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Cobra 200GTL DX Frequency Modification

Rev 1.1

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Cobra 200GTL DX Frequency Modification Package Introduction

Read the complete mod package before starting

NOTE: Exercise a great deal of care with this mod! Due to the placement, size, and close proximity of the surrounding traces. If done wrong you could destroy the PCB and / or the transistors.

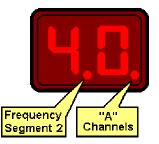
If you have even the slightest doubts or the proper equipment, it would be wise to have someone else you trust perform the mod for you.

The Cobra 200GLT DX is a 10 Meter Amateur Radio with some unique features not found on other Amateur radios. SMT (Surface Mount Technology) design and other advanced features such as the Bi-Polar Power Transistors used in the High Power Transmitter circuit give it superiority over other radios in it's class. The Microprocessor Controlled PLL circuit allows the frequency range to extend far beyond many of it's competitors. (Export Only!)

Channel Display:

The Channel Display has visual indicators for Band Segments, and "A" Channels Export mode consists of 8 Bands divided into 4

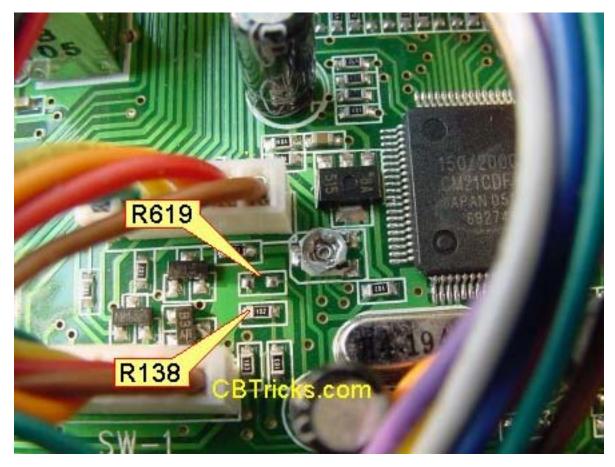
switch positions. The 4 Position Band Switch (A Through D) represents two 45 channel frequency blocks for each letter. For example, Position A would start on the lower frequency segment (1 - 40), and then continue the next segment above when channel 40 is passed. The channel display will show a small dot on the center of the display indicating that the radio is in the Upper Segment of the 2 bands.



"A" channels

The Cobra radios also have "continuous" coverage of each band by not skipping the "A" channels between 3, 7, 11, 15, and 19, as other radios do. As the channel selector reaches channel 3, the next channel up will display 3 again with a small dot on the Right Side. This represents channel 3A, which is normally skipped by most radios and only accessible if the radio has a "slider" control or a 10Khz offset switch. The Cobra 200GTL-DX has a built-in Frequency Display so it is much less confusing than other models having no display.

See page 2 for diagram for modification.



| (1) | Remove the covers and locate the TMP87PP21DF Microprocessor near the front right of the unit. |
|-----|---|
| (2) | Locate and Remove the surface mount Resistor R138 to the left side of the Microprocessor this will let the radio TX on all the channels but the "Government Frequency" range which is Listen Only!. |
| (3) | Resistor R619 controls the TX on the "Government Frequency" range and is not installed from the factory. Install the resistor that you removed from R138 to the R619 pads. (1k) to activate the "Government Frequency" range. |
| (4) | Remove Power from the radio by disconnecting the Power leads for 15 seconds to reset the Microprocessor. |

Cobra 200GTL DX Frequency Modification Package

| | Ва | nd A | |
|---------|----------|-----------------|---------|
| Freq. S | egment 1 | Freq. Segment 2 | |
| Freq. | Display | Freq. | Display |
| 26.065 | 1 | 26.515 | .1 |
| 26.075 | 2 | 26.525 | .2 |
| 26.085 | 3 | 26.535 | .3 |
| 26.095 | 3. | 26.545 | .3. |
| 26.105 | 4 | 26.555 | .4 |
| 26.115 | 5 | 26.565 | .5 |
| 26.125 | 6 | 26.575 | .6 |
| 26.135 | 7 | 26.585 | .7 |
| 26.145 | 7. | 26.595 | .7. |
| 26.155 | 8 | 26.605 | .8 |
| 26.165 | 9 | 26.615 | .9 |
| 26.175 | 10 | 26.625 | 1.0 |
| 26.185 | 11 | 26.635 | 1.1 |
| 26.195 | 11. | 26.645 | 1.1. |
| 26.205 | 12 | 26.655 | 1.2 |
| 26.215 | 13 | 26.665 | 1.3 |
| 26.225 | 14 | 26.675 | 1.4 |
| 26.235 | 15 | 26.685 | 1.5 |
| 26.245 | 15. | 26.695 | 1.5. |
| 26.255 | 16 | 26.705 | 1.6 |
| 26.265 | 17 | 26.715 | 1.7 |
| 26.275 | 18 | 26.725 | 1.8 |
| 26.285 | 19 | 26.735 | 1.9 |
| 26.295 | 19. | 26.745 | 1.9. |
| 26.305 | 20 | 26.755 | 2.0 |
| 26.315 | 21 | 26.765 | 2.1 |
| 26.325 | 22 | 26.775 | 2.2 |
| 26.355 | 23 | 26.805 | 2.3 |
| 26.335 | 24 | 26.785 | 2.4 |
| 26.345 | 25 | 26.795 | 2.5 |
| 26.365 | 26 | 26.815 | 2.6 |
| 26.375 | 27 | 26.825 | 2.7 |
| 26.385 | 28 | 26.835 | 2.8 |
| 26.395 | 29 | 26.845 | 2.9 |
| 26.405 | 30 | 26.855 | 3.0 |
| 26.415 | 31 | 26.865 | 3.1 |
| 26.425 | 32 | 26.875 | 3.2 |
| 26.435 | 33 | 26.885 | 3.3 |
| 26.445 | 34 | 26.895 | 3.4 |
| 26.455 | 35 | 26.905 | 3.5 |
| 26.465 | 36 | 26.915 | 3.6 |
| 26.475 | 37 | 26.925 | 3.7 |
| 26.485 | 38 | 26.935 | 3.8 |
| 26.495 | 39 | 26.945 | 3.9 |
| 26.505 | 40 | 26.955 | 4.0 |

| Band B | | | | | | |
|----------|---------|-----------------|------|--|--|--|
| Freq. Se | gment 1 | Freq. Segment 2 | | | | |
| Freq. | Display | Freq. Display | | | | |
| 26.965 | 1 | 27.415 | .1 | | | |
| 26.975 | 2 | 27.425 | .2 | | | |
| 26.985 | 3 | 27.435 | .3 | | | |
| 26.995 | 3. | 27.445 | .3. | | | |
| 27.005 | 4 | 27.455 | .4 | | | |
| 27.015 | 5 | 27.465 | .5 | | | |
| 27.025 | 6 | 27.475 | .6 | | | |
| 27.035 | 7 | 27.485 | .7 | | | |
| 27.045 | 7. | 27.495 | .7. | | | |
| 27.055 | 8 | 27.505 | .8 | | | |
| 27.065 | 9 | 27.515 | .9 | | | |
| 27.075 | 10 | 27.525 | 1.0 | | | |
| 27.085 | 11 | 27.535 | 1.1 | | | |
| 27.095 | 11. | 27.545 | 1.1. | | | |
| 27.105 | 12 | 27.555 | 1.2 | | | |
| 27.115 | 13 | 27.565 | 1.3 | | | |
| 27.125 | 14 | 27.575 | 1.4 | | | |
| 27.135 | 15 | 27.585 | 1.5 | | | |
| 27.145 | 15. | 27.595 | 1.5. | | | |
| 27.155 | 16 | 27.605 | 1.6 | | | |
| 27.165 | 17 | 27.615 | 1.7 | | | |
| 27.175 | 18 | 27.625 | 1.8 | | | |
| 27.185 | 19 | 27.635 | 1.9 | | | |
| 27.195 | 19. | 27.645 | 1.9. | | | |
| 27.205 | 20 | 27.655 | 2.0 | | | |
| 27.215 | 21 | 27.665 | 2.1 | | | |
| 27.225 | 22 | 27.675 | 2.2 | | | |
| 27.255 | 23 | 27.705 | 2.3 | | | |
| 27.235 | 24 | 27.685 | 2.4 | | | |
| 27.245 | 25 | 27.695 | 2.5 | | | |
| 27.265 | 26 | 27.715 | 2.6 | | | |
| 27.275 | 27 | 27.725 | 2.7 | | | |
| 27.285 | 28 | 27.735 | 2.8 | | | |
| 27.295 | 29 | 27.745 | 2.9 | | | |
| 27.305 | 30 | 27.755 | 3.0 | | | |
| 27.315 | 31 | 27.765 | 3.1 | | | |
| 27.325 | 32 | 27.775 | 3.2 | | | |
| 27.335 | 33 | 27.785 | 3.3 | | | |
| 27.345 | 34 | 27.795 | 3.4 | | | |
| 27.355 | 35 | 27.805 | 3.5 | | | |
| 27.365 | 36 | 27.815 | 3.6 | | | |
| 27.375 | 37 | 27.825 | 3.7 | | | |
| 27.385 | 38 | 27.835 | 3.8 | | | |
| 27.395 | 39 | 27.845 | 3.9 | | | |
| 27.405 | 40 | 27.855 | 4.0 | | | |

Cobra 200GTL DX Frequency Modification Package

| | Bai | nd C | |
|----------|----------|----------|----------|
| Freq. Se | egment 1 | Freq. Se | egment 2 |
| Freq. | Display | Freq. | Display |
| 27.865 | 1 | 28.315 | .1 |
| 27.875 | 2 | 28.325 | .2 |
| 27.885 | 3 | 28.235 | .3 |
| 27.895 | 3 | 28.345 | .3. |
| 27.905 | 4 | 28.355 | .4 |
| 27.915 | 5 | 28.365 | .5 |
| 27.925 | 6 | 28.375 | .6 |
| 27.935 | 7 | 28.385 | .7 |
| 27.945 | 7. | 28.395 | .7. |
| 27.955 | 8 | 28.405 | .8 |
| 27.965 | 9 | 28.415 | .9 |
| 27.975 | 10 | 28.425 | 1.0 |
| 27.985 | 11 | 28.435 | 1.1 |
| 27.995 | 11. | 28.445 | 1.1. |
| 28.005 | 12 | 28.455 | 1.2 |
| 28.015 | 13 | 28.465 | 1.3 |
| 28.025 | 14 | 28.475 | 1.4 |
| 28.035 | 15 | 28.485 | 1.5 |
| 28.045 | 15. | 28.495 | 1.5. |
| 28.055 | 16 | 28.505 | 1.6 |
| 28.065 | 17 | 28.515 | 1.7 |
| 28.075 | 18 | 28.525 | 1.8 |
| 28.085 | 19 | 28.535 | 1.9 |
| 28.095 | 19. | 28.545 | 1.9. |
| 28.105 | 20 | 28.555 | 2.0 |
| 28.115 | 21 | 28.565 | 2.1 |
| 28.125 | 22 | 29.575 | 2.2 |
| 28.155 | 23 | 28.605 | 2.3 |
| 28.135 | 24 | 28.585 | 2.4 |
| 28.145 | 25 | 28.595 | 2.5 |
| 28.165 | 26 | 28.615 | 2.6 |
| 28.175 | 27 | 28.625 | 2.7 |
| 28.185 | 28 | 28.635 | 2.8 |
| 28.195 | 29 | 28.645 | 2.9 |
| 28.205 | 30 | 28.655 | 3.0 |
| 28.215 | 31 | 28.665 | 3.1 |
| 28.225 | 32 | 28.675 | 3.2 |
| 28.235 | 33 | 28.685 | 3.3 |
| 28.245 | 34 | 28.695 | 3.4 |
| 28.255 | 35 | 28.705 | 3.5 |
| 28.265 | 36 | 28.715 | 3.6 |
| 28.275 | 37 | 28.725 | 3.7 |
| 28.285 | 38 | 28.735 | 3.8 |
| 28.295 | 39 | 28.745 | 3.9 |
| 28.305 | 40 | 28.755 | 4.0 |

| ent 2 lay .1 .2 .3 .3 .3 .4 .5 .6 .7 .7 .8 |
|--|
| lay .1 .2 .3 .3 .3 .4 .5 .6 .7 .7 |
| .1 .2 .3 .3 .4 .5 .6 .7 .7 |
| .2 .3 .3. .4 .5 .6 .7 .7 .7. |
| .3 .3. .4 .5 .6 .7 .7. |
| .3. .4 .5 .6 .7 .7. |
| .4 .5 .6 .7 .7. |
| .5 .6 .7 .7. |
| .6 .7 .7. |
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| <u>2.5</u> 3.0 |
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| <u>3.3</u> 3.4 |
| <u>3.4</u> 3.5 |
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