

BENDIX KING DPHX PROGRAMMING AND CLONING INSTRUCTIONS

The instructions below are for analog narrowband frequencies. If you need to program digital frequencies, see the [Digital Programming](#) section below.

Use caution when field programming any radio. These instructions are designed for radio users with field programming experience. If you are unfamiliar with these procedures, seek out someone who is.

1. Using a programming plug, hold red plug button then Function [FCN] key until display shows "-- -- ID"
2. Enter Password (usually 000000), then press the Enter [ENT] key
3. Display will read "CH 00". Select a channel by entering the channel you want (1-16) then press the [FCN]key
4. Display will show "RX" receive frequency. To change, press [CLR], then enter desired frequency (the decimal will insert automatically). **THEN PRESS [ENT].**
5. Display will show "MODE--A".* DO NOT CHANGE. Press [FCN]
6. Display will show RX CG, the Code Guard or Tone. To change, press [CLR], enter in desired 4 digits (the decimal will insert automatically), **THEN PRESS [ENT].** To skip press [FCN].
7. Display will show "NAC0000".* DO NOT CHANGE-Press [FCN] to skip.
8. Display will show "SQL—NRM".* DO NOT CHANGE- Press [FCN] to skip.
9. Display will show "TX" transmit frequency. To change, press [CLR], then enter desired frequency (the decimal will insert automatically) **THEN PRESS [ENT].**
10. Display will show "MODE--A" DO NOT CHANGE. Press [FCN] to skip.
11. Display will show TX CG, the Code Guard or Tone. To change, press [CLR], enter in desired 4 digits (the decimal will insert automatically)**THEN PRESS [ENT].** To skip press[FCN].
12. Display will show "NAC0000".* DO NOT CHANGE. Press [FCN] to skip.
13. Display will show "TG00001".* DO NOT CHANGE. Press [FCN] to skip.
14. Display will show channel label. See page 9 below for label editing instructions. To skip press [FCN]
15. Display will read "CH XX". Select next channel (press [PRI] for next channel) to program and repeat steps 1-14.

***=DIGITAL FUNCTIONS**

CLONING

1. Obtain programmed Master radio.
2. Turn on Master and Slave (your) radios and attach cloning cable between radios. Make sure all scan and priority switches are OFF for both radios.
3. Select desired group to program in Slave radio
4. Access Programming mode of MASTER radio. (see above)
5. With Master radio display reading "CH 00", press the * key on the Master radio
6. "PRGM" will appear in screen and flash.
7. Press the Function [FCN] key and "PRGM" will appear without flashing as the slave radio is programmed (Slave radio's screen will flash VH-1)
8. Turn off slave, and connect and program the next slave by pressing the [FCN] key once again. If display reads "FAIL" - an error has occurred. Seek Help.

NOTES:

- **If you want to change a frequency from Narrowband to Wide band, here's what you do:**
 1. In step 4 above, after you enter in a channel number, 15 for example, you may see 15N. The N means the frequency is Narrowband.
 2. Press the # key. You should see the N disappear, and now the channel is Wideband
- **If you have trouble keying in a tone or changing groups, your keypad may be locked. Look at your screen, and if it says "LOCKED" than press and hold the [FCN] key until you see "UNLOCKED."**

BENDIX KING – “ZERO CODES”

The “Zero Codes” control numerous features of your BK radio. USE CAUTION WHEN CHANGING.

- Zero Codes are specific to each group.
- Common settings are indicated with **yellow highlights** below.
- In the table below, a function is enabled if a particular number is **Grey**.
- In your radio, a function is enabled if the number is flashing. For example, to enable DTMF encoder, the number 5 must be flashing in the Group 2 functions. In the chart, you’ll see that the number **5** is grey next to the DTMF
- To change a number from flashing to solid (i.e., disable a function), simply touch the number on the keypad, **THEN PRESS [ENT]**. The opposite will also work: to enable a function, touch the number on the keypad, **THEN PRESS [ENT]**.
- To change the “LITE” settings (BACKLIGHT OPERATION) touch the [PRI] button to scroll thru your options, **THEN PRESS [ENT]**.

COMMON SETTINGS	
GROUP FUNCTION	FLASHING (ENABLED)
1	2, 3
2	1, 3, 5
3	5

Grey numbers = Flashing numbers= Enabled Function
Yellow numbers=Flashing numbers=Common Settings

Group One Functions						
Battery Saver Off <i>(If 1 is flashing, battery Saver is OFF!!)</i>	1	1	2	3	4	5
Group Scan List	1	1	2	3	4	5
Transmit on PRI 1 (old PRI Mode C)	1	1	2	3	4	5
Priority Key Lockout	1	1	2	3	4	5
Scan List Lockout	1	1	2	3	4	5
Group Two Functions						
User Code Guard Enabled	2	1	2	3	4	5
Busy Channel Indicator enabled	2	1	2	3	4	5
Busy Channel Lockout enabled (rarely enabled)	2	1	2	3	4	5
Busy Channel Override enabled (rarely enabled)	2	1	2	3	4	5
ANI enabled (rarely enabled)	2	1	2	3	4	5
Manual DTME Encoder enabled	2	1	2	3	4	5
Group Three Functions						
Light on Display Change	3	1	2	3	4	5
Light on Key Press	3	1	2	3	4	5
Alpha-numeric Mode enabled	3	1	2	3	4	5
Back Light Duration CHOOSE LITE OFF!						
Group Label (SEE BELOW)						

National Standard Tones / NACs			
Std Tone #	Analog Freq	DEC NAC	HEX NAC
1	110.9	1109	455
2	123.0	1230	4CE
3	131.8	1318	526
4	136.5	1365	555
5	146.2	1462	5B6
6	156.7	1567	61F
7	167.9	1679	68F
8	103.5	1035	40B
9	100.0	1000	3E8
10	107.2	1072	430
11	114.8	1148	47C
12	127.3	1273	4F9
13	141.3	1413	585
14	151.4	1514	5EA
15	162.2	1622	656
16	192.8	1928	788

<u>NOAA WX Freqs</u>
RX 162.400
RX 162.425
RX 162.450
RX 162.475
RX 162.500
RX 162.525
RX 162.550

LABEL EDITING

Channel and Group Labels

1. To enter a new label, press the [FCN] key. The display becomes blank.
2. Press the [PRI] key repeatedly to cycle through characters 0-9, A-Z, -, *, \$, /, +, %, \, _ , <, >, h, blank, then back to the start again. The characters appear in position eight. (If you pass the desired character, press the [PRI] key repeatedly until you reach that character again).
3. Press the [FCN] key to shift the display left by one position, leaving position eight blank.
4. Press the [PRI] key repeatedly to enter the next character, or press the [FCN] key a second time to enter a blank space.
5. Press number keys to enter 0-9 in positions one through seven. The digits start in position seven, then move left.
6. Press the [#] key to toggle a decimal on or off to the right of the character in position seven. The decimal moves left with the number in position seven as new numbers are entered.
7. To abandon changes, press the [CLR] key, restoring the original label.
8. Press the [ENT] key to store changes and go back to the starting point.

DIGITAL PROGRAMMING

In order to use your DPH as a digital radio, there are several things that you need in order for it to work.

MODE: Must Be **D** (Digital) or **M** (Mixed)

NAC=Network Access Code: Essentially a digital "tone." This code will be provided for you, and it is required for digital freqs to work. The code may be either HEX or DECIMAL. **MAKE SURE YOU KNOW WHICH ONE:** Hand programming requires Decimal inputs.

SQ OP: don't change from default of "Normal"

TG=Talk Group ID: provided for you by management unit -usually talk group 1.

Things to remember:

- DPH radios can be set up with digital and analog frequencies in a single group.
- When transmitting on a digital frequency, key your mic and wait one full second before speaking.
- Digital repeaters may not be set up with a transmission "tail" or "kick-back". An actual voice transmission may be needed to verify contact with the repeater.
- If you know you'll be using digital frequencies, plan ahead- you may have most success programming your radios with the laptop and the BK software.
- You can clone digital frequencies between DPH radios, just like analog frequencies.

NACS

F7E is what you program in if you want to listen in. F7E will listen to any digital signal

F7e is hexadecimal= 3966 is decimal (Hand Programming Mode Requires Decimal)

F7e is a receive nac only

Convert hexadecimal to decimal and vice-versa with the Microsoft calculator in Scientific Mode