

# VK3JFP - AMATEUR RADIO QUICK REFERENCE SHEET

## Foundation (6 Bands)

## Standard (11 Bands)

## Advanced (25 Bands)

Band	Freq MHz	Mode	Band	Freq MHz	Mode	Band	Freq MHz	Mode
80m	3.5 – 3.7	Any mode. Where bandwidth >8kHz the max power density =< than 1 watt per 100kHz. * <= 8kHz	80m	3.5 – 3.7	Any. BW <= 8kHz	2200m	.135 - .1378	Any. BW <= 2.1kHz
40m	7 – 7.1		40m	7 - 7.3	As above	630m	.472 - .479	As Above
40m	7.1-7.3*		20m	14 – 14.35	As above	160m	1.8 – 1.875	Any. BW <= 8kHz
15m	21 – 21.45	Any mode. As above but >16kHz	15m	21 – 21.45	As above	80m	3.5 – 3.7	As Above
10m	28 – 29.7		10m	28 – 29.7	Any. BW <= 16kHz	40m	7 – 7.3	As Above
2m	144 – 148	Any mode.	6m	52 – 54	As above	30m	10.1 – 10.15	As Above
70cm	430 - 450	Any mode.	2m	144 - 148	As above	20m	14 – 14.35	As Above
<b>Message    Telephony    Telegraphy</b> <b>Distress signal:</b> "MAYDAY"    SOS <b>Urgency signal:</b> "PAN PAN"    XXX <b>Safety signal:</b> "SECURITE"    TTT			70cm	430 - 450	As above	17m	18.068 – 18.168	As Above
			23cm	1240 - 1300	As above	15m	21 – 21.45	As Above
			13cm	2400 - 2450	As above	12m	24.89 – 24.99	As Above
			6cm	5650 - 5850	As above	10m	28 – 29.7	Any. BW <= 16kHz
			6m	50 - 54	Any. BW <= 100kHz			
			2m	144 - 148	Any.			
			70 cm	420 - 450	As Above			

### Code Used as a Question

**QRK** - What is the readability of my signals?  
**QRL** - Are you busy?  
**QRM** - Are you being interfered with?  
**QRN** - Are you troubled by static?  
**QRO** - Shall I increase transmitter power?  
**QRP** - Shall I decrease transmitter power?  
**QRS** - Shall I send more slowly?  
**QRT** - Shall I stop sending?  
**QRZ** - Who is calling me?  
**QRV** - Are you ready?  
**QRX** - I will be right back.  
**QSB** - Are my signals fading?  
**QSL** - Can you acknowledge receipt?  
**QSO** - Can you communicate with ... direct?  
**QSY** - Shall I change frequency?  
**QTH** - What is your location?

### Used as an Answer or statement

The readability of your signals is ...  
 I am busy.  
 I am being interfered with (M= manmade)  
 I am troubled by static (N=noise)  
 Increase transmitter power (O=output)  
 Decrease transmitter power (P=power)  
 Send more slowly (S=slow)  
 Stop sending (QRT=quiet)  
 You are called by ...  
 I am ready  
 Please QRX one.  
 Your signals are fading  
 I am acknowledging receipt (L=letter)  
 I can communicate with ... direct  
 Change to another frequency  
 My location is .... (H=home)

10cm	3300 – 3425	As Above
10cm	3492.5 3542.5	As Above
10cm	3575 - 3600	As Above
6cm	5650 5850	As Above
3cm	10 – 10.5GHz	As Above
1.25cm	24 = 24025GHz	As Above
7.5mm	47 – 47.2GHz	As Above
3.7mm	76 – 81GHz	As Above
2.5mm	122.25 – 123GHz	As Above
2mm	134 – 141GHz	As Above
1.25mm	241 – 250GHz	As Above

Shaded areas are cross licence compatible.

### Phonetic Alphabet

<b>A</b> - Alpha	<b>N</b> - November	<b>.</b> - Decimal
<b>B</b> - Bravo	<b>O</b> - Oscar	<b>-</b> - Stop
<b>C</b> - Charlie	<b>P</b> - Papa	
<b>D</b> - Delta	<b>Q</b> - Quebec	<b>0</b> - Zero
<b>E</b> - Echo	<b>R</b> - Romeo	<b>1</b> - Wun
<b>F</b> - Foxtrot	<b>S</b> - Sierra	<b>2</b> - Two
<b>G</b> - Golf	<b>T</b> - Tango	<b>3</b> - Tree
<b>H</b> - Hotel	<b>U</b> - Uniform	<b>4</b> - Fower
<b>I</b> - India	<b>V</b> - Victor	<b>5</b> - Fife
<b>J</b> - Juliet	<b>W</b> - Whiskey	<b>6</b> - Six
<b>K</b> - Kilo	<b>X</b> - X-ray	<b>7</b> - Seven
<b>L</b> - Lima	<b>Y</b> - Yankee	<b>8</b> - Ait
<b>M</b> - Mike	<b>Z</b> - Zulu	<b>9</b> - Niner

### Abbreviations

**BK** - Signal used to interrupt a transmission on progress  
**CQ** - General call to all stations  
**CW** - Continuous wave or Morse code  
**DE** - From, used to separate the callsign of the station called from that of the calling station  
**DX** - Distant  
**K** - Invitation to transmit  
**MSG** - Message  
**PSE** - Please  
**R** - Received  
**RX** -Receiver

### ARRL HF Calling Frequencies (CF)

**80m** 3.885Mhz AM CF  
           3.985Mhz SSB CF  
**40m** 7.285Mhz SSB CF  
           7.290Mhz AM CF  
**20m** 14.285Mhz SSB CF  
           14.286Mhz AM CF  
**15m** 21.385Mhz SSB CF  
**10m** 28.385Mhz SSB CF  
 Just a suggested starting point to look for contacts.

### SSB Convention

>10MHz use USB  
<10MHz use LSB

### Digital All Bands

RTTY use LSB  
Data mode use USB

### 2 Metre Convention

<= 147Mhz use – 600hz offset  
>147Mhz use + 600hz offset

### VK0 – Antarctica

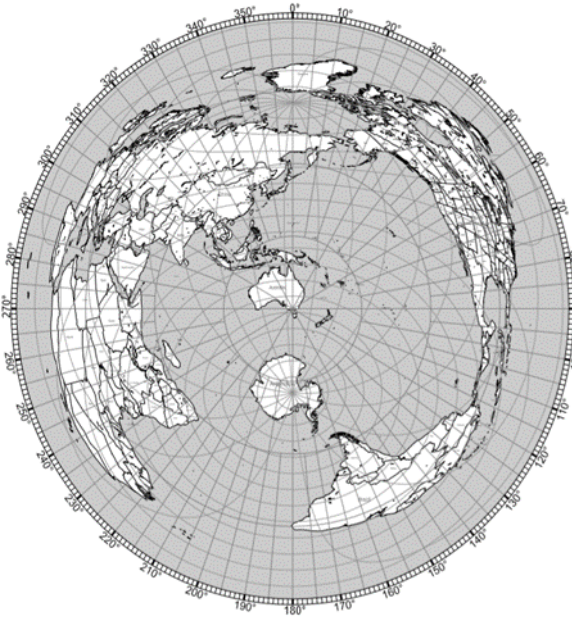
**VK1** – ACT  
**VK2** – New South Wales  
**VK3** – Victoria  
**VK4** – Queensland  
**VK5** – South Australia  
**VK6** – Western Australia  
**VK7** – Tasmania  
**VK8** – Northern Territory  
**VK9** – Australian External Territory  
**AX\$** - National Events    \$ = State number  
**VI\$** - Club or local events

Go to

[www.juleworkshop.net](http://www.juleworkshop.net)  
 for more information.

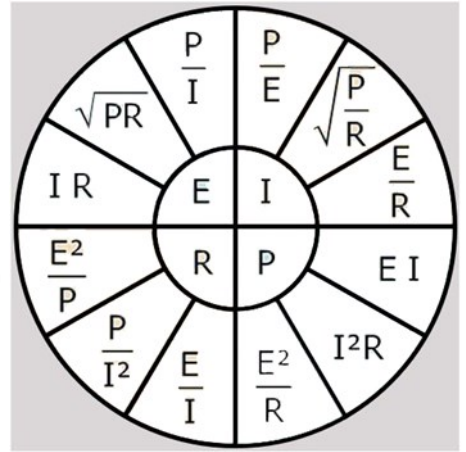
# Azimuthal Map

Center: 37°48'48"S 144°57'47"E  
Courtesy of Tom (NS6T)

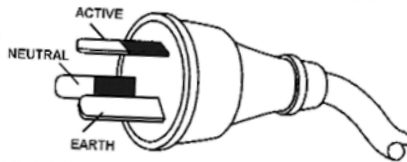


## More code in code order

E •	T —
I ••	M — —
S •••	O — — —
H ••••	N — •
A • —	G — ••
U •• —	Z — — ••
V ••• —	Q — — ••
W • — —	D — •••
J • — — —	B — ••••
R • — •	K — •• —
L • — ••	C — — •••
F •• — •	Y — •• — —
P • — ••	X — ••••
1 • — — — —	6 — •••••
2 •• — — —	7 — — ••••
3 ••• — —	8 — — — •••
4 •••• —	9 — — — — ••
5 •••••	0 — — — — —



240 Volt Wiring		
Pin	ISO Std	Old
Active	Brown	Red
Neutral	Blue	Black
Earth	Green/Yellow	Green



Resistor Colours
Black = 0
Brown = 1
Red = 2
Orange = 3
Yellow = 4
Green = 5
Blue = 6
Violet = 7
Grey = 8
White = 9
Gold = 5%

$R_t = R_1 + R_2 + R_3 \dots n$	$I = \frac{E}{R}$	$f_r = \frac{1}{2\pi\sqrt{LC}}$	$Z = \sqrt{R^2 + X^2}$
$\frac{1}{R_t} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \dots n$	$\lambda = \frac{c}{f}$	Period = $\frac{1}{\text{frequency}}$	$P = EI = \frac{E^2}{R} = I^2R$
$C_t = C_1 + C_2 + C_3 \dots n$	ERP = power x gain (linear)	$E_{rms} = \frac{V_{peak}}{\sqrt{2}}$	$E_{int} = E_{peak} \sin \theta$
$\frac{1}{C_t} = \frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} \dots n$	$X_c = \frac{1}{2\pi f C}$	$X_L = 2\pi f L$	$Z_o^2 = Z_{sc} + Z_{oc}$
$L_t = L_1 + L_2 + L_3 \dots n$	$c = 3 \times 10^8 \text{ m/s}$	$T = CR = \frac{L}{R}$	$Q = \frac{2\pi f L}{R} = \frac{1}{2\pi f C R}$
$\frac{1}{L_t} = \frac{1}{L_1} + \frac{1}{L_2} + \frac{1}{L_3} \dots n$	$I_p = I_s \frac{N_s}{N_p}$	$\frac{N_p}{N_s} = \sqrt{\frac{Z_p}{Z_s}}$	$\mu = \frac{\Delta f}{f_s}$
$SWR = \frac{\sqrt{P_f} + \sqrt{P_r}}{\sqrt{P_f} - \sqrt{P_r}}$	Voltage gain = $20 \log_{10} \frac{E_1}{E_2} \text{ dB}$	Power gain = $10 \log_{10} \frac{P_1}{P_2}$	$BW = 2(AF_{max} - \Delta f)$
Image = signal + (2 x IF)	$E_n = \sqrt{4(K)(T)(R)BW}$	$\beta = \frac{\Delta I_c}{\Delta I_b}$	$BW = \frac{f}{Q}$

Amateur Mode	Power Type	Foundation Licence Power Level	Standard Licence Power Level	Advanced Licence Power Level	Advanced Licence High Power Trial Authorisations <sup>2</sup>
CW	Mean (pY)	10W	30W	120W	500W
AM (Phone)	Mean (pY)	10W	30W	120W	500W
SSB (Phone)	PEP (pX)	10W	100W	400W	1000W
All Digital Modes <sup>1</sup>	Mean (pY)	NAM*	30W	120W	500W
FM (Phone)	Mean (pY)	10W	30W	120W	500W