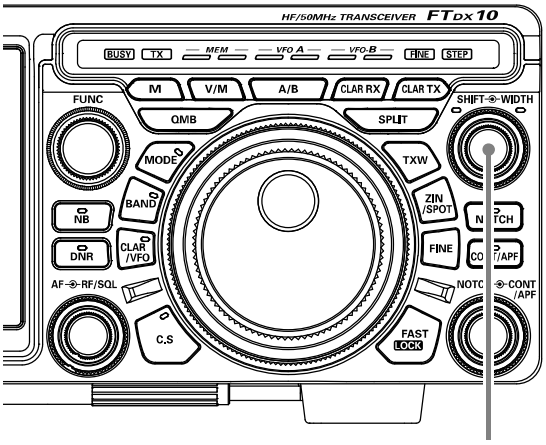
IF SHIFT Operation

IF SHIFT permits moving the DSP filter passband higher or lower, without changing the pitch of the incoming signal, and thus reduces or eliminates interference. Because the tuned carrier frequency is not varied, there is no need to re-tune the operating frequency to eliminate the interference. The total passband tuning range for the IF SHIFT system is ±1.2 kHz.

Rotate the [SHIFT] knob to the left or right to reduce the interference.

- ❍ The display will show the shift value of the IF SHIFT for 2 seconds whenever the [SHIFT] knob is turned.
- ❍ Press and hold the SHIFT knob to reset the IF SHIFT setting to “0 Hz”.



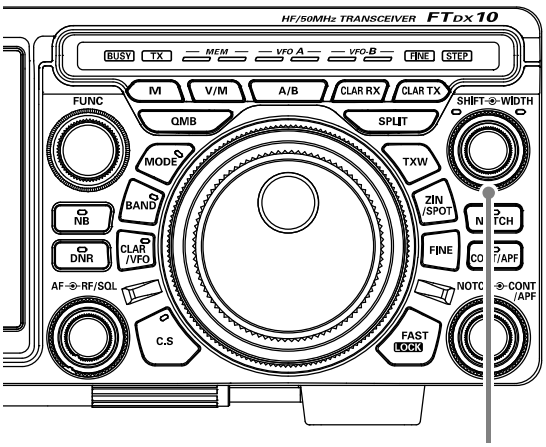
WIDTH Tuning

The IF WIDTH tuning system allows you to vary the width of the DSP IF passband, to reduce or eliminate interference.

Moreover, the bandwidth may actually be expanded from its default setting, should you wish to enhance incoming signal fidelity when interference on the band is low.

Rotate the [WIDTH] knob counter-clockwise to narrow the bandwidth and reduce interference.

- ❍ To increase the bandwidth, rotate the knob clockwise.
- ❍ The display will show the bandwidth of the IF SHIFT, while tuning the [WIDTH] knob.
- ❍ Press and hold the [SHIFT] knob to restore the WIDTH setting to factory default.



ATT (Attenuator)

When extremely strong local signals or high noise degrades reception, you can use the [ATT] button to insert 6, 12, or 18dB of RF attenuation in front of the RF amplifier.

1. Touch [ATT].
2. Touch desired attenuation level, per the chart below.

OFF	Attenuator is Off
6dB	The incoming signal power is reduced by 6 dB (Signal voltage reduced by 1/2)
12dB	The incoming signal power is reduced by 12 dB (Signal voltage reduced to 1/4)
18dB	The incoming signal power is reduced by 18 dB (Signal voltage reduced to 1/8)

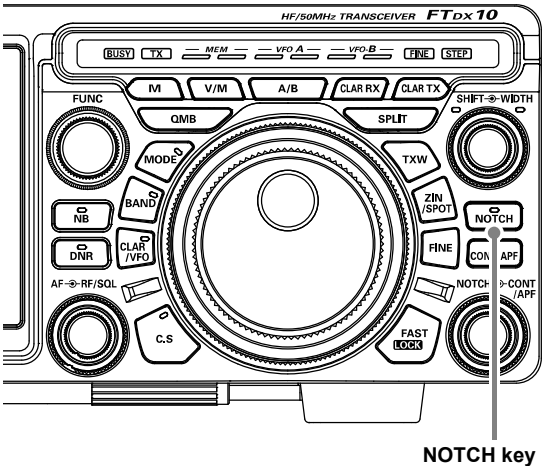
- If the noise level is high or the received signal is extremely strong, the incoming signal level can be suppressed with the IPO/ATT settings. If the S-meter fluctuates S-3 or more in the noise level, or the received signal is extremely strong and it causes a high Smeter indication (+20dB or more), activate the attenuator.
- Since IPO does not only attenuate the incoming signal, but also improves the cross modulation characteristic, try to activate the IPO first. If the signal is still strong, also use the ATT. In this way, you can attenuate the incoming signal and noise effectively.

IF NOTCH Filter Operation

The IF NOTCH filter is a highly effective system that allows cutting out an interfering beat note or other carrier signal from inside the receiver passband.

1. Rotate the [NOTCH] knob to adjust the “null” position of the Notch filter.
   - ❍ Press and hold the [NOTCH] key to restore the IF NOTCH setting to the factory default.

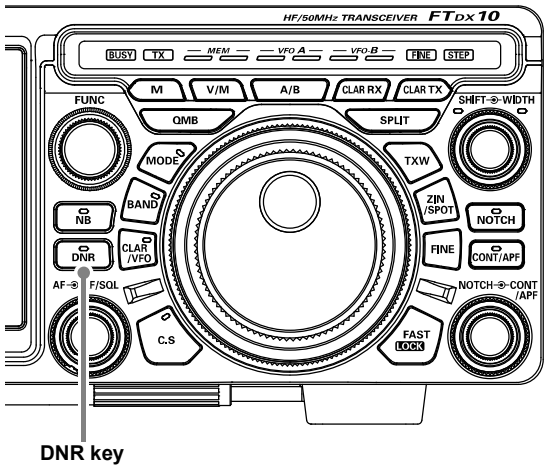
To exit from IF NOTCH filter operation, press the [NOTCH] key.



DNR Operation

The Digital Noise Reduction (DNR) system is designed to reduce the level of random noise found on the HF and 50 MHz bands, and it is especially effective during SSB operation.

1. Press the [DNR] key.
2. Press and hold the [DNR] key, then rotate the [FUNC] knob to set the noise reduction algorithms.
3. To exit from DNR operation, press the [DNR] key.

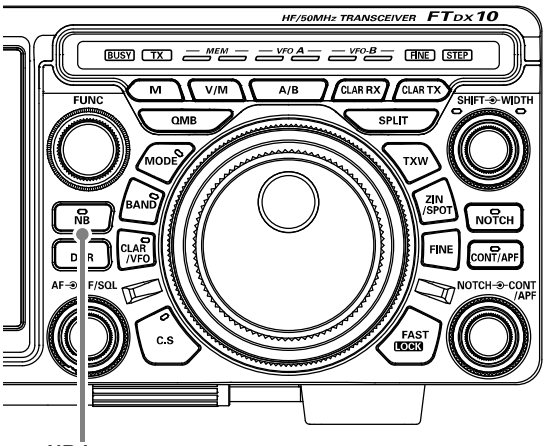


DNR key

Noise Blanker (NB) Operation

The FTDX10 includes an effective IF Noise Blanker, which can significantly reduce noise caused by automotive ignition systems.

1. Press the [NB] key.
2. Press and hold the [NB] key, then rotate the [FUNC] knob to set the noise blanker level.
3. To end Noise Blanker operation, press the [NB] key once more.



NB key

The NB function may be less effective on some other types of interference.

Adjusting the Noise Attenuation

1. Press the [FUNC] knob.
2. Select [OPERATION SETTING] → [GENERAL] → [NB REJECTION].
3. Rotate the [FUNC] knob to set the noise attenuation (10dB/30dB/40dB).
4. Press the [FUNC] knob to save the new setting.

Transmission

1. Press the microphone PTT switch to begin transmitting.
   - ❍ The “TX” indicator will light up in the LED indicators area confirmingthat transmission is in progress.
   - ❍ Release the PTT switch to return to receive mode.
   - ❍ When transmitting in the AM mode, set a maximum (carrier) power output of 25 Watts.
2. Then touch the meter area on the display to select the “ALC” meter.
3. Close the PTT switch, and speak into the microphone in a normal voice level.

In the SSB mode

Adjust the MIC gain so that the ALC meter stays within the ALC zone of the meter on voice peaks.

In the AM mode

When transmitting in the AM mode, adjust the MIC gain so that the ALC meter does not deflect on voice peaks.

Changing the transmission meter

Touch the meter area and the meter selection screen will be displayed, so touch the desired meter.

PO	Indicates the average power output level.
COMP	Indicates the speech compression level.
ALC	Indicates the relative ALC voltage.
VDD	Indicates the final amplifier drain voltage.
ID	Indicates the final stage FET transistor drain current.
SWR	Indicates the Standing Wave Ratio.

TOT (Time Out Timer)

The “Time-Out Timer” (TOT) shuts off the transmitter after continuously transmitting for the programmed time.

1. Press the [FUNC] knob.
2. Select [OPERATION SETTING] → [GENERAL] → [TX TIME OUT TIMER].
3. Rotate the [FUNC] knob to select the TOT countdown time (OFF/1 - 30 min).
4. Press the [FUNC] knob to save the new setting.

Speech Processor

The FTDX10 Speech Processor is designed to increase “talk power” by increasing the average power output (via a sophisticated compression technique).

1. Press the [FUNC] knob.
2. Touch [PROC].
   Speech Processor feature is activated.
3. Then touch the meter area on the display to select the “COMP” meter.
4. Press the PTT switch on the microphone, and speak into the microphone in a normal voice level.
   - ❍ To adjust the Compression level:
     1. Press the [FUNC] knob.
     2. Touch [PROC LEVEL].
     3. Rotate the [FUNC] knob to adjust the Compression level.
5. To exit from the Speech Processor, press the [FUNC] knob, then touch [PROC].

Monitor

Use the Monitor feature to listen to the quality of your transmitted signal.

1. Press the [FUNC] knob.
2. Touch [MONI].
   Monitor feature is activated.

❍ To adjust the Monitor level:

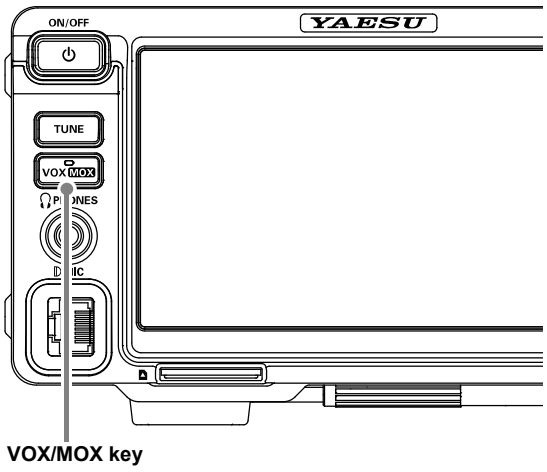
1. Press the [FUNC] knob.
2. Touch [MONI LEVEL].
3. Rotate the [FUNC] knob to adjust the audio level.

3. To exit from MONITOR operation, press the [FUNC] knob, then touch [MONI].

VOX

The VOX (Voice Operated Xmit) circuit will engage the transmitter automatically when you speak into the microphone.

1. Press the [VOX/MOX] key.
   VOX feature is activated.



VOX/MOX key

2. Without pressing the PTT switch, speak into the microphone in a normal voice level. When you start speaking, the transmitter should be activated automatically.
   When you finish speaking, the transceiver should return to the receive mode (after a short delay).

To cancel VOX and return to PTT operation, press the [VOX] key once more.

Adjusts the VOX GAIN

1. Press the [FUNC] knob.
2. Touch [VOX GAIN].
3. While speaking into the microphone, rotate the [FUNC] knob to the point where the transmitter is quickly activated by your voice, without background noise causing the transmitter to activate.

Adjusts the VOX Delay Time

1. Press the [FUNC] knob.
2. Touch [VOX DELAY]
3. Rotate the [FUNC] knob while saying a brief syllable like “Ah” and listening to the hang time for the desired delay.

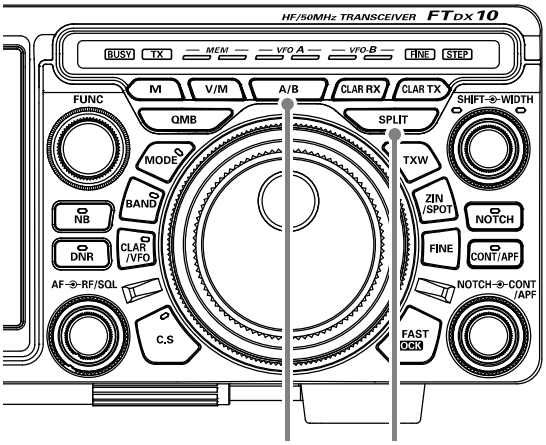
Adjusts the sensitivity of the anti-trip

1. Press the [FUNC] knob.
2. Touch [ANTI VOX].
3. Rotate the [FUNC] knob to prevent receiver audio from activating the transmitter (via the microphone).

Split-Frequency Operation

A powerful capability of the FTDX10 is its flexibility in Split Frequency operation using the VFO-A and VFO-B frequency registers. This makes the FTDX10 especially useful for high-level DX-peditions. The Split operation capability is very advanced and easy to use.

1. Set the VFO-A frequency as desired.
2. Press the [A/B] key.
3. Set the VFO-B frequency.
4. Press the [A/B] key.
5. Press the [SPLIT] key.



A/B key SPLIT key

- During Split operation, the VFO-A register will be used for reception, while the VFO-B register will be used for transmission.

6. Press the [SPLIT] key once more, Split operation will be cancelled.

- During Split operation, pressing the [A/B] key will reverse the contents of VFO-A and VFO-B. Press the [A/B] key once more, to return to the original frequency alignment.
- It is possible to set different operating modes (for example, LSB and USB) on the two VFOs used during Split operation.
- During Split operation, it is also possible to set VFO-A and VFO-B to different amateur bands.

Quick Split Operation

The Quick Split feature allows you to set a one-touch offset of +5 kHz to be applied to the VFO-B (transmit) frequency, compared to the VFO-A frequency.

1. Set the VFO-A frequency.
2. Press and hold in the [SPLIT] key for one second to engage the Quick Split feature, and apply a frequency 5 kHz above the VFO-A frequency to the VFO-B frequency register.
   - The operating mode applied to the VFO-B register will be the same as that in use on the VFO-A register.

CW Mode Operation

The powerful CW operating capabilities of the FTDX10 permit operation using an electronic keyer paddle, a “straight key”, or a computer-based keying device.

Setup for Straight Key Operation

1. Before starting, connect your key line to the rear panel KEY jack.
2. Set the operating mode to CW.
3. Rotate the MAIN Dial knob to select the desired operating frequency.
4. Press the [FUNC] knob.
5. Touch [BK-IN].
   The Break-in will be set to “ON”.
6. Touch [MONI].
   The CW monitor is activated.
7. Operation using your CW key may now proceed.

CW Delay Time Setting

During semi-break-in (not QSK) operation, the hang time of the transmitter, after you have finished sending, may be adjusted to a comfortable value consistent with your sending speed.

1. Press the [FUNC] knob.
2. Touch [BK-DELAY].
3. Start sending and rotate the [FUNC] knob to adjust the hang time, as you prefer for comfortable operation.
4. Press the [FUNC] knob to save the new setting.

Using the Built-in Electronic Keyer

1. Before starting, connect your key line to the rear panel KEY jack.
2. Set the operating mode to CW.
3. Rotate the MAIN Dial knob to select the desired operating frequency.
4. Press the [FUNC] knob.
5. Touch [BK-IN].
   The Break-in to select “ON”.
6. Touch [MONI].
   The CW monitor is activated.
7. Touch [KEYER].
   The KEYER will be set to “ON” to confirmthat the builtin Electronic Keyer is now active.
8. Touch [CW SPEED].
9. Rotate the [FUNC] knob to set the desired sending speed (4 to 60 WPM).
10. CW operation utilizing the CW paddle may now commence.
    - By pressing either the “Dot” or “Dash” side of the paddle, the CW keying tone will automatically be generated.

Setting the Keyer Weight (Dot/Dash) Ratio

Adjust the dot/dash ratio for the built-in Electronic Keyer (default weighting is 3:1).

1. Press the [FUNC] knob.
2. Select [CW SETTING] → [KEYER] → [CW WEIGHT].
3. Rotate the [FUNC] knob to set the weight to the desired value. The available adjustment range is a Dot/Dash ratio of 2.5 to 4.5.
4. Press the [FUNC] key to save the new setting.

Selecting the Keyer Operating Mode

The configuration of the Electronic Keyer may be customized independently for the front and rear KEY jacks of the FTDX10. This permits utilization of Automatic Character Spacing (ACS), if desired. This permits the use of an electronic keyer via the front jack and a straight key or computer-driven keying line via the rear panel jack.

1. Press the [FUNC] knob.
2. Select [CW SETTING] → [KEYER] → [KEYER TYPE].
3. Rotate the [FUNC] knob to select the keyer to the desired mode. The available selections are:

OFF	The built-in Electronic Keyer is turned off (“straight key” mode).
BUG	Dots will be generated automatically by the keyer, but dashes must be sent manually.
ELEKEY-A	A code elements (“Dot” or “Dash”) are automatically transmitted upon pressing either side of the paddle.
ELEKEY-B	Pressing both sides of the paddle transmits the currently generated “Dash” followed by the “Dot” (or reverse order).
ELEKEY-Y	Pressing both sides of the paddle transmits the currently generated “Dash” followed by the “Dot” (or reverse order). While transmitting the “Dash”, the first transmitted “Dot” will not be stored.
ACS	Same as “ELEKEY” except that the spacing between characters is precisely set by the keyer to be the same length as a dash (three dots in length)

4. Press the [FUNC] key to save the new setting.

Repeater Operation

The FTDX10 may be utilized on 29 MHz and 50 MHz repeaters.

1. Set the operating mode to FM.
2. Set the FTDX10 to the desired repeater's output frequency (downlink from the repeater).
3. Press the [FUNC] knob.
4. Touch [RPT].
5. Rotate the [FUNC] knob to select the desired repeater shift direction.
   The selections are:
   "SIMP" → "+" → "-" → "SIMP"
   where "SIMP" represents "Simplex" operation (not used on a repeater).
6. Press the [FUNC] knob.
7. Touch [ENC/DEC].
8. Rotate the [FUNC] knob to select "ENC".
9. Press the [FUNC] key.
10. Touch [TONE FREQ].
11. Rotate the [FUNC] knob to select the desired CTCSS Tone to be used. A total of 50 standard CTCSS tones are provided (see the CTCSS Tone Chart).
12. Press and hold the microphone PTT switch to begin transmission.

Tone Squelch Operation

The "Tone Squelch" may be activated to keep the receiver silent until an incoming signal modulated with a matching CTCSS tone is received. The receiver squelch will then open in response to the reception of the required tone.

1. Set the operating mode to FM.
2. Set the transceiver to the desired frequency.
3. Press the [FUNC] knob.
4. Touch [ENC/DEC].
5. Rotate the [FUNC] knob select to "TSQ".
6. Press the [FUNC] key.
7. Touch [TONE FREQ].
8. Rotate the [FUNC] knob to select the desired CTCSS Tone to be used. A total of 50 standard CTCSS tones are provided (see the CTCSS Tone Chart).

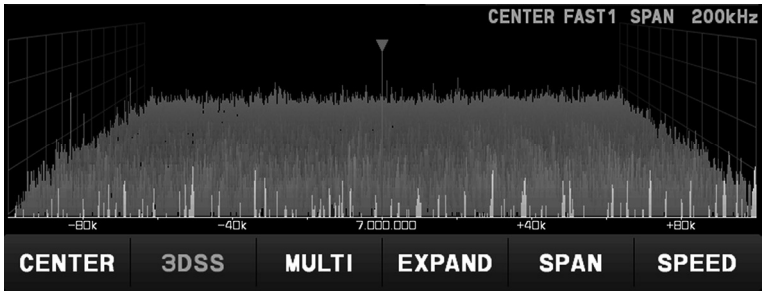
CTCSS Tone Frequency (Hz)							
67.0	69.3	71.9	74.4	77.0	79.7	82.5	85.4
88.5	91.5	94.8	97.4	100.0	103.5	107.2	110.9
114.8	118.8	123.0	127.3	131.8	136.5	141.3	146.2
151.4	156.7	159.8	162.2	165.5	167.9	171.3	173.8
177.3	179.9	183.5	186.2	189.9	192.8	196.6	199.5
203.5	206.5	210.7	218.1	225.7	229.1	233.6	241.8
250.3	254.1	-	-	-	-	-	-

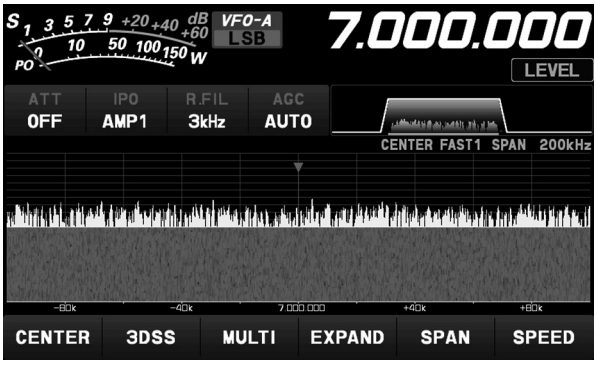
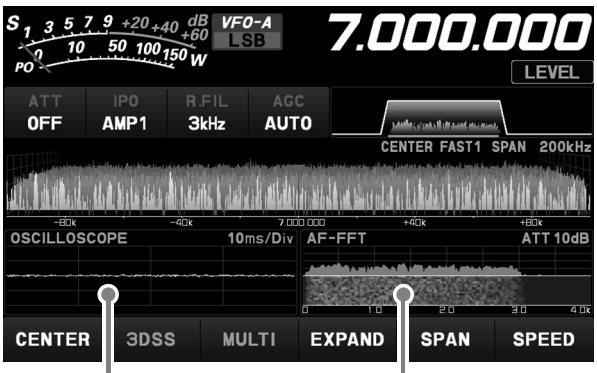
SCOPE

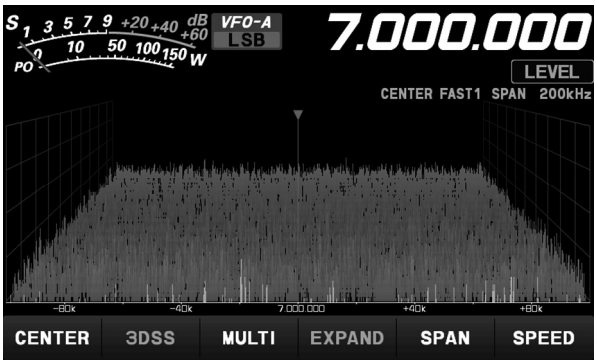
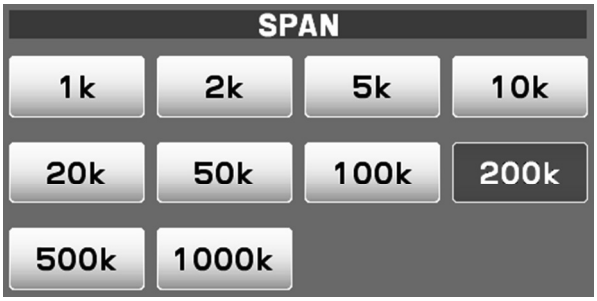
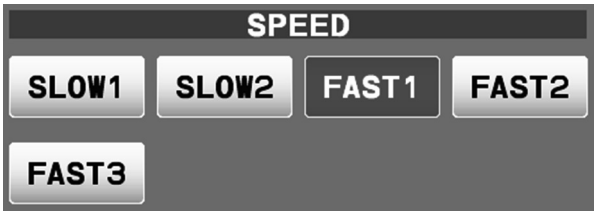
In addition to the conventional two-dimensional waterfall spectrum display, Yaesu has added the 3-Di-men-sion Spectrum Stream (3DSS) color display. The constantly changing band conditions and signals are depicted in real time and color. The frequency span is shown on the horizontal X axis, the vertical Y axis depicts the signals and their strengths, and the time is represented on the receding Z axis. The FTDX10 operator can intuitively grasp the band and signal conditions at any instant.

Scope function setting

The settings related to the scope display are done with the items on the screen.



CENTER/ CURSOR/ FIX	**Center Mode (default)** The receive frequency is always shown at the cen-ter of the screen and spectrum display. The band spectrum is shown within the range set by “SPAN”. The CENTER mode is convenient for monitoring the situation around the operating frequency. **Cursor Mode** Monitors the spectrum within the range set with “SPAN”. When the frequency (mark-er) exceeds the upper limit or the lower limit of the range, the screen is automatically scrolled and the status out-side the setting range can be observed. **FIX Mode** To use Fixed Mode, enter the start frequency of the scope.	
3DSS	The display of the waterfall switches between “con-ventional type” and “3DSS type”.	
MULTI	In addition to the scope dis-play, the oscilloscope and AF-FFT are also displayed.	

EXPAND	The image of the scope screen expands in the vertical direction.	
SPAN	Selects the desired frequency span of the Spectrum Scope.	
SPEED	Selects the Scope Display sweep speed. After touching, select the desired speed.	

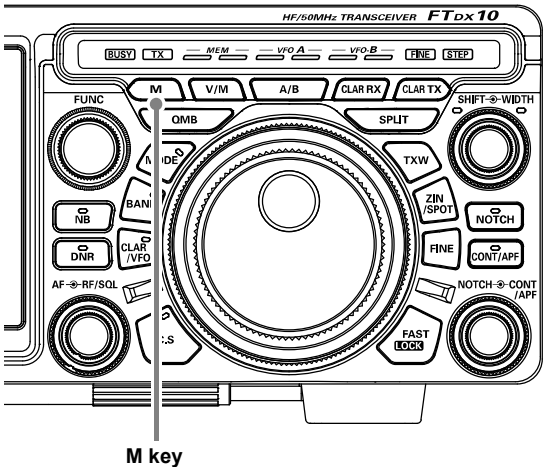
Press the [FUNC] knob and the function menu screen will be displayed, so touch the desired item.

LEVEL	Adjust the reference level to make it easier to distinguish between target signal and noise.
PEAK	Adjust the Peak Signal Color Density.
MARKER	Marker display ON or OFF.
COLOR	Changing scope display color.

Memory Operation

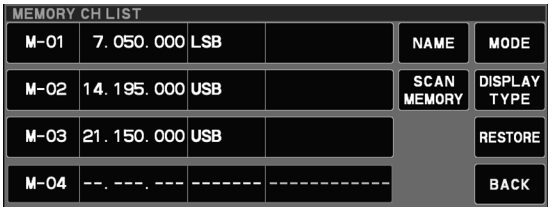
Memory Storage

1. In the VFO mode, select the frequency, mode, and status, the values you want to have stored.
2. Press the [M] key.



M key

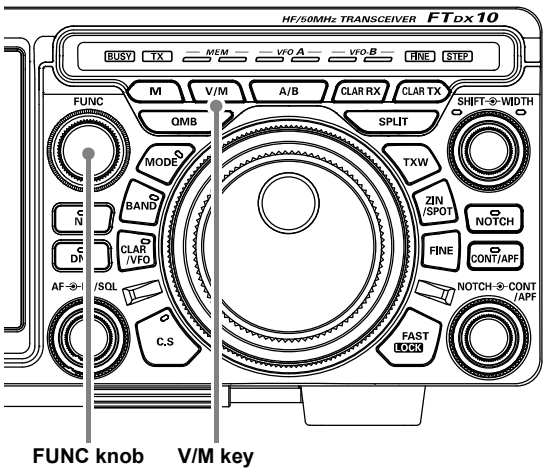
3. Rotate the [FUNC] knob to select the memory channel that you wish to store the data on.



4. Press and hold the [M] key to store the frequency and other data into the selected memory channel.
5. Press the [V/M] key, to confirm that the operation is completed.

Memory Channel Recall

1. Press the [V/M] key.
2. Press the [FUNC] knob.



FUNC knob **V/M key**

3. Touch [MEM CH].
4. Rotate the [FUNC] knob to select the desired memory channel.
5. To exit from memory mode and return to the VFO mode, press the [V/M] key.

Memory Tune Operation

The frequency may be freely tuned off from any memory channel in “Memory Tune” mode; this is similar to VFO operation.

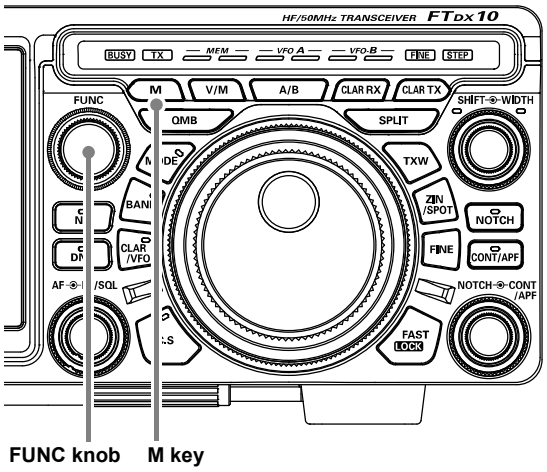
So long as you do not over-write the contents of the current memory, Memory Tune operation will not alter the contents of the memory channel.

❍ The “Memory Channel Number” will be replaced by one which indicates “MT” (Memory Tune).

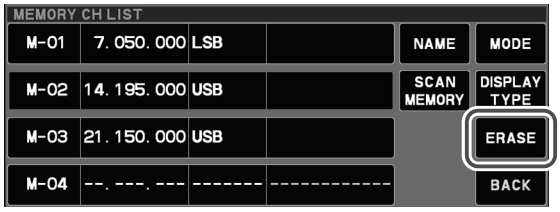
Press the [V/M] key momentarily to return to the originally memorized frequency of the current memory channel.

Erasing Memory Channel Date

1. Press the [M] key.
2. Rotate the [FUNC] knob to select the memory channel that you would like to erase.



3. Touch [ERASE] to erase the contents of the selected memory channel.



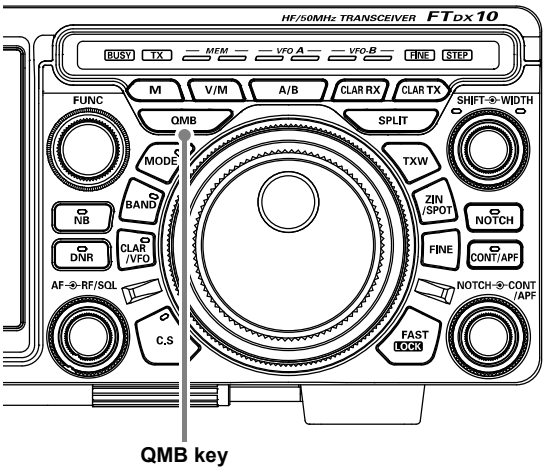
❍ The FTDX10 can not erase the memory channels "M-01".

QMB (Quick Memory Bank)

The Quick Memory Bank consists of five memories (labeled "QMB 1" through "QMB 5") independent from the regular and PMS memories. These can quickly store operating parameters for later recall.

QMB Channel Storage

1. Tune to the desired frequency on the VFO-A.
2. Press and hold the [QMB] key. The "beep" will confirm that the VFO-A contents have been written to the currently available QMB memory.



If you repeatedly press and hold the [QMB] key, the QMB memories will be written in the following order:

QMB 2 → QMB 3 → QMB 4 →
→ QMB 5 → QMB 1

Once all five QMB memories have data on them, previous data (starting with channel Q-1) will be over-written on a first-in, first-out basis.

QMB Channel Recall

1. Press the [QMB] key.
   The current QMB channel data will be shown on the frequency display area.
2. Repeatedly pressing the [QMB] key will toggle you through the QMB channels:
   QMB 2 → QMB 3 → QMB 4 →
   → QMB 5 → QMB 1
3. Press the [V/M] key to return to the VFO mode.

Setting Menu

The Menu system of the FTDX10 provides extensive customization capability; the transceiver may be setup to comple - ment personal operating preferences. Menu items are grouped by general utilization categories.

Using Menu

1. Press the [FUNC] knob.
2. Touch the category item that is to be set.
3. Touch the desired item.
4. Touch the item setting that is to be changed.
5. Touch the desired setting, or turn the [FUNC] knob to change the setting.
6. Press the [FUNC] knob to save the new setting.
7. Press the [V/M] key to exit to normal operation.

Setting Menu Resetting

All the Set mode settings can be restored to the default settings by following the procedure below.

1. Press the [FUNC] knob.
2. Touch [EXTENTION SETTING].
3. Touch [RESET].
4. Touch “DONE” in the [MENU CLAR].
5. Touch [OK] to reset and automatically restart the transceiver.
   To cancel resetting, touch [CANCEL].

Menu Function		Available Settings
RADIO SETTING		
MODE SSB	AGC FAST DELAY	20 - **300** - 4000 (20msec/step)
	AGC MID DELAY	20 - **1000** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **3000** - 4000 (20msec/step)
	LCUT FREQ	OFF / **100** - 1000 (50Hz/step)
	LCUT SLOPE	**6dB/oct** / 18dB/oct
	HCUT FREQ	700 - **3000** - 4000 (50Hz/step) / OFF
	HCUT SLOPE	**6dB/oct** / 18dB/oct
	SSB OUT LEVEL	0 - **50** - 100
	TX BPF SEL	50 - 3050 / 100 - 2900 / 200 - 2800 / **300 - 2700** / 400 - 2600
	SSB MOD SOURCE	**MIC** / REAR
	REAR SELECT	**DATA** / USB
	RPORT GAIN	0 - **50** - 100
	RPTT SELECT	**DAKY** / RTS / DTR
MODE AM	AGC FAST DELAY	20 - **1000** - 4000 (20msec/step)
	AGC MID DELAY	20 - **2000** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **4000** (20msec/step)
	LCUT FREQ	**OFF** / 100 - 1000 (50Hz/step)
	LCUT SLOPE	**6dB/oct** / 18dB/oct
	HCUT FREQ	700 - 4000 (50Hz/step) / **OFF**
	HCUT SLOPE	**6dB/oct** / 18dB/oct
	AM OUT LEVEL	0 - **50** - 100
	TX BPF SEL	**50 - 3050** / 100 - 2900 / 200 - 2800 / 300 - 2700 / 400 - 2600
	AM MOD SOURCE	**MIC** / REAR
	MIC GAIN	**MCVR** / 0 - 100
	REAR SELECT	**DATA** / USB
	RPORT GAIN	0 - **50** - 100
	RPTT SELECT	**DAKY** / RTS / DTR
MODE FM	AGC FAST DELAY	20 - **160** - 4000 (20msec/step)
	AGC MID DELAY	20 - **500** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **1500** - 4000 (20msec/step)
	LCUT FREQ	OFF / 100 - **300** - 1000 (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700 - **3000** - 4000 (50Hz/step) / **OFF**
	HCUT SLOPE	6dB/oct / **18dB/oct**
	FM OUT LEVEL	0 - **50** - 100
	FM MOD SOURCE	**MIC** / REAR
	MIC GAIN	**MCVR** / 0 - 100
	REAR SELECT	**DATA** / USB
	RPORT GAIN	0 - **50** - 100
	RPTT SELECT	**DAKY** / RTS / DTR
	RPT SHIFT(28MHz)	0 - **100** - 1000 (10kHz/step)
	RPT SHIFT(50MHz)	0 - **1000** - 4000 (10kHz/step)
MODE PSK/DATA	AGC FAST DELAY	20 - **160** - 4000 (20msec/step)
	AGC MID DELAY	20 - **500** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **1500** - 4000 (20msec/step)
	PSK TONE	**1000** / 1500 / 2000 (Hz)
	DATA SHIFT (SSB)	0 - **1500** - 3000 (10Hz/step)
	LCUT FREQ	OFF / 100 - **300** - 1000 (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700 - **3000** - 4000 (50Hz/step) / OFF
	HCUT SLOPE	6dB/oct / **18dB/oct**
	DATA OUT LEVEL	0 - **50** - 100

Menu Function		Available Settings
	TX BPF SEL	50 - 3050/100 - 2900/200 - 2800/**300 - 2700**/ 400 - 2600
	DATA MOD SOURCE	MIC / **REAR**
	REAR SELECT	**DATA** / USB
	RPORT GAIN	0 - **50** - 100
	RPTT SELECT	**DAKY** / RTS / DTR
MODE RTTY	AGC FAST DELAY	20 - **160 -** 4000 (20msec/step)
	AGC MID DELAY	20 - **500 -** 4000 (20msec/step)
	AGC SLOW DELAY	20 - **1500 -** 4000 (20msec/step)
	POLARITY RX	**NOR** / REV
	POLARITY TX	**NOR** / REV
	LCUT FREQ	OFF / 100Hz - **300Hz -** 1000Hz (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700Hz - **3000Hz** - 4000Hz (50Hz/step / OFF
	HCUT SLOPE	**6dB/oct** / 18dB/oct
	RTTY OUT LEVEL	0 - **50** - 100
	RPTT SELECT	**DAKY** / RTS / DTR
	MARK FREQUENCY	1275 / **2125** (Hz)
	SHIFT FREQUENCY	**170** / 200 / 425 / 850 (Hz)
ENCDEC PSK	PSK MODE	**BPSK** / QPSK
	DECODE AFC RANGE	8 / **15** / 30 (Hz)
	QPSK POLARITY RX	**NOR** / REV
	QPSK POLARITY TX	**NOR** / REV
	PSK TX LEVEL	0 - **70** - 100
ENCDEC RTTY	RX USOS	OFF / **ON**
	TX USOS	OFF / **ON**
	RX NEW LINE CODE	**CR, LF, CR+LF** / CR+LF
	TX AUTO CR+LF	OFF / **ON**
	TX DIDDLE	OFF / **BLANK** / LTRS
	BAUDOT CODE	CCITT / **US**
CW SETTING		
MODE CW	AGC FAST DELAY	20 - **160 -** 4000 (20msec/step)
	AGC MID DELAY	20 - **500 -** 4000 (20msec/step)
	AGC SLOW DELAY	20 - **1500 -** 4000 (20msec/step)
	LCUT FREQ	OFF / 100Hz - **250Hz -** 1000Hz (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700Hz - **1200Hz -** 4000Hz (50Hz/step) / OFF
	HCUT SLOPE	6dB/oct / **18dB/oct**
	CW OUT LEVEL	0 - **50** - 100
	CW AUTO MODE	**OFF** / 50M / ON
	CW BK-IN TYPE	**SEMI** / FULL
	CW WAVE SHAPE	1 / 2 / **4** / 6 (msec)
	CW FREQ DISPLAY	DIRECT FREQ / **PITCH OFFSET**
	PC KEYING	**OFF** / DAKY / RTS / DTR
	QSK DELAY TIME	**15** / 20 / 25 / 30 (msec)
	CW INDICATOR	OFF / **ON**
KEYER	KEYER TYPE	OFF / BUG /ELEKEY-A / **ELEKEY-B** / ELEKEY-Y / ACS
	KEYER DOT/DASH	**NOR** / REV
	CW WEIGHT	2.5 - **3.0** - 4.5
	NUMBER STYLE	**1290** / AUNO / AUNT / A2NO / A2NT / 12NO / 12NT
	CONTEST NUMBER	**1** - 9999
	CW MEMORY 1	**TEXT** / MESSAGE
	CW MEMORY 2	**TEXT** / MESSAGE
	CW MEMORY 3	**TEXT** / MESSAGE
	CW MEMORY 4	**TEXT** / MESSAGE

Menu Function		Available Settings
	CW MEMORY 5	**TEXT** / MESSAGE
	REPEAT INTERVAL	1 - **5** - 60 (sec)
DECODE CW	CW DECODE BW	25 / 50 / **100** / 250 (Hz)
OPERATION SETTING		
GENERAL	NB WIDTH	1 / **3** / 10 (msec)
	NB REJECTION	10 / **30** / 40 (dB)
	BEEP LEVEL	0 - **10** - 100
	RF/SQL VR	**RF** / SQL
	TUNER SELECT	**INT** / EXT / ATAS
	232C RATE	**4800** / 9600 / 19200 / 38400 (bps)
	232C TIME OUT TIMER	**10** / 100 / 1000 / 3000 (msec)
	CAT RATE	4800 / 9600 / 19200 / **38400** (bps)
	CAT TIME OUT TIMER	**10** / 100 / 1000 / 3000 (msec)
	CAT RTS	OFF / **ON**
	QMB CH	**5ch** / 10ch
	MEM GROUP	**OFF** / ON
	QUICK SPLIT INPUT	**OFF** / ON
	QUICK SPLIT FREQ	- 20 - **5** - 20 (kHz)
	TX TIME OUT TIMER	**OFF** / 1 - 30 (min)
	MIC SCAN	OFF / **ON**
	MIC SCAN RESUME	PAUSE / **TIME**
	REF FREQ FINE ADJ	- 25 - **0** - 25
	KEYBOARD LANGUAGE	JAPANESE / **ENGLISH(US)** / ENGLISH(UK) / FRENCH / FRENCH(CA) / GERMAN / PORTUGUESE / PORTUGUESE(BR) / SPANISH / SPANISH(LATAM) / ITALIAN
RX DSP	APF WIDTH	NARROW / **MEDIUM** / WIDE
	CONTOUR LEVEL	- 40 - **- 15** - 0 - 20
	CONTOUR WIDTH	1 - **10** - 11
	DNR LEVEL	**1** - 15
	IF NOTCH WIDTH	NARROW / **WIDE**
TX AUDIO	PROC LEVEL	COMP / **AMC**
	AMC RELEASE TIME	FAST / **MID** / SLOW
	PRMTRC EQ1 FREQ	**OFF** / 100 - 700 (100Hz/step)
	PRMTRC EQ1 LEVEL	- 10 - 0 - **5** - 10
	PRMTRC EQ1 BWTH	0 - **10**
	PRMTRC EQ2 FREQ	**OFF** / 700 - 1500 (100Hz/step)
	PRMTRC EQ2 LEVEL	- 10 - 0 - **5** - 10
	PRMTRC EQ2 BWTH	0 - **10**
	PRMTRC EQ3 FREQ	**OFF** / 1500 - 3200 (100Hz/step)
	PRMTRC EQ3 LEVEL	- 10 - 0 - **5** - 10
	PRMTRC EQ3 BWTH	0 - **10**
	P PRMTRC EQ1 FREQ	**OFF** / 100 - 700 (100Hz/step)
	P PRMTRC EQ1 LEVEL	- 10 - **0** - 10
	P PRMTRC EQ1 BWTH	0 - **2** - 10
	P PRMTRC EQ2 FREQ	**OFF** / 700 - 1500 (100Hz/step)
	P PRMTRC EQ2 LEVEL	- 10 - **0** - 10
	P PRMTRC EQ2 BWTH	0 - **1** - 10
	P PRMTRC EQ3 FREQ	**OFF** / 1500 - 3200 (100Hz/step)
	P PRMTRC EQ3 LEVEL	- 10 - **0** - 10
	P PRMTRC EQ3 BWTH	0 - **1** - 10
TX GENERAL	HF MAX POWER	5 - **100** (W)
	50M MAX POWER	5 - **100** (W)
	70M MAX POWER	5 - **50** (W)
	AM MAX POWER	5 - **25** (W)

Menu Function		Available Settings
	VOX SELECT	**MIC** / DATA
	DATA VOX GAIN	0 - **50** - 100
	EMERGENCY FREQ TX	**OFF** / ON
TUNING	SSB/CW DIAL STEP	5 / **10** (Hz)
	RTTY/PSK DIAL STEP	5 / **10** (Hz)
	CH STEP	1 / **2.5** / 5 (kHz)
	AM CH STEP	2.5 / **5** / 9 / 10 / 12.5 / 25 (kHz)
	FM CH STEP	**5** / 6.25 / 10 / 12.5 / 20 / 25 (kHz)
	MAIN STEPS PER REV.	250 / **500** / 1000
	MPVD STEPS PER REV.	250 / **500**
DISPLAY SETTING		
DISPLAY	MY CALL	Max 12 characters (**FTDX10**)
	MY CALL TIME	OFF / **1** / 2 / 3 / 4 / 5 (sec)
	SCREEN SAVER	OFF / 15 / 30 / **60** (min)
	TFT CONTRAST	0 - **10** - 20
	TFT DIMMER	0 - **15** - 20
	LED DIMMER	0 - **10** - 20
	MOUSE POINTER SPEED	0 - **10** - 20
SCOPE	RBW	**HIGH** / MID / LOW
	SCOPE CTR	FILTER / **CAR POINT**
	2D DISP SENSITIVITY	NORMAL / **HI**
	3DSS DISP SENSITIVITY	NORMAL / **HI**
EXT MONITOR	EXT DISPLAY	**OFF** / ON
	PIXEL	**800x480** / 800x600
EXTENSION SETTING		
DATE&TIME	DAY	-
	MONTH	-
	YEAR	-
	HOUR	-
	MINUTE	-
SD CARD	MEM LIST LOAD	-
	MEM LIST SAVE	-
	MENU LOAD	-
	MENU SAVE	-
	INFORMATIONS	-
	FIRMWARE UPDATE	-
	FORMAT	-
SOFT VERSION	-	-
CALIBRATION	CALIBRATION	-
RESET	MEMORY CLEAR	-
	MENU CLEAR	-
	ALL RESET	-

Resetting the Microprocessor

Some or all transceiver settings can be reset to their factory-default states using one of the following routines:

1. Press the [FUNC] knob.
2. Touch [EXTENTION SETTING].
3. Touch [RESET] .
4. Touch “DONE” of the desired item (see below).

MEMORY CLEAR (Memory Reset)

To reset (clear) the previously stored Memory channels, without affecting any configuratio changes you may have made to the Menu settings.

MENU CLEAR (Setting Menu Reset)

To restore the Menu settings to their factory defaults, without affecting the programmed memories.

ALL RESET (ALL Reset)

To restore all Menu and Memory settings to their original factory defaults. All Memories will be cleared by this procedure.

5. Touch [OK] to reset and automatically restart the transceiver.
   To cancel resetting, touch [CANCEL].

Specification

General

Tx Frequency Range:	1.8 MHz - 54 MHz (Amateur bands only)
Rx Frequency Range:	30 kHz - 75 MHz (operating)
	1.8 MHz - 29.699999 MHz (specifiedperformance, Amateur bands only)
	50 MHz - 53.999999 MHz (specifiedperformance, Amateur bands only)
Emission Modes:	A1A (CW), A3E (AM), J3E (LSB, USB), F3E (FM),
	F1B (RTTY), G1B (PSK)
Frequency Steps:	1/10 Hz (SSB, CW), 10/100 Hz (AM/FM)
Antenna Impedance:	50 ohms, unbalanced (Antenna Tuner “OFF”)
	HF: 16.7 - 150 ohms, unbalanced (Antenna Tuner “ON”)
	50 MHz: 25 - 100 ohms, unbalanced (Antenna Tuner “ON”)
Operating Temperature Range:	+32 °F to +122 °F (0 °C to +50 °C)
Frequency Stability:	±0.5 ppm (after 1 minute @ +32 °F to +122 °F [0 °C to +50 °C])
Supply Voltage:	DC13.8 V ± 15 % (Negative Ground)
Power Consumption (approx.)	Rx (no signal) 2.5 A
	Rx (signal present) 3 A
	Tx (100 W) 23 A
Dimensions (WxHxD):	10.5" x 3.6" x 10.4" (266 x 91 x 263 mm)
Weight (approx.):	13.0 lbs (5.9 kg)

Transmitter

Power Output:	5 - 100 W (5 - 25 W AM carrier)
Modulation Types:	J3E (SSB): Balanced
	A3E (AM): Low-Level (Early Stage)
	F3E (FM): Variable Reactance
Maximum FM Deviation:	±5.0 kHz/±2.5 kHz (Narrow)
Harmonic Radiation:	Better than -60 dB (1.8 MHz - 29.7 MHz Amateur bands: Harmonics)
	Better than -50 dB (1.8 MHz - 29.7 MHz Amateur bands: Others)
	Better than -63 dB (50 MHz Amateur band)
SSB Carrier Suppression:	At least 60 dB below peak output
Undesired Sideband Suppression:	At least 60 dB below peak output
3rd-order IMD:	-31dB @14 MHz 100 W PEP
Bandwidth:	3 kHz (LSB/USB), 500 Hz (CW), 6 kHz (AM), 16 kHz (FM)
Audio Response (SSB):	Not more than -6 dB from 300 to 2700 Hz
Microphone Impedance:	600 ohms (200 to 10 k-ohms)

Receiver

Circuit Type:	Double Superheterodyne		
Intermediate Frequencies:	1 st 9.005 MHz		
	2 nd 24 kHz		
Sensitivity (typ):	SSB/CW (2.4 kHz, 10 dB S+N/N)		
	1.8 MHz - 30 MHz	0.16μV (AMP2 “ON”)	
	50 MHz - 54 MHz	0.125μV (AMP2 “ON”)	
	AM (BW: 6 kHz, 10 dB S+N/N, 30 % modulation @400 Hz)		
	0.5 MHz - 1.8 MHz	7.9μV	
	1.8 MHz - 30 MHz	2μV (AMP2 “ON”)	
	50 MHz - 54 MHz	1μV (AMP2 “ON”)	
	FM (1 kHz 3.5 kHz DEV BW: 12 kHz, 12dB SINAD)		
	28 MHz - 30 MHz	0.25μV (AMP2 “ON”)	
	50 MHz - 54 MHz	0.2μV (AMP2 “ON”)	
Selectivity (typ):	Mode	–6 dB	–60 dB
	CW (BW=0.5 kHz)	0.5 kHz or better	0.75 kHz or less
	SSB (BW=2.4 kHz)	2.4 kHz or better	3.6 kHz or less
	AM (BW=6 kHz)	6 kHz or better	15 kHz or less
	FM (BW=12 kHz)	12 kHz or better	25 kHz or less
Image Rejection:	70 dB or better (1.8 MHz - 28 MHz Amateur bands)		
	60 dB or better (50 MHz Amateur bands)		
Maximum Audio Output:	2.5 W into 4 Ohms with 10% THD		
Audio Output Impedance:	4 to 16 ohms (4 ohms: nominal)		
Conducted Radiation:	Less than 4 nW		

Specifications are subject to change, in the interest of technical improvement, without notice or obligation, and are guaranteed only within the amateur bands.

YAESU

Declaration of Conformity

Type of Equipment:	HF/50MHz TRANSCEIVER
Brand Name:	YAESU
Model Number:	FTDX10
Manufacturer:	YAESU MUSEN CO., LTD.
Address of Manufacturer:	Tennozu Parkside Building, 2-5-8 Higashi-Shinagawa, Shinagawa-ku,Tokyo 140-0002 Japan

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The technical documentation as required by the Conformity Assessment procedures is kept at the following address:

Company: Yaesu U.S.A.
Address: 6125 Phyllis Drive, Cypress, CA 90630, U.S.A.
Telephone: (714) 827-7600

- Changes or modifications to this device that are not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference including received, interference that may cause undesired operation.
- The scanning receiver in this equipment is incapable of tuning, or readily being altered, by the User to operate within the frequency bands allocated to the Domestic public Cellular Telecommunications Service in Part 22.
- The YAESU MUSEN is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

This device complies with ISED's applicable license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

DECLARATION BY MANUFACTURER

The Scanner receiver is not a digital scanner and is incapable of being converted or modified to a digital scanner receiver by any user.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

CAN ICES-3 (B) / NMB-3 (B)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy; and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❒ Reorient or relocate the receiving antenna.
- ❒ Increase the separation between the equipment and receiver.
- ❒ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❒ Consult the dealer or an experienced radio/TV technician for help.

YAESU
The radio

YAESU MUSEN CO., LTD.
Tennozu Parkside Building
2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 Japan

YAESU USA
6125 Phyllis Drive, Cypress, CA 90630, U.S.A.

YAESU UK
Unit 12, Sun Valley Business Park, Winnall Close
Winchester, Hampshire, SO23 0LB, U.K.

Printed in Japan