

South County ARES



# Frequency Plans

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# Presentation Outline

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- Sources of Band Plans + URLs
- Understanding the Plans
- How members can use the plans
- Q & A



# Band Plan Sources

- SMC Sheriff's OES recommended ham radio frequency plan – [k6mpn.org](http://k6mpn.org)
- ARRL – [arrrl.org](http://arrrl.org)
- Northern Amateur Relay Council of CA (NARCC) repeater coordination council [narcc.org](http://narcc.org)
- Northern California Packet Association NCPA - [ncpa.n0ary.org](http://ncpa.n0ary.org)

# Utilizing the Plans

South County ARES



- Choose a local band plan source
- Choose a frequency band – 2m, 70 cm
- Select the chart to view
- Determine your usage and radio capability, i.e. FM, simplex, repeater, SSB, Packet
- Select from the frequencies recommended



# Understanding the Plans

- SMC Sheriff's are for local city frequency recommendations (within SM County)
- ARRL charts are general and for the US
- Local councils (NARCC) have local state usage recommendations
- If you travel – other areas may have other recommendations (So Ca repeaters are different from No Cal)



# SMC Sheriff's Frequency Plan

FINAL VERSION - 2017

San Mateo County Sheriff's Office of Emergency Services  
Ham Radio Frequency Plan Recommendation

Updated: 9/20/2017  
By Dan Bennett

Recommended Emergency Frequencies for San Mateo County								
San Mateo County Sheriff's Office of Emergency Services								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
SMCo. South Pri. Net - South	146.8650	Minus	865 S	KCSULT	T Sq	114.8	D. Bennett June 2017	
SMCo. North Pri. Net - North	146.9250	Minus	925 N	WA6TOW	T Sq	114.8	D. Bennett June 2017	
SMCo. South Pri. Net Direct	146.8650	Simplex	865DIR	Simplex	T Sq	114.8	D. Bennett June 2017	
SMCo. North Primary Net Direct	146.9250	Simplex	925DIR	Simplex	T Sq	114.8	D. Bennett June 2017	
SMCo. South Pri. Net - Link	146.8050	Minus	865LNK	KCSULT	T Sq	114.8	D. Bennett June 2017	South Coast Link to 865 S
SMCo. OES UHF Repeater - CLOSED	444.7875	Plus	OES U	KCSULT	T Sq	114.8	D. Bennett June 2017	Narrow Band - EOC-EOC Only
SMCo. OES UHF Repeater Direct	444.7875	Simplex	OESDIR	Simplex	T Sq	114.8	D. Bennett June 2017	Narrow Band - EOC-EOC Only Direct
SMCo. OES Tactical	147.5400	Simplex	OESTAC	Simplex	T Sq	114.8	D. Bennett June 2017	Co. Wide Emergency Services Tactical
SMCo. Area Tactical	147.4650	Simplex	SMCTAC	Simplex	T Sq	114.8	D. Bennett June 2017	Co. Wide General Tactical
Out of County - UHF Back Up Net	443.7250	Plus	ALISON	N6HWI	T Sq	127.3	D. Bennett June 2017	
Northern California/Bay Area Hospital Net								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
NorCal Hospital Net - Repeater	147.060	Plus	BAHOSP	W6CX	Tone	100.0	D. Bennett June 2017	
Bay Area Hospital Net - Simplex	146.430	Simplex	BAHOSP3	Simplex	No Tone		D. Bennett June 2017	
Atherton								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Atherton UHF Repeater - Primary	440.600	Plus	ATH U1	K6ATH	T Sq	91.5	Jon Mosby June 2017	Shared with EPA & Menlo Park
Atherton UHF Repeater - Back Up	440.450	Plus	ATH U2	N6ZX	T Sq	107.2		Shared with EPA & Menlo Park (Fusion AMS)
Atherton Tactical	147.555	Simplex	ATH 1	Simplex	T Sq	114.8	Jon Mosby June 2017	Shared with EPA, HMB & Menlo Park
Atherton Tactical	146.595	Simplex	ATH 2	Simplex	T Sq	114.8	Jon Mosby June 2017	Shared with EPA & Menlo Park
Belmont								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Belmont VHF Repeater	147.090	Plus	BEL V	WB6CKT	T Sq	100.0	Belmont CERT July 2017	Under Agreement with Nolan Lewis
Belmont Tactical	147.585	Simplex	BEL 1	Simplex	Tone	114.8	Belmont CERT July 2017	Shared with HMB
Belmont Tactical	446.000	Simplex	BEL BU	Simplex	Tone	114.8	Belmont CERT July 2017	Shared with Unincorporated SMCo. & Foster City
Brisbane								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Brisbane Tactical	146.460	Simplex	BRB 1	Simplex	Tone	114.8		Shared with RWC
Brisbane Tactical	147.525	Simplex	BRB 2	Simplex	Tone	114.8		Shared with Burlingame & Hillsborough
Broadmoor								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Broadmoor Tactical	147.465	Simplex	BRD 1	Simplex	Tone	114.8		Shared with Colma
Broadmoor Tactical	147.435	Simplex	BRD 2	Simplex	Tone	114.8		Shared with Colma & Kings Mt.
Burlingame								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Burlingame VHF Repeater	146.805	Minus	BURL V	KCSULT	T Sq	192.8	D. Bennett June 2017	
Burlingame Tactical	147.525	Simplex	BURL 1	Simplex	Tone	114.8	D. Bennett June 2017	Shared with Brisbane & Hillsborough
Burlingame Tactical	146.595	Simplex	BURL 2	Simplex	Tone	114.8	D. Bennett June 2017	Shared with Milbrae & Hillsborough
Colma								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Colma Tactical	147.465	Simplex	COLMA1	Simplex	Tone	114.8		Shared with Broadmoor & Portola Valley
Colma Tactical	147.435	Simplex	COLMA2	Simplex	Tone	114.8		Shared with Broadmoor & Kings Mt
Daly City								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
Daly City Tactical	147.495	Simplex	DCY 1	Simplex	Tone	114.8		Shared with San Mateo
Daly City Tactical	146.415	Simplex	DCY 2	Simplex	Tone	114.8		Shared with San Carlos
El Granada								
Comment	Frequency	Offset	Display	Resource Name	Tone Mode	CTCSS	Reviewed By/Date	Notes
El Granada Tactical	146.490	Simplex	ELGR 1	Simplex	Tone	114.8	P. Chuply July 2017	Shared with Milbrae
El Granada Tactical	147.570	Simplex	ELGR 2	Simplex	Tone	114.8	P. Chuply July 2017	Shared with Kings Mountain & Skyland



# ARRL Band Plan

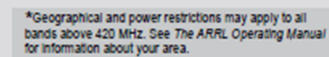
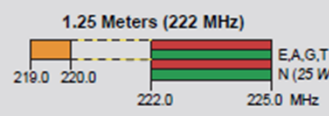
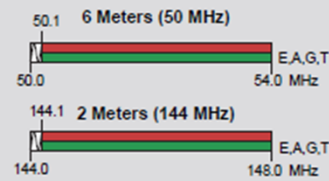
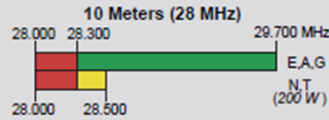
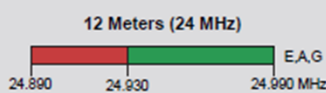
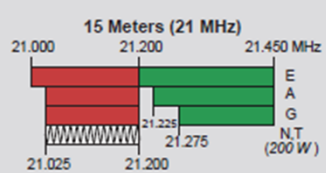
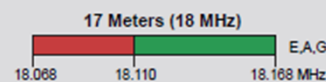
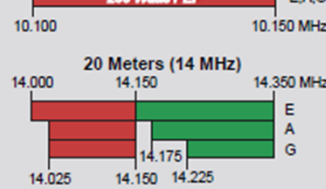
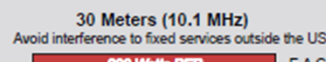
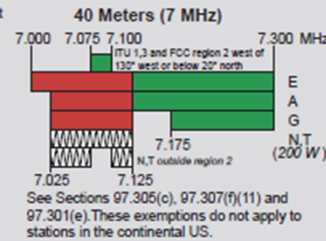
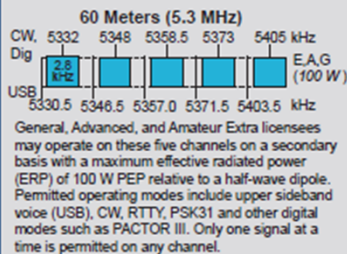
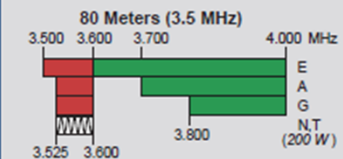
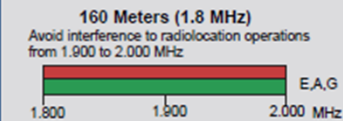
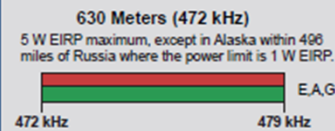
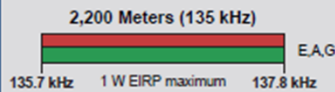
## US Amateur Radio Bands

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

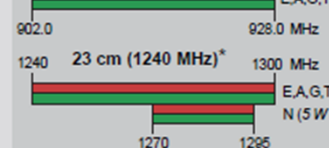
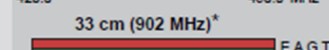


**ARRL** The national association for AMATEUR RADIO®

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



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



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

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

‡ No pulse emissions

**KEY**

Note:  
CW operation is permitted throughout all amateur bands.  
MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz.  
Test transmissions are authorized above 51 MHz, except for 219-220 MHz.

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

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

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

**ARRL**  
*We're At Your Service*

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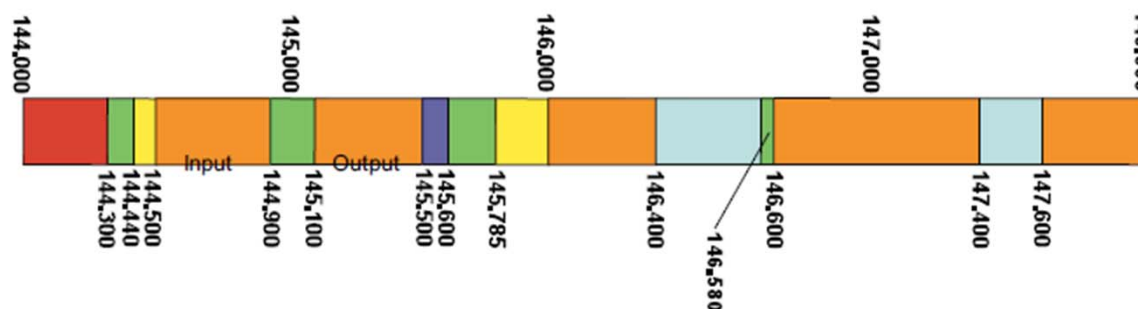
Getting Started in Amateur Radio:  
Toll-Free 1-800-326-3942 (860-594-0355)  
email: [neuham@arrl.org](mailto:neuham@arrl.org)

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



# NARCC 2m Band Plan

## Northern California 2 Meter Band Plan



Legend	
	Satellite
	Digital
	Experimental
	Simplex
	Weak Signal
	FM Repeaters

For Repeater coordination in Northern California contact NARCC [www.narcc.org](http://www.narcc.org)

For Packet Radio info contact the Northern California Packet Assc. (NCPA) <http://www.n0ary.org/ncpa/>

For satellite information see Amsat [www.amsat.org](http://www.amsat.org)

Specific Frequency info  
 FM Channel spacing  
 20 kHz below 146.00  
 15 kHz above 146.00

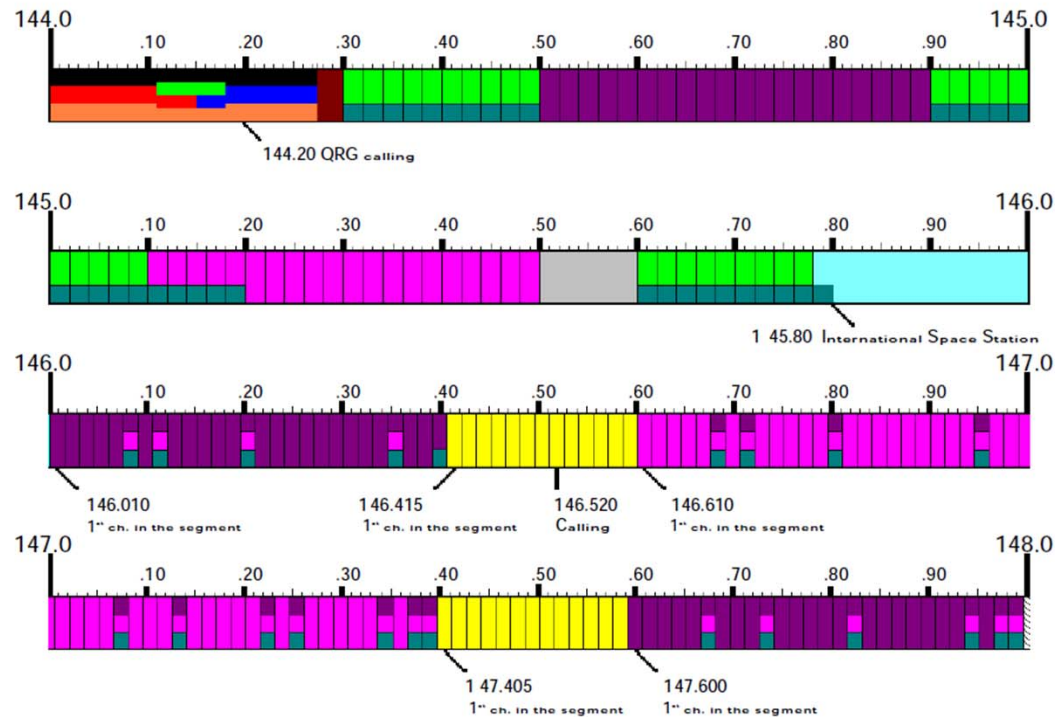
144.000-144.100 CW only  
 144.200 SSB calling  
 144.390 APRS  
 146.58 Digital  
 145.51 SSTV  
 146.52 Nationwide FM calling.  
 FM Simplex frequencies:  
 146.415, 146.430, 146.445,  
 146.460, 146.475, 146.490, 146.505,  
 146.520, 146.535, 146.550, 146.565,  
 146.595, 147.405, 147.420, 147.435,  
 147.450, 147.465, 147.480, 147.495,  
 147.510, 147.525, 147.540, 147.555,  
 147.570, 147.585





# NCPA Band Plan

## 2 meter Band Plan for Northern California 144.0 - 148.0 MHz

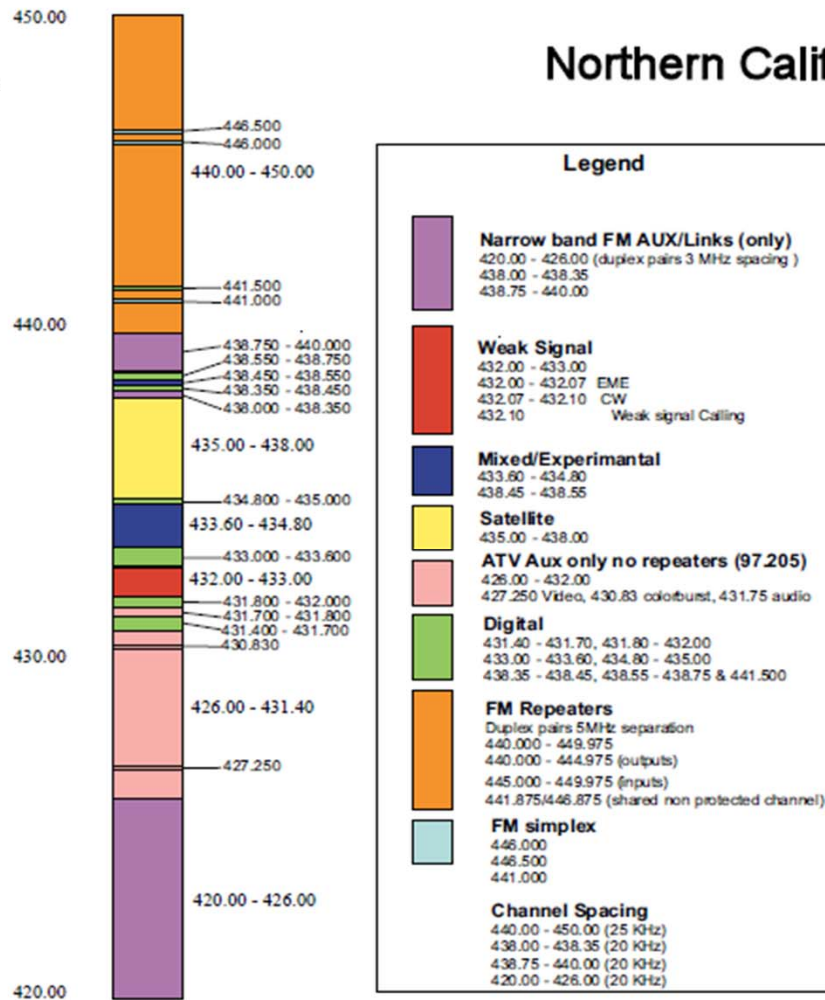


■ All Mode and Experimental	■ Repeater Input
■ Beacon	■ Repeater Output
■ CW	■ Satellite
■ Digital	■ SSB
■ Earth-Moon-Earth (EME)	■ Weak Signal
■ FM Simplex	■ Differs from ARRL plan



# NARCC 70 cm Band Plan

## Northern California 70 cm Band Plan



**Contact information**

For Repeater coordination in Northern California  
 Contact: NARCC  
[www.narcc.org](http://www.narcc.org)

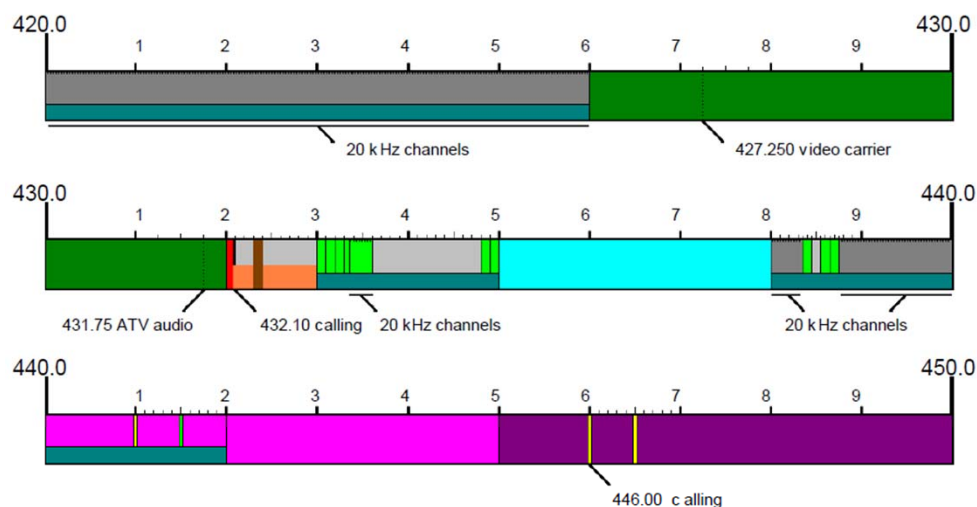
For weak signal information  
 Contact: Western States weak signal society  
[www.wswss.org](http://www.wswss.org)

For Amateur satellite information  
 Contact: AMSAT  
[www.amsat.org](http://www.amsat.org)



# NCPA 70 cm Band Plan

## 70 cm Band Plan for Northern California 420.0 - 450.0 MHz



□ All Mode and Experimental	□ Links and Auxiliary
■ Amateur fast-scan TV (ATV)	■ Repeater Input
■ Beacon	■ Repeater Output
■ CW	■ Satellite
■ Digital	■ Weak Signal
■ Earth-Moon-Earth (EME)	■ Differs from ARRL plan
■ FM Simplex	

25 kHz channel spacing 440.0 - 450.0 MHz  
 Links, Auxiliary, and digital are 20 kHz wide channels except as noted  
 ATV is a single 6 MHz wide simplex channel  
 Weak Signal, Satellite, and All Mode segments are not channelized



# Review of the 2m band

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- From the NARCC and NCPA charts:
- There are established frequencies for simplex and repeater usage
- Nets with sub frequencies should choose frequencies in another different segment to avoid cross-talk
- Use both VHF and UHF frequencies to avoid cross-talk
- Choose frequencies compatible with local customs



# The 70 cm Band

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- There are only three simplex channels
- There are MANY UHF repeater channels



# Q & A

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- Over – to you