

NCPA Meeting at Pacificon 2001

The plan is to meet at Pacificon 2001 this year, as we have in recent years. (The Airport Sheraton, on Concord Ave, Concord.) Unfortunately, as of this writing, the room and time has not been finalized.

Most likely we'll meet as we did last year, in one of the two smaller rooms sometime Saturday afternoon, October 20.

At this point, the best suggestion is to keep an eye out for a sign in the hotel lobby. If we are able to get an exhibitor table again this year, check there for information too.

For more information about Pacificon, see their web site at <http://www.pacificon.org>.

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President's Message

Gary Mitchell, WB6YRU

Thoughts about packet these days

The recent attacks in New York and the Pentagon have got me to thinking about how our own packet networks

would fair in a disaster.

Not a lot has changed over the past several years. We still use 1200 and 9600 baud. In fact, the primary emergency frequencies (keyboard to keyboard) are almost all 1200 baud.

Case in point: I recently visited the emergency amateur radio station at the Kaiser Santa Clara hospital. They're still using 1200 baud PK-88's. You can't even buy a PK-88 anymore.

Another case in point: A year or two ago the NCPA approved a request for a 70 cm 1200 baud keyboard frequency (intended primarily for emergency use). They simply weren't interested in speeds any faster than 1200 baud.

1200 baud is fine for very brief messages and the occasional short list of items. However, what are the chances people would want to send more data than that if the phone lines went down and we were in the middle of some crisis?

And it isn't just keyboard, the BBS network isn't any better. Most of the network around here hasn't seen new technology in many years.

Packet TCP/IP stations would be able to handle e-mail, but the traffic forwarding isn't compatible with standard BBS forwarding protocols.

My point here is that there's *LOTS* of room for improvement, folks. Most people are busy with the internet these days, not packet. That's fine, but

In This Issue

NCPA meeting	1
President's Message . . .	1
ARRL News	3
Packet BBS's	3
DX Spotting nodes	5
Remailer Excerpts	6
N6EEG BBS becomes	
WA6ZTY BBS	6
Digital Band Plan	7
General Band Plan	9

remember the internet runs primarily on the telephone network. That network most likely will not be operable in a major disaster.

Part of the problem is that higher speed TNC's and radios aren't easily available at reasonable prices. (i.e. faster than 9600 baud.) This is partly our own fault—we don't demand such equipment. When people buy a packet TNC, they're most likely to point at a 1200, or at most, 9600 baud TNC.

I believe what we need is a packet network capable of routing e-mail and with much greater capacity than what we have now. And now is the time to start thinking about this and working on it—before we really need it.

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The digital band plan as well as other information about the NCPA, are available on the Web at: <http://www.n0ary.org/ncpa>

The NCPA Board of Directors meets electronically in order to transact association business and meet with members and interested amateurs. The address for the board mailing list is: ncpa@qth.net. E-mail to majordomo@qth.net with the text "subscribe ncpa" in the body of the message to subscribe to the discussions.

Haggling over 70 cm continues

On the band planning front, there's good news and bad news...

Dave Shaw (NARCC V.P.) wanted some of us to come to a meeting. Howard N6HM, Dave "Zonker" N6UOW, and I attended. It was my impression we were to finalize the agreements on the bands 10 M through 70 cm. However, the bulk of the meeting involved a new 70 cm proposal

mainly from two of NARCC's ATV people.

The good news is that the NCPA and NARCC are in agreement on the bands from 10 meters through 1.25 meters.

The bad news is that the 70 cm plan I thought we had agreed to is apparently still in a state of flux and we're back to that old bugaboo ATV at 434 MHz.

The original agreement was for digital to be at 433.0-434.0 and parts of 438 MHz. The lower half of three high-speed duplex channels would be at the

top end of 433 MHz, the upper half would be in selected spots at 438 MHz, between aux./link channels.

Their proposal is to cut down the main segment to roughly 433.0-433.6, and have the lower half of the duplex channels sharing with ATV at roughly 429.5-430.0 and the upper half at 434.5-435.0 MHz, (this allows for two more duplex pair). Mixed/Experimental would be at roughly 433.6-434.5 MHz.

It turns out what they *really* had in mind is to rope off space for ATV simplex (with video carrier at 434 MHz). Moving the upper half of the digital duplex channels away from 438.x would free up space for the color burst and audio carriers (aux./link would also be kept away from those frequencies).

Needless to say, that went over like a lead balloon with me—ATV at 434 was one of the *original* problems. Also, I strongly oppose playing name games with the band plan—calling a segment "mix/exp" when they actually mean for it to be ATV simplex.

However, the other two NCPA board members felt it would be better to agree and settle the 70 cm band plan.

I proposed some conditions that so far seem to be acceptable. The 433.6-434.5 MHz segment really will be Mixed and Experimental. If ATV shows up there, they would be responsible for not causing interference to neighboring segments and would not have any priority over other users.

I'm concerned about interference between digital and ATV around 430 MHz, but I suppose we'll have to do some experimenting and see...At least that part of it would be similar to the ARRL suggested plan.

Another idea I've been floating is for simplex ATV to share the 420-426 MHz segment (aux./link) instead. So far, NARCC isn't exactly thrilled with that idea, but from what I've been able to find out to date, it *is* technically possible.

For reference, the overall band plan in this issue includes both the original 70 cm and the NARCC proposed version.

Packet Sysops of Northern California Packet Bulletin Board Systems September 2001

Call-SID	Location	User Ports
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WH6IO	Benica	144.99, 145.71&+, 145.75&, 433.43&+
N6EEG	Berkeley	144.97
KE6I	Berkeley	145.01&, 433.43&
N2THD-1	Citrus Heights	145.07, 441.50
WA6YLB	Exeter	145.69
N6QMY-1*	Fremont	144.31, 441.50
N6CKV	Gilroy	144.99
N6LDL	Los Gatos	144.97, 145.71&, 441.50
WA6NWE-1	North Highlands	144.93, 145.09, 145.75, 441.50
KD6DG	Redding	145.09
WD6CMU	Richmond	144.97
W6CUS-1	Richmond	145.63
N0ARY-1*	San Jose	144.93, 433.37&
KD6JZZ	Sonora	144.97
WA6EWV-1	South Lake Tahoe	144.97
W6YX-9	Stanford Univ	145.75+
W6SF	Stockton	144.99
K6MFV	Walnut Creek	144.31, 145.71&+
K7WWA*	Willits	144.31*, 145.69*
KE6LW-1	Yuba City	144.99

Keys:

& = 9600 Baud Port
 + = TCP/IP Port
 * = Currently Inactive

If anyone has any comments or other ideas, please let me and Dave Shaw know (wb6yru@aenet.net and dms@gene.com respectively).

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News from the ARRL

From *The ARRL Letter*, May 25, 2001

FCC TO AMATEURS: DETAILED REGULATION "NOT IN THE PICTURE"

The FCC says the ball is in the court of the Amateur Service to determine the course of future Amateur Radio

regulation. Speaking May 20 at the Dayton Hamvention FCC forum, Bill Cross, W3TN, of the FCC's Wireless Telecommunications Bureau, said that the days of Commission-imposed regulation are past.

"Detailed regulation of the nitty gritty of communication services, including the Amateur Service, is not in the picture," Cross said. "Rather, the FCC is shifting to strong and effective enforcement of truly necessary regulations." The FCC, he said, now plans to look to the amateur community to reach consensus on any new regulations it thinks it wants and needs.

"I hope that those of you who are thinking about asking us to carve up a band by fiat will think again," he told the packed forum. "You really are asking us to tie your hands regarding your use of your spectrum."

Before the FCC initiates any rulemaking proceedings in the Amateur Service to change privileges, Cross said it wants to see proposals involving the implementation of "new and more modern communications technologies," such as digital. In addition, he said, any future proposal "must include all licensees, and it must include all bands," and--most important--the amateur community must reach a consensus on the topic.

Cross said the FCC does not want and cannot handle "multiple proceedings that address piecemeal changes in operating privileges" that affect only certain classes of licensees or certain bands. "You, collectively, need to reach agreement on how you want to use your spectrum," he reiterated.

Cross said he expected the issue of restructuring operator privileges to come up "in a couple of years" at the outside. "Changes in operating privileges for the different classes of operator licenses are inevitable," he said.

From *The ARRL Letter*, August 10, 2001

NEW AMATEUR SATELLITE TO LINK REMOTE APRS NODES

A new Amateur Radio tracking and communications satellite called PCSat is scheduled to launch September 1 (0100 UTC) from Alaska. PCSat will augment the existing Amateur Radio Automatic Position Reporting System (APRS) by providing links to the 90 percent of Earth's surface not covered by the terrestrial network.

Designed and assembled by midshipmen at the Naval Academy in Annapolis,

Maryland, PCSat's first mission was to provide practical hands-on experience in support of the students' aerospace curriculum. The midshipmen worked under the guidance of Academy Senior Project Engineer Bob Bruninga, WB4APR--the acknowledged "father of APRS."

"We hope that PCSat will be a new direction for amateur satellites by serving the communications needs of travelers with only mobile and hand-held radios anywhere on Earth," Bruninga said. PCSat will be the first satellite to report its exact position directly to users via its onboard GPS. This means that whenever the bird's in view, users won't need tracking software to determine its position.

According to Bruninga, the satellite will demonstrate vehicle tracking and communication for GPS-equipped remote travelers--including Naval Academy vessels at sea, cross-country travelers, expeditions or anyone far from the existing APRS terrestrial tracking infrastructure <http://web.usna.navy.mil/~bruninga/digis.html>

In addition to its APRS capabilities, the satellite will offer 1200 and 9600-baud packet operation on VHF (145.825 MHz) and UHF (435.250 MHz). For APRS digipeating, the satellite will use the recognized North American APRS frequency of 144.39 MHz.

Bruninga said that PCSat should make a great classroom tool, since its telemetry can be received by any hand-held packet radio for display to students on their PCs. "And with the Internet connectivity of ground stations worldwide," he said, "classes are not limited to observing passes only over their school, but anytime PCSat is in view of any other participating school."

PCSat was deemed spaceworthy last month. Bruninga left this week for Alaska and the launch preparations. PCSat will be one of four satellites in the

Kodiak Star payload, and the only one with Amateur Radio capabilities. The others are Sapphire, Starshine III, and PicoSat.

For more information, visit the PCSat Web site, <http://web.usna.navy.mil/~bruninga/pcsat.html>

From *The ARRL Letter*, August 17, 2001

ARRL TO FCC: STOP THE ENCROACHMENT!

The ARRL has called on the FCC to put an end to commercial encroachment on amateur allocations at 2.3 and 2.4 GHz. The League included the request in its reply comments, filed August 16, on a petition by AeroAstro to share co-primary status with the Amateur Service at 2300 to 2305 MHz. The ARRL reiterated its stance that the company's petition represents "a Trojan Horse" and that there is no way that Amateur Radio and AeroAstro's position monitoring system could share the same spectrum.

"It is time for the Commission to stop those encroachments, because they have gone too far already," the ARRL said.

The League said AeroAstro's petition for a commercial Miscellaneous Wireless Communication Service allocation at 2300 to 2305 MHz not only would impose "preclusive operating conditions" on hams but represents "yet another in the continuing series of encroachments" into amateur allocations between 2300 and 2450 MHz. The ARRL asserted that AeroAstro has failed to back up its claim that hams and low-power commercial operations can share the band on a co-primary basis without interfering with each other. An interference study prepared by the ARRL Lab and attached to the League's comments predicts "intolerable" interference, especially to weak signals, if the AeroAstro petition were granted.

ARRL has petitioned to elevate the Amateur Service from secondary to primary status on the band and requested that no commercial operations be introduced. AeroAstro seeks co-primary status with the Amateur Service to accommodate its Satellite Enabled Notification System (SENS) position-monitoring system under MWCS rules. The FCC put both petitions on public notice last month, and both parties filed comments earlier this month. There is no primary occupant at 2300-2305 MHz.

"There is no dispute that the segment near 2304 MHz is uniquely suited to amateur weak-signal communications, and the remainder of that segment is used and useful for other types of amateur communication," the ARRL said in its reply comments.

AeroAstro says its 1 W spread-spectrum SENS uplinks and Amateur Radio can share the 5 MHz of spectrum and still protect the nearby NASA Deep Space Network. While contending that it "does not seek to cut back current Amateur operations in the band," AeroAstro also asked the FCC to severely limit amateur power levels in the band. The ARRL has called those recommendations "Draconian" and "unacceptable."

The ARRL has contended that AeroAstro should wait until the FCC finalizes another proceeding, ET Docket 00-221, that would make spectrum at 1670 to 1675 and 2385 to 2390 MHz available for the MWCS system it proposes.

The League asked the FCC to dismiss the AeroAstro petition as defective and to grant the League's petition for primary amateur status at 2300 to 2305 MHz.

A copy of ARRL's reply comments in the proceedings, RM-10165 and RM-10166, are available on the ARRL Web site <<http://www.arrl.org/>

DX Spotting Nodes

June 2000

<u>Location</u>	<u>Call</u>	<u>Alias</u>	<u>Frequency</u>	<u>Coverage</u>
California City	K6ZZ		144.490	Antelope Valley area
	EARN8		144.490	Oak Peak
Castro Valley Chico	W6RGG	DXCV	145.770	East, West, South SF Bay area
	K6EL	DXC	145.670	Chico
	K6EL	DXW	145.670	Oroville, Red Bluff
Hanford	K6EL	DX	144.950	South Fork Mtn - Redding area
	K6UR	DXFRES	144.950	Bear Mtn, Fresno area
	K6UR	DX7	145.770	Mt. Adelaide, Bakersfield area
	K6UR	DX16	145.770	Oakhurst
Livermore	NF6S	DXL	145.770	Tri-Valley area
Los Gatos	N6ST	DXLG	146.580	Santa Cruz Mtns, Monterey Bay
	N6ST	DXF	146.580	Santa Cruz/Los Gatos
Mountain View	K6LLK	DXMV	144.950	Mountain View, San Jose area
Oakdale	K6OQ		146.580	Modesto area
Penngrove	K6ANP	DXANP	145.670	Sonoma County
Reno, Nevada	N7TR	RENODX	144.950, 146.58, 441.500 (2400 baud), 51.7	
	N7TR	PCDX1	146.580	Low Level in Reno
	N7TR	PCDX	144.950	Virginia City, NV
	N7TR	DX2400	441.500 (2400 baud)	
Rio Linda	K6NP	DXRL	144.950	Sacramento, Woodland, Davis

Bob Vallio - W6RGG wsixrgg@crl.com

announce/regulatory/rm-10166/rm-10166-reply.html>

ARRL ANNOUNCES AMATEUR RADIO INTERFERENCE ASSESSMENT PROJECT

The ARRL has inaugurated the Amateur Radio Interference Assessment (ARIA) project. The effort will involve amateur volunteers across the country to assess the noise levels primarily from unlicensed devices in bands above 400 MHz.

ARRL President Jim Haynie, W5JBP, has advised the FCC that ARRL plans to conduct ARIA as a "real-world" noise study. The League will contribute its sponsored by the FCC Technological Advisory Council. The TAC study will look into whether noise generated by

low-power unlicensed Part 15 devices is on the rise and whether it's adversely impacting other services.

ARRL's role will be to measure radio noise in the amateur bands above 400 MHz, with initial emphasis on the band 2400-2450 MHz, where Bluetooth and IEEE 802.11b-protocol wireless local area networks are gaining popularity. The ARIA's noise-measurement program will begin with some exploratory tests by the ARRL Laboratory.

results to an overall radio noise study. Long-term tests starting next year will assess noise trends on the UHF/microwave bands over a period of several years to determine if the situation is staying the same, getting worse or getting better.

"If it's getting worse, as some suspect,

we will then be armed with factual data to develop a strategy for continued Amateur Radio access to the UHF/microwave spectrum," said ARRL Technical Relations Manager Paul Rinaldo, W4RI.

ARIA is attempting to identify volunteers to participate in the program. Rinaldo asked that "qualified and motivated" individuals send resumes and information related to test and measurement capability and equipment availability to aria@arrl.org.

Initial volunteers should be willing to review the test plan, have receiving equipment and antennas capable of covering the 2400-2450 MHz band in a vehicle, and be able to report results in a timely manner.

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Board of Directors Electronic Meeting

Excerpts of the NCPA board remailer traffic, April 27, 2001 through October 3, 2001. Compiled by Gary Mitchell WB6YRU (full text of traffic is available).

June 6, 2001
Hugh Jamison:

Was wondering what's all the stuff on 145.05. I thought that freq. was only keyboard to keyboard ???

Gary WB6YRU:

What "stuff" on 145.05?

July 13, 2001
Gary WB6YRU:

NARCC is having a board meeting August 11, and Dave Shaw (NARCC V.P.) suggested we get together for a band planning meeting afterward. I'm planning on going (representing NCPA), anyone else interested?

David N6UOW:

That weekend is the next air show at Moffett Field. On the other hand, the band planning is important. Since the air show will be both Saturday *and* Sunday, I'm willing to give my Saturday to NCPA and NARCC.

Howard N6HM:

I might be able to attend, that is also a Foothill Flea Market day. However, I think this is important.

Gary WB6YRU

I don't have the specifics yet, but it will be in Concord, possibly mid afternoon. If it is mid afternoon, at least that would be good for those wanting to go to the Foothill flea market.

Bob W6OPO:

For specifics go to www.narcc.org and select Meetings and Events. Includes a map.

July 16, 2001
Bob W6RGG:

I have removed the following addresses from the list because of continual bounce messages.

john_w_smith@msn.com
John_W_Smith@email.msn.com
louis_cobet@email.msn.com
cathryn@junglelevision.com
gregonis@pacbell.net
barnes@ycusd.k12.ca.us
thom@digikron.com

Gary WB6YRU:

> john_w_smith@msn.com
> John_W_Smith@email.msn.com

This is John N6IYA (Monterey hub BBS) I have another address, I'll contact him.

> cathryn@junglelevision.com

This is Cathryn KE6I (BBS in Berkeley)

> gregonis@pacbell.net

This is Mel W6BNG (used to be BBS in Livermore) I have another address, I'll contact him.

> barnes@ycusd.k12.ca.us

This is Barry KE6LW (BBS Yuba city)

That's all I know.

July 17, 2001
Gary WB6YRU

Posted details of the band planning meeting.

Bob W6OPO:

Mentioned the NARCC board meeting will be busy and may go long.

Aug. 10, 2001
Gary WB6YRU:

Posted a reminder of the band planning meeting

August 11, 2001
Bob W6RGG:

I believe that all of the DXPSN UHF frequencies are on record with NARCC,

WB6YRU:

What do you mean "on record with NARCC?" NARCC isn't a digital organization.

W6RGG:

They were originally coordinated with NARCC, as that was the only place to do so. I therefore figured they were also in the NARCC database.

Oct. 3, 2001
Gary WB6YRU:

I've just received a request from Jerry K6MD to put a statement in the Downlink regarding his candidacy for Pacific Division Vice Director. To my knowledge, we haven't put such ads in the Downlink before. If we do, I believe we probably should give all candidates equal time. What does everyone think about it?

PS If anyone has anything for the Downlink, please get it to me in the next day or two.

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N 6 E E G B B S becomes WA6ZTY BBS

By Mike Fahmie, WA6ZTY

N6EEG, one of the pioneer BBS's in the US, has a new call sign. The BBS is located at the Lawrence Berkeley National Laboratory and when Don (N6EEG) retired from there some years back, Mike (WA6ZTY) agreed to carry on as Sysop. Don allowed the BBS to continue using his call sign and the system has continued to operate as N6EEG ever since. Don has recently traded in his old call sign for a vanity call and as a result, the BBS is now using Mike's call sign WA6ZTY, all else remains the same.

EOF

Northern California Packet Band Plan

N C P A

September 2001

50 MHz

50.60-50.80 (20 kHz channels, non-specific at this time)
51.12 SCA backbone
51.14 BBS
51.16 Keyboard to Keyboard
51.18 Experimental
51.62 TCP/IP, 9600 baud
51.64-51.68 (20 kHz channels, non-specific at this time)

NOTE: On this band adjacent channel interference is harder to overcome for repeaters. NARCC requests that any new six meter permanent packet installations (such as nodes) please check with their six meter coordinator. You don't need to get a formal coordination, but they would like to be aware of your station and have an opportunity to check for possible conflicts first.

144 MHz

144.31 BBS
144.33 Balloon & experimental
144.35 Keyboard to Keyboard
144.37 BBS LAN forwarding
144.39 APRS (U.S. and Canada)
144.41 duplex, lower half (145.61 upper half, 1.2 MHz split)
144.43 TCP/IP (OK to run duplex with 145.65)
144.91 Keyboard to Keyboard
144.93 BBS
144.95 DX Spotting
144.97 BBS
144.99 BBS
145.01 User access
145.03 Keyboard to Keyboard
145.05 Keyboard to Keyboard
145.07 BBS
145.09 BBS
145.61 duplex, upper half (144.41 lower half)
145.63 BBS
145.65 TCP/IP 9600 bps (OK to run duplex with 144.43)
145.67 DX Spotting
145.69 BBS
145.71 9600 bps
145.73 BBS
145.75 TCP/IP
145.77 DX Spotting
146.58 DX Spotting

NOTE:

Allocations from 144.31 through 144.43 are relatively close to the weak-signal sub-band—please watch your FM deviation.

220 MHz

219.05-219.95 100 kHz channels, Backbone
223.54 LAN
223.56 LAN
223.58 LAN, Gilroy (GARLIC)
223.60 LAN, Sacramento Valley (SACVAL)
223.62 LAN, South Bay (SBAY)
223.64 TCP/IP
223.66 Keyboard to Keyboard
223.68 DX Spotting Backbone
223.70 LAN, Monterey Bay & North Coast (MRYBAY)
223.72 LAN, North Bay (NBAY)
223.74 Backbone, DX Spotting

NOTES:

- 219 channels are by coordination only. There are currently political problems with using 219-220, making them unavailable in most of northern CA.
- On 223.58, TCP/IP interlink (Sacramento) is secondary, not to interfere with node uplink.

440 MHz

433.05 TCP/IP backbone (100 kHz)
433.15 BBS backbone (100 kHz)
433.25 DX Spotting backbone (100 kHz)
433.33 Experimental (60 kHz)
433.37 BBS, 9600 baud
433.39 DX Spotting
433.41 BBS LAN
433.43 9600 baud TCP/IP
433.45 BBS LAN
433.47 Keyboard Interlink
433.49 TCP/IP
433.51 Keyboard
433.53 Keyboard
433.55 BBS LAN
433.57 - 433.70 (20 kHz channels non-specific at this time)
433.75 / 438.45 Duplex (100 kHz)
433.85 / 438.55 Duplex (100 kHz)
433.95 / 438.65 Duplex (100 kHz)
441.50 Any digital

NOTE: Except for 441.5, the frequencies above 433.6 were tentatively agreed to as of November 2000. The following change was proposed by NARCC August 2001. It has not yet been accepted by the NCPA board. Some changes may be made from what appears here.

The top half of this segment (starting at 433.6) becomes mixed/experimental. To make up for the loss to digital, the following would be substituted.

429.55 / 434.55 Duplex (100 kHz)
429.65 / 434.65 Duplex (100 kHz)
429.75 / 434.75 Duplex (100 kHz)
429.85 / 434.85 Duplex (100 kHz)
429.95 / 434.95 Duplex (100 kHz)

The lower half of these duplex pairs will share the ATV segment. The intent is that interference between the two modes should be minimal. Some adjustment may become necessary if there is an interference problem, but the channels will still be in the vicinity of 430 MHz.

900 MHz

903.500 1 MHz wide, TCP/IP
904.500 1 MHz wide, TCP/IP
915.500 1 MHz wide, experimental
916.100 200 kHz wide, experimental
916.300 200 kHz wide, experimental
916.500 200 kHz wide, experimental
916.650 100 kHz wide, experimental
916.750 100 kHz wide, experimental
916.810 20 kHz wide, experimental
916.830 20 kHz wide, experimental
916.850 20 kHz wide, experimental
916.870 20 kHz wide, experimental
916.890 20 kHz wide, experimental
916.910 20 kHz wide, experimental
916.930 20 kHz wide, experimental
916.950 20 kHz wide, experimental
916.970 20 kHz wide, experimental
916.990 20 kHz wide, LAN links (Contra Costa County only)

NOTE:

900 MHz activity is on a non-interference basis to vehicle locator service. This sub-band is not considered suitable for omnidirectional systems. Use for point-to-point links only.

1296 MHz

1248.500 1 MHz wide, experimental*
1249.000-1249.450 Unchannelized, experimental
1249.500 100 kHz wide, experimental
1249.600 100 kHz wide, experimental
1249.700 100 kHz wide, experimental*
1249.800 100 kHz wide, experimental*
1249.870 20 kHz wide, experimental
1249.890 20 kHz wide, DX Packet Spotting
1249.910 20 kHz wide, experimental*
1249.930 20 kHz wide, experimental*
1249.950 20 kHz wide, experimental*
1249.970 20 kHz wide, experimental*
1249.990 20 kHz wide, experimental*
1250.500 1 MHz wide, experimental
1251.500 1 MHz wide, experimental
1297.000-1298.000 Unchannelized, experimental
1298.500 1 MHz wide, experimental*
1299.000-1299.450 Unchannelized, experimental
1299.500 100 kHz wide, experimental
1299.600 100 kHz wide, experimental
1299.700 100 kHz wide, experimental*
1299.800 100 kHz wide, experimental*
1299.870 20 kHz wide, BBS LAN
1299.890 20 kHz wide, DX Packet Spotting
1299.910 20 kHz wide, BBS LAN

1299.930 20 kHz wide, experimental*
1299.950 20 kHz wide, experimental*
1299.970 20 kHz wide, experimental*
1299.990 20 kHz wide, experimental*

* Full duplex channel pairs at 50 MHz separation, example:
1249.910 ↔ 1299.910

Definitions

9600 BPS Stations using 9600 baud with direct FSK (G3RUH, TAPR, etc.) modems.

Backbone No uncoordinated stations. These channels are for specific purposes as defined by the NCPA and/or affiliated groups. These are frequencies where the various BBS, nodes, and networks forward traffic and are very high volume channels. Please use the normal user entry points of the network you want to access rather than these channels.

BBS These frequencies are for user access to a full-service BBS. Keyboard-to-keyboard is tolerated. Please don't put high level nodes or digipeaters on these channels since they are local. A low-level direct link or node that links into a backbone on another frequency is the proper implementation.

Duplex Simultaneous transmit and receive by a single station, including digital repeaters. Duplex channels are intended for high-volume applications. 9600 baud or higher is encouraged, but not required at this time.

DX Spotting Northern California DX packet spotting network. No other activity should be on these channels.

Experimental Anything goes except full service BBS or any 24 Hr/Day services (nodes, gateways, etc). This is where you can test new gear, programs, etc. These channels may be reassigned in the near future, so no permanent activities please.

Forwarding same as *backbone*

Keyboard to Keyboard Primarily chat channels. These are also the primary emergency channels. No high-volume activity such as full service BBS, DX Spotting, TCP/IP, etc.

Interlink same as *backbone*

LAN Local Area Network. BBS's are grouped into LAN's for more efficient forwarding. A LAN frequency is the forwarding channel within a LAN and to the backbone. Please do not attempt to access the BBS network on these channels.

Personal mailbox/maildrop A BBS-like system, often running entirely within a TNC, with a small number of users that handles information of a personal, local or special-purpose nature. A mailbox is allowed on keyboard-to-keyboard channels ONLY if it does not forward with other BBSs. Mailboxes may forward with full-service BBSs on LAN channels at the discretion of the BBS SYSOP.

TCP/IP Stations using TCP/IP protocol on top of AX.25. Some

AX.25 tolerated to communicate to TCP/IP stations if a compatible p-persistence access method used.

User Access User access to a network. This is for the next generation of packet which is expected to operate like the internet. Users would access such a network on these frequencies. The load on these channels may be rather high, like BBS channels. The activity may be any combination of BBS, keyboard, TCP/IP, or other modes.

Procedure for changes

Send requests for changes to either the frequency coordinator or the NCPA board. The frequency coordinator will then present the request to the board along with suggested assignments. The NCPA board, elected by you, the packet user, makes all assignments.

Misc. Info.

Packet tends to splatter if the deviation is set too high. Please keep your deviation to less than 5 kHz.

Except for the 219-220 MHz segment, the NCPA currently does not coordinate individual stations, nodes, etc. leaving that to the special interest groups. BBS station coordination is done by the PSNC in Northern CA. DX spotting is coordinated by DXPSN. Some digital has been coordinated on auxiliary channels by NARCC.

The NCPA board conducts most of its meeting activity electronically by internet e-mail remailer, ncpa@qth.net. As with face-to-face board meetings, interested persons are welcome. Subscribe to the remailer by sending e-mail to majordomo@qth.net with "subscribe ncpa" as the message (don't include the quote marks). Subscribing to the remailer is like attending a continuous NCPA board meeting. One must subscribe before posting messages.

Overall Band Plan in Northern California

ten meters and above September 2001

Notes:

This band plan is a joint effort by NARCC (www.narcc.org) and the NCPA (www.n0ary.org/ncpa). As of this printing, the bands ten meters through 1.25 meters are settled, the bands above 70 cm are in progress. Two versions of the 70 cm band are listed here. The first had been tentatively agreed to as of November 2000, the other was recently proposed by NARCC. The latter has wide-band digital (100 kHz channels) sharing with ATV. Furthermore, while the Experimental/Mixed segment at 433.6-434.5 includes all modes, it shall not include repeaters.

Other sources:

Weak Signal: WSWSS (Wester States Weak Signal Society) www.wswss.org.

Satellites: AMSAT www.amsat.org.

ARRL: www.arrl.org.

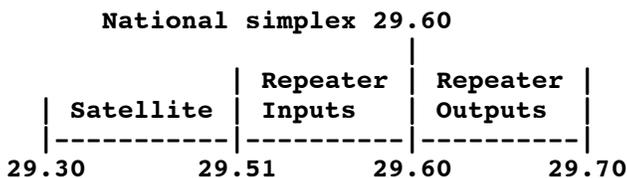
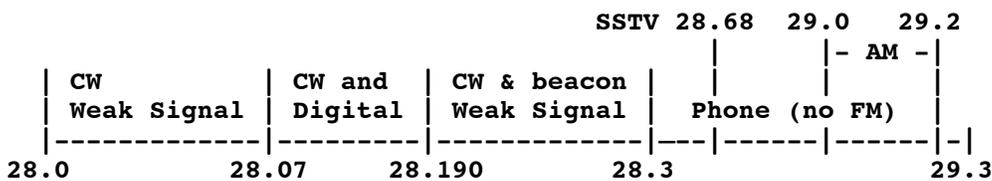
Individual channels are 20 kHz wide, ATV is 6 MHz, unless otherwise noted.

Simplex - FM voice SSTV - Slow-Scan TV SS - Spread Spectrum

RC - Remote Control ATV - Fast-scan TV

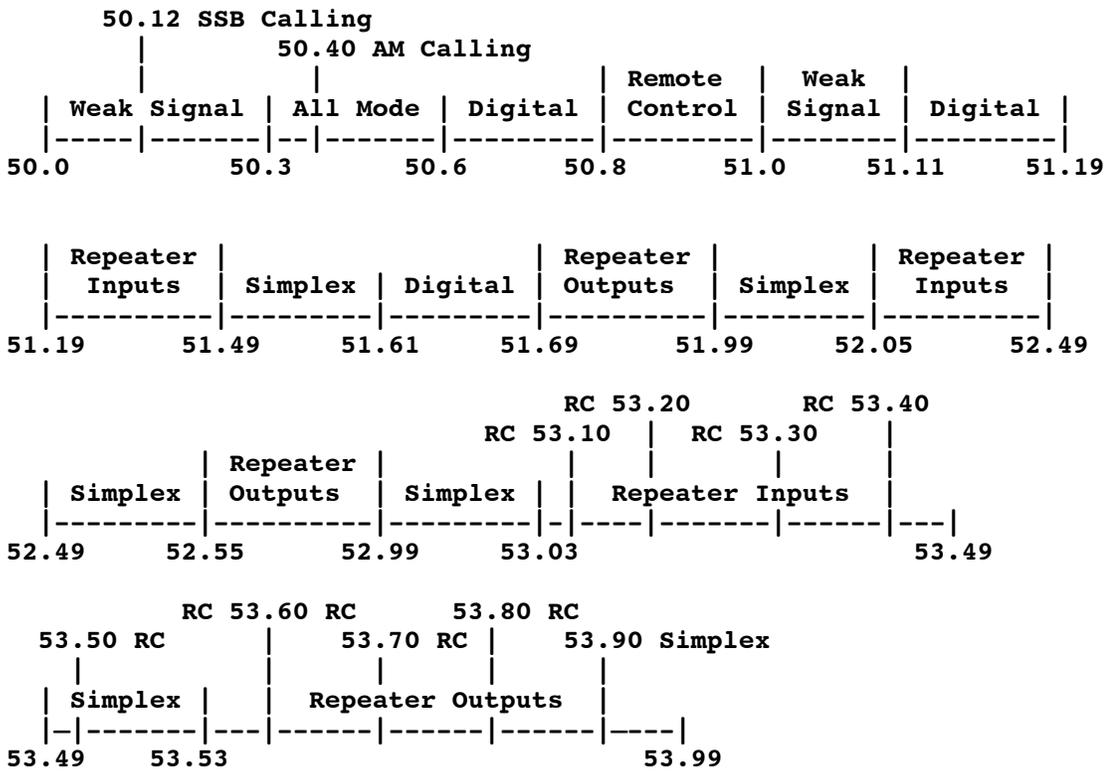
SSB - Single Side Band NBFM - Narrow Band FM FMTV - FM ATV

TEN METERS =====

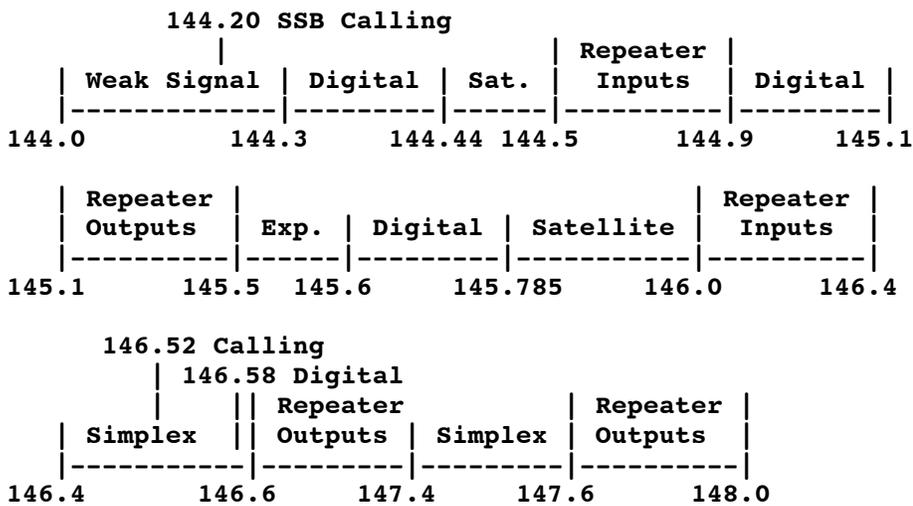


Note: Automatic beacons are limited to 28.20 - 28.30

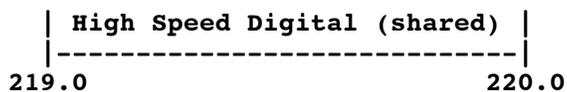
SIX METERS =====

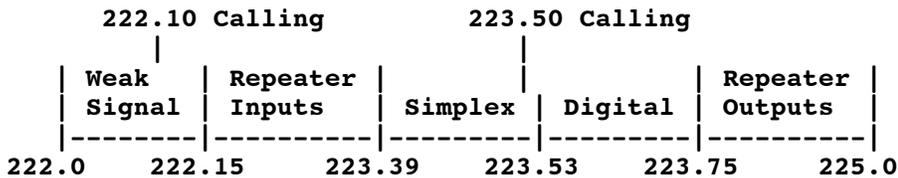


TWO METERS =====

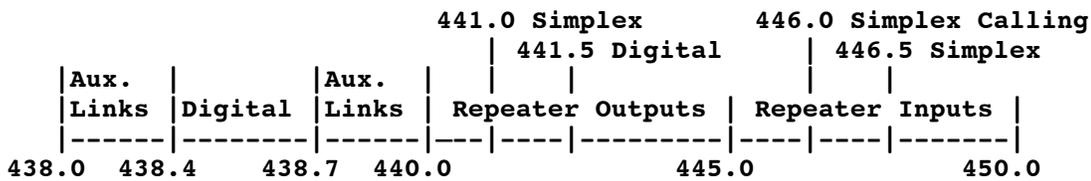
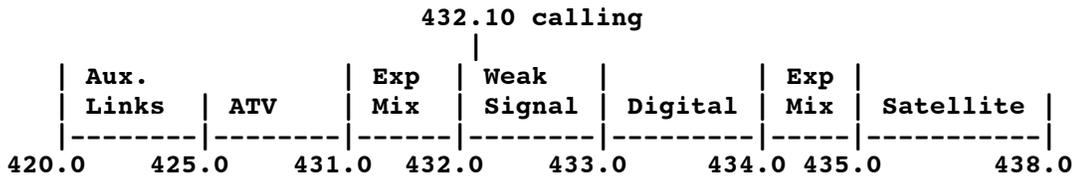


1.25 METERS =====

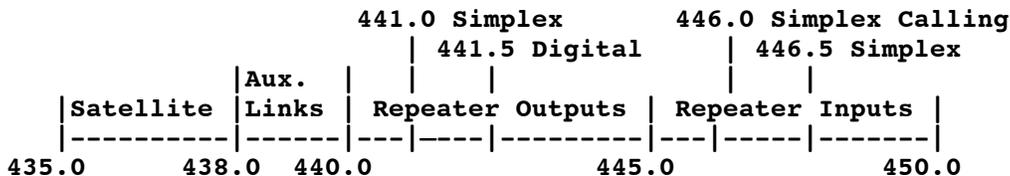
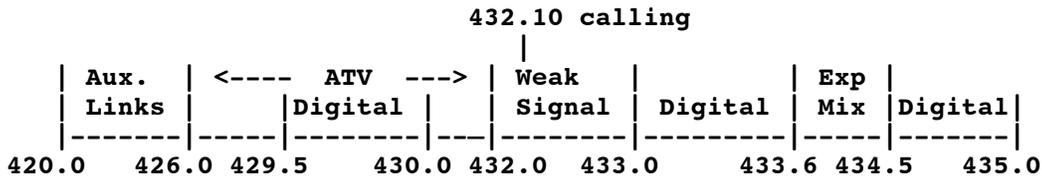




70 cm Tentatively agreed to Nov. 2000 =====



70 cm Proposed by NARCC August 2001 =====



This proposed version has high-speed (100 kHz) digital channels sharing with ATV. These are the lower half of duplex pairs, the upper half being in the 434.5-435.0 segment. NARCC expects that the 429 frequencies will result in negligible interference, if any.

Furthermore, the proposal is expected to include something along the following lines: The mixed/experimental segment shall not include repeaters. "Mixed/Experimental" means any mode and unknown techniques; however, any wide-band signal should not appear outside the segment. If it does, the operator is responsible for not interfering with activity in the neighboring segments and must accept interference from properly operated stations in the neighboring segments. (In this context, "properly operated" means none of their signal appears in the mixed/experimental segment.)

Comments on this proposal should be directed to both Gary Mitchell WB6YRU (Pres. NCPA) at wb6yru@aenet.net and Dave Shaw WB6WTM (V.P. NARCC) at dms@gene.com.

Northern California Packet Association

The NCPA fosters digital communications modes of amateur radio through education, band planning, and acts as an umbrella organization for various packet special interest groups. Your annual dues helps pay for this newsletter and other educational materials activities. If you might be interested in getting more involved, please let us know.

Call: _____ Home BBS: _____ e-mail: _____

Name: _____ Address: _____

City: _____ State: _____ Zip + 4: _____ Phone: _____

- New Membership Renewal Change of Address I'm an ARRL Member
 One year: \$10 Two Years: \$20 Three years: \$30
(make checks payable to NCPA)

Please indicate your area(s) of interest:

- BBS SysOp BBS User APRS NET/ROM TCP/IP High-speed packet
 DX Packet Spotting Network Keyboard to Keyboard FCC/legal issues Other:

NCPA *Downlink*

Northern California Packet Association

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First Class