CTCSS/ DCS/ CROSS TONE

CTCSS

You may sometimes want to hear calls only from specific persons. The Continuous Tone Coded Squelch System (CTCSS) allows you to ignore (not hear) unwanted calls from other persons who are using the same frequency. To do so, select the same CTCSS tone as selected by the other persons in your group. A CTCSS tone is subaudible and is selectable from among 42 tone frequencies.

DCS

Digital Coded Squelch (DCS) is another application which allows you to ignore (not hear) unwanted calls. It functions the same way as CTCSS. The only differences are the encode/ decode method and the number of selectable codes. For DCS, you can select from 104 different codes.
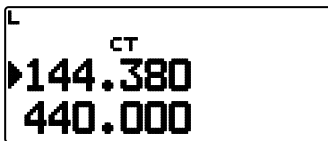
Note: CTCSS/ DCS does not cause your conversation to be private. It only relieves you from listening to unwanted conversations.

CTCSS

USING CTCSS

1 Select your desired band.

2 Press **[TONE]** 2 times to activate the CTCSS function.
- The "CT" icon appears on the display when the CTCSS function is On.
- Each time you press **[TONE]**, the selection changes as follows:

  Tone (**T**) ➡ CTCSS (**CT**) ➡ DCS (**DCS**) ➡ Cross Tone (**D▪O**: default) ➡ Off (no display).

  <Additionally, when APRS is ON and Voice Alert is configured, Voice Alert ON is added to the above cycle.>

  ```
  L
        CT
  ▶144.380
   440.000
  ```

3 Press **[F]**, **[TONE]**.
- The current CTCSS frequency appears on the display and blinks. The default frequency is 88.5 Hz.

  ```
  [▨▨▨]        F-8
  CTCSS Freq.
           88.5 Hz
  ```

4 Press **[▲]/[▼]** or rotate the **Tuning** control to select your desired CTCSS frequency.
- Refer to the table below for the available frequencies.
- To exit the CTCSS frequency selection, press **[ESC ◀]**.

5 Press **[▶OK]** to complete the setting.

6 **When you are called:** The transceiver squelch opens only when the selected CTCSS tone is received.
When you make a call: Press and hold **[PTT]**, then speak into the microphone.

- To cancel CTCSS, press **[TONE]** until "CT" no longer appears on the display.

No.	Frequency (Hz)	No.	Frequency (Hz)	No.	Frequency (Hz)
01	67.0	16	110.9	31	186.2
02	69.3	17	114.8	32	192.8
03	71.9	18	118.8	33	203.5
04	74.4	19	123.0	34	206.5
05	77.0	20	127.3	35	210.7
06	79.7	21	131.8	36	218.1
07	82.5	22	136.5	37	225.7
08	85.4	23	141.3	38	229.1
09	88.5	24	146.2	39	233.6
10	91.5	25	151.4	40	241.8
11	94.8	26	156.7	41	250.3
12	97.4	27	162.2	42	254.1
13	100.0	28	167.9		
14	103.5	29	173.8		
15	107.2	30	179.9		

CTCSS FREQUENCY SCAN

This function scans through all CTCSS frequencies to identify the incoming CTCSS frequency on a received signal. You may find this useful when you cannot recall the CTCSS frequency that the other persons in your group are using.

1 Press **[TONE]** 2 times to activate the CTCSS function.

- The "**CT**" icon appears on the display when the CTCSS function is On.
- Each time you press **[TONE]**, the selection changes as follows:

  Tone (**T**) ➡ CTCSS (**CT**) ➡ DCS (**DCS**) ➡ Cross Tone (**DJO**: default) ➡ Off (no display).

  <Additionally, when APRS is ON and Voice Alert is configured, Voice Alert ON is added to the above cycle.>

2 Press **[F], [TONE] (1s)**.

- Scan starts and "Scanning" blinks on the display.

```
┌─────────────────────────┐
│ (████)          F-8     │
│ CTCSS Freq.             │
│            Scanning     │
└─────────────────────────┘
```

- To quit the scan, press **[ESC ◀]**.
- When a CTCSS frequency is identified, the identified frequency appears on the display and blinks.

```
┌─────────────────────────┐
│ (████)          F-8     │
│ CTCSS Freq.             │
│            88.5 Hz      │
└─────────────────────────┘
```
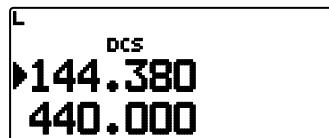
3 Press **[▶ (OK)]** to program the identified frequency in place of the currently set CTCSS frequency.

- The CTCSS function will remain on. To cancel CTCSS, press **[TONE]** until CT no longer appears on the display.
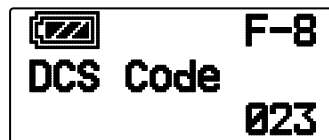- Press **[ESC ◀]** if you do not want to program the identified frequency.

DCS

USING DCS

1 Select your desired band.

2 Press **[TONE]** 3 times to activate the DCS function.

- The "**DCS**" icon appears on the display when the DCS function is on.
- Each time you press **[TONE]**, the selection changes as follows:

  Tone (**T**) ➡ CTCSS (**CT**) ➡ DCS (**DCS**) ➡ Cross Tone (**DJO**: default) ➡ Off (no display).

  <Additionally, when APRS is ON and Voice Alert is configured, Voice Alert ON is added to the above cycle.>

```
┌─────────────────────────┐
│ L                       │
│         DCS             │
│ ▶144.380                │
│  440.000                │
└─────────────────────────┘
```

3 Press **[F], [TONE]**.

- The current DCS code appears on the display and blinks.

```
┌─────────────────────────┐
│ (████)          F-8     │
│ DCS Code                │
│              023        │
└─────────────────────────┘
```
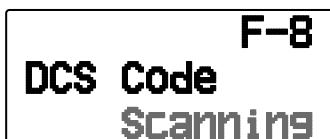
4 Press **[▲]/[▼]** or rotate the **Tuning** control to select your desired DCS code.

- Refer to the table below for the available codes.
- To exit the DCS code selection, press **[ESC ◀]**.

5 Press **[▶OK]** to complete the setting.

6 **When you are called:** The transceiver squelch opens only when the selected DCS code is received.
When you make a call: Press and hold **[PTT]**, then speak into the microphone.

- To cancel DCS, press **[TONE]** until DCS no longer appears on the display.

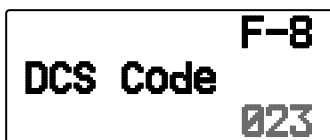| DCS Code							
023	025	026	031	032	036	043	047
051	053	054	065	071	072	073	074
114	115	116	122	125	131	132	134
143	145	152	155	156	162	165	172
174	205	212	223	225	226	243	244
245	246	251	252	255	261	263	265
266	271	274	306	311	315	325	331
332	343	346	351	356	364	365	371
411	412	413	423	431	432	445	446
452	454	455	462	464	465	466	503
506	516	523	526	532	546	565	606
612	624	627	631	632	654	662	664
703	712	723	731	732	734	743	754

DCS CODE SCAN

This function scans through all DCS codes to identify the incoming DCS code on a received signal. You may find it useful when you cannot recall the DCS code that the other persons in your group are using.

1 Press **[TONE]** 3 times to activate the DCS function.

- The "**DCS**" icon appears on the display when the DCS function is on.
- Each time you press **[TONE]**, the selection changes as follows:

    Tone (**T**) ➡ CTCSS (**CT**) ➡ DCS (**DCS**) ➡ Cross Tone (**D◢O**: default) ➡ Off (no display).

    <Additionally, when APRS is ON and Voice Alert is configured, Voice Alert ON is added to the above cycle.>

2 Press **[F], [TONE] (1s)**.

- Scan starts and "Scanning" blinks on the display.

```
                    F-8
DCS Code
            Scanning
```

- To quit the scan, press **[ESC ◀]**.
- When a DCS code is identified, the identified code appears on the display and blinks.

```
                    F-8
DCS Code
                    023
```

3 Press **[▶OK]** to program the identified code in place of the currently set DCS code.

- The DCS function will remain on. To cancel DCS, press **[TONE]** until DCS no longer appears on the display.
- Press **[ESC ◀]** if you do not want to program the identified code.

CROSS TONE

USING CROSS TONE

You can set separate signaling types by TX and RX for when you access a repeater that uses different Encode/decode signaling.

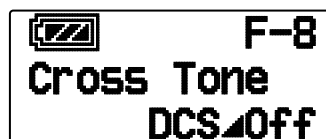To turn the Cross Tone function On:

Press **[TONE]** 4 times to activate the Cross Tone function.

- The "**D◢O**" (default) icon appears on the display when the Cross Tone function is On.
- Each time you press **[TONE]**, the selection changes as follows:

    Tone (**T**) ➡ CTCSS (**CT**) ➡ DCS (**DCS**) ➡ Cross Tone (**D◢O**: default) ➡ Off (no display).

    <Additionally, when APRS is ON and Voice Alert is configured, Voice Alert ON is added to the above cycle.>

■ Selecting a Cross Tone mode

To select the cross tone/code frequency required to access your desired repeater:

1 Turn the Cross Tone function On.

2 Press **[F], [TONE]**.

- The Cross Tone setting appears on the display.

```
 ▨             F-8
Cross Tone
            DCS◢Off
```

3 Press **[▲]/[▼]** or rotate the **Tuning** control to select your desired Cross Tone setting.

Setting	Encode	Decode	Icon
DCS/Off	DCS	off	**D◢O**
TONE/DCS	Tone	DCS	**T◢D**
DCS/CTCSS	DCS	CTCSS	**D◢C**
TONE/CTCSS	Tone	CTCSS	**T◢C**

- To exit the Cross Tone setting selection, press **[ESC ◀]**.

4 Press **[▶OK]** to set the selected setting.