

### **General Characteristics**

- |                          |                                                                                                          |
|--------------------------|----------------------------------------------------------------------------------------------------------|
| 1. Radio Compliance      | : FCC Part 2, 15, 80, DOC V. DSC (SC101-STD)                                                             |
| 2. Number of Channels    | : All USA, International, Canadian and 10 Weather channels are included.                                 |
| 3. Input Voltage         | : 13.8 VDC+/-15%                                                                                         |
| 4. Input Current         | : TX Less than 5.0A Max at 25 Watts<br>Less than 1.5A Max at 1 Watt<br>RX (squellch) less than 250mA Max |
| 5. Modulation Type       | : Frequency modulated 16K0F3E (G3E), G2B for DSC                                                         |
| 6. Operating Temperature | : -20°C ~ +55°C                                                                                          |

### **Transmitter Characteristics**

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|---------------------------------|------------------------------------------------------------------------------------------------|
| 1. Frequency Range              | : 156.025 to 157.425 MHz                                                                       |
| 2. Channel Spacing              | : 25KHz                                                                                        |
| 3. RF Output Power              | : 25W / 1W, selectable into 50 ohms at 13.8VDC                                                 |
| 4. Frequency Stability          | : +/-0.001% (-20°C ~ +55°C)                                                                    |
| 5. Frequency Deviation          | : +/-5KHz Max                                                                                  |
| 6. Modulation AF Response       | : Within the limit of +1/-3 dB at 6dB/oct. frequency curve ( 300 ~ 3000Hz) reference ( 1000Hz) |
| 7. Time-out-timer               | : 5 minutes +/-10%                                                                             |
| 8. Hum & Noise Level            | : Less than -40dB below audio<br>Less than 10% at 1KHz for +/-3KHz                             |
| 9. Spurious & Harmonic Emission | : Attenuated at least 43+10 Log Power ( below rated radiated carrier power)                    |

### **Receiver Characteristics**

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|---------------------------------|------------------------------------------------|
| 1. Frequency Range              | : 15.025 to 163.275MHz in 25KHz increment      |
| 2. AF Output                    | : 3 Watts ( Less than 10% at 1KHz)             |
| 3. AF Response                  | : 6 dB/oct de-emphasis +1/-3dB from 300~3000Hz |
| 4. Sensitivity                  | : 0.3uV for 12 SINAD                           |
| 5. Squellch Sens. Threshold     | : 0.15uV                                       |
| 6. Tight Squellch Sensitivity   | : 0.95uV                                       |
| 7. Adjacent Channel Selectivity | : Better than 70dB                             |
| 8. Spurious Image Rejection     | : Better than 70dB                             |
| 9. Intermodulation              | : Better than 65dB                             |
| 10. FM Hum and Noise            | : Less than -40dB                              |

### **DSC**

- |                        |                           |
|------------------------|---------------------------|
| 1.Mark                 | :1300Hz                   |
| 2.Space                | :2100Hz                   |
| 3. Frequency Stability | : +/-10Hz (-20°C ~ +50°C) |
| 4.Baulate              | : 1200 bit/sec            |
| 5.Modulation Index     | :2+/-10%                  |
| 6. DSC Format          | : RTCMSC101               |

## Channel List: VHF Marine Channel Frequencies

### USA Version

| CH    | TX      | RX      | Type of Operation        |
|-------|---------|---------|--------------------------|
| 01A   | 156.050 | 156.050 | Port operation<br>&Com'l |
| 05A   | 156.250 | 156.250 | Port operation           |
| 06    | 156.300 | 156.300 | Intership safety         |
| 07A   | 156.350 | 156.350 | Com'l                    |
| 08    | 156.400 | 156.400 | Com'l                    |
| 09    | 156.450 | 156.450 | Boater calling           |
| 10    | 156.500 | 156.500 | Com'l                    |
| 11    | 156.550 | 156.550 | Com'l                    |
| 12    | 156.600 | 156.600 | Port operation           |
| 13#   | 156.650 | 156.650 | Intership safety         |
| 14    | 156.700 | 156.700 | Port operation           |
| 15*   |         | 156.750 | Environmental            |
| 16    | 156.800 | 156.800 | Emerg/calling            |
| 17**  | 156.850 | 156.850 | State controlled         |
| 18A   | 156.900 | 156.900 | Com'l                    |
| 19A   | 156.950 | 156.950 | Com'l                    |
| 20    | 157.700 | 161.600 | Port operation           |
| 20A   | 157.000 | 157.000 | Port operation           |
| 21A## | 157.050 | 157.050 | US Govern. only          |
| 22A   | 157.100 | 157.100 | Coast Guard              |
| 23A## | 157.150 | 157.150 | US Govern. only          |
| 24    | 157.200 | 161.800 | Public corresp.          |
| 25    | 157.250 | 161.850 | Public corresp.          |
| 26    | 157.300 | 161.900 | Public corresp.          |
| 27    | 157.350 | 161.950 | Public corresp.          |
| 28    | 157.400 | 162.000 | Public corresp.          |

| CH    | TX      | RX      | Type of Operation       |
|-------|---------|---------|-------------------------|
| 63A   | 156.175 | 156.175 | Port operation<br>&Com' |
| 65A   | 156.275 | 156.275 | Port operation          |
| 66A   | 156.325 | 156.325 | Port operation          |
| 67#   | 156.375 | 156.375 | Com'l                   |
| 68    | 156.425 | 156.425 | Non com'l               |
| 69    | 156.475 | 156.475 | Non com'l               |
| 70    | 156.525 | 156.525 | DSC                     |
| 71    | 156.575 | 156.575 | Non com'l               |
| 72    | 156.625 | 156.625 | Non com'l               |
| 73    | 156.675 | 156.675 | Port operation          |
| 74    | 156.725 | 156.725 | Port operation          |
| 77**  | 156.875 | 156.875 | Port operation          |
| 78A   | 156.925 | 156.925 | Non com'l               |
| 79A   | 156.975 | 156.975 | Com'l                   |
| 80A   | 157.025 | 157.025 | Com'l                   |
| 81A## | 157.075 | 157.075 | US Govern. only         |
| 82A## | 157.125 | 157.125 | US Govern. only         |
| 83A## | 157.175 | 157.175 | US Govern. only         |
| 84    | 157.225 | 161.825 | Public corresp.         |
| 85    | 157.275 | 161.875 | Public corresp.         |
| 86    | 157.325 | 161.925 | Public corresp.         |
| 87    | 157.375 | 161.975 | Public corresp.         |
| 88    | 157.425 | 162.025 | Public corresp.         |
| 88A   | 157.425 | 157.425 | Com'l                   |

\* Transmitting is disabled.

\*\* 1W only

# 1W initially. Can be switched to 25W.

## Not for use by the general public in U.S. waters.

### Canadian Version

| CH  | TX      | RX      | Type of Operation    |
|-----|---------|---------|----------------------|
| 01  | 156.050 | 160.650 | Public corresp.      |
| 02  | 156.100 | 160.700 | Public corresp.      |
| 03  | 156.150 | 160.750 | Public corresp.      |
| 04A | 156.200 | 156.200 | Coast Guard<br>Com'l |
| 05A | 156.250 | 156.250 | Port operation       |
| 06  | 156.300 | 156.300 | Intership, Safety    |
| 07A | 156.350 | 156.350 | Com'l, Intership     |
| 08  | 156.400 | 156.400 | Com'l, Intership     |
| 09  | 156.450 | 156.450 | Boater calling       |
| 10  | 156.500 | 156.500 | Com'l, Intership     |
| 11  | 156.550 | 156.550 | Com'l, Intership     |
| 12  | 156.600 | 156.600 | Port operation       |
| 13  | 156.650 | 156.650 | Intership safety     |
| 14  | 156.700 | 156.700 | Port operation       |
| 15  | 156.750 | 156.750 | Com'l, Non-com'l     |
| 16  | 156.800 | 156.800 | Emerg/calling        |
| 17  | 156.850 | 156.850 | State controlled     |
| 18A | 156.900 | 156.900 | Com'l                |
| 19A | 156.950 | 156.950 | Coast Guard          |
| 20  | 157.000 | 161.600 | Coast Guard          |
| 21A | 157.050 | 157.050 | Coast Guard          |
| 22A | 157.100 | 157.100 | Coast Guard          |
| 23  | 157.150 | 161.750 | Public corresp.      |
| 24  | 157.200 | 161.800 | Public corresp.      |
| 25  | 157.250 | 161.850 | Public corresp.      |
| 26  | 157.300 | 161.900 | Public corresp.      |
| 27  | 157.350 | 161.950 | Public corresp.      |
| 28  | 157.400 | 162.000 | Public corresp.      |
| 60  | 156.025 | 160.625 | Public corresp.      |
| 61A | 156.075 | 156.075 | Coast Guard<br>Com'l |
| 62A | 156.125 | 156.125 | Coast Guard          |
| 64A | 156.225 | 156.225 | Com'l                |

| CH  | TX      | RX      | Type of operation |
|-----|---------|---------|-------------------|
| 65A | 156.275 | 156.275 | Port operation    |
| 66A | 156.325 | 156.325 | Port operation    |
| 67  | 156.375 | 156.375 | Com'l             |
| 68  | 156.425 | 156.425 | Non-com'l         |
| 69  | 156.475 | 156.475 | Com'l             |
| 70  | 156.525 | 156.525 | DSC               |
| 71  | 156.575 | 156.575 | Non-com'l         |
| 72  | 156.625 | 156.625 | Non-com'l         |
| 73  | 156.675 | 156.675 | Com'l             |
| 74  | 156.725 | 156.725 | Com'l             |
| 77  | 156.875 | 156.875 | Port operation    |
| 78A | 156.925 | 156.925 | Non-com'l         |
| 79A | 156.975 | 156.975 | Com'l             |
| 80A | 157.025 | 157.025 | Com'l             |
| 81A | 157.075 | 157.075 | Environmental     |
| 82A | 157.125 | 157.125 | Coast Guard       |
| 83A | 157.175 | 157.175 | Coast Guard       |
| 84  | 157.225 | 161.825 | Public corresp.   |
| 85  | 157.275 | 161.875 | Public corresp.   |
| 86  | 157.325 | 161.925 | Public corresp.   |
| 87  | 157.375 | 161.975 | Public corresp.   |
| 88  | 157.425 | 162.025 | Public corresp.   |

### International Version

|    |         |         |                  |
|----|---------|---------|------------------|
| 01 | 156.050 | 160.650 | Public corresp.  |
| 02 | 156.100 | 160.700 | Public corresp.  |
| 03 | 156.150 | 16.0750 | Public corresp.  |
| 04 | 156.200 | 160.800 | Public corresp.  |
| 05 | 156.250 | 160.850 | Public corresp.  |
| 06 | 156.300 | 156.300 | Intership safety |
| 07 | 156.350 | 160.950 | Public correps.  |
| 08 | 156.400 | 156.400 | Com'l            |
| 09 | 156.450 | 156.450 | Boater calling   |
| 10 | 156.500 | 156.500 | Com'l            |
| 11 | 156.550 | 156.550 | Com'l            |
| 12 | 156.600 | 156.600 | Port operation   |
| 13 | 156.650 | 156.650 | Intership safety |
| 14 | 156.700 | 156.700 | Port operation   |
| 15 | 156.750 | 156.750 | Com'l,Non-com'l  |
| 16 | 156.800 | 156.800 | Emerg/calling    |
| 17 | 156.850 | 156.850 | State controlled |
| 18 | 156.900 | 161.500 | Port operation   |
| 19 | 156.950 | 161.550 | Port operation   |
| 20 | 157.000 | 161.600 | Port operation   |
| 21 | 157.050 | 161.650 | Port operation   |
| 22 | 157.100 | 161.700 | Port operation   |
| 23 | 157.150 | 161.750 | Public corresp.  |
| 24 | 157.200 | 161.800 | Public corresp.  |
| 25 | 157.250 | 161.850 | Public corresp.  |
| 26 | 157.300 | 161.900 | Public corresp.  |
| 27 | 157.350 | 161.950 | Public corresp.  |
| 28 | 157.400 | 162.000 | Public corresp.  |
| 60 | 156.025 | 160.625 | Public corresp.  |
| 61 | 156.075 | 160.675 | Public corresp.  |
| 62 | 156.125 | 160.725 | Public corresp.  |
| 63 | 156.175 | 160.775 | Public corresp.  |
| 64 | 156.225 | 160.825 | Public corresp.  |
| 65 | 156.275 | 160.875 | Port operation   |
| 66 | 156.325 | 160.925 | Public corresp.  |
| 67 | 156.375 | 156.375 | Com'l            |

| CH | TX | RX | Type of Operation |
|----|----|----|-------------------|
|----|----|----|-------------------|

| CH | TX      | RX      | Type of Operation |
|----|---------|---------|-------------------|
| 68 | 156.425 | 156.425 | Non com'l         |
| 69 | 156.475 | 156.475 | Port operation    |
| 70 | 156.525 | 156.525 | DSC               |
| 71 | 156.575 | 156.575 | Port operation    |
| 72 | 156.625 | 156.625 | Non com'l         |
| 73 | 156.675 | 156.675 | Port operations   |
| 74 | 156.725 | 156.725 | Port operations   |
| 77 | 156.875 | 156.875 | Port operations   |
| 78 | 156.925 | 161.525 | Public corresp.   |
| 79 | 156.975 | 161.575 | Port operation    |
| 80 | 157.025 | 161.625 | Port operation    |
| 81 | 157.075 | 161.675 | Port operation    |
| 82 | 157.125 | 161.725 | Public corresp.   |
| 83 | 157.175 | 161.775 | Public corresp.   |
| 84 | 157.225 | 161.825 | Public corresp.   |
| 85 | 157.275 | 161.875 | Public corresp.   |
| 86 | 157.325 | 161.925 | Public corresp.   |
| 87 | 157.375 | 161.975 | Public corresp.   |
| 88 | 157.425 | 162.025 | Public corresp.   |

### VHF Marine Weather Channels ( USA Version)

| CH  | Receive Frq. | Service          |
|-----|--------------|------------------|
| WX0 | 163.275      | NOAA weather     |
| WX1 | 162.550      | NOAA weather     |
| WX2 | 162.400      | NOAA weather     |
| WX3 | 162.475      | NOAA weather     |
| WX4 | 162.425      | NOAA weather     |
| WX5 | 162.450      | NOAA weather     |
| WX6 | 162.500      | NOAA weather     |
| WX7 | 162.525      | NOAA weather     |
| WX8 | 161.650      | Canadian weather |
| WX9 | 161.775      | Canadian weather |

Transmitting is disabled when WX0~WX9 is displayed.