100%
 Olivia 500/16.....100%
 Olivia 500/8.....100%
 RTTYM 500/32.....100%
 Olivia 500/4.....90%
 Feld Hell*.....90%
 ThrobX-4.....70%
 Chip-64.....No Copy
 Chip-128.....No Copy
 DominoEX 4bd.....No Copy
 DominoEX 11bd.....No Copy
 FEC-31.....No Copy
 PSK31.....No Copy
 Jason Turbo (fast).....No Copy
 PSK10.....No Copy
 PSKAM10.....No Copy
 PSK63.....No Copy
 RTTY45.....No Copy
 THOR-11.....No Copy
 THOR-16.....No Copy
 MT63.....No Copy

SNR: +10db (Moderate Signal)

Chip64.....90%
Chip-128**.....00
Feld Hell*.....90%
Olivia 500/4.....90%
RTTY45.....90%
ThrobX-4.....70%
DominoEX 4bd.....No Copy
DominoEX 11bd.....No Copy
FEC-31.....No Copy
PSK31.....No Copy
Jason Turbo(fast).....No Copy
PSK10.....No Copy
PSKAM10.....No Copy
PSK63.....No Copy
THOR-11.....No Copy
THOR-16.....No Copy
MT63.....No Copy

*diffuse text - readable

**Intermittent decode problem with Chip-128

Simulation: High Latitude

Magnitude: Disturbed

Path Delay: 7ms

Frequency Spread: 30Hz

SNR: -3db (weak signal)

Contestia 500/16.....100%
CW 20 WPM.....100%
Olivia 500/16.....100%
Olivia 500/8.....100%
Olivia 500/4.....95%
RTTYM**.....95%
MFSK31.....90%
MFSK16.....75%
RTTY.....40%
Chip-64.....10%
Chip-128**.....no copy
DominoEX-4.....no copy
FEC-31.....no copy
Jason Turbo (Fa.....no copy
MT63 1K.....no copy
PSK10.....no copy
PSKAM10.....no copy
PSK31.....no copy
PSK63.....no copy

Thor-11.....no copy
ThrobX-4.....no copy
Feld Hell.....Readable

SNR: +10db (Moderate Signal)

Olivia 500/4.....100%
Feld Hell*.....90%
Chip64.....75%
Chip-128**.....75%
RTTY45.....50%
ThrobX-4.....No Copy
DominoEX 4bd.....No Copy
DominoEX 11bd.....No Copy
FEC-31.....No Copy
PSK31.....No Copy
Jason Turbo (fast.....No Copy
PSK10.....No Copy
PSKAM10.....No Copy
PSK63.....No Copy
THOR-11.....No Copy
THOR-16.....No Copy
MT63.....No Copy

* diffuse print - readable

** Intermittent decode problem Chip-128

Simulation: Mid-Latitude
Magnitude: Disturbed
Path Delay: 2ms
Frequency Spread: 1Hz
SNR: -8db SNR (weak signal)

Contestia 500/16.....100%
MFSK16.....100%
Olivia 500/16.....100%
Thor-11.....100%
Thor-16.....100%
CW 20 WPM.....90%*
DominoEX 4bd.....90%
Feld Hell.....90%
MFSK31.....90%
MT63 1K.....90%
Olivia 500/8.....90%
Olivia 500/4.....90%
RTTYM 500/32.....90%
ThrobX-4.....90%
DominoEX 11bd.....80%
FEC-31.....70%

PSK31.....70%
 PSK63.....50%
 PSKAM10.....50%
 Jason Turbo (Fast).....35%
 RTTY45.....20%
 PSK10.....20%
 Chip-64.....20%
 Chip-128**.....00

SNR: +10db (Moderate Signal)

DominoEX 11bd.....100%
 Feld Hell*.....100%
 FEC-31.....100%
 MT63.....100%
 Olivia 500/4.....100%
 THOR-11.....100%
 THOR-16.....100%
 ThrobX-4.....100%
 SK63.....95%
 Chip64.....90%
 PSK31.....90%
 PSKAM10.....90%
 RTTY45.....90%
 DominoEX 4bd.....90%
 Chip-128**.....00
 Jason Turbo (fast).....No Copy
 PSK10.....No Copy

* diffuse print - readable

** Intermittent decode problem Chip-128

Simulation: Low-Latitude

Magnitude: High

Path Delay: 6ms

Frequency Spread: 10Hz

SNR: -8db SNR (weak signal)

Contestia 500/16.....100%
 MFSK16.....100%
 MFSK31.....100%
 Olivia 500/16.....100%
 RTTYM 500/32.....100%
 CW 20 WPM.....90%
 Olivia 500/8.....90%
 Olivia 500/4.....90%
 Throbx-4.....70%

Feld Hell.....Poor Copy*
Chip-64.....No Copy
Chip-128.....No Copy
DominoEX 4bdNo Copy
DominoEX 11bd.....No Copy
FEC-31.....No Copy
Jason Turbo (Fast).....No Copy
MT63 1k.....No Copy
PSK10.....No Copy
PSKAM10.....No Copy
PSK31.....No Copy
PSK63.....No Copy
RTTY45.....No Copy
Thor-11bd.....No Copy
Thor-16bd.....No Copy

SNR: +10db (Moderate Signal)

Olivia 500/4.....100%
Feld Hell.....90%*
Chip64.....90%
Chip-128.....??**
RTTY45.....70%
ThrobX-4.....No Copy
DominoEX 4bd.....No Copy
DominoEX 11bd.....No Copy
FEC-31.....No Copy
PSK31.....No Copy
Jason Turbo (fast).....No Copy
PSK10.....No Copy
PSKAM10.....No Copy
PSK63.....No Copy
THOR-11.....No Copy
THOR-16.....No Copy
MT63.....No Copy

* Characters diffuse difficult to read.

** Intermittent decode problem Chip-128

N.V.I.S.

Near Vertical Incidence Skywave

Simulation: Mid-Latitude NVIS

Magnitude: High

Path Delay: 20ms*

Frequency Spread: 1Hz

*NVIS waves penetrate deeper into the ionosphere than waves that are beamed at low angles. The increased interaction with the plasma tends to slow the wave down increasing the time-of-flight. NVIS sky wave echoes can take up to 20ms to return and can often mix with ground waves due to the close proximity of NVIS stations. Multi-path timing delays of this magnitude can cause internal timing issues for some digital modes.

The 20ms path delay used in this simulation is most likely the worse case scenario.

SNR: +10db

Contestia 500/32.....	100%
CW 20 WPM.....	100%
MFSK16.....	100%
MFSK31 (MMvari).....	100%
MT63 1K.....	100%
Olivia 500/16.....	100%
RTTYM 500/32.....	100%
THOR11.....	100%
THOR16.....	100%
Contestia 500/16.....	95%
Olivia 500/4.....	95%
DominoEX-4	95%
DominoEX-11.....	85%
Feld Hell*.....	80%
RTTY 45.....	80%
Chip-64.....	75%
DominoEX-22.....	60%
THROBX-4.....	60%
PSK31.....	10%
PSK63.....	10%
FEC-31.....	nil
PSKAM10.....	nil
PSK10.....	nil
ARQ Modes (Unproto)	
ALE400.....	10%
Pax.....	nil
Pax-2.....	nil
HFPacket (300baud).....	nil
HFPacket (300baud).....	nil

* Hellschreiber Text Ghosting - difficult to read print

ARQ Modes

Minimum SNR Test
(Direct Path no Ionospheric distortion)

PAX (UNPROTO).....-11db
ALE400 (UNPROTO).....-8db
PAX2 (Unproto).....-7db
HF Packet (300 baud Unproto).....+1db

Simulation: High-Latitude
PathSim Title: Moderate
Magnitude: Moderate
Criteria: Complete Pangram Decode
(*)Indicates partial decode
Partial Decode Criteria: => 50% decode

ALE400 (Unproto).....-1db / -6db*
PAX (Unproto).....-4db / -10db*
PAX2 (Unproto).....+2db / 0db*
HF Packet (Unproto 300bd).....NO DECODE

*Partial Decode

Simulation: High-Latitude
PathSim Title: Disturbed
Magnitude: High
Criteria: Complete Pangram Decode
(*)Indicates partial decode
Partial Decode Criteria: =>50% Copy

ALE400 (Unproto).....Incomplete / +2db*
PAX (Unproto).....NO DECODE
PAX2 (Unproto).....NO DECODE
HF Packet (Unproto 300bd).....NO DECODE

Simulation: Mid-Latitude
PathSim Title: Disturbed
Magnitude: Low
Criteria: Complete Pangram Decode
(*)Indicates partial decode
Partial Decode Criteria: => 50% Copy

ALE400 (Unproto).....-2db / -6db*
PAX (Unproto).....-4db / -10db*
PAX2 (Unproto).....+1db / -2db*
HF Packet (Unproto 300bd).....NO DECODE

Simulation: Low-Latitude
PathSim Title: Disturbed
Magnitude: High
Criteria: Complete Pangram Decode
(*)Indicates partial decode
Partial Decode Criteria: =>50% Copy

ALE400 (Unproto).....0db / -5db*
PAX (Unproto).....0db / -6db*
PAX2 (Unproto).....NO DECODE
HF Packet (Unproto 300bd).....NO DECODE

RSID and Video I.D. Tests
(MutliPSK Software by F6CTE)
Minimum SNR (no Ionospheric distortion)

RSID..... -25db
Video ID..... -2db

High-Latitude Moderate

RSID.....No Decode
Video.....Partial Decode*

* Difuse text difficult to read regardless of SNR

High-Latitude Disturbed

RSID.....No Decode
Video.....No Decode*

*Text completely difuse

Mid-Latitude Disturbed

RSID.....-25db
Video..... +3db

Low-Latitude Disturbed

RSID.....No Decode
Video.....Partial Decode*

* Difuse text difficult to read regardless of SNR

*(Big thank you to **Tony K2MO** for letting us publish his findings here!!)*

30 Meter Digital Group Facts

- The 30 Meter Digital Group was officially formed November 21st 2007
- The group was formed to increase and support more digital activity on the 30 Meter Band
- Membership is well over 3,900 Members World Wide – DXCC count 104 (numbers as of Aug2010 – will hit 4,000 soon!) still growing with many interested in learning more about the 30 Meter Band and digital modes
- 30MDG Membership is FREE to anyone and there are no hoops to jump to get in this Club just join in. Give 30 Meter Digital a try...and have fun on the band is all we ask
- Do you have to be a member of the 30MDG to gain access to our website, forum, awards or information? NO, please join in on the 30 Meter Band our group is secondary but our primary goal is to increase digital activity on the 30 Meter Band or produce more 'core' digital users of this great band
- 30MDG promotes other digital groups as published in this informational document (we all have like interests using digital modes, ours is just a little different than others and geared for using digital modes on 30 Meter Band)
- 30MDG promotes CW the original digital mode and all our Awards accept CW as such
- 30MDG promotes good operating habits and digital mode procedures
- 30MDG supports all types digital modes but also focuses on using the least power needed and least wide digital mode to make the contact (please be kind to others using the limited space on this band...remember we are SECONDARY USERS and MUST give way to primary users of this band)
- 30MDG does NOT promote contesting on the 30 Meter Band...this is a WARC Band and a safe haven for casual operation from Ragchew to experimenting to working casual DX
- SWLers are welcome to join 30MDG and participate in our 30MDG Awards (we always welcome SWL reports on our signals)
- This group welcomes those new to digital modes or new to the 30 Meter band to promote good will...please do ask questions and join with us
- How is the 30 Meter Digital Group supported both site costs and awards? By average Hams just like you that volunteer their time to make this fun for all of us
- For more Q & A's about 30MDG see: <http://www.30mdg.net/qa.html>



Thank You for Joining in on the 30 Meter Band...Have Fun and Hope this information was Helpful...73 de 30MDG

<http://www.30mdg.net>