# RT85 PROGRAMMING DATA . VK3TAE 30/MAY/1997

**This data will not work on the RT85A, RT85B or RT85C Models**

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**LOCATION 3F0**

**The HIGHEST Channel must be placed in location 03F0**

**For a radio with 63 Channels fitted**

EG: 0003F0 **63** 00 00 42 FF FF FF FF FF FF FF FF FF FF FF FF

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**LOCATION 3F1 First Bit**

EG: 0003F0 63 **0**0 00 00 FF FF FF FF FF FF FF FF FF FF FF FF

The first digit is filled from the following table

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CTCSS Decoder fitted | **Y** | **Y** | **Y** | **Y** | | | | |
| Busy Lamp Delay | **Y** | **Y** | | | **Y** | **Y** | | |
| Selcall Fitted | **Y** | | **Y** | | **Y** | | **Y** | |
| Programming Code | **7** | **6** | **5** | **4** | **3** | **2** | **1** | **0** |

**LOCATION 3F1 Second Bit.**

EG: 0003F0 63 0**0** 00 00 FF FF FF FF FF FF FF FF FF FF FF FF

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Status No.Required | **Y** | **Y** | **Y** | **Y** | | | | |
| Inhibit TX when BUSY LED ON | **Y** | **Y** | | | **Y** | **Y** | | |
| Inhibit TX when OPEN LED OFF | **Y** | **Y** | **Y** | **Y** | | | | |
| CODE Silent switch Active. | **E** | **C** | **A** | **8** | **6** | **4** | **2** | **0** |
| No. Silent switch Inhibited | **F** | **D** | **B** | **9** | **7** | **5** | **3** | **1** |

**LOCATION 3F2 First Digit**

EG: 0003F0 63 00 **0**0 00 FF FF FF FF FF FF FF FF FF FF FF FF

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **PTT release (ms) hold on delay** | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 350 |
| **CODE No.** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

**LOCATION 3F2 Second Digit**

EG: 0003F0 63 00 0**0** 00 FF FF FF FF FF FF FF FF FF FF FF FF

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TX Time out timer seconds** | **30** | **60** | **90** | **120** | **150** | **180** | **210** | **NONE** |
| **CODE** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **0** |

**LOCATION 3F3**

EG: 0003F0 63 00 00 **00** FF FF FF FF FF FF FF FF FF FF FF FF

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Scan Stop With** | **CTCSS TONE** | | | | **BUSY CHANNEL** | | | |
| **Scan Hold on Delay** | 1.3 | 2.5 | 5 | 7.5 | 1.3 | 2.5 | 5 | 7.5 |
| **Scan 0.2 sec/ch** | **41** | **51** | **61** | **71** | **42** | **52** | **62** | **72** |
| **CODE No: Scan 0.4 sec/ch** | **01** | **11** | **21** | **31** | **02** | **12** | **22** | **32** |

# RT85 EPROM PROGRAMMING CTCSS CODEING.

**CTCSS IS LOCATED BEFORE THE CHANNEL DATA. Depending upon the Check sum the data may be 40hex higher.**

**On 25Khz Spacing 00 and 40 are used for no CTCSS**
**On 12.5 Khz Spacing 01 and 41 are used for no CTCSS**

| ODD | EVEN | FREQ IN Hz |
|---|---|---|
| 01 | 41 | **NO CTCSS or 00 and 40** |
| 3F | 7F | 71.9 |
| 3D | 7D | 77.0 |
| 3B | 7B | 82.5 |
| 39 | 79 | 88.5 |
| 37 | 77 | 94.8 |
| 35 | 75 | 100.0 |
| 33 | 73 | 103.5 |
| 31 | 71 | 107.2 |
| 2F | 6F | 110.9 |
| 2D | 6D | 114.8 |
| 2B | 6B | 118.8 |
| 29 | 69 | 123.0 |
| 27 | 67 | 127.3 |
| 25 | 65 | 131.8 |
| 23 | 63 | 136.5 |
| 21 | 61 | 141.3 |
| 1F | 5F | 146.2 |
| 1D | 5D | 151.4 |
| 1B | 5B | 156.7 |
| 19 | 59 | 162.2 |
| 17 | 57 | 167.9 |
| 15 | 55 | 173.8 |
| 13 | 53 | 179.9 |
| 11 | 51 | 186.2 |
| 0F | 4F | 192.8 |
| 0D | 4D | 203.5 |
| 0B | 4B | 210.7 |
| 09 | 49 | 218.1 |
| 07 | 47 | 225.7 |
| 05 | 45 | 233.6 |
| 03 | 43 | 241.8 |

**Data info on** HEX 00, 40, 01, 41 that is placed before the frequency bits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ----- | EVEN | 8 | 4 | 2 | 1 | X | 5 Khz |

CTCSS CODE SPACING

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ----- | ODD | 8 | 4 | 2 | 1 | X | 12.5 Khz |

In the freq dat count the number of bits set to 1
If even number c/s is set to 1.
If odd number c/s is set to 0.

## BANDS

| | | HEX LOCATION 410 | 404 AND | 40C |
|---|---|---|---|---|
| 80 | 1 | 41 | 72 | 56 |
| 86 | 0 | 51 | 72 | 56 |
| 15F | D | 32 | 72 | 56 |
| 150 | 2 | 02 | 72 | 56 |
| 400 | 3 | 03 | 72 | 56 |

**The starting ADDRESS is 00000 Scan, CTCSS/CS, RX DATA First**

**The finishing ADDRESS is 05FF TX data**

**This radio can have upto 63 channels in plus channel 0.**

**The RX Data starts 00000 To 00018F this includes scan and ctcss.**
**The option data is located in locations 3F0, 3F1, 3F2, 3F3.**
**The TX Data starts 400 To 00058F**

**Each line contains 4 Channels.**
**EG: LINE 1 RX**

**00000 01 FF FF FF FF 00 C3 95 FF 00 C3 9A FF 00 C3 9F**

**00010 FF 40 C3 A4 FF 00 C3 A9 FF 40 C3 AE FF 40 C3 B3**

**EG: LINE 1 TX**

**00400 00 FF FF FF 72 00 C4 15 FF 00 C4 1A 56 00 C4 1F**

**00410 02 40 C4 24 FF 00 C4 29 FF 40 C4 2E FF 40 C4 33**

## SCAN

**There can only be 31 scanning channels. This data is in RX data section.**

**00000 01 FF FF FF 02 00 C3 95 03 00 C3 9A 04 00 C3 9F**
**00010 05 40 C3 A4 06 00 C3 A9 07 40 C3 AE 08 40 C3 B3**
**00020 09 41 C3 A4 10 41 C3 A9 FF 01 C3 AE FF 01 C3 B3**

**SCAN in the above is programed between 1 to 10**
**Enter the channels you want to scan starting at the first location and then every fifth location up to location 00078 which is the 31'st scan location. Numbers can be in any order.**
**EG: 01.10. 02. 08. 09. 32. 20. 40. 41. 42. 63.**