

Scanner Programming

A good reference for active frequencies is Radio Shack's "Call the Police Directory, Including Fire and Emergency". We update this directory every year, so be sure to get a current copy. Additionally, refer to "Reception Notes" and "Searching for Active Frequencies" in this manual.

1. Turn on your scanner by turning in the VOLUME direction.
2. Press MANUAL, enter the channel number you want to program, then press MANUAL. The channel number you wish to program appears.
3. Enter a frequency.
4. Press ENTER to save the frequency.

If you make a mistake in step 3, error appears on the screen. Proceed again with step 3.

5. If you want your scanner to pause after each transmission before scanning to the next channel, press DELAY so that DLY appears in the display. See "Using the Delay Function".
6. To program more channels, repeat steps 2-4. If you want to program the next channel in order, press MANUAL and repeat steps 3-4.

A CONTROL setting

Use the SQUELCH control to decrease the sensitivity of your scanner to weak signals. This allows the scanner to only receive the strongest transmissions.

1. Turn the squelch and VOLUME all the way to the left.
2. Turn the volume until you hear a hissing sound.
3. Slowly turn the SQUELCH control until the hissing stops.

Channel scanning

To start scanning, press SCAN. The scanner scans through all channels for banks that are not locked out. SQUELCH should be set so that hissing is not heard between transmissions. Be sure to read the

The following sections to get the full benefit of all the special features of your scanner.

MANUALLY Selecting a channel

You can continuously monitor a single channel without scanning them. This is useful if you hear an emergency message on a channel and don't want to miss the details - even though there may be periods of silence - from IR that you want to monitor a channel you have locked out. out.

To select a channel to monitor, press MANUAL, enter the channel number, and then press MANUAL again. Or, if your scanner is scanning and has stopped at the desired channel, simply press MANUAL times. Pressing MANUAL more times causes your scanner to step through the channels one at a time.

USING THE DELAY FUNCTION

Many agencies use a two-way radio system that might have a silence of 2 seconds (or more) between a request and a response. To avoid missing a response, a delay program on channels to identify you as worked this way.

To program a delay, select the channel and press DELAY, so that DLY appears on the screen. Now, when your scanner stops at an active channel while scanning, it waits for 2 seconds after the end of each transmission on that channel before resuming scanning.

If you don't want your scanner to pause, select the channel and make sure DLY is not on screen. If DLY appears on the display, press DELAY to turn it off for that channel.

CHANNEL LOCK

You can make your scanning scanner more efficient by blocking channels that you have not programmed. Manually select the channel and press L/O if L/O appears on the display. It is also very practical for locking chains that have a continuous transmission. You can still manually select locked channels to listen to.

To unlock a channel you have locked, manually select the channel and press L/O so that L/S disappears from the screen.

NOTE: You can lock channels as you want. But there must be at least one channel that is not locked out in each bank.

USING THE PRIORITY FUNCTION

Your scanner's priority feature allows you to browse all scheduled channels, and still not miss an important or interesting call on a particular channel theme. When you program a channel as the priority channel, and turn on the priority function your scanner checks for transmission on that channel every 2 seconds.

To program a priority channel, press MANUAL, enter the channel number, and PRIORITY then press. The channel is displayed with the PRI indicator. To activate the Press Priority function, while scanning. The scanner now checks channel priority every 2 seconds, and stays on the channel when there is activity. To deactivate the priority function, press PRIORITY again.

You can only program a channel as the priority channel. If you program a new channel as the priority channel, the previous channel you chose is automatically deactivated.

NOTE: Channel 1 is automatically designated as the priority channel the first time you turn on your scanner.

LISTEN TO THE weather band

The Federal Communications Commission (FCC) has allocated several channels for use by the National Oceanic and Atmospheric Administration (NOAA). We have programmed your scanner with all frequencies available to NOAA. To listen to local weather forecasts and regional weather information, simply press WX. Your scanner begins reading through the time band, and WX appears on the screen.

Your scanner should stop in a few seconds, and you will hear the local weather report broadcast. If the broadcast is weak, you can press WX again to cycle through the rest of the time band.

USING THE BANK FUNCTION

As explained in "Understanding Channel Storage Banks," the scanner divides the 100 channels into ten banks of ten channels each. The bars under small numbers at the top of the screen are the bank indicators.

You can turn each bank on and off, so all channels in a bank are scanned or locked out. In scan mode, press the number key corresponding to the bank you want to turn on or off. If the memory bank

is on, the bank is powered on, and all channels within that bank that are not locked out are scanned. If the LED is off, none of the channels in that bank are scanned.

You can still manually select a channel in a bank, even if the bank is disabled. You can't disable all banks - you have to be sure.

Frequency search ACTIVE

Use this procedure to search for transmission within a frequency range. You need to define the frequency range in each band listed below. That is, you cannot implement the upper limit in one band and the lower limit in a different group. For example, if you set the frequency lower to 30 MHz and set the frequency higher to 110 MHz, the scanner does not accept the input and the display shows ERROR when you press UP-UP or DOWN arrow .

29 MHz to 54 MHz (VHF Lo)
108 MHz and 136.975 MHz (Air)
137 MHz to 174 MHz (VHF Hi)
406 MHz to 512 MHz (UHF)

When you find an interesting frequency, you can store the frequency in the memory monitor and later move it to a channel.

1. Press MANUAL.
2. Enter either the lower limit or the upper limit of the frequency range.
3. LIMITED press / Mon.
4. Enter the other limit of the frequency range.
5. LIMITED press / Mon.
6. Press down arrow looking for the upper limit to the lower limit. Or, press up arrow to look upward from the lower limit.
7. When the scanner stops on a transmission, press LIMIT/MON to store the frequency in monitor memory. Or, press up or down arrow to continue searching.

NOTE: Press delay to pause scanner 2 seconds after a transmission before moving to the next frequency.

MOVING one-channel monitor memory

If you want to move a frequency that you have stored in monitor memory to a channel, follow this procedure:

- 1. Press MANUAL, the channel number, then MANUAL.
- 2. LIMITED press / Mon.
- 3. Press ENTER. The frequency is stored in the specific channel.
- 4. If you want to return to a search, after this procedure, press up arrow or down arrow. To return to manual mode Press manual.

RESET

To reset the scanner:

- 1. Turn off the device.
 - 2. Press 2, 9 and SCAN while turning the device.
- 200-0136 PRO-35 100CH Doc Faxback scanner port. #30381

To order parts call 1-800-843-7422 or visit your local RadioShack store. Reference #
Cat.No. Part NP Description #

				11318540	1N4003A	BAND			
Q005	Q205	Q302	Q006	10511178	XSTR	CHIP	SI	NPN	LO-PW 1TD0006
				10511178	1TD0006				
Q002	10511608	XSTR	2SC3704	CHIP	1TD0100				
				10511608	1TD0100				
Q704	Q708	10511673	USE	1TD0760	1TD0120				
				10511673	1TD0120				
Q201	10511749	XSTR	2SB815-B7	CHIP	1TD0136				
				10511749	1TD0136				
Q003	Q701	Q702	Q703	10511798	XSTR	2SC3121	MICR	BIPOLAR	1TD0144
Q706	10511798	1TD0144							
Q007	Q202	Q301	Q209	10512168	XSTR	RT1N141C-T12-1	1TD0210		
				10512168	1TD0210				
Q011	10512994	XSTR	RT1N441C-12-1	SI	1TD0409				
				10512994	1TD0409				
Q207	10513000	XSTR	2SD1777-C1	S0T23	SI	1TD0410			
				10513000	1TD0410				
Q704	Q708	10516136	XSTR	2SA1162-Y	PWR	IF	LOW	1TD0760	
				10516136	1TD0760				
				10516458	1TD0793				
				11334232	2SD1676				
AT951	10538411	rubber antenna	DUCKEY	A0146	10538411	Duckie			
				RUBBER	A0146				
CT701	10555969	PAC,	adjuster	CT-065	50pF	C2014			
FT401	10555977	CERAMIC	FILTER	FL-200	C2015				
				10555977	C2015				
L703	10559912	COIL,	INDUCTOR	LZ-052	CA1550				
L015	10561660	COIL,	LF-149	CA2686					
				10561660	SLUG & Slot	CROSS TOP	CA2686		
L007	10562320	COIL,	LB607	can type	CA3064				
				10562320	can type	WITH / yellow ring	CA3064		
L012	10562338	COIL,	LB-799	can type	CA3065				
				10562338	WITH / RING	BLACK	CA3065		
L005	10562346	COIL,	lf207	small box	TYPE	CA3071			
				10562346	CROSS	SLOT AT TOP	CA3071		
L701	11272275	COIL,	can type	LB-568	CA3136				
				11272275	yellow ring	CA3136			
L705	10567824	COIL,	beads	LD087	CA8742				
				10567824	radio frequency	CA8742			
L704	10568228	COIL,	cast	0.56	UH	CA9460			
FT001	10571297	CRYSTAL	FILTER	FL-195	CB0716				
C001	C002	10575645	CER	CAP	50V 3PF + -. 25pF	CDA030CJBC			
				10575645	CASE	0805 PKG OF 5	CDA030CJBC		
C028	C042	10575678	CER	CAP	50V 5PF + -. 25 pF	CDA050CJBC			
				10575678	CASE	0805 PKG DE 5	CDA050CJBC		
C003	C414	C050	10575751	CER	CAP	50V 100PF + -5	CDA101JJBC		
				10575751	CASE	0805 PKG DE 5	CDA101JJBC		
C006	C011	C013	C019	10575793	1000PF	CER	CAP + -10 50V	CDA102KJBC	
C025	C053	C054	C059	10575793	CASE	0805 PKG DE 5	CDA102KJBC		
C068	C022	C067	10575793	CDA102KJBC					
C017	C411	C415	C018	10575843	CER	PAC	0,01 UF + -10 50V	CDA103KJBC	
C039	C057	C061	C066	10575843	CASE	0805 PKG DE 5	CDA103KJBC		
C074	C081	C023	C073	10575843	CDA103KJBC				
C020	C403	C404	10.575.900	0,1	UF	80-20 50V	CER	CDA104ZJBC	
				10575900	CASE	0805 PKG DE 5	CDA104ZJBC		

C058	10575983	15PF 50V + -5 CER CDA150JJBC			
		10575983 CASE 0805 PKG DE 5 CDA150JJBC			
C716	10576056	ceramic cap 18pF 50V + -5			CDA180JJBC
		10576056 CASE 0805 PKG DE 5 CDA180JJBC			
C076	10576130	ceramic cap 50V 220pF + -5 CDA221JJBC			
		10576130 CASE 0805 PKG DE 5 CDA221JJBC			
C041	10576171	CER CAP 50V 2200pF + -10 CDA222KJBC			
		10576171 CASE 0805 PKG DE 5 CDA222KJBC			
C034	C709 C045	10.576.189 0.022 UF + -10 50V CER CDA223JJBC			
		10576189 CASE 0805 PKG DE 5 CDA223JJBC			
C021	C056 C005	10576239 27pF CER CAP + -5 50V CDA270JJBC			
		10576239 CASE 0805 PKG DE 5 CDA270JJBC			
C016	10576254	capuchon en céramique 50V 270pF + -5 CDA271JJBC			
		10576254 CASE 0805 PKG DE 5 CDA271JJBC			
C012	C405 C706 C024	10576288 33pF 50V + -5 CER CDA330JJBC			
C069	10576288	CASE 0805 PKG DE 5 CDA330JJBC			
C062	C071	10576304 330PF 50V + -5 CER CDA331JJBC			
		10576304 CASE 0805 PKG DE 5 CDA331JJBC			
C014	10576320	3300PF 50V + -10 CER CDA332KJBC			
		10576320 CASE 0805 PKG DE 5 CDA332KJBC			
C052	c027	10576379 47PF 50V + -5 CER CDA470JJBC			
		10576379 CASE 0805 PKG DE 5 CDA470JJBC			
C064	10576403	470pF + -5 50V CER CDA471JJBC			
		10576403 CASE 0805 PKG DE 5 CDA471JJBC			
C043	C407 C412	10576411 CER CAP 50V 4700pF + -10 CDA472KJBC			
		10576411 CASE 0805 PKG DE 5 CDA472KJBC			
C036	10576429	CER CAP 25V 0.047 UF + -10 CDA473KFBC			
		10576429 CASE 0805 PKG DE 5 CDA473KFBC			
C004	10576528	CAP CERAMIC 56PF 50V + -5 CDA560JJBC			
		10576528 CASE 0805 PKG DE 5 CDA560JJBC			
C301	C413	10.577.237 0,1 UF CDQ104MGBT + -20 35V TNP			
		10577237 CASE 3216 PKG DE 5 CDQ104MGBT			
C212	10577401	1000PF 50V + -5 CER CDR102JJBC			
		10577401 CASE 1206 PKG DE 5 CDR102JJBC			
C201	C203	C208-4-9 C + -10 10577567 22000PF 50V CER CDR223KJBC			
C211		C215-12 10577567 CASE 1206 PKG DE 5 CDR223KJBC			
		1C206 330PF 50V + -5 CER CDR331JJBC			
		AFFAIRE 1206 PKG DE 5 CDR331JJBC			
C078	10578060	10UF CER CAP + -20 16V CE106MDCA			
C079	10578078	10UF 25V + -20 ALP CE106MFBAC			
		10578078 PKG DU 10 CE106MFBAC			
C047	C065	10578276 4.7UF 35V + -20 ALP CE475MGBAB			
		10578276 package of 5 CE475MGBAB			
C718	C719	10579472 10PF 50V + -. 5PF CER CJ100DJBCC			
		10579472 PKG DU 10 CJ100DJBCC			
C711	10579746	47PF 50V + -5 CER CJ470JJBCC			
		10579746 PKG DU 10 CJ470JJBCC			
4 CS0000X	5 PART INFORMATION				
					CS0000X
B1501 B29	10586816	BAT single cells 7.2V 600 M CS0241			
		10586816 CS0241			
Y201	10588176	RESONATEUR, céramique CRK400 CV0081			
		10588176 AA-665 CV0081			
10594695 X701		CRYSTAL, QX-145 MHZ 10,400 CX0903			
4 11 20 28	10605145	CASE ENSEMBLE DE BATTERIES DB0255			
		10605145 ordre p CASE / N Z4308 DB0255			
D002	D702	D703 D005 10617280 DIODE HSK110 SI DD0022			
D016	D019	D021 D023 10617280 DD0022			
D028	D029	D012 D024 10617280 DD0022			
D003	D701	D704 D004 10617546 VARACTOR DIODE ISV201 DD0103-4			
D013	D017	D027 D011 10617546 DD0103			
D018	D708	D031 10617587 DIODE 1SS184-TE85R SI DD0111			
		10617587 DD0111			
		11369493 DTA143XS			
D001	D202	D204 D301 10624450 HSK120TR DIODE TAPING SI DX1042			
D007	D008	D014 D015 10624450 VERRE ORANGE TUBLAR DX1042			
D022	10624450	AVEC / White Band DX1042			
D032	D033	D301 D006 10624450 DX1042			
D009	10625556	DIODE 1SS85 DX1462			
		10625556 DX1462			
D401	11290574	CHIP MIXER DIODE HSM88 DX1709			
		11290574 DX1709			

D034 D603 10630325 DIODE HRP22 SI DX3040
10630325 AVEC / White Band DX3040
10637387 EARPHONE, 3.5MM E0008
EP951 10637718 USE E0008 e0128
11644861 D00R, PCB MFZN3.17 SPCC HB00038
10 35 10657138 HOLDER, circuit board assembly HB1095
40 10681344 PLATE spring button, HC4816
6 21 10681419 COVER, EARPHONE BLACK HC4833
10681799 Ring, BUTTON HC4900
10684967 BLACK RUBBER GASKET SI HC5680
42 10694594 3X5 flat screw belt clip, HD4018
41 10710747 CLIP, belt HN0021
10714897 BH PT SCREW D2X5 NI QTY 9 HW2000136
J501 10722296 JACK, 9.2 ANTENNA J0429
10722296 JK-474-BNC RB3-8D-01 J0429
POWER JACK J003 10722346, DC J0438
10722346 EN 02MM J0438 scanner unit
J001 10722353 USE J1304 J0439
10722353 REPLACED BY J1304 J0439
J002 10722361 JACK, ANTENNA JK-447 J0440
10722361 69308-016 16 pin J0440
J001 10729432 JACK, 3.5 mm for J1304 headphones
J601 10729838 JACK, DC POWER 3.5MM J1389
10729838 J1389
10734432 JA0145 TERMINAL
10767325 BLACK BUTTON K2756
10787349 BUTTON leaf spring D6 KA0061
Y501 10787752 RUBBER KEYBOARD AA-999 KB0042
10787752 KB0042
D602 10794493 UTILISATION LA0002 L1119
10794493 REMPLACE PAR LA0002 L1119
D602 10796373 LED, ligne 1 / 2 LA0002
10796373 rond rouge LA0002
11390929 LA1186N
10898146 LA1600
DP201 10800696 LCD, DL-026 LB0115
10800696 LB0115
10822898 MANUEL DE SERVICE 20-136 MS2000136
10844827 COPY XEROX MU2000136
IC207 10877280 IC, DRIVER LH5008TP LCD MX1455
10877280 52 PIN MX1455
10880698 MX1881
IC203 10881050 IC, S-8054ALB REGULATEUR MX1932
10881050 S0 T 89/SC62 (S) MX1932
IC301 10881886 IC, NJM2904M linéaire 8 PIN MX2044
10881886 Amplificateur Opérationnel MX2044
IC202 10886836 IC, S-81350HG MX2758 LINEAR
10886836 CODE DATE APRES 4A2 MX2758
IC204 10894566 IC, S-8054-HN-CB-T1 MX4005
10897049 IC, régulateur S81250HG-RD MX4397
IC004 IC202 10897197 IC, MX4420 TK11750 SI MONOLITHIQUE
Avant que le code 10897197 DATE 4A2 MX4420
10898146 REMPLACE PAR LA1600 MX4637
IC401 10899201 IC, TK10421M-2 16 T R 256K MX4863
10899201 MOUNT 20 broches RCL 1041 MX4863
IC601 10899292 IC, L4810CV 220 T REG MX4882
10899292 MX4882
IC201 10900074 IC HD614081-FC25 FP80 SC MX5092
10900074 MX5092
IC006 10906279 IC, SILICIUM L78M08T MX6473
10906279 MX6473 BIPOLAIRE MONOLITHIQUE
IC005 10909497 IC, IRE3M03AN MX7194 DC-DC
10909497 CONVERTISSEUR MX7194
IC205 10909562 IC, CXK1013P MX7213
10909562 MX7213
IC701 10911592 IC, PLL2002A1 MX7622
10911592 MX7622
IC002 10912483 IC, AMP NJM386S-AUDIO L MX7809
10912483 MX7809
IC702 10912491 IC, TLC271CP OP MX7811
10912491 MX7811
R031 10941334 1K 1/6W 5% CBF RES N0196ECCC

10941334 PKG DU 10 N0196ECCC
 R601 10941490 1.5K 1/6W 5% CBF RES N0206ECCC
 10941490 PKG DU 10 N0206ECCC
 R026 R054 10941805 2,7 K 5% 1/6W CBF RES N0224ECCC
 10941805 PKG DU 10 N0224ECCC
 R064 R065 R059 10946325 100 5 CBF 1/10W% RES NDA0132EDC
 R701 R006 R011 R014 10946325 CASE 0805 PKG DE 5 NDA0132EDC
 R703 10946630 330 5 CBF 1/10W% RES NDA0159EDC
 10946630 CASE 0805 PKG DE 5 NDA0159EDC
 R704 10946689 470 5 CBF 1/10W% RES NDA0169EDC
 10946689 CASE 0805 PKG DE 5 NDA0169EDC
 R058 R061 R410 R042 10946853 1K 5 CBF 1/10W% RES NDA0196EDC
 R406 R009 R018 R025 10946853 CASE 0805 PKG DE 5 NDA0196EDC
 R016 10946994 2.2K 5 CBF 1/10W% RES NDA0216EDC
 10946994 CASE 0805 PKG DE 5 NDA0216EDC
 R002 R017 R028 R056 10947075 2,7 K 5 CBF 1/10W% RES NDA0224EDC
 R057 10947075 CASE 0805 PKG DE 5 NDA0224EDC
 R033 10947752 12K 5 CBF 1/10W% RES NDA0288EDC
 10947752 CASE 0805 PKG DE 5 NDA0288EDC
 R066 R302 10948008 39K 5 CBF 1/10W% RES NDA0330EDC
 10948008 CASE 0805 PKG DE 5 NDA0330EDC
 R301 R715 R717 10948214 100K 5 CBF 1/10W% RES NDA0371EDC
 10948214 CASE 0805 PKG DE 5 NDA0371EDC
 CBF R306 1/10W 10948479 330K 2% RES NDA0410CDC
 10948479 CASE 0805 PKG DE 5 NDA0410CDC
 R048 10948511 470K 5 CBF 1/10W% RES NDA0423EDC
 10948511 CASE 0805 PKG DE 5 NDA0423EDC
 R044 R303 R402 10948586 680K 5 CBF 1/10W% RES NDA0433EDC
 10948586 CASE 0805 PKG DE 5 NDA0433EDC
 R732 10948685 2,2 5 CBF 1/10W% RES NDA0454EDC
 10948685 CASE 0805 PKG DE 5 NDA0454EDC
 R217 10949527 4.7 5% 1/8W CBF RES NDR0047EBC
 10949527 CASE 1206 PKG DE 5 NDR0047EBC
 R223 R235 R236 R237 10949568 10 5% 1/8W CBF RES NDR0063EBC
 10949568 CASE 1206 PKG DE 5 NDR0063EBC
 R242 10949865 150 5% 1/8W CBF RES NDR0142EBC
 10949865 CASE 1206 PKG DE 5 NDR0142EBC
 R243 10950210 1.2K 1/8W 5% CBF RES NDR0199EBC
 10950210 CASE 1206 PKG DE 5 NDR0199EBC
 R206 R231 R232 R241 10950285 2.2K 1/8W 5% CBF RES NDR0216EBC
 10950285 CASE 1206 PKG DE 5 NDR0216EBC
 R205 R218 10950392 RES 4.7K CBF 1/8W 5% NDR0247EBC
 10950392 CASE 1206 PKG DE 5 NDR0247EBC
 R244 10950491 RES 10K CBF 1/8W 5% NDR0281EBC
 10950491 CASE 1206 PKG DE 5 NDR0281EBC
 R204 R208 R221 R253 10950699 RES 47K CBF 1/8W 5% NDR0340EBC
 R255 10950699 CASE 1206 PKG DE 5 NDR0340EBC
 10950699 APRÈS 1A2 CODE DATE NDR0340EBC
 R201 R202 R203 R225 10950848 RES 100K 1/8W CBF 5% NDR0371EBC
 R227 R226 10950848 CASE 1206 PKG DE 5 NDR0371EBC
 R212 R216 10951085 1M 5% 1/8W CBF RES NDR0445EBC
 10951085 CASE 1206 PKG DE 5 NDR0445EBC
 VR001 10960169 POT, SEMI-FIXD 33KB RT-528 P0254
 VR002 10980175 POT, VARIABLE SQUELCH 100K PA0388
 10980175 RV-746 PA0388
 VR003 10982320 POT, variable volume 100KA PA0730
 12 11036316 SPRING PLATE RJ0463
 27 11082658 President of the Assembly SP0144
 11082658 MOLTPRENE SP0144
 AD951 11124724 AC ADAPTER WE0141
 11124724 SS DC cord 270-1533 WE0141
 11149226 assembly of printed circuits, MAIN XB3531
 11149234 assembly of printed circuits, WINDOW XB3532
 11149242 XB3533 MICROPROCESSOR
 11149259 FREQUENCY XB3534
 11149267 BD INSIDE XB3535 battery holder
 11149275 LOOP XB3536
 11 12 13 18 19 34 37 11198728 CASE ASSEMBLY, FRONT Z4278
 23456 7 8 9 10 33 11198728 COMPOSED OF: Z4278
 11198728 WINDOW Clear LCD Z4278
 5 28 11198975 CASE SET, FRONT Z4308
 11198975 40X45X3T Z4308

1 16 39 15 31 38 11198983 CASE SET, REAR Z4310
11198983 black silk back housing Z4310
3 11198991 CASE, TOP silk black Z4311

PRO-35 100-Channel Input direct programmable scanner
(200-0136) Doc Faxback specifications. #17997

Accessories:

Battery :.....

CMC part number T20-0003

Specifications are typical; Individual devices may vary. Specifications are subject to change without notice.

Pro-Series Scanners Programmable Direct Entry General
Guide to Scanning Doc Faxback. #17653

Birdies

Birdies are the frequencies your scanner uses when it is operating. These operating frequencies may interfere with broadcasts on the same frequency. If you program these frequencies, you only hear noise on that frequency.

If the jamming is not severe, you may be able to turn SQUELCH clockwise to reduce the birdie. Most common birdies to watch out for are listed below.

Birdie Frequencies:

31.05 MHz 124.20 MHz
41.40 MHz 134.55 MHz
51.75 MHz 144.90 MHz
113.85 MHz 155.25 MHz

Reception Notes

Reception of the frequencies covered by your scanner is essentially "line of sight". This means that you generally cannot listen to stations that are beyond the horizon. During the summer months, you may be able to hear in 30-50 MHz stations range several hundred or even thousands of miles.

This is because summer atmospheric conditions. This type of reception is unpredictable, but often very interesting!

A very useful service is the National Weather Service continuous broadcast weather report. These broadcasts contain weather forecasts and data for the areas around the station, as well as bulletins on any threatening weather conditions. These stations use three frequencies - 162.40, 162.475 or 162.55 MHz. In most areas of the country you can receive one of these frequencies.

A Guide to Band Action

With the frequencies programmed into your Pro-Series scanner, you can monitor exciting events. With a little investigation, you can find active frequencies in your community. We can give you some general pointers, and you can go from there. Please use caution and common sense when you hear an emergency call. Never go to the scene of an emergency. It could be very dangerous.

Find out if there is a local club that monitors your community's frequencies. Perhaps a local electronics repair shop that works on equipment similar to your scanner can give you the frequencies used by local radio services. A police department or volunteer fire department may also be a good source for this information.

Typically, on VHF radio, activity is concentrated between 153.785 and 155.98 MHz, and then again from 158.73 to 159.46 MHz. Here you find local administrations, police, firefighters and most emergency services. If you are near a rail yard or major railroad tracks, look around 160.0 to 161.9 MHz for signals.

In some large cities, there has been a switch to the UHF band for emergency services. Here, most of the activity is between 453.025 and 453.95 MHz and between 456.025 and 467.925 MHz. In the UHF band, frequencies between 456.025 and 459.95 MHz and between 465.025 and 469.975 MHz are used by mobile units and control stations associated with base and repeater units that operate 5 MHz lower (this is -to- 451.025 to 454.950 and 460.025 to 464.975 MHz). This means that if you find an active frequency within one of these gaps, you can look 5 MHz lower (or higher) to find the base station/repeater for that service.

Typical tape usage

The following is a brief list of typical services that use the bands you can receive scanned. This list will help you decide who you want to scan.

These frequencies are subject to change, and may vary from region to region.
For a more complete list consult the Radio Call Font Guide available at your local RadioShack store.

Abbreviations:

Affiliation radio system:	March
Amateur:	 Ham
Automotive Emergency:	Emer Auto.
Remote broadcast:	 BC.R
Bureau of Reclamation:	Bur.Recl.
Civil air patrol:	 CAP
Ministry of Agriculture and Forestry:	Agr. And for.
Fire Department:	FD
Forest products:	For.Prod.
Forest conservation:	Fors.Cons.
Government:	 Govt.
Road maintenance:	. Hwy.
Land transportation:	Tr Land.
Local government:	. Govt L..
Manufacturers:	Mfg
Military:	MIL
Mobile phone:	Mob.Tel.
Picture Motion:	 Word.P.
Road carriers:	Buses.Trucks
National parks:	.. Nat.Park
Oil:	 Fart.
Police:	 P.D.
Power Utilities:	 Power
Paging:	Page
Railroad:	 RR
Press relay:	 Press
State Police:	 St.PD
Special emergency:	Sp.Emer.
Special industries:	. Sp.Ind.
Taxi radio:	Taxi
Maintenance Telephone:	Tel.Now.
US Coastal and Geodetic Survey:	USCGS
US Navy:	USN
United States Weather Bureau:	USWB

CAUTION: Your scanner may not be able to receive all frequencies and/or reception modes that are contained herein.
For complete information of your scanner's capabilities, be sure to read your owner's manual completely.

Frequency Guide

- National Weather frequencies:
- 1) 161,650 5) 162,440 9) 162,525
 - 2) 161.775 6) 162.450 10) 162.550
 - 3) 162,400 7) 162,475 11) 163,275
 - 4) 162,425 8) 162,500

Ham radio frequencies

Ham operators often transmit emergency information when other methods of communication fail. The following table shows some of the Hams frequencies that use.

Frequency wavelength
(Meters) (MHz)
10-meter 28,000 to 29,700
From 6 meters from 50,000 to 54,000
2-meter 144,000 to 148,000
70-cm from 420,000 to 450,000

Here are the Citizens Band channels and frequencies:

- 1) 26.965 21) 27.215
- 2) 26.975 22) 27.225
- 3) 26.985 23) 27.255

- 4) 27.005 24) 27.235
- 5) 27.015 25) 27.245
- 6) 27.025 26) 27.265
- 7) 27.035 27) 27.275
- 8) 27.055 28) 27.285
- 9) 27.065 29) 27.295
- 10) 27.075 30) 27.305
- 11) 27.085 31) 27.315
- 12) 27.105 32) 27.325
- 13) 27.115 33) 27.335
- 14) 27.125 34) 27.345
- 15) 27.135 35) 27.355
- 16) 27.155 36) 27.365
- 17) 27.165 37) 27.375
- 18) 27.175 38) 27.385
- 19) 27,185 39) 27,395
- 20) 27.205 40) 27.405

Guide to the action of the bands

United States Broadcast bands
In the United States, there are several broadcast bands. The AM standard and FM bands are probably the better known. There are also four televisions broadcast audio-tapes The first three transmit on the VHF band and the fourth transmits on the UHF band.

of	
Range allocation	frequencies
54.0 at 72.0 MHz	VHF Television
76.0 at 88.0 MHz	VHF Television
88.0 at 108.0 MHz	Standard FM
at 216.0	
174.0 MHz	VHF Television
470.0 at 805.75 MHz	UHF television

International broadcast bands

Several shortwave bands are allocated for international broadcasting due to the nature of high frequency propagation. The bands are sometimes identified according to the approximate wavelength of the signals in meters. Your scanner can receive the 11 meter band, from 25.6 to 26.10 MHz.

Typical tape usage

HF band (3.0 to 30.0 MHz):

Medium:	25.00 to 28.63 MHz
10-Meter amateur band:	28.00 to 29.70 MHz
High end:	29.70 to 29.90 MHz

VHF band (30.00 to 300.0 MHz):

Low range:	30.00 to 50.00 MHz
6-Meter amateur:	50.00 to 54.00 MHz
FM-TV audio broadcasting, broadband:	54.00 to 72.00 MHz
Broadband FM radio broadcast:	88.00 to 108.00 MHz
Airplanes:	108.00 to 136.00 MHz
United States Government:	138.00 to 144.00 MHz
2-Meter amateur:	144.00at 148.00 MHz
High end:	148.00 to 174.00 MHz
New narrowband mobile:	220.00 to 222.00 MHz
1.3-Meter amateur:	222.00at 225.00 MHz
Military aircraft:	225.00at 287.80 MHz

UHF band (300.00 MHz - 3.0 GHz):

Military aircraft:	311.00at 384.00 MHz
United States Government:	406.00 to 470.00 MHz
From 0.6 meter amateur:	420.00 to 450.00 MHz
Low range:	450.00 to 470.00 MHz
FM-TV audio broadcasting, broadband:	470.00 to 806.00 MHz
Conventional systems:	851.00 to 856.00 MHz
Classics / Trunked systems:	856.00 to 861.00 MHz
Trunked systems:	861.00 to 866.00 MHz
Public safety:	866.00 to 869.00 MHz
Carrier:	869.00 to 894.00 MHz
Private Trunked:	935.00 to 940.00 MHz
General trunked:	940.00 to 941.00 MHz

Main use:
Typically, most radio activity is concentrated on the following frequencies:

VHF band:

	ha	
Band 2-Meter amateur:	144,000 s 148,000	MHz
Government, police and fire:	153.785 to 155.980	MHz
	ha	
Emergency services:	158,730 s 159,460	MHz
	ha	
Railroad:	160,000 s 161,900	MHz

UHF band:

0.6cm amateur FM Band repeaters:	440,000 to 450,000	MHz
Mobile terrestrial "twinned" Frequencies:	450,000 at 470,000	MHz
Base stations:	451,025 at 454.950	MHz
	h	
	a	
Units mobile:	456,025 s 459.950	MHz
Units Repeater:	460.025 to 464.975	MHz
	h	
	a	
Posts control:	465,025 s 469.975	MHz

NOTE: UHF remote control stations and mobile units generally operate at 5 MHz higher than their base and associated relay repeater units.

Determined intervals:

THE frequencies different bands are only accessible to specific intervals.
By example:
VHF, ham and the government: 5.0 kHz steps
All others: 12.5kHz steps
Airplanes:
.... . 25.0 kHz steps

Note: Your scanner turns to the nearest frequency entered into force. For example, if you try to enter 151.473, the scanner might accept it as 151.470.

Allocation of tape:

To help you to decide which ranges of frequencies to search, use the order receives.
following list of typical services that use the frequencies of your scanner These
frequencie An
s are subject to change d may vary from region to region. For a list
more complete, refer to the Radio "Police-Call
Guide in
particular fire and emergency ", Thus that "Beyond Police
Director
Call "," Aeronautical Directory "," y Nautical" and "Now You Are
Talk about "texts available from of your store RadioShack.

Abbreviations

- AIR: Plane
- CIFB: Boise (ID) Interagency Fire Cache
- BUS:Business
- CAP: Civil Air Patrol
- CB:Citizens Band
- CCA:Common Carrier
- OEC: Conventional systems
- CTSB: Classics / Trunked systems
- FIRE:Fire Department
- HAM: Amateur (HAM) Radio
- GOVT: Federal Government
- GMR: General Mobile Radio
- GTR: General trunked
- IND: Industrial services
- Husband: Coastal Maritime Limited
- MARCH: The military system of Radio Affiliation
- MED: Emergency and medical care
- MIL: American military

MOV: Film/Video Industry
NEW:New Mobile Narrow
NEWS: Press relay
OIL: Oil industry petroleum oil /
POL: Police Department of
ADVERTISING: Public Services
PSB:Public safety
PTR: Private Trunked
ROAD: Road and highway maintenance
RTV: Radio / Pickup remote TV broadcast
TAXI:Taxi Services
TELBL: Mobile Phone

TEL:	Cordless phones
TELM:	Phone care
TOW:	 Tow trucks
.	Transportation
TRAN:	Services
.	 Trunked systems
TSB:	Broadcast FM-TV Audio
.	Government classified
TVN:	
USXX:	
USEFUL:	
... ..	Power & Water Utilities
WTHR:	
.	 Time

High frequency (HF) - (3 - 30 MHz):

High Band - (25.00 to 27.36 MHz):

25.020 to	
25.320:	 IND
25.870 to	
26.470:	RTV
26.62:	
.	 CAP
26.966 to	
27.405:	 CB
27.430 to	
27.630:	 BUS

10-Meter Amateur Band - (28.0 to 29.7 MHz):

28,000 to 29,700:	HAM
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Very high frequency (VHF) - (30 - 300 MHz):

Low Band - (29.7 - 50 MHz - in 5 kHz):

h		
a		
29,700 s	29,790:	 IND
t		
29,900 o	30,550:	. gvt, THOUSAND
t		
30,580 o	31,980:	.. IND, PUB
t		
32,000 o	32,990:	. gvt, THOUSAND
t		
33,020 o	33,980:	BUS, IND, PUB
t		
34,010 o	34,990:	. Govt, MIL
h		
a		
35,020 s	35,980:	BUS, PUB, IND, TELM
h		
a		
36,000 s	36.230:	. Govt, MIL
36,250:		Spill of oil cleaning
h		
a		
36,270 s	36,990:	. Govt, MIL
h		
a		
37,020 s	37,980:	.. PUB, IND
t		
38,000 o	39,000:	. gvt, THOUSAND
t		
39,020 o	39,980:	 PUB
t		
40,000 o	42,000:	Gvt, MIL, MARI
t		
42,020 o	42,940:	 POL
t		
42,960 o	43,180:	 IND
t		
43,220 o	43,680:	TELM, IND, PUB

43,700	t o	44,600:	.....	TRAN
44,620	t o	46,580:	..	POL, PUB
46,600	t o	46,990:		Gvt, TELC
47,020	t o	47,400:	.....	PUB
47,420:				American Red Cross
47,440	h a s	49,580:	..	IND, PUB
49,610	h a s	49,990:	.	MIL, TELC

From 6 meters of the amateur band (50-54 MHz):
50.00 to 54.00: HAM

FM-TV audio broadcast, wideband (54-72 MHz):				
59,750:			.....	TV2
65,750:			.....	TV3
71,750:			.....	TV4

Land mobile service band (72 to 76 MHz):

FM-TV audio broadcast, wideband (76-88 MHz):				
81,750:			.....	TV5
87,750:			.....	TV6

Broadband FM radio broadcast (88-108 MHz):

The aeronautical band (108-136 MHz):

108,000	at 121.400:	.....	AIR
121,500:		...	emergency air
121,510	at 136,000:		AIR

BAND US Government (138-144 MHz):

137,000	at 144,000:	Govt,	MIL
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VHF-Hi band (148-174 MHz):

148,050	150.345:	at	PAC, MARS, MIL
150,775	at 150.790:		 MED
150,815	at 150.965:		TOW
150,980:			Oil spill cleanup
150,995	at 151.130:		 ROAD
151,145	151.475:	at	POL
151,490	at 151.955:		IND, BUS
151,985:			 TELM
152,030	at 152.240:		 TELB
152,270	at 152.465:		IND, TAXI
152,480:			 BUS
152,510	at 152.840:		 TELB
152,870	at 153.020:		IND, MOV
153,035	153.175:		IND, OIL, UTIL
153,740	at 154.445:		PUB, FIRE
154,490	at 154.570:		IND, BUS
154,585:			Oil spill cleanup
154,600	at 154.625:		 BUS
154,665	156.240:		MED, road, POL, PUB
165.255:			 OIL
156,275	at 157.425:		 HUSBAND
157,450:			MED
157,470	at 157.515:		TOW
157,530	at 157.725:		IND, TAXI
157,740:			 BUS
157,770	at 158.100:		 TELB
158,130	158.460:		BUS, IND, OIL, TELM, UTIL
158,490	at 158,700:	..	TELB
158,730	159.465:	at	POL, ADVERTISING, THE ROAD
159,480:			 OIL
159,495	161,565:	to	 TRAN
161,580:			 OIL
161,600	to 162,000:		MARI, RTV
162.0125 to 162.35:			Gvt, MIL, USXX
162,400	162,550:	to	 WTHR
162.5625 to 162.6375:			Gvt, MIL, USXX
162.6625:			 MED
162.6875 to 163.225:			Govt, MIL, USXX
163,250:			MED
163,275	166.225:	at	Govt, MIL, USXX
166,250:			. Govt, RTV, FIRE
166,275	169,400:	at	Government, CIFB
169.445:			.. WIRELESS MIKES
169,500:			GOVT
169.505:			.. WIRELESS MIKES
169.55 to 169.9875:			Govt, MIL, USXX
170,000:			 CIFB
170,025	170.150:	at	Govt, RTV, FIRE

170,175	at 170.225:	.....	.....GOVT
		at	
170,245	170.305:	.....	WIRELESS MIKES
170,350	at 170,400:	.....	Govt, MIL
170,425	at 170.450:	.....	..... CIFB
			
170.475:		.	ADVERTISING
170.4875 to			
173.175:		.....	Govt, PUB, WIRELESS MIKES
		at	
173,225	173.375:	.....	MOV, NEWS, USEFUL
173.3875 to			
178.5375:		.....	...MIL
173.5625 to			
173.5875:		.....	MIL Medical Crews Crash /
173.60 to 173.9875:		....	GOVT

FM-TV broadcast audio, VHF broadband (174-216 MHz):

179,750:	.....	..... TV7
185,750:	.....	..... TV8
191,750:	.....	..... TV9

197,750:	.....	TV10
203,750:	.....	TV11
	209,750:	TV12
215.750:	.....	TV13

New Mobil narrowband (220-222 MHz):

220,000 to 222,000:NEW

1.3 meters from the amateur band (222-225 MHz):

222,000 to 225,000:HAM

BAND military aircraft (from 237.9 to 287.8 MHz):

237.900:	.....	Coast Guard Search and Rescue
239,800:	.....	FAA Weather
241,000:	.....	ARMY
243,000:	.....	EMERGENCY
255,400:	.....	Flight information from the FAA
257,800:	.....	. CIVIL OF TOURS
287,800:	.....	Air Coast Guard /Sea
Rescue		

Ultra High Frequency (UHF) - (300 MHz-3 GHz)

The military aeronautical band (from 319.1 to 383.9 MHz):

319.100:	.....	FAA Traffic Control
	at	
321,000	336,600:	Air Strength
	at	
342,500	344,600:	Weather report FAA
h		
a		
346,400	s 364,200:	Force Air Traffic Control
h		
a		
381,800	s 383,900:	Guard coastal

US Government Band (406-420 MHz):

406.125 to 419.975: Govt, USXX

70-cm amateur band (420-450 MHz):

420,000 at 450,000:HAM

Low band (450-470 MHz):

450,050	at 450.925:	RTV
451,025	at 452.025:	IND, OIL, TELM, UTIL
452.0375 to 453.00:		IND, taxi, TRAN, TOW, NEWS
453.0125 to 453.9875:		... ADVERTISING
454,000:	.....	..... OIL
454,025	at 454.975:	 TELB
455,050	at 455.925:	RTV
457,525	at 457.600:	 BUS
458,025	at 458.175:	 MED
460.0125 to 460.6375:		FIRE, POL, ADVERTISING
460,650	at 462.175:	 BUS
462.1875 to 462.450:		BUS, IND
462.4625 to 462.525:		IND, OIL, TELM, UTIL
462,550	at 462.725:	 GMR
462,750	at 462.925:	 BUS
462.9375 to 463.1875:		...MED
463,200	at 467.925:	 BUS

FM-TV audio broadcast, UHF wideband (470-512 MHz): (Channels 14-69 MHz in steps of 6):

475,750:	.....	Channel 14
481,750:	.....	THE channel 15
487,750:	.....	Channel 16
805.750:	.....	Channel 69

Note: Some cities use the 470-512 MHz band for land / mobile service.
Classics Systems tape - locally allocated

ha
851.0125 s 855.9875:CSB

Classics / Trunked Systems tape - locally allocated
ha
856.0125 s 860.9875: CTSB

Trunked tape systems - locally allocated
ha
861.0125 s 865.9875:BST

Band of public safety - locally allocated
h
a
866.0125 s 868.9875:PSB
Common Carrier
869,010 to 894,000: CCA
Private Trunked
h
a
935.0125 s 939.9875: PTR
General trunked
h
a
940.0125 s 940.9875:GTR

Conversion frequency
The
setting point of a station can be expressed in frequency (kHz or MHz) or in length
wave (in meters). The following information may help you make the conversions
necessary.

$1 \text{ MHz (millions)} = 1,000 \text{ kHz (thousands)}$

To convert MHz to kHz, multiply by 1,000:

$\text{kHz } 9.62 \text{ MHz} \times 1000 = 9620$

To convert from kHz to MHz, divide by 1,000

$2780 \text{ MHz kHz} / 1000 = 2.780$

To convert MHz meters, divide 300 by the number of megahertz

$300 / 7.1 \text{ MHz} = 42.25 \text{ meters}$

A note on the welcome image

Working radios through simple mathematics. For example, most tune a frequency by mixing it with another frequency as the (local) oscillator's frequencies are slightly different. This mixing process mainly gives us two original frequencies, their sum and their difference. Well, the radio's Intermediate Frequency (IF) filter normally passes either the sum or difference of frequency, which is then processed into the sound we hear.

Because nothing is perfect, some "harmonics" will also be passed off if they are strong enough. For example, if an IF radio is 10.7 MHz, we might be able to tune to a 21.4 MHz frequency (2 x IF) above (or below, depending on the design of the radio) a signal loud and hear it! This is more obvious in a double conversion radio than a triple conversion radio, because the prime triple conversion radio's intermediate frequency is quite high. This causes the image to be so far out of frequency that it is easy to actually filter out.

So, remember that just because the radio is not receiving something that the other is not necessarily an indication of a problem. Radio One simply cannot be 'tricked' into picking up a picture! This rejection of unwanted signals is one reason that the triple conversion receiver costs more than a similar double conversion model.

You might be interested in finding out more about radio. A good place to start researching is your local public library. You can also
To contact the ARRL, as they are an excellent source of informative texts on the subject.

UBC100XLT Bearcat Uniden / UBC200XLT

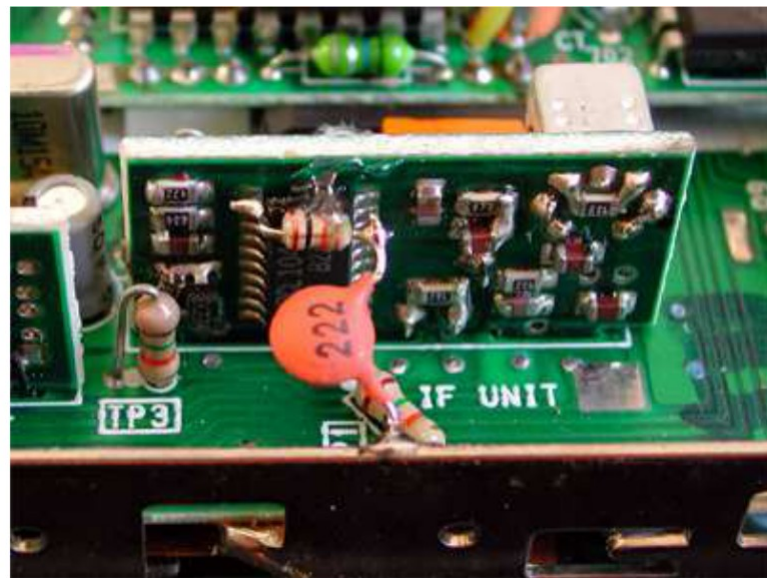
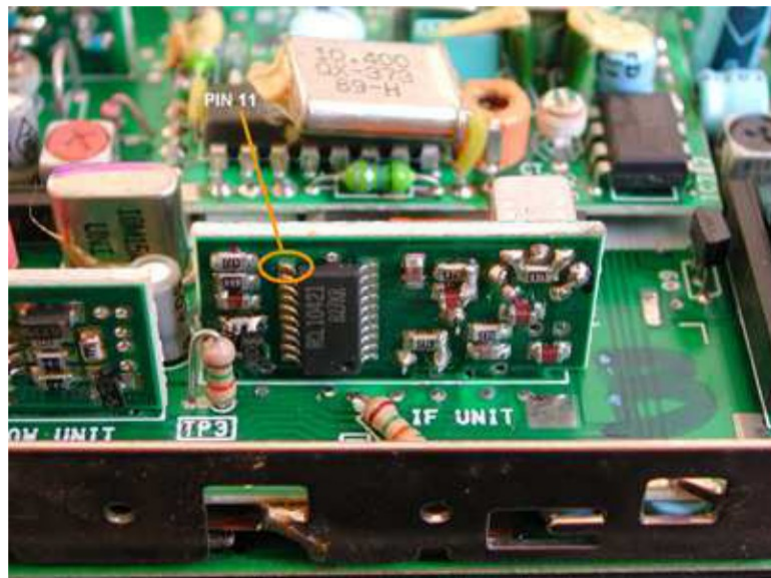


The BC200XLT

The discriminator IC in the Bearcat Uniden 100XLT and 200XLT is a TK10421. Pin 11 contains unfiltered audio.

This circuit can be found on a vertically mounted PCB, called an 'If Unit'. Test Point 3 (TP3) contains a fairly discriminating signal from the right, but it is filtered too much to be of use.

A 10k limiter resistor is attached to the IC with a drop of glue from a glue gun. As the discriminator output contains a slight IF component, a simple RC filter is created by adding a 2.2n capacitor. The cutoff frequency of this filter is approximately 7 kHz. The capacitor is connected to the metal structure of the scanner.



Pin 11 contains unfiltered audio

The simple RC filter: 10K and 2.2n

The core of a small piece of shielded cable is connected to the junction of the resistor and capacitor. The braid is connected to the metal chassis of the scanner. The other side of the cable is connected to a 3.5mm terminal in the rear chassis of the scanner.



Overview



The result>

