Radio Programming with CHIRP



RMHAM University Tech Talks

Chris Keller, KØSWE October 20, 2021



Chris Keller, K0SWE. Active in RMHAM and Colorado ARES R1D6, as well as software development for amateur radio



What is CHIRP?

CHIRP



"CHIRP is a **free, open-source** tool for **programming** your amateur radio. It supports a **large number of manufacturers and models**, as well as provides a way to interface with **multiple data sources and formats**."

https://chirp.danplanet.com/projects/chirp/wiki/Home

Capabilities

What can it program?

• Dozens of manufacturers, hundreds of radios

What doesn't it do?

- DMR, D-Star, C4FM
- Motorola



Some radios with digital modes are supported, but digital channels are not. Some radios (particularly DMR) are not supported at all.

Not sure if lack of Motorola support is because of a technical blocker or because nobody has gotten around to it.

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The nice thing about manufacturer-built programming software is that they cover every feature they intend you to use. Downsides include:

- Needing a separate program for each radio
- Not always free
- Usually Windows only



RT Systems is a high-quality ecosystem. CHIRP vs RT Systems is sort of a time vs money dichotomy. RT Systems is reliable and offers support, but it's expensive. CHIRP is free and supports a lot of radios in one program, but it's rough around the edges and relies on community for tech support.



Another analogy is multitool vs handcrafted tool set. Chirp is a single tool that can get you a long way in a lot of situations, but isn't appropriate for every job. RT Systems is handcrafted to make the experience with each radio as seamless as possible, and that high quality comes at a price. Manufacturer CPS' reach every nook and cranny of the radio but are not as elegant or integrated as RT Systems. Each has their place, and they're all good to have in your arsenal.



Building a Generic Codeplug



Generic Codeplug Methods



- Manual entry
- Online databases
 - RadioReference
 - RepeaterBook
 - RFinder
- CSV (next slide)

RT Systems supports most of the same online sources.

Power User: Spreadsheet to CSV

- No import wizard like RT Systems
- Not too hard to transform our own CSV to fit CHIRP's "shape"
- Docs at https://chirp.danplanet.com/projects/chirp/wiki/CSV HowTo

Transforming from an RT Systems CSV to a CHIRP CSV should be very scriptable. (Maybe I should get around to that?)

Spreadsheet "Gymnastics"



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	4	3	446.2125	446.2125	5 10U3D	TS1	CC1	High	Yes		DMR Simplex Calling					
	5	4	449.9250	449.9250	10U4	TS2	CC8	High	Yes		R1 ARES EmComm, DMR Devil's Head - TG71	1				
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	9	8	147.4350	147.4350	11V4D	None		High	Off		R1D1 Primary Simplex					
	10	9	445.8000	445.8000	11U5D	None		High	Off		R1D1 Secondary Simplex					
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	13	12	449.2250	444.2250	1202	Tone	141.3	High	Off		R1D2 Primary UHF, Thorodin					
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	15	14	448.2250	443.2250	1204	Tone	141.3	High	011		R1D2 RMHAM, Squaw Mth					
	17	15	140.5500	140.5500	12V50	None		High	01		R1D2 Primary VHF Simplex					
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	20	19	449 6250	444 6250	12119	Tone	141.3	High	Off		B1D2 Chief Mountain					
	21	20	447.2250	442.2250	12U10	Tone	141.3	High	Off		B1D2					
	22	21	446,2000	446.2000	12U11D	TS1	CC1	High	Yes		DMR Simplex (CO-DMR TAC1 D)					
	23	22	146.8800	146.2800	12V13	Tone	100.0	High	Off		R1D2 Secondary VHF, Warren Mountain					
	24	23	447.7500	442.7500	12U14	Tone	141.3	High	Off		R1D2, Lee Hill					
	25	24	147.1500	147.7500	12V15	Tone	100.0	High	Off		R1D2, Guy Hill					
	26	25	448.8500	443.8500	12U17	Tone	88.5	High	Off		R1D2, Guy Hill					
	27	26	447.5000	442.5000	12U18	Tone	88.5	High	Off		R1D2 ARA Critchell Mountain, Conifer					
	28	27	446.1250	446.1250	12U19D	None		High	Off		R1D2 Primary UHF Simplex					
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Choice of spreadsheet software isn't too important, we'll be using all common features.

This band plan happens to be published by my ARES team.

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Tmode has possible values of "Tone", "TSQL", "DTCS", "DTCS-R", "TSQL-R", "Cross" or blank

Duplex has possible values of "+", "-", "split", "off" or blank

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	1	Location	Name	Frequency	(TX Freq)	Duplex	Offset	5	Tone	rToneFreg	cTopeFreq	Dtes	
	2	Location	1 10111	447 5250	442 5250	o upica	=02-C2	Tone	14	6.2 High	off	bitts	
	3		2 10U2	447.5250	442.5250		-5.0000	Tone	20	3.5 High	Off		
	4		3 10U3D	446.2125	446.2125		0.0000	TS1	CC1	High	Yes		
	5		4 10U4	449.9250	449.9250		0.0000	TS2	CC8	High	Yes		
	6		5 11U1	448.2250	443.2250		-5.0000	Tone	14	1.3 High	Off		
	7		6 11V2	146.9850	146.3850		-0.6000	Tone	10	0.0 High	Off		
	8		7 11U3	449.2500	444.2500		-5.0000	Tone	14	1.3 High	Off		
	9		8 11V4D	147.4350	147.4350	Form	ulas fore	ffset		High	Off		
	10		9 11U5D	445.8000	445.8000		0.0000	None		High	Off		
	11		10 11U6D	446.2750	446.2750		0.0000	TS1	CC1	High	Yes		
	12		11 12V1	146.6400	146.0400		-0.6000	Tone	10	0.0 High	Off		
	13		12 12U2	449.2250	444.2250		-5.0000	Tone	14	1.3 High	Off		
	14		13 12V3	147.1200	147.7200		0.6000	Tone	8	8.5 High	Off		
	15		14 1204	448.2250	443.2250		-5.0000	Tone	14	1.3 High	Off		
	10		15 12V5D	146.5500	146.5500		0.0000	None		High	Off		
	10		16 12V6D	147.5550	147.5550		0.0000	None		High	Off		
	10		17 1207	449.6000	444.6000		-5.0000	Tone	10	0.0 High	011		
	20		18 1208	449.4500	444.4500		-5.0000	Tone	10	3.5 High	011		
	21		19 1209	449.8230	444.8230		-3.0000	Tone	14	1.3 High	off		
	22		20 12010	447.2250	442.2230		-5.0000	TC1	001	1.5 High	Vor		
	23		22 120110	146 9900	146 2800		0.6000	Tono	10	0.0 High	0#		
	24		22 12/13	447 7500	442 7500		-5.0000	Tone	10	1.2 High	0#		
	25		24 12/15	147.1500	147 7500		0.6000	Tone	10	0.0 High	Off		
	26			147.1500	147.7500		0.0000	TOTIC	10	0.0	0.1		

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(F2)=D2-C2

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E2	• <i>fx</i>	=if(F2<0,"-	,if(<mark>F2</mark> >0,"+",""))								
	A	В	C	D	E	F	G	н	1	J		
1	Location	Name	Frequency	{TX Freq}	- × x Offset		Tone		rToneFreq	cToneFreq	Dtcs	
2	1	10U1	447.5250	442.5250	=if(F2<0,"-",if(F2>	0,"+","")	one	146.	2 High	Off		
3	2	10U2	447.5250	442.5250	-	-5.0000	Tone	203.	5 High	Off		
4	3	10U3D	446.2125	446.2125		0.0000	TS1	CC1	High	Yes		
5	4	1004	449.9250	449.9250		0.0000	TS2	CC8	High	Yes		
6	5	5 1101	448.2250	443.2250	-	-5.0000	Tone	141.	B High	Off		
7	6	5 11V2	146.9850	146.3850	•	-0.6000	Tone	100.) High	Off		
8	7	1103	449.2500	444.2500	*	-5.0000	Tone	141.	B High	Off		
9	8	8 11V4D	147.4350	147.4350		0.0000	None		High	Off		
10	9	9 11USD	445.8000	445.8000	Duplex is	0.0000	None		High	Off		
11	10	0 1106D	446.2750	446.2750	+ or blan	0.0000	TS1	CC1	High	Yes		
12	11	1 12V1	146.6400	146.0400		-0.6000	Tone	100.	High	011		
14	12	1202	449.2230	444.2230		-5.0000	Tono	141.		011		
15	13	1 1214	449 2250	442 2250	-	-5.0000	Tone	141	High	0#		
16	14	1204	146 5500	146 5500		-5.0000	None	141.	High	Off		
17	16	12450	140.5500	147.5550		0.0000	None		High	off		
18	17	12000	449,6000	444 6000	-11	-5.0000	Tone	100	High	Off		
19	18	3 12U8	449.4500	444.4500	-	-5.0000	Tone	103.	5 High	Off		
20	19	1209	449.6250	444.6250	-	-5.0000	Tone	141.	B High	Off		
21	20	12U10	447.2250	442.2250		-5.0000	Tone	141.	B High	Off		
22	21	12U11D	446.2000	446.2000		0.0000	TS1	CC1	High	Yes		
23	22	12V13	146.8800	146.2800	-	-0.6000	Tone	100.) High	Off		
24	23	8 12U14	447.7500	442.7500	-	-5.0000	Tone	141.	B High	Off		
25	24	12V15	147.1500	147.7500	+	0.6000	Tone	100.	High	Off		
26	25	5 12U17	448.8500	443.8500	-	-5.0000	Tone	88.	5 High	Off	*	
		- Contractor	447 5000	112 5000		5 0000			a starte	011		

(E2)=if(F2<0,"-",if(F2>0,"'+","")) "If offset is less than zero, Duplex should be a minus sign; if it's greater than 0, it should be a plus sign (with escape char); if it's equal, it should be blank"

DU	ıplex	and	"P	a	ste as \	/alue"		
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220	218 MURS 2 219 MURS 2	151.8800	151.8800			,		
221	219 MURS 3	151.5400	151.9400		Insert 240 rows	Paste format only Ctrl-	+Alt+V	
222	220 BL DOT	154,6000	154,6000			Paste all except borders		
223	222 EGRS 1	462 5625	462 5625		Insert column			
224	223 FGRS 2	462.5875	462.5875		Insert cells	Paste column widths only		
225	224 NOAA 1	162.5500	162,5500					
226	225 NOAA 2	162.4000	162,4000	,		Paste formula only		
227	226 NOAA 3	162,4750	162.4750		Delete rows 2 - 241			
228	227 NOAA 4	162.4250	162.4250	,	Delete column	Paste data validation only		
229	228 NOAA 5	162.4500	162.4500	•		Paste conditional formattin	a only	
230	229 NOAA 6	162.5000	162.5000	0	Delete cells >		going	
231	230 Reserved					Paste transposed		
232	231 231 6M	53.0900	52.0900	-	Sort range	107.2 High	NA	
233	232 232 6M	53.1700	52.6700	-	-	107.2 High	NA	
234	233 233 6M	53.1300	51.4300	-	Randomize range	107.2 High	NA	
235	234 234 6M	53.0300	51.3300	-		88.5 High	NA	
236	235 235 40M	3.8100	3.8100		Get link to this range	High	NA	
237	236 236 20M	7.2350	7.2350)	D.C.	High	NA	
238	237 Reserved				Define named range			
239	238 UHFPKT	441.0750	441.0750)	Protect range	High	NA	
240	239 VHFPKT	145.0500	145.0500	1	5	High	NA	
241	240 SSBPKT	14.1050	14.1050			High	NA	
	Add 1000 m	ore rows at bottom.			Insert note			

We're about to edit the Offset with an absolute value, but Duplex is based on whether it's negative or positive. Freeze Duplex values by pasting the current values, replacing the formulas

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F2	• fx	=abs(D2-C2)										
	A	В	С	D	E	F	G	н	I	J		
1	Location	Name	Frequency	{TX Freq}	Duplex	Offset	_	Tone	rToneFreq	cToneFreq	Dtcs	
2		1 10U1	447.5250	442.5250	-	=abs(D2-C2)	Tone	146	.2 High	Off		
3		2 10U2	447.5250	442.5250	-		5 Tone	203	.5 High	Off		
4		3 10U3D	446.2125	446.2125		0	0 TS1	CC1	High	Yes		
5		4 1004	449.9250	449.9250		0	D TS2	CC8	High	Yes		
7		5 1101	448.2250	443.2250	-		5 Tone	141	.3 High	Off		
8		6 11V2	146.9850	146.3850	-	0.0	5 Ione	100	3 High	Off		
9		7 1103 8 111/4D	449.2300	147 4250			3 None	141	.5 High	Off		
10		9 111150	445 8000	445 8000			None		High	off		
11		0 11U6D	446.2750	446.2750		(0 TS1	CC1	High	Yes		
12		11 12V1	146.6400	146.0400	-	0.6	5 Tone	100	.0 High	Off		
13		12 12U2	449.2250	444.2250	-		5 Tone	141	.3 High	Off		
14		13 12V3	147.1200	147.7200	+	0.6	5 Tone	88	.5 High	Off		
15		14 12U4	448.2250	443.2250	-		5 Tone	141	.3 High	Off		
16		15 12V5D	146.5500	146.5500		(0 None		High	Off		
17	1	16 12V6D	147.5550	147.5550		(0 None		High	Off		
18		17 1207	449.6000	444.6000	-		5 Tone	100	.0 High	Off		
19		18 12U8	449.4500	444.4500	-		5 Tone	103	.5 High	Off		
20		19 1209	449.6250	444.6250	-		5 Tone	141	.3 High	Off		
21		20 12U10	447.2250	442.2250	•		5 Tone	141	.3 High	Off		
22		21 12U11D	446.2000	446.2000		(D TS1	CC1	High	Yes		
23		22 12013	146.8800	146.2800	-	0.6	b Ione	100	D High	011		
24		23 12014	447.7500	442.7500	+		5 Ione	141	.3 High	011		
		L4 12V10	147.1500	147.7500		0.0	o ione	100	ro uiku	UII		

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To the offset column, add ABS() to transform negatives into positives; copy the new formula down the column

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	Band pl	an (demo)	☆ ⊡ ⊘							A Share	0
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D:D	• <i>f</i> x	{TX Freq}									
	A	В	С	D	E	F	G	н	I	J	
1	Location	Name	Frequency	{TX Freq}	Duplex	Offset	Tone		rToneFreq	cToneFreq	Dtcs
2		1 1001	447,5250	442.5250	+		5 Tone	14	6.2 High	Off	0
3		2 10U2	447.5250	442.5250	+		5 Tone	20	3.5 High	Off	
4		3 10U3D	446.2125	446.2125			0 TS1	CC1	High	Yes	
5		4 10U4	449.9250	449.9250			D TS2	CC8	High	Yes	
6		5 11U1	448.2250	443.2250	+		5 Tone	14	1.3 High	Off	
7		6 11V2	146.9850	146.3850	+	0.	5 Tone	10	0.0 High	Off	
8		7 11U3	449.2500	444.2500	+		5 Tone	14	1.3 High	Off	
9		8 11V4D	147.4350	147.4350			0 None		High	Off	
10		9 11U5D	445.8000	445.8000			0 None		High	Off	
11		10 11U6D	446.2750	446.2750			D TS1	CC1	High	Yes	
12		11 12V1	146.6400	146.0400	+	0.	5 Tone	10	0.0 High	Off	
13		12 12U2	449.2250	444.2250	+		5 Tone	14	1.3 High	Off	
14		13 12V3	147.1200	147.7200	+	0.	5 Tone	8	8.5 High	Off	
15		14 1204	448.2250	443.2250	•		o ione	14	1.3 High	011	
17		121200	146.5500	146.5500) None		High	011	
18		17 12000	449 6000	444 6000			5 Tone	10	0.0 High	off	
19		18 12U8	449,4500	444.4500	+		5 Tone	10	3.5 High	Off	
20		19 1209	449.6250	444.6250	+		5 Tone	14	1.3 High	Off	
21		20 12U10	447.2250	442.2250	+		5 Tone	14	1.3 High	Off	
22		21 12U11D	446.2000	446.2000			0 TS1	CC1	High	Yes	
23		22 12V13	146.8800	146.2800	+	0.	6 Tone	10	0.0 High	Off	
24		23 12U14	447.7500	442.7500	+		5 Tone	14	1.3 High	Off	
25		24 12V15	147.1500	147.7500	+	0.	5 Tone	10	0.0 High	Off	
26		25 12U17	448.8500	443.8500	+		5 Tone	8	8.5 High	Off	*
							or I contractor to		married to a Googland	1 Street	-

Chirp doesn't care about TX Freq column and we're ready to remove it. Offset is still based on TX Freq, so first copy and "paste as value" on Offset. Then you can delete TX Freq column.

	Band plan File Edit	n (demo) View Insert	☆ 🗈 ⊙ Format Data	Tools Add-	ons Help <u>Laste</u>	dit was sec	onds ago	0		â Share	
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F:F	• JX	Tone	c	D	F	F	G	н	1		
1	Location =	Name	- Frequency -	Duplex	= Offset =	Tone	Tone	= rToneFreg	- cToneFreq	= DtcsCode	- Dtcs
4	3	10U3D	446.2125		0	TS1	CC1	High	Yes		DME
5	4	10U4	449.9250		0	TS2	CC8	High	Yes		R1 A
11	10	11U6D	446.2750		0	TS1	CC1	High	Yes		R1D
22	21	12U11D	446.2000		0	TS1	CC1	High	Yes		DMF
44	43	13U1D	446.2250		0	TS1	CC1	High	Yes		DMF
49	48	14U8D	446.2500		0	TS1	CC1	High	Yes		DMF
54	53	15U5	446.8250		5	TS2	CC1	High	Yes		Bran
57	56	15U8D	446.2875	+	2	TS1	CC1	High	Yes		DMF
69	68	16U12D	446.3000		0	TS1	CC1	High	Yes		DMF
76	75	ST ANT	447.8250	-	5	DCS	DCS 73	High	Yes	6	i.4 DRC
231	230	Reserved			0						
230	235	235 40M	3.8100		0	NA		High	NA		State
238	230	230 ZUM	7.2350		0	NA		High	NA		State
239	237	UHEPKT	441.0750		0	NA		High	NA		KON
240	239	VHFPKT	145.0500		0	NA		High	NA		KON
241	240	SSBPKT	14.1050		0	NA		High	NA		W0\
	Add 10	100 more	e rows at bottom.								

Start filtering, and ignore Tones with "Tone" or "None" because I probably want to keep those.

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4:69	* <i>J.</i> A	X 3 B	C D	E	F	G	Н	I	L	
1	Location	⇒ Name	∓ Frequency ∓ Duplex	⇒ Offset		Tone	⊤ rToneFreq	= cToneFreq	= DtcsCode	= Dtcs
4		3 10U3D	446.2125		0 TS1	CC1	High	Yes		DMF
5		4 10U4	449.9250		0 TS2	CC8	High	Yes		R1 A
11		10 11U6D	446.2750		0 TS1	CC1	High	Yes		R1D
22		21 12U11D	446.2000		0 TS1	CC1	High	Yes		DMF
44		43 13U1D	446.2250		0 TS1	CC1	High	Yes		DMF
49		48 14U8D	446.2500		0 TS1	CC1	High	Yes		DMF
54		53 15U5	446.8250 -		5 TS2	CC1	High	Yes		Bran
57		56 15U8D	446.2875 +		2 TS1	CC1	High	Yes		DMF
69		68 16U12D	446.3000		0 TS1	CC1	High	Yes		DMF
76		75 ST ANT	447.8250 -		5 DCS	DCS 73	High	Yes		6.4 DRC
231		230 Reserved			0					
236		235 235 40M	3.8100		0 NA		High	NA		State
237		236 236 20M	7.2350		0 NA		High	NA		State
238		237 Reserved			0					
239		238 UHFPKT	441.0750		0 NA		High	NA		KON
240		239 VHFPKT	145.0500		0 NA		High	NA		KON
	Add	1000 m	ore rows at bottom.							

Chirp will vomit if we try to import them

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F:F		fx Tone											
	A	В	С	D	E		F		G	Н	I	J	
1	Location	[→] Name	= Frequency =	Duplex	= Offset =	Tone	Ŧ	Tone	Ŧ	rToneFreq	= cToneFree	= DtcsCode	= Dtcs
52		59 16V3	146.6700	-	0.6	Tone			100.0	High	Off		R1D
53		60 16U4	449.0500	2	5	Tone			107.2	High	Off		R1D
54		61 16U5	448.5000	-	5	Tone			100.0	High	Off		R1D
55		62 16U6	448.9750	2	5	Tone			123.0	High	Off		R1D
56		63 16V7	145.4000	-	0.6	Tone			100.0	High	Off		R1D
57		64 16V8	145.3100	-	0.6	Tone			88.5	High	Off		R1D
58		65 16V9D	146.4300		0					High	Off		R1D
59		66 16V10D	147.5400		C					High	Off		R1D
60		67 16U11D	446.1500		C					High	Off		R1D
61		69 UCALL1	446.0000		C					High	Off		Nati
62		70 VCALL1	146.5200		C					High	Off		Nati
63		71 SKWARN	146.5500		C					High	Off		Nati
64		74 WMN300	449.3000	-	5	Tone			100.0	High	Off		5.4 N1U
65		75 ST ANT	447.8250	-	5	DTCS		DCS 73		High	Yes		6.4 DRC
66		76 LKOUT	447.1750	-	5	Tone			100.0	High	Off		6.9 Look
67		77 BL MTN	145.4750	-	0.6	_				High	Off		7.0 IRG
68		78 LKWOOD	448.7500	-	5	Tone			100.0	High	Off		7.0 NOE
70		79 DEN715	146.7150	-	0.6	Ione			123.0	High	off		7.0 Den
70		80 DEN075	448.0750	• 0	5	Tone			123.0	High	Off		7.0 Den
72		81 DEN550	448.5500	-	5	Tone			82.5	High	Off		7.0 Den
72		82 DEN925	447.9250	-	5	Ione			100.0	High	011		7.0 Den
74		84 NGLENN	447.9000	+	0.6	Tone			122.0	High	Off		7.0 Den
75		85 GOLDN	448 1250	2	0.6	Tone			107.2	High	Off		7.6 KUIV
76		86 BRMFLD	448.1250			Tone			131 9	High	Off		8.1 Broc
		55 DIMMILD	440.9230		3	- One			131.0				0.1 0100

"Tone" can stay "None" changes to blank "NA" changes to blank "DCS" changes to "DTCS"

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G:H	• fx	cToneFreq										
	D	E F	G		н	L.	J	K	L	М		
1	Duplex =	Offset = Tone	= cToneFreq		íoneFreq 🔫	{Power}	= {Narrow FM} =	DtcsCode =	DtcsPolarity	- Mode	⊤ TSte	
55	-	5 Tone		123.0	123.0	High	Off		R1D6 Addl UHF	Allstar Blue N	It WOGV	
56		0.6 Tone		100.0	100.0	High	Off		R1D6 Addl VHF,	Smokey Hill		
57	-	0.6 Tone		88.5	88.5	High	Off		R1D6 ColCon, T	horodin Mour	ntain	
58		0				High	Off		R1D6 Primary V	/HF Simplex		
59		0				High	Off		R1D6 Primary U	JHF Simplex		
60		0				High	Off		R1D6 Secondar	y UHF Simplex		
61		0				High	Off		National UHF FI	M Calling Freq	uency	
62		0				High	Off		National VHF FI	M Calling Freq	uency	
0.3		0				High	Off		Nationwide Wx	Spotter Simpl	ex	
65		5 Ione	0.00 72	100.0	0011	High	Uff	5.4	NIUPS, 77th an	to Newton	N	
66	-	5 DICS	DCS 73	100.0	100.0	High	Tes Off	6.4	DRC Lakewood	St Anthony's (Narrow Banc	
67		0.6		100.0	100.0	High	off	7.0	IRG Blue Mount	tain		
68		5 Tone		100.0	100.0	High	Off	7.0	NOFLY, Lakewood	d		
69		0.6 Tone		123.0	123.0	High	Off	7.0	Denver			
70	-	5 Tone		123.0	123.0	High	Off	7.0	Denver			
71	-	5 Tone		82.5	82.5	High	Off	7.0	Denver			
72	-	5 Tone		100.0	100.0	High	Off	7.0	Denver			
73		5				High	Off	7.0	Denver			
74	+	0.6 Tone		123.0	123.0	High	Off	7.8	KOML, Exact loc	ation unkown		
75	-	5 Tone		107.2	107.2	High	Off	7.8	Golden			
76	-	5 Tone		131.8	131.8	High	Off	8.1	Broomfield			
77	+	0.6 Tone		100.0	100.0	High	Off	8.5	DRC, Green Mo	untain		
78		5 Tone		100.0	100.0	High	Off	10.6	Lakewood, exac	t location unk	own	
79	-	5 Tone		107.2	107.2	High	Off	11.3	Morrison Mt. N	torrison		

I'm assuming cToneFreq is for TX and rToneFreq is for receive. However, all of these channels are set to "Tone" and not "TSQL", so the rToneFreq will be ignored. I arbitrarily copied the values from cToneFreq into rToneFreq.

Notice that the band plan had put a DCS tone in this column. Chirp is not going to like that, so move that to its own DtcsCode column and clear the values here.

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	F	G	н	i i		К	1	м	N	0		
	1 Tone =	cToneFreg =	rToneFreg =	(Power)	(Narrow FM)	(Distance)	DtcsCode	- Comment	Mode	TStep	= Skip	
	2 Tone	146.2	146.2	High	Off	(,		NCR Ops "A" Cas	t FM			
	3 Tone	203.5	203.5	High	Off			NCR Ops "B" Par	kt FM			
	4 Tone	141.3	141.3	High	Off			R1D1 Primary UI	H FM			
	5 Tone	100.0	100.0	High	Off			R1D1 Secondary	E FM			
	6 Tone	141.3	141.3	High	Off			R1D1 Cedar Poir	t FM			
	7			High	Off			R1D1 Primary Si	m FM			
	8			High	Off			R1D1 Secondary	S FM			
	9 Tone	100.0	100.0	High	Off			R1D2 Primary Vi	HF FM			
	10 Tone	141.3	141.3	High	Off			R1D2 Primary UI	HI FM			
	11 Tone	88.5	88.5	High	Off			R1D2, ARA, Coni	fe FM			
	12 Tone	141.3	141.3	High	Off			R1D2 RMHAM,	SC FM			
	14			High	off			R1D2 Primary Vi	HE FM			
	15 Tope	100.0	100.0	High	Off			R1D2 Secondary	I EM			
	16 Tone	103.5	103.5	High	Off			R1D2 Secondary	EM			
	17 Tone	141.3	141.3	High	Off			R1D2 Chief Mou	n FM			
	18 Tone	141.3	141.3	High	Off			R1D2	FM			
	¹⁹ Tone	100.0	100.0	High	Off			R1D2 Secondary	V FM			
	20 Tone	141.3	141.3	High	Off			R1D2, Lee Hill	FM			
	²¹ Tone	100.0	100.0	High	Off			R1D2, Guy Hill	FM			
	22 Tone	88.5	88.5	High	Off			R1D2, Guy Hill	FM			
	23 Tone	88.5	88.5	High	Off			R1D2 ARA Critch	e FM			
	24			High	Off			R1D2 Primary U	HI FM			
	25			High	Off			R1D2 Secondary	LFM			
	20 Tone	1/1 3	141 3	High	Off			D1D2 D77 Doxtok	LICAS		*	

Vast majority of these are implicitly "FM" (at least in my case)

		{Power}						. ш			,		
-	F	G	Н	1	Ĺ	к	L		М	N	0		
1	Tone	cToneFreq 👎	rToneFreq 🗧	{Power}	Narrow FM}	{Distance}	DtcsCode	Ŧ	Comment =	Mode	= TStep	=	Skip
65	DTCS	107.2	107.2	High	Yes	6.	1	73.0	DRC Lakewood St	NFM			
207	Tone	107.2	107.2	High	On	23.	1		CRA Eldora Moun	NEM			
208				Low	On				Receive Only	NEM			
209				Low	On				Receive Only	NEM			
220	Tone	107.2	107.2	High	NA	8.	5		Lakewood Green	FM			
221	Tone	107.2	107.2	High	NA	10.	3		Mt. Morrison, Mo	FM			
222	Tone	107.2	107.2	High	NA	74.	5		Cheyenne Mounta	FM			
223	Tone	88.5	88.5	High	NA	93.	5		Canyon City, Free	FM			
224				High	NA				State HF LSB	LSB			
226				High	NA				KONTS-10 9600 B	EM			
227				High	NA				KONTS-10 1200 Ba	FM			
228				High	NA				W0VG	FM			
220 221 222 223 224 225 226 227 228	Tone Tone Tone Tone Add 1	107.2 107.2 107.2 88.5 000 more ro	107.2 107.2 107.2 88.5 ws at bottom.	High High High High High High High High	NA NA NA NA NA NA NA NA	8. 10. 74. 93.	5 5 5		Lakewood Green I Mt. Morrison, Mo Cheyenne Mount. Canyon City, Free State HF LSB State HF LSB KONTS-10 9600 Ba KONTS-10 1200 Ba WOVG	FM FM FM FM LSB LSB FM FM FM			

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These columns from the band plan are TX Power, Narrow FM and Distance. TX Power and Distance are not relevant at all to Chirp. Narrow FM is part of the mode, so we'll change those rows from "FM" to "NFM". Then we can delete those columns completely.

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	LQ	Н	I	L	К		L	4 N	0	Р	0		
	1 ,	rToneFreg =	DtcsCode	- Comment -	Mode	- TStep	= Skip	- URCALL	= RPT1CALL	= RPT2CALL	= DVCODE	=	
	55	123.0		R1D6 Addl UHF.	ALEM								
	56	100.0		R1D6 Addl VHF. S	5r FM								
	57	88.5		R1D6 ColCon, Th	o FM								
	58			R1D6 Primary VH	HF FM								
	59			R1D6 Primary UH	HI FM								
	60			R1D6 Secondary	L FM								
	61			National UHF FM	1 FM								
	62			National VHF FM	I (FM								
	0.3			Nationwide Wx S	S¢ FM								
	65			Reserved for NCS	S FM								
	66	100.0		Nation 77th and									
	67	100.0	7	73 DRC Lakewood S	t NEM								
	68	100.0	,	Lookout Mounta	ir FM								
	69			IRG Blue Mounta	aii FM								
	70	100.0		NOELY, Lakewood	FM								
	71	123.0		Denver	FM								
	72	123.0		Denver	FM								
	73	82.5		Denver	FM								
	74	100.0		Denver	FM								
	75			Denver	FM								
	76	123.0		KOML, Exact loca	ti FM								
	77	107.2		Golden	FM								
	78	131.8		Broomfield	FM								
	19	100.0		DRC, Green Mou	in FM								

Some fields are optional, and our band plan gave us no information to put in them. So just delete those.

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	В	C D	E	F G	н	T	J K	
1	Name	Frequency = Duplex		🝸 cToneFreq \Xi r	ToneFreq = DtcsCo	de \Xi Ci	omment = Mode	-
7	11V4D	147.4350	0	88.5	88.5	23.0 R	1D1 Primary Sim FM	
8	11U5D	445.8000	0	88.5	88.5	23.0 B	1D1 Secondary S FM	
13	12V5D	146.5500	0	88.5	88.5	23.0 R	1D2 Primary VHF FM	
14	12V6D	147.5550	0	88.5	88.5	23.0 R	1D2 Secondary V FM	
24	12U19D	446.1250	0	88.5	88.5	23.0 R	1D2 Primary UHI FM	
25	12U20D	446.1750	0	88.5	88.5	23.0 R	1D2 Secondary L FM	
34	13V4D	146.4000	0	88.5	88.5	23.0 R	1D3 Simplex Net FM	
35	13V5D	144.3700	0	88.5	88.5	23.0 R	1D3 Simplex FM	
43	14V7D	146.4600	0	88.5	88.5	23.0 R	1D4 - Simplex VF FM	
48	15U6D	445.7250	0	88.5	88.5	23.0 R	1D5 "Palmer" FM	
49	15V7D	147.4200	0	88.5	88.5	23.0 R	1D5 Primary Voic FM	
58	16V9D	146.4300	0	88.5	88.5	23.0 R	1D6 Primary VHF FM	
59	16V10D	147.5400	0	88.5	88.5	23.0 R	1D6 Primary UHI FM	
60	16U11D	446.1500	0	88.5	88.5	23.0 R	1D6 Secondary L FM	
61	UCALL1	446.0000	0	88.5	88.5	23.0 N	lational UHF FM (FM	
62	VCALL1	146.5200	0	88.5	88.5	23.0 N	lational VHF FM (FM	
63	SKWARN	146.5500	0	88.5	88.5	23.0 N	lationwide Wx Sr FM	
72	BL MTN	145.4750 -	0.6	88.5	88.5	23.0 IR	RG Blue Mountair FM	
152	DEN900	447.9000 -	5	88.5	88.5	23.0 D	enver FM	
207	ALLES 1	147.2700 +	0.0	88.5	0.55	23.0 0	acaiva Ophy NEA4	
207	MURS 1	151.6200	0	88.5	68.5	23.0 R	acoluo Only NEM	
209	MURS 2	151.8800	0	99.5	99.5	23.0 N	aceive Only NEM	
210	BLDOT	154.5700	0	28.5	88.5	23.0 R	eceive Only FM	
211	GR DOT	154.6000	0	88.5	88.5	23.0 R	eceive Only FM	*
	0	10 110000	0	00.5	30.5	2010 10	course only The	*

Some values are allowed to be blank, but unfortunately, cToneFreq, rToneFreq, and DtcsCode must have some value even when they're not relevant. Backfill those with something like 88.5 for CTCSS tones and 023 for DCS tones. Maybe this bug will be fixed someday?

	Band plan (demo)	🗇 🕑	e Add-one Hel	In Lactor	lit was 2 mir	utes ano			••	ê s	hare	
-	Chara	× 0 00 122-	Default (Ca	10	D T	c A A	— 52		1 - 15 -	De-		
	Share		Deladit (Ca +	10	Бт	<u>a</u> 4.	m 25	= -	± • 17 •			~
A1	New >	0	0	F	E.	0		ы	1			
1 10	Onen Otelu O			• =	Tone	ToneFreg	= rTone	Fred T	DterCode	= 60	ment	= Mor
2	Open CIN+O	447.525 -	iex Olise		Tono	teronerreq	46.2	146.2	Dicacode	22 NC	R Ope "A"	Costl EM
3	Import	447.525 -		5	Tone	2	03.5	203.5		23 NC	R Ops "B"	Parke FM
4	Make a conv	448.225 -		5	Tone	1	41.3	141.3		23 B1	01 Primar	VUHEEM
5	mane a copy	146.985 -		0.6	Tone		100	100		23 R10	J1 Second	dary, EFM
6	-	449.25 -		5	Tone	1	41.3	141.3		23 R1	D1 Cedar	Point FM
7	Email >	147.435		0			88.5	88.5		23 R1)1 Primar	y Sim FM
8	Download +	Minnerth	(used (used)				88.5	88.5		23 R10	01 Second	dary S FM
9		MICIOSOITE	xcei (.xisx)				100	100		23 R1	02 Primar	VHF FM
10	Make available offline	OpenDocur	nent format (.ods	s)		1	.41.3	141.3		23 R1	02 Primar	Y UHI FM
11	Version history >	PDE docum	ant (ndf)				88.5	88.5		23 R11	32, ARA, 0	Conife FM
12		PDF docum	ient (.pui)				41.3	141.3		23 R1	2 RMHA	AM, Sc FM
13	Pename	Web page (.html, zipped)				88.5	88.5		23 R11)2 Primar	VHF FM
15		Comma-se	narated values (sv current	sheet)		100	88.5		23 R1	02 Second	dary V FM
16	Move	oonna-se	parated rulues (.e	sor, current	onocij	1	03.5	103 5		25 R11	12 Second	
17	Add shortcut to Drive	Tab-separa	ted values (.tsv, c	current shee	rt)	1	41.3	103.5		23 R1	02 Chief M	Mount FM
18	Out of the office	447.225 -		5	Tone	1	41.3	141.3		23 R1	22	FM
19	Move to trash	146.88 -		0.6	Tone		100	100		23 R1	J2 Second	dary V FM
20		447.75 -		5	Tone	1	.41.3	141.3		23 R1	02, Lee Hi	II FM
21	Publish to the web	147.15 +		0.6	Tone		100	100		23 R1	2, Guy H	iil FM
22		448.85 -		5	Tone		88.5	88.5		23 R1)2, Guy H	III FM
23	Document details	447.5 -		5	Tone		88.5	88.5		23 R1	2 ARA Cr	ritche FM
24	Document details	446.125		0			88.5	88.5		23 R1	02 Primar	Y UHI FM
25	Spreadsheet settings	446.175		0			88.5	88.5		23 R1	02 Second	dary L FM
26		4473 -		5	Tone	1	41 3	141 3		23 R1I	12 B77 Po	ertable FM *

nport int	o Ch	irp				Rocky Mou Ham Ra
				Import From File	8	
	Import To	From Name	Frequency	Comment	1	
	2 1	I 10U1	447.525000	NCR Ops "A" Castle Rock (Devil's Head)		
	✓ 2 2	2 10U2	447.525000	NCR Ops "B" Parker Hess Reservoir		
	✓ 5 1	5 11U1	448.225000	R1D1 Primary UHF RMHAM Squaw		
	₩ 6 0	5 11V2	146.985000	R1D1 Secondary, El Jebel Rad Ops, Cent. Cone		
	✓ 7. 1	7 11U3	449.250000	R1D1 Cedar Point		
	✓ 8 4	3 11V4D	147.435000	R1D1 Primary Simplex		
		ə 11U5D	445.800000	R1D1 Secondary Simplex		
	👻 11 °	11 12V1	146.640000	R1D2 Primary VHF, Cent. Cone		
	💌 12 ·	12 12U2	449.225000	R1D2 Primary UHF, Thorodin		
	👻 13 °	13 12V3	147.120000	R1D2, ARA, Conifer Critchell Mt.,		
		14 12U4	448.225000	R1D2 RMHAM, Squaw Mtn		
	✓ 15 *	15 12V5D	146.550000	R1D2 Primary VHF Simplex		
	💌 16 °	16 12V6D	147.555000	R1D2 Secondary VHF Simplex		
	✓ 17 17	17 12U7	449.600000	R1D2 Secondary UHF Repeater		
	✓ 18	18 12U8	449.450000	R1D2, Squaw		
	✓ 19	19 12U9	449.625000	R1D2 Chief Mountain		
	✓ 20	20 12U10	447.225000	R1D2		
	✓ 22	22 12V13	146.880000	R1D2 Secondary VHF, Warren Mountain		
	✓ 23	23 12U14	447.750000	R1D2, Lee Hill		
	✓ 24 2	24 12V15	147.150000	R1D2, Guy Hill		
	✓ 25 2	25 12U17	448.850000	R1D2, Guy Hill		
	✓ 26 2	26 12U18	447.500000	R1D2 ARA Critchell Mountain, Conifer		
	✓ 27 2	27 12U19D	446.125000	R1D2 Primary UHF Simplex		
	✓ 28	28 12U20D	446.175000	R1D2 Secondary UHF Simplex		
	Select Ad	just New Locat				
	ALL INO IDV +I			KPI		

Opportunity here to move channels around if needed

Γ

v!												
,						CHIRP						- (
File Edit View F	tadio Help											
Generic CSV: Unt	itled.csv* ×											
Memories Memo	ory Range:		Refresh	Special Channel	s Show Empty	Properties						
	Frequency	Name	Tone Mode	Tone ToneSo	DTCS Code	DTCS Pol	Dunley	Offset	Mode	Tune Sten		Comment
54	445.725000	15U6D	(None)	Tone	breb code		(None)		FM	5.0	onap	R1D5 "Palmer"
	147.420000	15V7D	(None)				(None)		FM			R1D5 Primary Voice linked to S
57	146.940000	16V1	Tone	103.5			-	0.600000	FM	5.0		R1D6 Primary VHF Squaw, RMR
58	147.300000	16V2	Tone	103.5			+	0.600000	FM	5.0		R1D6 Secondary VHF Squaw N
	146.670000	16V3	Tone	100.0				0.600000	FM			R1D6 Alternate VHF Squaw CRF
	449.050000	16U4	Tone					5.000000	FM			R1D6 Primary UHF Squaw WG
	448.500000	16U5	Tone	100.0				5.000000	FM			R1D6 Secondary UHF CRRG, Sm
	448.975000	16U6	Tone	123.0				5.000000	FM			R1D6 Addl UHF, Allstar Blue Mt
	145.400000	16V7	Tone	100.0				0.600000	FM	5.0		R1D6 Addl VHF, Smokey Hill
	145.310000	16V8	Tone	88.5				0.600000	FM	5.0		R1D6 ColCon, Thorodin Mount
	146.430000	16V9D	(None)				(None)		FM	5.0		R1D6 Primary VHF Simplex
66	147.540000	16V10D	(None)				(None)		FM	5.0		R1D6 Primary UHF Simplex
67	446.150000	16U11D	(None)				(None)		FM	5.0		R1D6 Secondary UHF Simplex
69	446.000000	UCALL1	(None)				(None)		FM	5.0		National UHF FM Calling Frequ
70	146.520000	VCALL1	(None)				(None)		FMT -	5.0		National VHF FM Calling Frequ
	140.550000	JAMAN200	(None)	100.0			(None)	5 000000	EM	5.0		Nationwide wx Spotter Simple
74	449.300000	ST ANT	DTCS	100.0	073	NN		5.000000	NEM	5.0		DPC Lakewood St Anthony's (A
75	447175000	IKOUT	Tone	100.0				5 000000	FM	5.0		Lookout Mountain
77	145 475000	BI MTN	(None)	10010				0.600000	FM	5.0		IRG Blue Mountain
78	448.750000	LKWOOD	Tone	100.0				5.000000	FM	5.0		N0ELY, Lakewood
79	146.715000	DEN715	Tone	123.0				0.600000	FM	5.0		Denver
80	448.075000	DEN075	Tone	123.0				5.000000	FM	5.0		Denver
	448.550000	DEN550	Tone	82.5				5.000000	FM			Denver
	447.925000	DEN925	Tone	100.0				5.000000	FM			Denver
	447.900000	DEN900	(None)					5.000000	FM			Denver
84	147.045000	NGLENN	Tone	123.0				0.600000	FM			KOML, Exact location unkown
85	448.125000	GOLDN	Tone	107.2				5.000000	FM	5.0		Golden

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Generic band plan contains channels from any band, and even non-ham frequencies that we can program as RX only. Only when we get to a particular radio do bands start to matter.



Transferring to Radios

General Process

- 1. Read from radio
- 2. Copy from generic (CSV) codeplug into radio-specific one
- 3. Write to radio

Need a cable





Baofeng UV-5R

- Clone mode
- Only 127 channels, so might have to cut/paste some things around





Conv/Pasta (odoplug		
Copy/ Faste C	ouepiug	Rocky Mour	ntain
File Edit View Radio Help	CHIRP	- ®	10
Generic CSV: Chirp Band Plan V7.3.csv × Baofeng L	-SR: (Untitled)* ×		
Memories Memory Panger	Special Channels, Show Empty, Droperties		
Settings Loc. Eraguancy Name Tone Mode	Tono TonoSal DTCS Code DTCS Dv Code DTCS Dol Croce Mode Duple	slav Offent Mada Dawar Skin	
0 0 000000 (None)	Inne Innesqu Dics code Dics in code Dics Por cross mode Duple.	ne) FM	
1 447.525000 10U1 Tone	146.2 -	5.000000 FM High	
2 447.525000 10U2 Tone	203.5 -	5.000000 FM High	
3 0.000000 (None)	(None)	ne) FM	
4 0.000000 (None)	(None	ne) FM	
5 448.225000 11U1 Tone		5.000000 FM High	
6 146.985000 11V2 Tone	100.0 -	0.600000 FM High	
7 449.250000 11U3 Tone		5.000000 FM High	
8 147.435000 11V4D (None)	(None	ne) FM High	
9 445.800000 11U5D (None)	(None)	ne) FM High	
10 0.000000 (None)	(None	ne) FM	
11 146.640000 12V1 Tone	100.0 -	0.600000 FM High	
12 449.225000 12U2 Tone	141.3 -	5.000000 FM High	
13 14/120000 12V3 Tone	88.5 +	0.600000 FM High	
14 448.223000 1204 Tone	141.3 - (11	SUUUUUU FM High	
15 146.350000 12V5D (None)	(None)	ne) FM High	
17 669 600000 12117 Tope	100.0	5.000000 EM High	
18 449450000 1218 Tone	103.5 -	S DODODO FM High	
19 449.625000 12U9 Tone	141.3	5.000000 FM High	
20 447.225000 12U10 Tone		5.000000 FM High	
21 0.000000 (None)	(None	ne) FM	
22 146.880000 12V13 Tone	100.0 -	0.600000 FM High	
23 447.750000 12U14 Tone		5.000000 FM High	
24 147.150000 12V15 Tone	100.0 +	0.600000 FM High	
25 448.850000 12U17 Tone	88.5 -	5.000000 FM High	
26 447.500000 12U18 Tone	88.5 -	5.000000 FM High	
27 446.125000 12U19D (None)	(None	ne) FM High	
28 446.175000 12U20D (None)	(None,	ne) FM High	
29 447.300000 12026 Tone 30 448.050000 12026 Tone	179.9	5.000000 FM High	
31 449.65000 12027 Tone	100.0	5.00000 FM High	
32 449.825000 12029 Tone	103.5	5.000000 FM High	
33 448.325000 12U38 Tone	179.9 -	5.000000 FM High	
34 146.760000 13V1 Tone		0.600000 FM High	
	[0] Completed Getting me	memory 127 (idle)	

Radio only has 128 channels and our generic codeplug has up to 241; have to pick and choose which channels to copy

Careful of "Show Empty" setting if channel numbers are important

Bill Composition Composition Setting Advanced Setting Setting	Settings			Rocky Mountain
Trie Edit Vew Radio Help Generic CSUC Dib Back Settings Final South Level: 5 Setting Advance: 5 Ph Abdo There Back Settings Wirk Madio Help Beschipt Himaout: 5 Back Settings Frequency - Setvice Setting Frequency - Back Settings Frequency - Standby LDColor Back - Wirk Madio Help Frequency - Standby LDColor Back - Roger Beep: Enabled		CHIRP	- 8	Ham Radio
MemoriesSubsidiariesContro Squalch Level:SService SettingsUnit SettingsIbacting Threeus:SWork Mode SetBacking Service SettingTimeout Time:B SetService SettingTimeout Time:B SetSDiplap Mode (B):Frequency -Diplap Mode (B):Frequency -Diplap Mode (B):Frequency -Statbyl (ED Color:NurgeTX LED Color:NurgeSRoger Beep:Roger Beep:EnabledFrequency -Statbyl (ED Color:NurgeSRoger Beep:EnabledFrequency -Statbyl (ED Color:NurgeSRoger Beep:EnabledFrequency -Statbyl (ED Color:NurgeSRoger Beep:EnabledFrequency -Statbyl (ED Color:NurgeSRoger Beep:EnabledFrequency -Statbyl (ED Color:NurgeSStatbyl (ED Color:NurgeSRoger Beep:EnabledFrequency -Statbyl (ED Color:NurgeSStatbyl (ED Color:SSStatbyl (ED Color:SSStatbyl (ED Color:SSStatbyl (ED Colo:SSStatbyl (ED Colo:SS <td>File Edit View Radio Help Generic CSV: Chirp Band Plan V7.3.csv × Be</td> <td>feng UV-SR: (Untitled)* ×</td> <td></td> <td></td>	File Edit View Radio Help Generic CSV: Chirp Band Plan V7.3.csv × Be	feng UV-SR: (Untitled)* ×		
	Memories Back Settings Convert Squetcl Setting Advanced Sett Batter VDAP settings Backlight T Timeout VTM Radio Pere DTM Settings Service Setting Service Setting Stanty LEI RX LEI RX LEI RX LEI RX LEI	tevel: 5 1 Saver: 13 1 Even: 5 1 Even: 5 0 sect - 1 Even: 5 0		

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Kenwood TH-D72

• Clone mode or Live mode



Download from Radio



No Instructions Needed!



				CI	HIRP	- 🙁
File Edit View I	Radio Help	cours Kenwood	FH-D?2 (rlone mode): (IIntitled)*			
Memories Mem	rp band Plan V7.5	.csv · Keilwood	rH-D/2 (clone mode). (onclued)	^		
Settings	ory kange:	e . Reir	sn special channels show Emp	ny Propercies		
211	147.200000 SH	1011e Tolle Mou	oo.o	cross mode Duplex	U.OUUUUU FM	
212	145.295000 SA	L295 Tone			0.600000 FM	
213	449.650000 SA	L650 Tone	107.2		5.000000 FM	
214	449.925000 SA	L925 Tone	103.5		5.000000 FM	
215	146.6/0000 Sh 165.305000 ST	M6/U Ione	107.2		0.600000 FM	
210	151.820000 MI	IRS 1 (None)	100.0	(None)	NEM	
218	151.880000 ML	JRS 2 (None)		(None)	NFM	1
219	151.940000 ML	JRS 3 (None)		(None)	NEM	
220	154.570000 BL	DOT (None)		(None)		
221	154.600000 GR	DOT (None)		(None)		
222	462.562500 FG	RS 1 (None)		(None)	FM	
223	462.587500 FG	RS 2 (None)		(None)	FM	
224	162.550000 NC	JAA1 (None)		(None)	FM EM	
225	162,400000 NC	0443 (None)		(None)	FM	
227	162.425000 NC	DAA 4 (None)		(None)		
228	162.450000 NC	DAA 5 (None)		(None)		
229	162.500000 NC	DAA 6 (None)		(None)		
230	0.000000	(None)		(None)		
231	0.000000	(None)		(None)		
232	0.000000	(None)		(None)	FM	
233	0.000000	(None)		(None)	FM	
234	0.000000	(None)		(None)	EM	
235	0.000000	(None)		(None)	FM	
237	0.000000	(None)		(None)		
238	441.075000 UH	IFPKT (None)		(None)		
239	145.050000 VH	IFPKT (None)		(None)		
240	0.000000	(None)		(None)		
241	144.390000 AP	RS (None)		(None)	FM	
242	0.000000	(None)		(None)	FM	
243	0.000000	(None)		(None)	FM	
244	0.000000	(None)		(None)	FM	

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Settings	Rocky Mountain Radio
ChiRP -	
rine zon view Kallon Help Generic CSC Chirp Band Pan IV.3.czw Kenwood TH-Dr2 (clone mode): (Untilled)* -	
Memorine Deglacy Power on message: HLUB Setting Audo LD Contrast: Level 7 Lamp Control: Manual Lamp Time: Seconds 5	
[0] Completed Writing memory 241 (idle)	

This particular radio only exposes a few

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Upload to Radio



No Instructions Needed!







Yaesu FT3D

- CHIRP doesn't support SD card
- What happens to C4FM channels?





This one takes a while, over a minute

py/F);	ast	te	C	od	ep	oluo	a		Com 20
File Edit Vie	w Rad	dio Help				•	•	СНІВ	RP	– 🛞
Generic CSV:		Band Plan V7.		Yaesu FT3D: (U	Untitled)* ×					
Memories	Memo	ory Range:		Refresh	Special Channels	Show Emp	ty Properties			
Banks							Offset Mod			e Step Skip
Bank Names		447.525000	10U1	Tone	146.2		5.000000 FM	Hi	5.0	
Settings		447.525000		Tone	203.5		5.000000 FM			
		0.0000000		(None)		(None)	FM		5.0	
		0.000000	44114	(None)		(None)	FM		5.0	
		446.225000	111/2	Tone	100.0		0.600000 FM	u:	5.0	
		449 250000	111/2	Tone	141 3		5.000000 FM	Hi	5.0	
	8	147 435000	11V4D	(None)		(None)	FM	Hi	5.0	
		445.800000	11U5D	(None)		(None)	FM	Hi	5.0	
		0.000000		(None)		(None)	FM		5.0	
		146.640000		Tone	100.0		0.600000 FM		5.0	
		449.225000		Tone			5.000000 FM		5.0	
		147.120000					0.600000 FM			incompatible Memory
		448.225000					5.000000 FM			
		146.550000	12V5D	(None)		(None)			5.0	
		147.555000	12V6D	(None)		(None)			5.0	Pasted memory 217 is not compatible with this radio becaus
		449.600000		Tone	100.0		5.000000 FM		5.0	Mode NEM not supported
	18	449.450000	12U8	Tone	103.5		5.000000 FM		5.0	mode nim not supported
	19	449.625000	1209	lone	141.3		5.000000 FM	Hi	5.0	
	20	447.225000	12010	(hlass)	141.3		5.000000 FM	HI	5.0	Cancel OK
	21	146 990000	12)/12	(none)	100.0	(None)	0.600000 FM		5.0	
	22	447 750000	12013	Tone	141 3		5.000000 FM	Hi -	5.0	
	74	147150000	12014	Tone	100.0		0.600000 FM	Hi -	5.0	
	25	448.850000	12U17	Tone	88.5		5.000000 FM	Hi	5.0	
	26	447.500000	12U18	Tone	88.5		5.000000 FM		5.0	
		446.125000	12U19D	(None)		(None)				
		446.175000	12U20D	(None)		(None)				
		447.300000	12U26				5.000000 FM			
		448.050000		Tone			5.000000 FM			
		449.425000			100.0		5.000000 FM			
	32	449.825000		Tone			5.000000 FM			
		448.325000	12U38	Tone	179.9		5.000000 FM	Hi		
	33 34	448.325000 146.760000	12U38 13V1	Tone Tone	179.9		5.000000 FM 0.600000 FM	Hi	5.0 5.0	

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Settings			Rocky Mountain Ham Radio
ette entre internette inter		c	- 😻
File Edit View Radio Help Generic CSV: Chim Band Plan VZ	3 csv × Yaesu FT3D: (Untit)	ed)* ×	
Memories APRS General	My Callsign: #	KOSWE	
Banks APRS Receive	My SSID: 7	walkie talkies, HT's or other human portable	
Settings APRS SmartBe	My Symbol: /	'[Person	
APRS Message: APRS Baacons	User Selected Symbol: 1		
DTMF	Position Comment: c	off duty	
Misc	My Position: 0	SPS	
Backtrack	Manual Latitude: 0	0.00000	
	Manual Longitude: 0	0.00000	
			·
	Timezone: -	06:00	
	APRS Speed Units: n	nph	
	GPS Speed Units: n	nph	
	APRS Altitude Units: f		•
	GPS Altitude Units: f		•
	APRS Position Format: c	id.mmmm'	•
	GPS Position Format: c	id.mmmm'	•
	APRS Distance Units: n	nile	
	APRS Wind Speed Units: In	nph - th	
	APRS Rain Units:	- -	
	APRS Temperature Units: F		
			[0] Completed Retrieving Bank information (idle)



Again, takes a while





Contact Me

k0swe@arrl.net