8. Functions Allotted to the Keypad

The functions printed at the top of respective keys are allotted to those keys on the DJ-G29T. Press the FUNC key and light F on the display and press the keys to select the allotted functions. **Press PTT to complete and go back to operate.**

8-1 Shortcut Function

Spontaneous menus in the set mode can be assigned to the [MONI] key and the WILD 7 key.

1.Light the F on the display by pressing the FUNC key.

2.Recall the assigned function by pressing either the [MONI] key or the WILD 7 key.

3.After following the above steps, the functions executed are the same as the operation executed when in the set mode.
Please refer to "Short-cut (Wild) key Settings (P.96)" to register the desired operations.

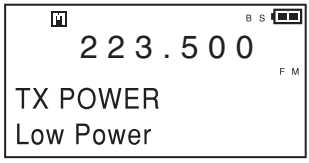
8-2 Transmitter Output Setting

You may select the power level used when transmitting. A lower power setting decreases the range but extends the amount of operating time by preserving battery power. When transmitting directly to a nearby station or through a repeater, it is best to use a lower power setting.

1.Press the FUNC key and light F on the display.

2.By pressing the PO 2ABC key, [Transmitting output] will be displayed.

3.Rotate the upper dial and select the transmitting output from three levels.
[Transmitting output] will increase in the order of [Low Power]→[Middle Power]→[High Power].

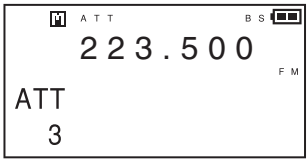


8-3 Attenuator Function

This function is used when the received signal is affected by other strong signals. When the attenuator is set, the intensity of the targeted signal will be reduced but other signals that affect the signal of your target will become weaker at the same time. This will allow you to listen to the targeted signal more clearly. The attenuation amount may be selected from 4 different levels, with a maximum attenuation of 15dB.

1.Press the FUNC key and F will be lit on the display.

2.When the ATT 3DEF key is pressed, [Attenuator] will be displayed.



3.Rotate the upper dial and turn the attenuator off or select the intensity in a range from 1 to 4.
The attenuation amount can be selected in the order from “1” (low) to “4” (high).

8

CAUTION

•The Attenuator function operates on both the main band and the sub band.

8-4 Modulation Mode Setting

Although DJ-G29T has been programmed with appropreate modulation mode according to the standard band-plans, the transmitting modulation mode can be selected manually.

1.Tune to the frequency on MAIN band and press FUNC key. F appears on the display.

2.Press MODE 4GHI key. [Modulation mode] and current mode setting will be indicated. Rotate the upper dial and select a mode.

Available modes are NFM (narrow FM) and FM only.

8-5 Tone Squelch Function/DCS Function Settings

Two different selective-calling tones, CTCSS (PL) and DCS, are available.
When you transmit using previously selected tone signals, these functions allow signal reception by opening the squelch only when the tone signals of your station and the tone squelch or DCS code signals of another party's station correspond with each other.
When receiving in dual band mode, the tone squelch function or the DCS function will only be valid on one band.

CAUTION

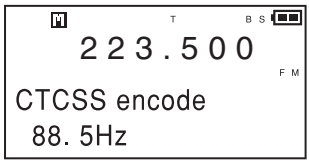
•The tone squelch function and the DCS function can't be used at the same time.

8-5-1 Tone Squelch Function

There are three types of tone squelch functions:
Tone (CTCSS encode):
This function can be set only to encode. It can be used to access a repeater.
Tone Squelch (CTCSS ENC./DEC.):
By using the encoder/decoder functions, you can use the selective receive option.
Reverse Tone Squelch (CTCSS E/D REV.):
This is a setting for the decoder function and the squelch closes when the receiving signal has been set with CTCSS tone.

1.Press the FUNC key and light F on the display.

2.Press the TONE 5JKL key several times and select "CTCSS encode", "CTCSS ENC./DEC." and "CTCSS E/D REV.".



3.Rotate the upper dial and select the tone frequencies from those below.

<Available tone frequencies> (units displayed: Hz)

67.0	69.3	71.9	74.4	77.0	79.7	82.5	85.4
88.5	91.5	94.8	97.4	100.0	103.5	107.2	110.9
114.8	118.8	123.0	127.3	131.8	136.5	141.3	146.2
151.4	156.7	162.2	167.9	173.8	179.9	186.2	192.8
203.5	210.7	218.1	225.7	233.6	241.8	250.3	

When the [PTT] key or the FUNC key is pressed, the setting process ends.
When the tone frequency corresponds, the [TSQ] indicator is shown in reverse typeface.

4.To cancel the Tone Squelch function, press the FUNC key and light the F on the display. Press the TONE 5JKL key several times, and select [OFF] and the Tone Squelch function will be cancelled after pressing the FUNC key.

8

CAUTION

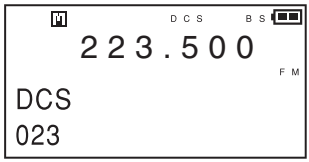
•When using the tone squelch, also adjust the regular squelch to a normal level. If the squelch is kept open, it will take additional time for the tone squelch to open.

8-5-2 DCS Function

This function allows selective reception similar to the Tone Squelch function. Any of 104 different DCS codes can be selected.

1.Press the FUNC key and the F is lit on the display.

2.Press the TONE 5JKL key several times and select [DCS].



3.Rotate the upper dial and select the DCS code.

The DCS code can be selected from any of the following:

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

To complete the setting process, press the[PTT] key or the FUNC key.

4.To cancel DCS, repeat the same and select [OFF].

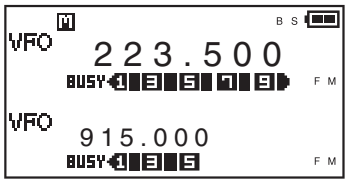
MEMO

•Please refer to “DCS Operation Settings (P.87) for setting squelch operation while operating the DCS function.

8-6 Channel Scope Function

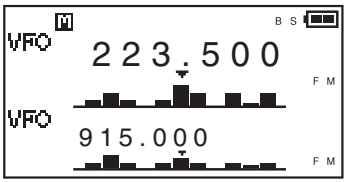
The Channel Scope function indicates activity and relative signal strength of transmissions on adjacent frequencies or memory channels. It can be used on the VFO or Memory modes and the activity status of multiple frequencies or memory channels can be quickly observed.

Normal operation



The received signal level of the indicated frequency is displayed as above.

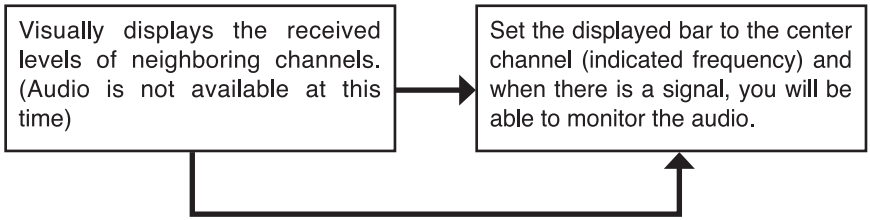
When using the Channel Scope function



The received signal levels of up to 11 frequencies are displayed in the longitudinal direction with the currently selected channel (indicated frequency) (▼ is lighted) positioned in the center.

8

●Channel Scope Function Operation



- If there is no signal being received by the center channel, the Channel Scope function automatically scans 11 frequencies and continues to update the visual display.
- When there is a signal on the center channel you may receive it, depending on the Scan Type (P.90) you have selected.
- When the Timer Scan is selected, the Channel Scope function will update the displayed neighboring channels at the selected interval. If audio is being received on the center channel, the received audio will be briefly interrupted. When the Busy Scan setting is selected, the neighboring channels will not be updated while the center channel is receiving a signal.
- When the Time Assignment Scan is selected, the scope indication will renew at each given time interval regardless of whether or not there are signals being received on the center channel.

●Channel Scope Operation When Using Tone Squelch or DCS.
(Receiving the center channel in the normal mode)
When the Tone Squelch or the DCS is set, scanning stops when there is a signal on the center channel, and if the tone or DCS corresponds, received audio can be heard.

●Types of Channel Scope Operations
(1) Channel Scope can operate in either the VFO or Memory Mode.
(2) When operating in mono band on the main band side, the received audio will not break up regardless of the scan setting.

8-6-1 VFO Channel Scope

This function displays the received signal levels in accord with the Channel Step that is currently selected. Each displayed channel will be one or more of the selected steps away from the displayed center channel.

1.Set the band to display the scope in the VFO mode.

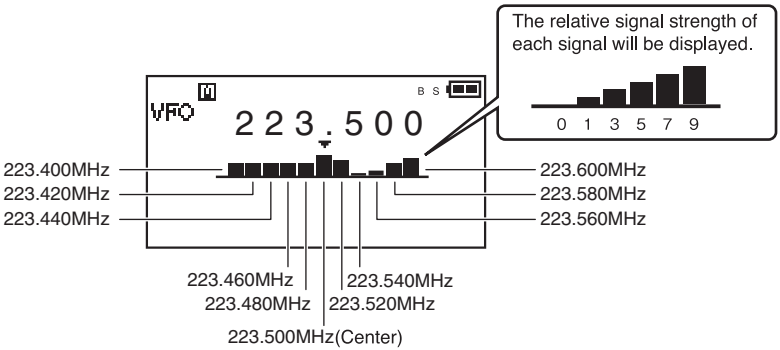
2.Press the FUNC key and light F on the display.

3.Press the SCOPE 6MNO key.
The VFO Channel Scope will be displayed.

4.Rotate the dial and select the center channel.
The center channel goes up or down by one channel and by one tuning step. According to this movement, the scope indication drifts to the left or right side, one at a time.

5.Repeat above 2 amd 3 to cancel this function.

●How to Use the VFO Scope Display
Example: When the Channel Scope is active and the Channel Step is 20kHz on the main band.



8-6-2 Memory Channel Scope

This function displays the received levels of frequencies in neighboring registered memories with the frequency of the indicated memory at the center.

CAUTION

- Unoccupied memories will not be displayed in the Memory Channel Scope mode.
- When there are no registered memory channels in a bank, the Memory Channel Scope function will not operate.

1.In the Memory mode, select the bank you want to display in the Channel Scope.

2.Press the FUNC key and light F on the display.

3. Press the SCOPE (6 MNO) key.

The Memory Channel Scope function starts. It will display the received signal levels of registered memories adjacent to the center channel while receiving the indicated memory (on the center channel).

8

4.Rotate the dial and select a different center channel

The center channel will go up or down and move to the next registered memory. Depending on which direction you move the dial, the scope will move to the left or right, one channel at a time.

MEMO

- You can transmit by pressing the [PTT] key even while you are using the Channel Scope. The Channel Scope function temporarily stops when you transmit. The transmitter output level will be shown in a lateral direction in place of the scope display. When transmitting is complete, the Channel Scope will start again.
- Press the FUNC key and light F , and when pressing the MODE (4 GHI) key, the receiving operation of the center channel will change as follows:
  [Normal mode] When receiving on the center channel, audio output and the amount of receive time will be in accord with the receive time found in “Scan Mode Settings (P.90)”. When starting the Channel Scope feature, the transceiver will return to normal mode every time it is activated.
  [Indication mode] The levels of the center channel and other channels will be displayed, and there will be no audio output, even when a signal is received.
- By pressing the A MAIN or the B SUB keys, the operating bands will switch. As you change the operating band while using the Channel Scope, the feature remains active on the new band. You may also use it when operating in dual band mode.

8-7 Changing the Channel Steps

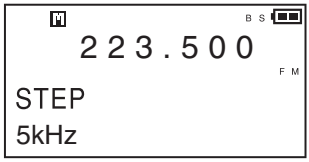
Channel steps can be defined as the intervals between frequencies. The default frequency of the channel step can be changed. The increments of channel steps can be selected from the following:

●Channel steps that can be selected
5kHz, 6.25kHz, 10kHz, 12.5kHz, 15kHz, 20kHz, 25kHz, 30kHz, 50kHz, 100kHz, 125kHz, 150kHz, 200kHz, 500kHz and 1MHz

1.Select the band for which you want to adjust the channel step.

2.Press the FUNC key and light F on the display.

3.When pressing the STEP 7PQRS key, "Channel step" will be indicated.
It will be displayed as shown in the illustration on the right.



4.Rotate the upper dial and select the appropriate channel step.

8-8 Microphone Gain Setting

The microphone gain can be adjusted in four steps. The modulation depth can be affected by the volume at which the operator is speaking and by adjusting the distance between the operator's mouth and the microphone.

1.the FUNC key and light F on the display.

2.When the MIC-G 8TUV key is pressed, "Mic Gain" will be indicated.

3.Adjust the microphone gain by rotating the upper dial.
The microphone gain can be adjusted from 1 (shallow)↔4 (deep).

8-9 Recalling the Call Channels

This function allows recalling call channels that have been previously stored. It can be selected from any operating mode.

1.Press the [FUNC] key and light [F] on the display.

2.Select a call channel by rotating the upper dial while pressing the [CALL 9] key.
When releasing the [CALL 9] key, the frequency is changed to that of the call channel.

•Recalling the call channel is only valid on the main band.

8-10 Priority Function

This is a function that allows automatically monitoring two channels alternately. When using the Priority function in the VFO mode, you will receive a selected channel for five seconds (*1), and the designated priority channel will be received for 0.5 seconds to check for the presence of a signal. The Priority function is convenient to use when monitoring channels that you frequently listen to.
The main band and the sub band can be operated independently in the Priority mode. Please program at least 1 priority-memory in advance.

1.Press the [FUNC] key and light [F] on the display.

2.Select the priority channel while pressing the [PRIO 0] key and rotating the upper dial.

3.When you release the [PRIO 0] key, the Priority function operates.
When the priority channel is received, a beep will be heard and reception will continue until the transmission has concluded.

4.The Priority function can be stopped by pressing either the [PTT] , [FUNC] , [MW C V/P/M] or the [M→V D SCAN] keys.
- •When there is no memory registered in the priority channel, the Priority function does not operate.
- •When the Priority function is operating, scanning is disabled.
- •When active, the priority channel is monitored every five seconds (*1), the audio on the main channel is interrupted at intervals when the priority channel is being monitored. These interruptions are normal and not due to a malfunction of the transceiver.

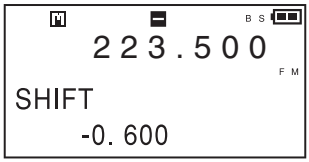
*1 The intervals on the priority channel can be changed in the “Priority Duration Setting (P.91)” in the Set mode.
*2 The time stopped when receiving signals on the priority channel can be changed by the “Priority Duration Setting (P.91)” in the Set mode.

8-11 Shift Setting

In conventional repeater systems, a signal received on one frequency is retransmitted on another frequency. The difference between these two frequencies is called the offset frequency. The offset frequency of range this unit is from 0 to 999.995MHz.

1.Press the [FUNC] key, and while F is displayed, press the MAIN key several times to display the current offset frequency and shift direction setting [+] or [-]:
∗ (-) means that the TX frequency is lower than the RX frequency.
∗ (+) means vice versa.

2.Rotate the upper main dial while the shift frequency is being displayed.
Clockwise: each click increases the frequency by one tuning step.
Counter-clockwise: each click decreases the frequency by one tuning step.
Press the FUNC key and rotate the dial to increase or decrease the frequency in 1MHz steps.



Note: In the event that the transmitting frequency goes beyond the amateur radio band by setting a shift, [TX disabled] is shown on the display and transmission is disabled.

MEMO

•Please refer 8-5 Tone squelch function (P.53) / Tone encode to set CTCSS or DCS required for repeater access.

8-12 Copying a Memory Channel to the VFO Mode

When you want to seek or move a QSO by shifting the frequency slightly from that of the memory channel, you can copy the frequency of the memory channel to the VFO, which then allows you to move up or down from the memory channel frequency.

1.In the memory mode, select the memory channel you wish to copy to the VFO mode.

2.Press the [FUNC] key and light F on the display.

3.By pressing the [M→V D SCAN] key, the frequency of the memory channel is copied to the VFO mode.
After copying the memory channel, the transceiver will switch to the VFO mode.

8-13 XBR(Cross Band Repeater) Mode

This mode allows the DJ-G29T to operate like a repeater using both Main and Sub Bands.
That is, when receiving a signal on one band, the DJ -G29T automatically transmits the same signal on another band simultaneously.

1.Set both MAIN and SUB frequencies/shifts/tones to the desired operating setting.

2.Press FUNC key to display F on the display.

3.Press and hold #RPT ENT Key for about 3 seconds to activate the XBR.

4.Repeat above to exit.

MEMO

- The MAIN band setting cannot be altered in XBR mode.
- Any combination of VFO, or memory channels can be set as receiving and transmitting frequencies of the XBR as far as they are within the transmitter' coverage.
- The XBR doesn't support digital modes such as packet.
- The XBR respects the offset direction and range settings of the transceiver mode.
- The TOT function is usable but TOT penalty-time and BCLO functions become deactivated during XBR operation.
- Cross Band Repeater is prohibited when MAIN and SUB are set for Same band.

8-14 RIT/TXIT Operation

RIT/TXIT: RIT adjusts the receiving signal to fine-tune, TXIT adjusts the transmitting signal so that fine-tunr to the receiving station's monitoring frequency. This function is available only to Main band 902MHz operation in DJ-G29T.

[RIT setting]

1.Press FUNC **key.** **F** **appears on the display.**

2.Press #RPT ENT **key once or twice until [RIT] appears on the display.**

3.Fine tune to the receiving frequency by rotating the upper dial. Adjustable range is +/- 1.8KHz in approx 600Hz steps.

-3 ⟷ -2 ⟷ -1 ⟷ OFF ⟷ +1 ⟷ +2 ⟷ +3

[TXIT setting]

1.Press FUNC **key.** **F** **appears on the display.**

2.Press #RPT ENT **key once or twice until [TXIT] appears on the display.**

3.Adjust the transmitting frequency by rotating the upper right dial. Adjustable range is +/- 1.8KHz in approx 600Hz steps.

-3 ⟷ -2 ⟷ -1 ⟷ OFF ⟷ +1 ⟷ +2 ⟷ +3

Note: Both RIT/TXIT will be reset and cancelled at power on/off of DJ-G29T and can't be programmed in the memory channel data.

9.Convenient Functions

9-1 Keylock Function

This function is used to prevent unintentionally operating the keys and/or dials when using the transceiver or when moving about. There are two ways to lock the keys and dials; the quick lock allows locking easily and the normal lock makes releasing the lock more complicated.

9-1-1 How to Lock Keys

●Quick Lock

Press and hold the FUNC key for a second, to switch the Keylock function on or off.

When the Keylock function is active, the icon appears on the display.

●Normal Lock

Press the dial on the left side three times while pressing the SUB key to switch the Keylock function on or off.

When the Keylock function is active, the icon appears on the display.

CAUTION

- To release the Keylock function, follow the same steps used to activate it.
- If you do not press the left dial while pressing the SUB key for approximately one second, the transceiver will switch from dual band to mono band or vice-versa.

9-1-2 Operations that are possible when the Keylock Function is active

Adjusting volume: The volume can be adjusted by rotating the lower dial.

Adjusting squelch: Squelch can be adjusted by pressing and rotating the upper dial.

Please refer to the settings of keys that can be operated while the Keylock function is active in “Key Lock Mode Settings (p.93)”.

9-2 Scan Function

This is a function that automatically scans and searches for transmitted signals.

VFO-Scan	Scans all frequencies in the selected band by the previously set Channel Step in the VFO mode.
Memory-Scan	Scans only the frequencies registered in the Memory mode.
Program-Scan	Scans between the highest and lowest frequencies in a selected range. “Program scan mode (P.36)”

●These operations are common to all scanning modes:

- If you press the [PTT], [FUNC] , [MW C V/P/M] or the [M→V D SCAN] keys, scanning will stop.
- By rotating the dial when scanning, the direction of the scan (up or down) can be changed.
- By operating the Monitor function while scanning, scanning temporarily stops. When the Monitor function is released, scanning starts again.
- The direction of scanning (up or down) is determined by the direction scanned last. (However, in the case of Program-Scan, scanning starts from the registered ○○A to ○○ B)
- The parameters of scanning operations can be set. Please read “Scan Mode Settings (P.90)” to learn how to change settings.

9

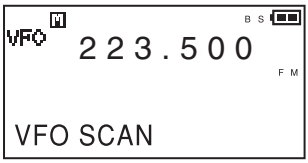
9-3 VFO-Scan

1.Press the [MW C V/P/M] key and set the VFO mode.

2.Rotate the upper dial while pressing the [M→V D SCAN] key and select the “VFO Scan”.

3.Scanning will start when the [M→V D SCAN] key is released.
The decimal indicator of the displayed frequency will blink when scanning.

4.When the [PTT], [FUNC] , [MW C V/P/M] or the [M→V D SCAN] key is pressed, scanning will stop.



9-4 Memory-Scan

You can scan a particular band or all bands while operating in the Memory mode.
There are three types of Memory Scans as follows:

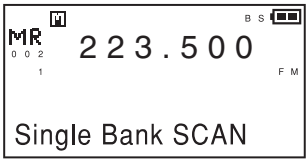
Single bank scan	You can scan only the single bank you've selected
Group scan	You can scan banks previously linked
All bank scan	All banks are scanned

MEMO

•Only banks for normal memory channels may be scanned.

1.Press the MW C V/P/M key and select the Memory mode.

2.While pressing the M→V D SCAN key, rotate the upper dial and select the type of scanning.



The types of Memory Scan are:
•Single bank scan
•Group scan
•All bank scan
When the mono bank scan is selected, the bank currently in use will be scanned.

3.When the M→V D SCAN key is released, scanning will start.

4.Press either a [PTT], FUNC , MW C V/P/M or the M→V D SCAN key to stop scanning.

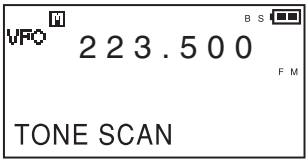
9

9-5 Tone Scan

This function automatically identifies the tone frequencies included in the received signal.

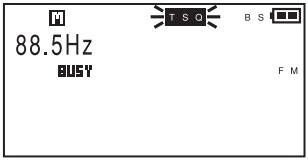
1.Set the frequency to the channel you want to check the tone in the VFO mode.

2.Rotate the upper dial while pressing the M→V D SCAN key and select "Tone Scan".



3.When the M→V D SCAN key is released, tone scanning will begin.

Tone scanning will start and the tone frequencies will be indicated on the display in ascending or descending order. When a tone is detected, a beep will be heard, the tone frequency will be indicated and the tone scan will stop. If the tone frequencies are not detected in the received signal, the tone scan will continue until given a command to stop.



4.By pressing the [PTT], FUNC , MW C V/P/M or the M→V D SCAN key, scanning will stop.

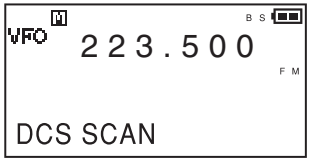
9

9-6 DCS Scan

This function identifies a DCS code included in the received signal.

1.Set the transceiver to the frequency you want to check in the VFO mode.

2.Rotate the upper dial while pressing the M→V D SCAN key and select "DCS Scan".



3.When the M→V D SCAN key is released, scanning will start.

Scanning will start and the DCS codes will be displayed in ascending or descending order. When a DCS code is detected, a beep will be heard, and DCS and the DCS code will be indicated and the scan will stop. If a DCS code is not included in the received signal, the transceiver will continue scanning until given a command to stop.

4.By pressing the [PTT], FUNC , MW C V/P/M or the M→V D SCAN key, DCS scanning will stop.

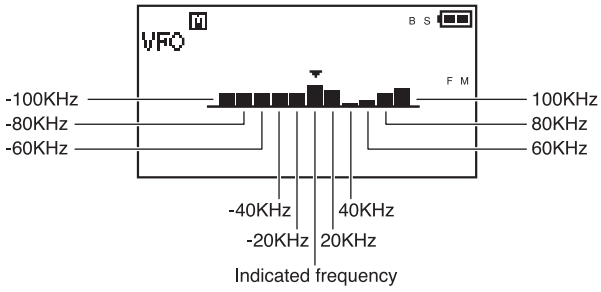
9-7 Sweep Scan

Sweep Scan is a function that indicates received signal levels while scanning during channel scope operation. Even if you move to the next channel, the received level of the previous channel will remain on the display. There are three types of Sweep Scan:
Band Scan, Programmed Scan and Memory Scan, the same as normal scan functions.

1.Press the M→V D SCAN key while operating channel scope.
Sweep Scan starts. The transceiver sweep scans by the pre-selected channel step. While the Sweep Scan function is operating, the decimal point blinks and when the transceiver receives a signal at an indicated frequency, it receives the signal and will then continue scanning in accord with the selected scan function.

2.By pressing the [PTT], FUNC , MW C V/P/M or the M→V D SCAN key, the transceiver will return to channel scope operation.

●How to view the level of Sweep Scan
Example: Sweep scanning in the up direction (when the channel step is 20kHz)



Indicates the received signal level while frequency increases by one step.
The frequency levels will be displayed from the right side by one tuning step while sweep scanning, and the levels will move to the left in order. When the transceiver is scanning frequencies in a downward direction, the levels will be indicated vice versa.
While scanning, the ▼ icon will not move.