



Vertex Standard

CE27 EEPROM PROGRAMMING SOFTWARE REFERENCE MANUAL

The CE27 is used to program the VXR-7000 Desktop Repeater. With the CE27 Programming Software, you can quickly and easily program the Vertex VXR-7000 repeater's channels and configuration from your personal computer. In the event of an accidental memory failure, repeater memory and configuration data may be re-loaded in a matter of minutes.

VERTEX STANDARD CO., LTD.

4-8-8 Nakameguro, Meguro-Ku, Tokyo 153-8644, Japan

VERTEX STANDARD

US Headquarters

17210 Edwards Rd., Cerritos, CA 90703, U.S.A.

International Division

8350 N.W. 52nd Terrace, Suite 201, Miami, FL 33166, U.S.A.

YAESU EUROPE B.V.

P.O. Box 75525, 1118 ZN Schiphol, The Netherlands

YAESU UK LTD.

Unit 12, Sun Valley Business Park, Winnall Close
Winchester, Hampshire, SO23 0LB, U.K.

VERTEX STANDARD HK LTD.

Unit 5, 20/F., Seaview Centre, 139-141 Hoi Bun Road,
Kwun Tong, Kowloon, Hong Kong

Important Note!

Do not work directly with the CE27 programming diskette. Make a copy of it and use the copy when programming the VXR-7000. Keep it and the original distribution diskette in a safe place in case you need to make another copy of it later.

INSTALLING THE PROGRAM

The CE27 programming diskette contains the following files:

- ☐ CE27.EXE
- ☐ CE27.HLP

Before connecting the VXR-7000 for programming, turn off both the computer and the VXR-7000. Now connect the VPL-1 Connection Cable to the computer's serial port and the VXR-7000 front panel **MIC** jack.

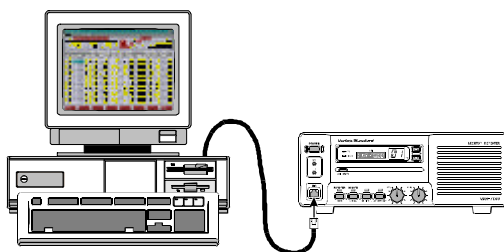
Then it will be safe to restart the computer; turning off the equipment during interconnection avoids the potential for damage to the electronics caused by voltage spikes.

Insert the distribution diskette into your 3½" drive (after booting DOS), and make a copy of the diskette; use the distribution diskette for archive purposes, and use the disk copy for programming.

Place the CE27 (copy) diskette into your 3½" drive (usually "Drive A"), and log onto this drive by typing "**A: [ENTER]**", then load the contents of the CE27 diskette into a directory named CE27, using the COPY command (e.g. "**COPY A:*. * C:\CE27**").

Now type "**CE27 [ENTER]**" to start the program. The introductory screen will appear, and you may press any key to enter the main screen.

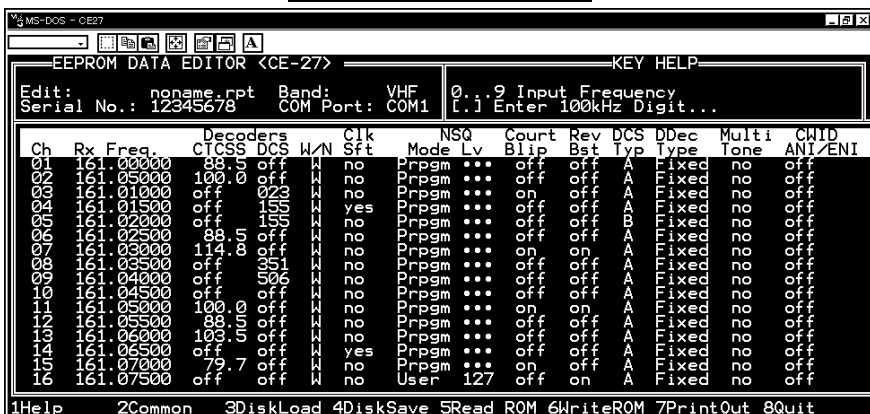
Choose the "Help" contents option (**[F1]** key) from the program's Menu for assistance with channel programming or setting of parameters.



VXR-7000 Programming Setup

Important Note!

Before creating the programming data via the CE27 programming software, upload the current hardware environment data from the repeater by **[F5] (ReadRom) key, first time. See page 9 for details regarding the **[F5]** (ReadRom) key.**



THE CHANNEL PROGRAMMING SCREEN

Key Help Box

The **Key Help** box at the upper right indicates the keyboard keys that can be used to edit data at any given moment. The contents of this box change according to the location of the cursor in the Channel Data table, so you will need to watch this box while becoming familiar with the channel editor. For example, when the program first starts, you will see “**Rx Freq.**” (Receiving Frequency) field, which indicates that you can enter the receiving frequency into the current channel from the [0] ~ [9] and [•] keys on the PC’s keyboard.

You can press the [F1] key for more detailed help on the functions of particular keys in the current cursor field. Of course, you can always use the cursor keys to select another field (unless you are in the middle of entering new field data).

Channel Data Table

The largest section of the screen is the Channel Data table. Press the [UP], [DOWN], [LEFT] and [RIGHT] arrow keys on the PC’s keyboard to move the cursor around the table (you may have to press the [NUM LOCK] key to switch the keypad from numeric to cursor movement mode if your keyboard does not have separate cursor keys). Each line in the editing table represents one channel, with the columns indicating the current setting of each parameter that can be set for that channel. Hyphens indicate that a parameter is not currently being used. If all of the fields on a line are hyphens, the channel is currently blanked (hidden from use).

Note that, to access the right-most columns (“**Action Mode**,” “**Tx Freq.**,” “**Encoders CTCSS**” etc.), just move the cursor to the right from the right-most edge of the screen. The table will scroll sideways to reveal the additional columns.

CE27 Main Screen (Scrolled Right)

EEPROM DATA EDITOR <CE-27>														
Edit: noname.rpt					Band: VHF					KEY HELP				
Serial No.: 12345678					COM Port: COM1					[SPACE] Toggle Action Mode Simplex/Duplex				
Ch	Action Mode	Tx Freq.	Encoders CTCSS	DCS	Base TOT	Base Guard	LOUT	Pwr	TOT Mute	Rot101 Use	Rot101 Beep	RPT HT	RPT GT	
01	Duplex	161.50000	88.5	off	no	no	off	Hi	off	no	no	no	no	
02	Duplex	161.55000	100.0	off	no	no	off	Hi	off	no	no	no	no	
03	Duplex	161.60000	off	023	no	no	BTLO	Lo	off	no	no	no	no	
04	Duplex	161.65000	off	155	no	no	BTLO	Lo	off	no	no	no	no	
05	Duplex	161.70000	off	155	no	no	off	Hi	off	no	no	no	no	
06	Duplex	161.75000	88.5	off	no	no	off	Hi	off	no	no	no	no	
07	Duplex	161.80000	114.8	off	no	no	off	Hi	off	no	no	no	no	
08	Duplex	161.85000	off	951	no	no	off	Hi	off	no	no	no	no	
09	Duplex	161.90000	off	906	no	no	off	Hi	off	no	no	no	no	
10	Duplex	161.95000	off	off	no	no	BCLO	Hi	off	no	no	no	no	
11	Duplex	162.00000	100.0	off	no	no	off	Hi	off	no	no	no	no	
12	Duplex	162.05000	88.5	off	no	no	off	Hi	off	no	no	no	no	
13	Duplex	162.10000	103.5	off	no	no	off	Hi	off	no	no	no	no	
14	Duplex	162.15000	off	off	no	no	off	Hi	off	no	no	no	no	
15	Duplex	162.20000	79.7	off	no	no	off	Hi	off	no	no	no	no	
16	Duplex	162.25000	off	off	yes	yes	BCLO	Hi	on	yes	yes	yes	yes	

1Help 2Common 3DiskLoad 4DiskSave 5Read ROM 6WriteROM 7PrintOut 8Quit

THE CHANNEL PROGRAMMING SCREEN

Ch: Channel Number.

This 2-digit number (“01” ~ “16”) is used to identify the channel. Channel numbers occur in sequence, and their order can not be changed.

Rx Freq.: Edit Receive (or simplex) Frequency.

Use the [0] ~ [9] keys to enter the desired channel frequency directly, and press the [ENTER] key.

Decoders CTCSS: Toggle CTCSS Decoder ON/OFF, set CTCSS Frequency.

Press the [SPACE] bar to toggle the CTCSS Decoder “on” or “off,” or press the [ENTER] key to display the “TONE SELECT” window, from which you may select a CTCSS frequency using the [ARROW] key; press [ENTER] again to accept the selected tone, or press [Esc] key to cancel.

67.	67.	67.	67.
68.	68.	68.	68.
69.	69.	69.	69.
70.	70.	70.	70.
71.	71.	71.	71.
72.	72.	72.	72.
73.	73.	73.	73.
74.	74.	74.	74.
75.	75.	75.	75.
76.	76.	76.	76.
77.	77.	77.	77.
78.	78.	78.	78.
79.	79.	79.	79.
80.	80.	80.	80.
81.	81.	81.	81.
82.	82.	82.	82.
83.	83.	83.	83.
84.	84.	84.	84.
85.	85.	85.	85.
86.	86.	86.	86.
87.	87.	87.	87.
88.	88.	88.	88.
89.	89.	89.	89.
90.	90.	90.	90.
91.	91.	91.	91.
92.	92.	92.	92.
93.	93.	93.	93.
94.	94.	94.	94.
95.	95.	95.	95.
96.	96.	96.	96.
97.	97.	97.	97.
98.	98.	98.	98.
99.	99.	99.	99.
100.	100.	100.	100.

THE CHANNEL PROGRAMMING SCREEN

NSQ Lv: Noise Squelch threshold level.

Use the [0] ~ [9] keys to enter the desired Squelch threshold level directly, and press the [ENTER] key. Available Values are 0 (min.) ~ 255 (max.).

Court Blip: Courtesy Blip.

When this parameter select “**on**,” this function causes the VXR-7000 to send out a “blip” on the portable/mobile radio is frequency each time the portable radio is unkeyed. This provides audible confirmation to the user that the VXR-7000 was able to receive the transmission from the portable/mobile.

Press the [SPACE] bar to toggle “**on**” or “**off**.”

Rev Bst: Reverse Burst.

When this parameter is set to “**on**,” the CTCSS tone’s phase will be inverted just before the repeater returns to receive.

Press the [SPACE] bar to toggle “**on**” or “**off**.”

DSC Typ: DCS Format.

This command is effective only when DCS is chosen for squelch control.

A = “Normal” DCS

B = “Inverted” (complement) DCS

Press the [SPACE] bar to select the desired DCS Type.

DDec Type: DCS Decoder Type.

This command selects the manner in which DCS is to be decoded.

Fixed = Decodes only the type selected in the above parameter (**DCS Typ**: Normal or Inverted).

Auto = Both types (Normal and Inverted) will be decoded.

Press the [SPACE] bar to select the desired DCS Decoder Mode.

Multi Tone: Enable/disable the Multi Tone Operation.

Press the [SPACE] bar to toggle the Multi Tone Operation between selections “**yes**” and “**no**.”

Press the [ENTER] key to display the “**MULTI TONE SELECT**” window, from which you may select a CTCSS tone or DCS code; move the cursor to the appropriate field you using the [ARROW] key, then press the [ENTER] key to open the “**TONE SELECT**” or “**CODE SELECT**” window. Now select the desired CTCSS tone or DCS code using the [ARROW] key, then press the [ENTER] key again to accept the selected tone or code, or press [Esc] key to cancel.

You may set as many as 16 CTCSS tones and/or DCS codes.

Note that, if you do not yet program a CTCSS tone or DCS code in the “**MULTI TONE**

Multi Tone Select(CH-1)					
		Decoders		Encoders	
		CTCSS	DCS	CTCSS	DCS
Tone	01	88.5	---	88.5	---
Tone	02	100.0	---	100.0	---
Tone	03	---	023	---	023
Tone	04	114	---	88.5	001
Tone	05	203	005	88.5	001
Tone	06	---	155	---	155
Tone	07	---	561	---	023
Tone	08	---	506	---	506

THE CHANNEL PROGRAMMING SCREEN

SELECT” window (when the **“MULTI TONE SELECT”** window data is not programmed), press the **[SPACE]** bar to display the **“MULTI TONE SELECT”** window directly.

CWID ANI/ENI: *Select the Identifier mode.*

Press the **[SPACE]** bar to toggle the selections **“CW ID,” “ANI/ENI,”** or **“off.”** To select this feature to the **“CW ID”** or **“ANI/ENI,”** the **“CW ID”** parameter must be enabled via the **“EDIT COMMON DATA”** window; see page 13 for details.

Action Mode: *Select the repeater operation mode.*

Press the **[SPACE]** bar to toggle between **“Duplex”** operation or **“Simplex”** operation.

Tx Freq.: *Edit Transmit Frequency.*

Use the **[0] ~ [9]** keys to enter the desired channel frequency directly, and press the **[ENTER]** key.

Encoders CTCSS: *Toggle CTCSS Encoder ON/OFF, set CTCSS Frequency.*

Press the **[SPACE]** bar to toggle the CTCSS Encoder **“on”** or **“off,”** or press **[ENTER]** key to display the **“TONE SELECT”** window, from which you may select a CTCSS frequency using the **[ARROW]** key; press **[ENTER]** again to accept the selected tone, or press the **[Esc]** key to cancel.

Tone	Select
67	69.3
67	71
77	79
88	91
100	103.5
100	107
114	118
123	132
131	136
151	156.7
151	162
200	210.7
200	218
230	241.9
230	246
230	254
230	261.1
230	273
230	291.1
230	300
230	318
230	336
230	354
230	372
230	390
230	408
230	426
230	444
230	462
230	480
230	498
230	516
230	534
230	552
230	570
230	588
230	606
230	624
230	642
230	660
230	678
230	696
230	714
230	732
230	750
230	768
230	786
230	804
230	822
230	840
230	858
230	876
230	894
230	912
230	930
230	948
230	966
230	984
230	1002
230	1020
230	1038
230	1056
230	1074
230	1092
230	1110
230	1128
230	1146
230	1164
230	1182
230	1200
230	1218
230	1236
230	1254
230	1272
230	1290
230	1308
230	1326
230	1344
230	1362
230	1380
230	1398
230	1416
230	1434
230	1452
230	1470
230	1488
230	1506
230	1524
230	1542
230	1560
230	1578
230	1596
230	1614
230	1632
230	1650
230	1668
230	1686
230	1704
230	1722
230	1740
230	1758
230	1776
230	1794
230	1812
230	1830
230	1848
230	1866
230	1884
230	1902
230	1920
230	1938
230	1956
230	1974
230	1992
230	2010
230	2028
230	2046
230	2064
230	2082
230	2100
230	2118
230	2136
230	2154
230	2172
230	2190
230	2208
230	2226
230	2244
230	2262
230	2280
230	2298
230	2316
230	2334
230	2352
230	2370
230	2388
230	2406
230	2424
230	2442
230	2460
230	2478
230	2496
230	2514
230	2532
230	2550
230	2568
230	2586
230	2604
230	2622
230	2640
230	2658
230	2676
230	2694
230	2712
230	2730
230	2748
230	2766
230	2784
230	2802
230	2820
230	2838
230	2856
230	2874
230	2892
230	2910
230	2928
230	2946
230	2964
230	2982
230	3000
230	3018
230	3036
230	3054
230	3072
230	3090
230	3108
230	3126
230	3144
230	3162
230	3180
230	3198
230	3216
230	3234
230	3252
230	3270
230	3288
230	3306
230	3324
230	3342
230	3360
230	3378
230	3396
230	3414
230	3432
230	3450
230	3468
230	3486
230	3504
230	3522
230	3540
230	3558
230	3576
230	3594
230	3612
230	3630
230	3648
230	3666
230	3684
230	3702
230	3720
230	3738
230	3756
230	3774
230	3792
230	3810
230	3828
230	3846
230	3864
230	3882
230	3900
230	3918
230	3936
230	3954
230	3972
230	3990
230	4008
230	4026
230	4044
230	4062
230	4080
230	4098
230	4116
230	4134
230	4152
230	4170
230	4188
230	4206
230	4224
230	4242
230	4260
230	4278
230	4296
230	4314
230	4332
230	4350
230	4368
230	4386
230	4404
230	4422
230	4440
230	4458
230	4476
230	4494
230	4512
230	4530
230	4548
230	4566
230	4584
230	4602
230	4620
230	4638
230	4656
230	4674
230	4692
230	4710
230	4728
230	4746
230	4764
230	4782
230	4800
230	4818
230	4836
230	4854
230	4872
230	4890
230	4908
230	4926
230	4944
230	4962
230	4980
230	4998
230	5016
230	5034
230	5052
230	5070
230	5088
230	5106
230	5124
230	5142
230	5160
230	5178
230	5196
230	5214
230	5232
230	5250
230	5268
230	5286
230	5304
230	5322
230	5340
230	5358
230	5376
230	5394
230	5412
230	5430
230	5448
230	5466
230	5484
230	5502
230	5520
230	5538
230	5556
230	5574
230	5592
230	5610
230	5628
230	5646
230	5664
230	5682
230	5700
230	5718
230	5736
230	5754
230	5772
230	5790
230	5808
230	5826
230	5844
230	5862
230	5880
230	5898
230	5916
230	5934
230	5952
230	5970
230	5988
230	6006
230	6024
230	6042
230	6060
230	6078
230	6096
230	6114
230	6132
230	6150
230	6168
230	6186
230	6204
230	6222
230	6240
230	6258
230	6276
230	6294
230	6312
230	6330
230	6348
230	6366
230	6384
230	6402
230	6420
230	6438
230	6456
230	6474
230	6492
230	6510
230	6528
230	6546
230	6564
230	6582
230	6600
230	6618
230	6636
230	6654
230	6672
230	6690
230	6708
230	6726
230	6744
230	6762
230	6780
230	6798
230	6816
230	6834
230	6852
230	6870
230	6888
230	6906
230	6924
230	6942
230	6960
230	6978
230	6996
230	7014
230	7032
230	7050
230	7068
230	7086
230	7104
230	7122
230	7140
230	7158
230	7176
230	7194
230	7212
230	7230
230	7248
230	7266
230	7284
230	7302
230	7320
230	7338
230	7356
230	7374
230	7392
230	7410
230	7428
230	7446
230	7464
230	7482
230	7500
230	7518
230	7536
230	7554
230	7572
230	7590
230	7608
230	7626
230	7644
230	7662
230	7680
230	7698
230	7716
230	7734
230	7752
230	7770
230	7788
230	7806
230	7824
230	7842
230	7860
230	7878
230	7896
230	7914
230	7932
230	7950
230	7968
230	7986
230	8004
230	8022
230	8040
230	8058
230	8076
230	8094
230	8112
230	8130
230	8148
230	8166
230	8184
230	8202
230	8220
230	8238
230	8256
230	8274
230	8292
230	8310
230	8328
230	8346
230	8364
230	8382
230	8400
230	8418
230	8436
230	8454
230	8472
230	8490
230	8508
230	8526
230	8544
230	8562
230	8580
230	8598
230	8616
230	8634
230	8652
230	8670
230	8688
230	8706
230	8724
230	8742
230	8760
230	8778
230	8796
230	8814
230	8832
230	8850
230	8868
230	8886
230	8904
230	8922
230	8940
230	8958
230	8976
230	8994
230	9012
230	9030
230	9048
230	9066
230	9084
230	9102
230	9120
230	9138
230	9156
230	9174
230	9192
230	9210
230	9228
230	9246
230	9264
230	9282
230	9300
230	9318
230	9336
230	9354
230	9372
230	9390
230	9408
230	9426
230	9444
230	9462
230	9480
230	9498
230	9516
230	9534
230	9552
230	9570
230	9588
230	9606
230	9624
230	9642
230	9660
230	9678
230	9696
230	9714
230	9732
230	9750
230	9768
230	9786
230	9804
230	9822
230	9840
230	9858
230	9876
230	9894
230	9912
230	9930
230	9948
230	9966
230	9984
230	10002

THE CHANNEL PROGRAMMING SCREEN

LOUT: *Select the Lock Out Feature's mode.*

Press the [**SPACE**] bar to toggle the Lock Out Feature between “**BCLO**,” “**BTLO**,” or “**off**,” then press the [**ENTER**] key to accept the setting. “**BCLO**” inhibits transmitting while there is carrier present. “**BTLO**” inhibits transmitting while there is carrier present unless there is also valid tone present.

TX Pwr: *Transmitter Power Output Selection.*

This parameter selects the desired power output from the VXR-7000 on the current channel. The available values are **HIGH** and **LOW**.

Press the [**SPACE**] bar to select “**Hi**” or “**Lo**.”

TOT Mute: *Enable/disable the TOT beep monitoring.*

When this parameter is set to “**on**,” the alert beep will sound from the front panel speaker before the repeater turns itself off.

RptTOT Use: *Enable/disable the Time-Out Timer while operating in the repeater mode.*

Press the [**SPACE**] bar to toggle the Repeater TOT selections “**yes**” or “**no**.”

The TOT time is determined via the “**EDIT COMMON DATA**” window; see page 13 for details.

RptTOT Beep: *Enable/disable the TOT beep transmission.*

Press the [**SPACE**] bar to toggle the TOT beep selections “**yes**” or “**no**.”

When this parameter is set to “**yes**,” the alert beep will be sent out on the air before the repeater turns itself off, while operating in the “Repeater” mode.

RPT HT: *Enable/disable the Repeater Hang-on Timer.*

Press the [**SPACE**] bar to toggle the Repeater Hang-on Timer selections “**yes**” or “**no**.”

When this parameter is set to “**yes**,” the repeater will remain keyed for a desired number of seconds after a receiving carrier is dropped.

The Hang-on time is determined via the “**EDIT COMMON DATA**” window; see page 13 for details.

RPT GT: *Enable/disable the Repeater Guard.*

When this parameter is set to “**yes**,” the transmitter will be inhibited a desired number of seconds before the repeater is unkeyed.

The inhibit time is determined via the “**EDIT COMMON DATA**” window; see page 13 for details.

THE CHANNEL PROGRAMMING SCREEN

Function Key Selections

The main features of the program are indicated along the bottom of the screen, and are accessible by pressing the corresponding function keys ([F1] to [F8], located along the left side or top of your keyboard). You will always return to this screen after completing one of the actions listed, and can then edit channel data, select another feature, or quit.

1Help 2Common 3DiskLoad 4DiskSave 5Read ROM 6WriteROM 7PrintOut 8Quit

[F1]: Help

Pressing this key anywhere in the program will invoke the on-line help feature. The help displayed will depend on where the cursor is when the [F1] key was pressed. Pressing the [Esc] key returns you to normal program operation. If more help is available, press [F1] or [ENTER] to switch to the next help window.

```
HELP 1
(Edit Rx/Simplex Frequency & Hide/Unhide Channel Data)

Use 0 - 9 to enter the desired channel frequency, and press
Enter. This frequency will be adjusted if it does not match
the Channel Step parameter, and will also appear in the TX
Freq field. You do not need to enter all 8 digits; empty
digits to the right are zero-filled. Pressing [.] (period)
after several digits forces them to MHz. Press period first
to change only kHz.

Pressing only the Space Bar without entering a number
toggles the data for the entire channel between hidden and
unhidden (except the first channel, which cannot be hidden).
Hidden channels display "---" in place of field entries, and
are not used for operation (although they are still stored in
hidden form for possible recall later).
[ Enter/F1 ] for MORE Help, [ Esc ] to resume
```

[F2]: Common

Press this key to display the “**EDIT COMMON DATA**” window. If you intend to edit any parameter in this window, execute the CE27 programming software with the “F” option (type “**CE27-F**” [ENTER]). See page 19 for details. Pressing the [Esc] key returns you to normal program operation.

```
EDIT COMMON DATA
Band Select: VHF          IF:
Duplexer Installed: no    RX Reference: 21.40 MHz
Beep Enable: yes         TX Reference: 14.40 MHz
Monitor Enable: yes      TX Power Type: 14.40 MHz
1st Local Offset: Lower  DC TX Power Low: yes 50 W
2nd Local Offset: Lower  HI-Temp TX Pwr Low: no
Accessory: High/Low      Base I.O.T:
MIC, Moni Enable: yes    Base Guard Time: 3.0 Min
Fan Alert Enable: yes    Repeat I.O.I: 3.0 Min
HI-Temp Alert: yes       Repeat HangOn Time: 2.0 Sec
Hang On Audio: Quiet     Repeat Guard Time: 10 Sec
CH Step: S/6.25 KHz      CH ID:
COM Port: COM1           DTMF ANI/ENI:
                       S-Tone ANI/ENI: off RX Enable
```

[F3]: DiskLoad

Pressing this key displays the “**FILE DIRECTORY**” window, which downloads the data available from the disk file. Select the desired file using the [ARROW] key, then press the [ENTER] key, to download the data file. Pressing the [Esc] key returns you to normal program operation.

```
<..      >  noname.rpt      rpt_1.rpt      vxr-7000.rpt

File to Load  C:\CE27\*.rpt
```

THE CHANNEL PROGRAMMING SCREEN

[F4]: DiskSave

Pressing this key displays the “FILE DIRECTORY” window, which saves the Data to a disk file. To save the Data, type the file name (up to eight letters) with the extension “.rpt,” then press the [ENTER] key.



[F5]: Read ROM

Pressing this key uploads data from the repeater. Make the proper connections and turn on power before pressing this key.



[F6]: Write ROM

Pressing this key downloads data to the repeater.



[F7]: Print Out

Pressing this key prints a copy of the current data. Or you may use this command to view data without making any changes.

To print a displayed page on the printer, just press the [PRINT SCREEN] key.



[F8]: Quit

Press this key to quit the CE27 Programming Software.

“EDIT COMMON DATA” WINDOW

To open the “EDIT COMMON DATA” window, just press the [F2] (Common) key. If you intend to edit a parameter in this window, execute the CE27 programming software with the “/F” option (type “CE27-F” [ENTER]).

Band Select: *VHF/UHF Operating Band Selection.*

Press the [SPACE] bar to toggle the operating band between “VHF” or “UHF,” so as to match to your repeater’s version (VHF or UHF).

Duplexer Installed: *Duplexer Status.*

Press the [SPACE] bar to toggle the (internal Antenna) Duplexer status between “yes” and “no.” When you install the Antenna Duplexer into the repeater, this parameter must be set to “yes.”

Beep Enable: *Enable/disable the keypad beeper.*

Press the [SPACE] bar to toggle the keypad beeper selections between “yes” and “no.” When this parameter is set to “no,” the keypad beeper is disabled.

Monitor Enable: *Enable/disable the Front Panel Monitor Switch.*

Press the [SPACE] bar to toggle the Front Panel MONITOR switch function selections between “yes” and “no.” When this parameter is set to “no,” the MONITOR switch is disabled.

1st Local Offset: *Select the 1st IF Heterodyne Shift Direction.*

Press the [SPACE] bar to toggle the repeater’s 1st IF heterodyne shift direction between “Upper” and “Lower.” This parameter should not be changed (to Upper) unless your repeater is modified.

2nd Local Offset: *Select the 2nd IF Heterodyne Shift Direction.*

Press the [SPACE] bar to toggle the repeater’s 2nd IF heterodyne shift direction between “Upper” and “Lower.” This parameter should not be changed (to Upper) unless your repeater is modified.

“EDIT COMMON DATA” Window

EDIT COMMON DATA			
Band Select:	VHF	IF:	21.40 MHz
Duplexer Installed:	no	RX Reference:	14.40 MHz
Beep Enable:	yes	TX Reference:	14.40 MHz
Monitor Enable:	yes	TX Power Type:	50 W
1st Local Offset:	Lower	DC TX Power Low:	yes
2nd Local Offset:	Lower	HI-Temp TX Pwr Low:	no
Accessory:	High/Low	Base T.O.T:	3.0 Min
MIC. Moni Enable:	yes	Base Guard Time:	3.2 Sec
Fan Alert Enable:	yes	Repeat T.O.T:	3.0 Min
Hi-Temp Alert:	yes	Repeat HangOn Time:	2.0 Sec
Hang On Audio:	Quiet	Repeat Guard Time:	10 Sec
CH Step:	5/6.25 KHz	CW ID:	on
COM Port:	COM1	DTMF ANI/ENI:	RX Enable
		5-Tone ANI/ENI:	off

“EDIT COMMON DATA” WINDOW

Accessory: *Select the Front Panel Accessory Switch Function.*

Press the [SPACE] bar to toggle the front panel's **ACCESSORY** Switch function between “**High/Low**” and “**ACC.**”

MIC. Moni. Enable: *Enable/disable the Microphone's Monitor Button.*

Press the [SPACE] bar to toggle the microphone's Monitor Button feature between “**yes**” or “**no.**”

When using the optional Base Microphone, this parameter is set to “**yes**” to enable the microphone's Monitor Button.

Note: When this parameter is set to “**yes**,” the repeater's **MONITOR** LED glows green continuously when you unplug the Base Microphone.

Fan Alert Enable: *Enable/disable the Fan Alert Feature.*

Press the [SPACE] bar to toggle the Fan Alert feature selections between “**yes**” and “**no.**”

When this parameter is set to “**yes**,” the Channel Indicator will display an Alert Message (“**FE**”) should the cooling fan have a mechanical (accumulated dirt and dust) and/or electrical (such as a broken fan motor coil) problem.

HI-Temp Alert: *Enable/disable the HI-Temp Alert Feature.*

Press the [SPACE] bar to toggle the HI-Temp Alert feature selections between “**yes**” and “**no.**”

When this parameter is set to “**yes**,” the Channel Indicator will display an Alert Message (“**Hi**”) if the final transistor should overheat.

Hang On Audio: *Select the Hang On Audio Feature mode.*

Press the [SPACE] bar to toggle the Hang On Audio Feature between “**Quiet**” and “**Noise.**”

When this parameter is set to “**Quiet**,” the repeater's speaker will be quiet when no signal is being received.

When this parameter is set to “**Noise**,” the repeater's speaker will put out muted (20 dB down) noise when no signal is being received.

CH Step: *Select the Channel Step Size.*

Press the [SPACE] bar to toggle the channel step size between “**2.5/6.25**” and “**5/6.25.**” This allows you to select the channel step size which matches your repeater's channel step size requirements.

Selection is available in VHF repeaters only. UHF repeaters are fixed at “**5/6.25**” only.

COM Port: *Select the computer's COM Port.*

Press the [SPACE] bar to toggle the COM Port between “**COM1**” and “**COM2**,” corresponding to the COM Port to which your **VPL-1** Connection Cable is connected.

“EDIT COMMON DATA” WINDOW

IF: *1st IF Frequency.*

Use the [0] ~ [9] and [•] keys to enter the 1st IF frequency directly, and press the [ENTER] key. This parameter must not be changed (from 21.40 MHz) unless your repeater is modified.

RX Reference: *RX Reference frequency.*

Use the [0] ~ [9] and [•] keys to enter the RX Reference frequency directly, and press the [ENTER] key. This parameter must not be changed (from 14.40 MHz) unless your repeater is modified.

TX Reference: *TX Reference frequency.*

Use the [0] ~ [9] and [•] keys to enter the TX Reference frequency directly, and press the [ENTER] key. This parameter must not be changed (from 14.40 MHz) unless your repeater is modified.

TX Power Type: *Select the Maximum TX Output Power.*

Press the [SPACE] bar to toggle the maximum TX output power between “50W” and “25W.”

You can adjust the TX output power for each operating channel individually via the [F3] (TXP Adj) key.

DC Power Low:

Enable/disable the TX Power Reduction while operating on a DC Power Supply or Battery.

When this parameter is set to “yes,” the TX output power will automatically be reduced to the “LOW” power selection when a DC power source is detected. Power output will return to “HIGH” when AC power is restored.

HI-Temp TX Pwr Low:

Enable/disable the TX Power Reduction if the Final Amplifier is Overheating.

When this parameter is set to “yes,” the TX output power will automatically be reduced to the “LOW” power selection if the final amplifier is overheating.

Base T.O.T.: *Base Time-Out Timer Time Setting.*

Use the [0] ~ [9] and [•] keys to enter the desired Time-Out Timer (TOT) time (while operating in the “BASE” mode) directly, and press the [ENTER] key. Available values are 0.0 (Min) ~ 60.0 (Min) in 0.5 minute multiples.

Base Guard Time: *Base Guard Time Setting.*

Use the [0] ~ [9] keys to enter the desired Base Guard time (while operating in the “BASE” mode) directly, and press the [ENTER] key. Available values are 0 (Sec) ~ 360 (Sec) in 2 second multiples.

“EDIT COMMON DATA” WINDOW

Repeat T.O.T: *Repeater Time-Out Timer Time Setting.*

Use the [0] ~ [9] and [•] keys to enter the desired Time-Out Timer (TOT) time (while operating in the “**REPEATER**” mode) directly, and press the [ENTER] key. Available values are 0.0 (Min) ~ 60.0 (Min) in a 0.5 second multiples.

Repeat HangOn Time: *Repeater Hang-On Time Setting.*

Use the [0] ~ [9] and [•] keys to enter the desired Hang-On time (while operating in the “**REPEATER**” mode) directly, and press the [ENTER] key. Available values are 0.0 (Sec) ~ 60.0 (Sec) in a 0.5 minute multiples.

Repeat Guard Time: *Repeater Guard Time Setting.*

Use the [0] ~ [9] keys to enter the desired Guard time (while operating in the “**REPEATER**” mode) directly, and press the [ENTER] key. Available values are 0 (Sec) ~ 360 (Sec) in a 2 second multiples.

CW ID: *Enable/disable the CW Identifier feature.*

Press the [SPACE] bar to toggle the repeater’s CW Identifier “on” or “off.”

When this parameter set to “on,” details of the settings may be set via the [F5] key. See page 18 for details.

DTMF ANI/ENI: *Enable/disable the DTMF ANI/ENI feature*

Press the [SPACE] bar to toggle the DTMF ANI/ENI feature selections “RX Enable,” “TX Enable,” “TRX Enable,” or “off.”

When the Identifier is set to “on,” details of the settings may be set via the [F4] key. See page 14 for details.

5-Tone ANI/ENI: *Enable/disable the 5-TONE ANI/ENI feature*

Press the [SPACE] bar to toggle the 5-TONE ANI/ENI feature “RX Enable,” “TX Enable,” “TRX Enable,” or “off.”

When the Identifier is set to “on,” details of the settings may be set via the [F4] key. See page 16 for details.

Note: The DTMF ANI/ENI feature and 5-TONE ANI/ENI feature are exclusive; only one may be active at any time.

“EDIT COMMON DATA” WINDOW

Function Key Selections on the “EDIT COMMON DATA” Window

[F1]: Help

Pressing this key anywhere in the program will invoke the on-line help feature. The help displayed will depend on where the cursor is when [F1] key was pressed. Pressing the [Esc] key returns you to normal program operation. If more help is available, press [F1] or [ENTER] to switch to the next help window.

[F2]: Enviro

Pressing this key displays the “**HARDWARE ENVIRONMENT**” window. These parameters can not be edited in the field. If adjustments to any of these parameters are required, the repeater must be returned to Yaesu.

HARDWARE ENVIRONMENT		Lowest	Low	High	Highest
Serial: 12345678	RX Freq: 150.0MHz	160.0MHz	170.0MHz	174.0MHz	
TX Power Display	SOL Level: 48(30h)	48(30h)	48(30h)	48(30h)	
High: 50W	RX Tune: 44(2Ch)	128(80h)	186(8Ah)	218(DAh)	
Low: 10W	TX Freq: 150.0MHz	160.0MHz	170.0MHz	174.0MHz	
Squelch W/N Adjust	TX Pwr Hi: 195(C9h)	199(C7h)	203(CBh)	206(CEh)	
Value: 0(00h)	Lo: 75(4Bh)	75(4Bh)	76(4Ch)	77(4Dh)	
	Max Dev Hi: 157(9Dh)	156(9Ch)	155(9Bh)	154(9Ah)	
Squelch Hysteresis	CTC Dev N: 146(92h)	145(91h)	143(8Fh)	142(8Eh)	
Value: 23(14h)	N: 163(99h)	161(97h)	154(92h)	153(91h)	
NSQ Threshold	DCS Dev N: 149(95h)	148(94h)	146(92h)	145(91h)	
Level: 110(6Eh)					

[F3]: TXP Adj

Pressing this key displays the “**TX POWER ADJUST VALUE**” window, which individually sets the adjusting values for the TX output power (determined from the “TX Pwr” parameter, described previously) for each operating channel. Select the desired operating channel using the [ARROW] key, then use the [0] ~ [9] keys to enter the adjusting values for the TX output power to be you want, then press the [ENTER] key. Available values are -128(80h: maximum reducing) ~ 127(7Fh: maximum increasing). Alternately, the values can be incremented by the [SPACE] bar or decremented by the [BACK SPACE] key.

TX Power Adjust Value	
CH 01: 127(7Fh)	CH 09: 120(78h)
CH 02: 127(7Fh)	CH 10: 125(7Dh)
CH 03: 127(7Fh)	CH 11: 125(7Dh)
CH 04: 120(78h)	CH 12: 127(7Fh)
CH 05: 127(7Fh)	CH 13: 127(7Fh)
CH 06: 125(7Dh)	CH 14: 127(7Fh)
CH 07: 125(7Dh)	CH 15: 127(7Fh)
CH 08: 120(78h)	CH 16: 127(7Fh)

Pressing the [Esc] key closes the “TX POWER ADJUST VALUE” window.

[F4]: DTMF

This function key appears when DTMF ANI/ENI is set to “**Enable**.”

Pressing this key displays the “**DTMF SETTINGS (COMMON DATA)**” window, which allows editing of the DTMF identifier parameters.

DTMF SETTINGS(COMMON DATA)	
Mark Time:	50 ms
Space Time:	50 ms
ANI On:	Both
Delay Time:	300 ms
Delay Time:	1200 ms
TX Time:	2 sec
TX Time:	2 sec
TX Desd Time:	2 sec
Repeat Count:	N
Header Code:	B
Header Code:	B
Code:	1234
Code:	ABCD

Select the item to be you need via the [UP/DOWN] Arrow keys.

Mark Time programs the “Mark” Weight for the DTMF ANI/ENI feature. Use the [0] ~ [9] keys to enter the desired “Mark” Time directly, then press the [ENTER] key. Available values are 1 (ms) ~ 600 (ms).

Space Time programs the “Space” Weight for the DTMF ANI/ENI feature. Use the [0] ~ [9] keys to enter the desired “Space” Time directly, then press the [ENTER]

“EDIT COMMON DATA” WINDOW

key. Available values are 1 (ms) ~ 600 (ms).

ANI on programs the ANI transmit timing. Press the [SPACE] bar to toggle the ANI transmit timing “TX off,” “TX on,” “Both,” or “None.”

TX off: The ANI transmits when the repeater is unkeyed.

TX on: The ANI transmits when the repeater is keyed.

Both: The ANI transmits when the repeater is keyed and unkeyed.

None: ANI is not transmitted.

ANI Delay Time programs envelope delay for the ANI feature. This setting allows shifting of the entire ANI transmission string in time. Use the [0] ~ [9] keys to enter the desired “Delay” Time directly, then press the [ENTER] key. Available values are 20 (ms) ~ 1275 (ms) in 5 ms multiples.

ENI Delay Time programs envelope delay for the ENI feature. This setting allows shifting of the entire ENI transmission string in time. Use the [0] ~ [9] keys to enter the desired “Delay” Time directly, then press the [ENTER] key. Available values are 20 (ms) ~ 1275 (ms) in 5 ms multiples.

ENI TX Time programs repeater transmit time when the ENI feature is activated. The repeater keeps transmit mode until this period expires when ENI feature is activated. Use the [0] ~ [9] keys to enter the desired “Transmit” Time directly, then press the [ENTER] key. Available values are 1 (sec) ~ 255 (sec), however, this time must be more than (Mark Time + Space Time) x 5 (digits) (sec).

ENI RX Time programs receive time when the ENI feature is activated. The repeater keeps receive mode until this period expires after the ENI code is transmitted. Use the [0] ~ [9] keys to enter the desired “Receive” Time directly, then press the [ENTER] key. Available values are 1 (sec) ~ 255 (sec).

ENI RX Dead Time programs receiver dead time when the ENI feature is activated. Use the [0] ~ [9] keys to enter the desired “Receiver Dead” Time directly, then press the [Enter] key. Available values are 0 (sec) ~ 255 (sec).

ENI Repeat Count programs the number of times for the ENI code transmitting. The repeater repeatedly transmits the ENI code sequence this many times. Use the [0] ~ [9] keys to enter the desired number directly, then press the [ENTER] key. Available values are 1 ~ 255 (times).

ANI Header Code programs the Header Code for the ANI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #).

ENI Header Code programs the Header Code for the ENI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #).

ANI Code programs the ANI code for the ANI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #) (four digits).

ENI Code programs the ENI code for the ANI feature. The character to be used is

“EDIT COMMON DATA” WINDOW

0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #) (four digits).

Pressing the [Esc] key closes the “DTMF SETTINGS (COMMON DATA)” window.

[F4]: 5-TONE

This function key appears when 5-TONE ANI/ENI is set to “Enable.”

Pressing this key displays the “5-TONE SETTINGS (COMMON DATA)” window, which allows editing of the 5-tone identifier parameters.

5-TONE SETTINGS (COMMON DATA)	
Mark Time:	50 ms
Space Time:	50 ms
ANI Delay Time:	Both
ENI Delay Time:	300 ms
TX Time:	1200 ms
ENI RX Time:	2 sec
ENI Repeat Count:	2
ENI Header Code:	1234
ENI Code:	ABCD
5-Tone Repeat Code:	E

FREQUENCY	
0: 1060Hz	8: 2200Hz
1: 1160Hz	9: 2400Hz
2: 1270Hz	0: 2600Hz
3: 1400Hz	1: 2800Hz
4: 1530Hz	2: 3000Hz
5: 1670Hz	3: 3200Hz
6: 1830Hz	4: 3400Hz
7: 2000Hz	5: 3600Hz

5-Tone Set : USER

Select the item to be you need the [Up/Down] Arrow keys.

Mark Time programs the “Mark” Weight for the 5-TONE ANI/ENI feature. Use the [0] ~ [9] keys to enter the desired “Mark” Time directly, then press the [ENTER] key. Available values are 1 (ms) ~ 600 (ms).

Space Time programs the “Space” Weight for the 5-TONE ANI/ENI feature. Use the [0] ~ [9] keys to enter the desired “Space” Time directly, then press the [ENTER] key. Available values are 1 (ms) ~ 600 (ms).

ANI on programs the ANI transmit timing. Press the [SPACE] bar to toggle the ANI transmit timing “TX off,” “TX on,” “Both,” or “None.”

TX off: The ANI transmits when the repeater is unkeyed.

TX on: The ANI transmits when the repeater is keyed.

Both: The ANI transmits when the repeater is keyed and unkeyed.

None: ANI is not transmitted.

ANI Delay Time programs envelope delay for the ANI feature. This setting allows shifting of the entire ANI transmission string in time. Use the [0] ~ [9] keys to enter the desired “Delay” Time directly, then press the [ENTER] key. Available values are 20 (ms) ~ 1275 (ms) in 5 ms multiples.

ENI Delay Time programs envelope delay for the ENI feature. This setting allows shifting of the entire ENI transmission string in time. Use the [0] ~ [9] keys to enter the desired “Delay” Time directly, then press the [ENTER] key. Available values are 20 (ms) ~ 1275 (ms) in 5 ms multiples.

ENI TX Time programs repeater transmit time when the ENI feature is activated. The repeater keeps transmit mode until this period expires when ENI feature is activated. Use the [0] ~ [9] keys to enter the desired “Transmit” Time directly, then press the [ENTER] key. Available values are 1 (sec) ~ 255 (sec), however, this time must be more than (Mark Time + Space Time) x 5 (digits) (sec).

ENI RX Time programs receive time when the ENI feature is activated. The repeater keeps receive mode until this period expires when after the ENI code is

“EDIT COMMON DATA” WINDOW

transmitted. Use the [0] ~ [9] keys to enter the desired “Receive” Time directly, then press the [ENTER] key. Available values are 1 (sec) ~ 255 (sec).

ENI RX Dead Time programs receiver dead time when the ENI feature is activated. Use the [0] ~ [9] keys to enter the desired “Receiver Dead” Time directly, then press the [ENTER] key. Available values are 0 (sec) ~ 255 (sec).

ENI Repeat Count programs the number of times for the ENI code transmitting. The repeater repeatedly transmits the ENI code sequence this many times. Use the [0] ~ [9] keys to enter the desired number directly, then press the [ENTER] key. Available values are 1 ~ 255 (times).

ANI Header Code programs the Header Code for the ANI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #).

ENI Header Code programs the Header Code for the ENI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #).

ANI Code programs the ANI code for the ANI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #) (four digits).

ENI Code programs the ENI code for the ENI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #) (four digits).

5-Tone Repeat Code programs the 5-Tone Repeat Code for the 5-TONE ANI/ENI feature. The character to be used is 0 ~ 9, A, B, C, D, E (=DTMF *), or F (=DTMF #).

Frequency selects/programs 5-Tone Set for the 5-TONE ANI/ENI feature. To change the 5-Tone Set, then press the [TAB] key to switch the cursor to the “FREQUENCY” section, press the [SPACE] bar to select the 5-Tone set among the “ZVEI1,” “ZVEI2,” “ZVEI3,” “PZVEI,” “DZVEI,” “EEA,” “CCIR,” “EIA,” and “User,” and then press the [ENTER] key.

When set to “User,” select the tone you wish to change via the [Up/Down] Arrow keys. Now, enter the desired Tone Frequency directly via the [0] ~ [9] keys, then press the [ENTER] key.

Pressing the [Esc] key closes the “5-TONE SETTINGS (COMMON DATA)” window.

[F5]: CW-ID

This function key appears when CW ID parameter is set to “on”

Pressing this key displays the “CW-ID SETTINGS (COMMON DATA)” window, which sets the status of some CW identifier items (“Dot Time,” “Interval Timer,” “Tone Freq,” and “CW-ID”).

Select the item to edit using the [ARROW] keys, then use the [0] ~ [9] and [.] keys to enter the desired directly, then press the [ENTER] key.



“EDIT COMMON DATA” WINDOW

Dot Time programs the CW Dot Weight for the CW Identifier. Available values are 20 (ms) ~ 255 (ms). 50 ms = approx. 25 WPM.

Interval Timer programs the Polling Interval for the CW Identifier. Available values are 30 (sec) ~ 4800 (sec).

Tone Freq programs the CW pitch and CW sidetone for the CW Identifier. Available values are 300 (Hz) ~ 3000 (Hz).

CW-ID allows programming of the repeater’s callsign. It may contain up to 16 characters.

Pressing the [Esc] key closes the “**CW-ID SETTINGS (COMMON DATA)**” window.

[F6]: AlphaTag

Pressing this key displays the “**ALPHA TAG**” window, which programs the ANI message when an ANI code is received.

Use the [0] ~ [9] keys to enter the ANI code and press the [ENTER] key, then press the [RIGHT (ARROW)] key momentarily to switch the cursor to the right area. Type the message (up to 8 characters) corresponding to the ANI code.

You can program up to 48 ANI messages.

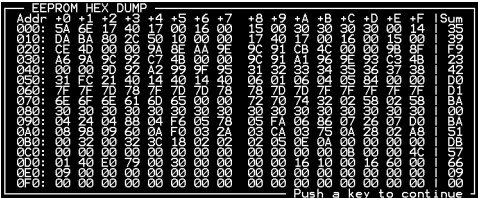
Pressing the [Esc] key closes the “**ALPHA TAG**” window.



[F7]: Data Dump

Pressing this key displays the “**EEPROM HEX DUMP**” window.

Pressing the [Esc] key closes the “**EEPROM HEX DUMP**” window.



[F8]: CH Edit

Pressing this key returns you to the “**Channel Programming**” Screen.

“HARDWARE ENVIROMENT” WINDOW

To open the “**HARDWARE ENVIROMENT**” window, just press the [**F2**] (**Enviro**) key while the “**EDIT COMMON DATA**” window is open.

Left Section

The following six parameters provide to the of the repeater.

Serial:

Use the [**0**] ~ [**9**] keys to enter the your repeater’s serial number directly, then press the [**ENTER**] key.

TX Power Display “High”:

Use the [**0**] ~ [**9**] key to enter your repeater’s actual TX “HIGH” power directly, then press the [**ENTER**] key. This parameter is just a memorandum.

TX Power Display “Low”:

Use the [**0**] ~ [**9**] key to enter your repeater’s actual TX “LOW” power directly, then press the [**ENTER**] key. This parameter is just a memorandum.

Squelch W/N Adjust Value:

The revised value of the squelch noise level (the difference between the setting for Wide operation and Narrow operation) appears here.

Squelch Hysteresis Value:

The Squelch Hysteresis value appears here.

NSQ Threshold Level:

The front panel’s **SQL** knob Squelch Threshold value appears here.

“HARDWARE ENVIROMENT” Window

HARDWARE ENVIRONMENT		Lowest	Low	High	Highest
Serial:	12345678				
TX Power Display		RX Freq:	150.0MHz	160.0MHz	170.0MHz
High:	50W	SQL Level:	48(30h)	48(30h)	48(30h)
Low:	10W	RX Tune:	44(2Ch)	128(80h)	186(BAh)
					218(DAh)
Squelch W/N Adjust		TX Freq:	150.0MHz	160.0MHz	170.0MHz
Value:	0(00h)	TX Pwr Hi:	195(C3h)	199(C7h)	203(CBh)
		Lo:	75(4Bh)	75(4Bh)	76(4Ch)
		Max Dev	157(9Dh)	156(9Ch)	155(9Bh)
Squelch Hysteresis		N:	146(92h)	145(91h)	143(8Fh)
Value:	20(14h)	CTC Dev	162(A2h)	161(A1h)	166(A6h)
		N:	158(9Fh)	158(9Fh)	154(9Ah)
NSQ Threshold		DCS Dev	158(9Fh)	158(9Fh)	156(9Ch)
Level:	110(6Eh)	N:	149(95h)	147(93h)	146(92h)
					145(91h)

“HARDWARE ENVIRONMENT” WINDOW

Right Section

The following 12 parameters individually provide to the four partition (“*Lowest*,” “*Low*,” “*High*,” and “*Highest*”) of the repeater’s bandwidth.

RX Freq.: *Displays test frequencies.*

You can change these test frequencies using the [0] ~ [9], and [•] keys, or enter the frequency directly using the [0] ~ [9] keys.

SQL Level: *Displays the Squelch level when the repeater transmitter is activated.*

You can adjust this level using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

RX Tune: *Displays the tuning voltage for the IF stage alignment.*

You can adjust this setting using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

TX Freq.: *Displays test frequencies.*

You can change these test frequencies using the [0] ~ [9], and [•] keys, or enter the frequency directly using the [0] ~ [9] keys.

TX Pwr Hi: *Displays the TX “HIGH” power output level.*

You can change this level using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

TX Pwr Lo: *Displays the TX “LOW” power output level.*

You can change this level using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

Max Dev W: *Displays the Maximum deviation level while in WIDE FM operation.*

You can change this level using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

Max Dev N: *Displays the Maximum deviation level while in NARROW FM operation.*

You can change this level using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

CTC Dev W: *Displays the Maximum deviation level for the CTCSS tone encoder while in WIDE FM operation.*

You can change this level using the [SPACE] bar (increment) or [BACK SPACE] key, or enter the value directly using the [0] ~ [9] keys.

“HARDWARE ENVIRONMENT” WINDOW

CTC Dev N: *Displays the Maximum deviation level for the CTCSS tone encoder while in NARROW FM operation.*

You can change this level using the [**SPACE**] bar (increment) or [**BACK SPACE**] key, or enter the value directly using the [**0**] ~ [**9**] keys.

DCS Dev W: *Displays the Maximum deviation level for the DCS encoder while in WIDE FM operation.*

You can change this level using the [**SPACE**] bar (increment) or [**BACK SPACE**] key, or enter the value directly using the [**0**] ~ [**9**] keys.

DCS Dev N: *Displays the Maximum deviation level for the DCS encoder while in NARROW FM operation.*

You can change this level using the [**SPACE**] bar (increment) or [**BACK SPACE**] key, or enter the value directly using the [**0**] ~ [**9**] keys.



Copyright 2001
VERTEX STANDARD CO., LTD.
All rights reserved.

No portion of this manual
may be reproduced
without the permission of
VERTEX STANDARD CO., LTD.

Printed in Japan