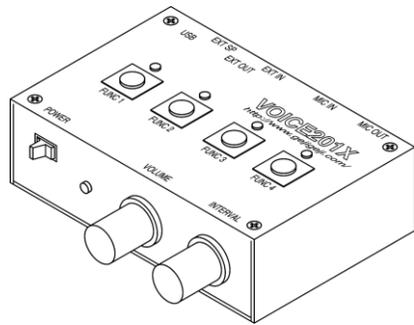
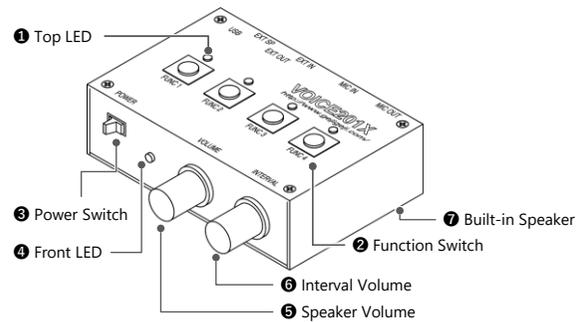


4 CHANNEL VOICE MEMORY VOICE 201X Instruction Manual



Thank you for purchasing the special VOICE memory "VOICE201X" of Gejigeji Club. Please read this instruction manual thoroughly before using the instrument in order to maximize its performance and use it effectively. After reading, it may be useful for later use, so be sure to keep it in a place where you can refer to it.

Function of each part (front)



1 Top LED	Various statuses are displayed on the top LED.
2 Function Switch	You can perform various operations using the four function buttons. In this manual, the buttons are labeled F1, F2, F3, F4 in order from the left button.
3 Power Switch	Turns the power on/off. Turn it to the right to turn on the power.
4 Front LED	Various statuses are displayed on the front LED.
5 Speaker Volume	Adjust the speaker volume
6 Interval Volume	Adjust the message interval during repeat playback.
7 Built-in Speaker	Audio monitoring is possible with the built-in speaker on the bottom.

Restrictions on product use

This product is designed in consideration of safety. Nevertheless, electronic devices in general can malfunction or fail due to wrong usage. It is the responsibility of the buyer, when using our products, to observe the optimum usage, and to avoid situations bodily injury, loss of human life or damage to property.

Our products are manufactured on the assumption that people with the knowledge of ham radio. So the explanation about electronics required for ham radio and how to communication etc. is omitted in this manual.

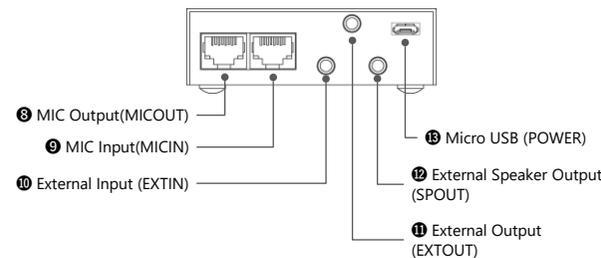
Please observe the law of each country about the operation rule of ham radio.

Gejigeji club is continually working to improve the quality of its product. The information contained herein subject to change without notice.

Acknowledgment

This device uses FatFs, which is a general-purpose FAT file system for embedded devices. We would like to express our sincere gratitude to Mr. ChaN who provided FatFs as free software.

Function of each part (rear)



8 MIC Output(RJ-45)	This is the microphone output that connects to the transceiver. It has a pinout conforming to YAESU's FT-817.
9 MIC Input (RJ-45)	Microphone input to connect a microphone. It has a pinout conforming to YAESU's FT-817.
10 External Input (3.5mm)	Input line signal and external PTT signal. The line signal input (LINE IN) is connected to the speaker output of the personal computer. Connect the external PTT signal input (EXT PTT IN) to a foot switch etc.
11 External Output(3.5mm)	Output line signal and external PTT signal. The line signal output (LINE OUT) is connected to the line input of the transceiver. External PTT signal output (EXT PTT OUT) is used for PTT control of linear amplifier and pre-amplifier.
12 External Speaker Output(3.5mm)	Connect external speakers or headphones.
13 Micro USB	Supply USB 5V power. Connect the attached or commercially available micro USB cable. Please use the USB AC adapter and mobile battery (*1). You can also use the USB connector (*2) of the PC, but please be careful of interference of ground loop. (*1) Please note that some mobile battery protection circuits may automatically turn off the output when the current drops below a certain level. (*2) This unit does not use the USB function. In that case, please note that 5V may not be output.

Main features

Compact design

Compact size due to the use of surface mount components. The aluminum body is color anodized for a beautiful finish. The power supply is 5V power supply via a micro USB connector.

CQ machine useful for contests

By recording in advance the voice that is repeatedly used such as CQ, you can play the voice message by pressing the button. At that time, PTT works together, which is very convenient. It can significantly reduce the operator's burden in contests.

Voice message is rewritable any number of times

Up to 4 channels can be registered for approximately 64 seconds per channel. Since it uses a non-volatile memory, it can be rewritten any number of times.

High voice quality with 48kHz sampling

The sampling frequency is 48kHz. Therefore, it is recorded very clearly and the sound quality during playback is also very good. In addition, the noise gating function reduces noise when no signal is recorded, so the S/N ratio is also improved.

Connector connection method

MIC Input (MICIN)
MIC Output (MICOUT)

No.	Name	Color	Function
1	NC	Blue	Not used
2	NC	Yellow	Not used
3	NC	Green	Not used
4	MICGND	Red	MIC Ground
5	MIC	purple	MIC
6	PTT	Blue/White	PTT
7	GND	Yellow/White	Ground
8	NC	Green/White	Not used

Note 1) Unused terminals are connected with microphone input and microphone output.
Note 2) The color is that of the attached microphone cable.

External Input (EXTIN)

No.	Name	Function
1	LINE IN	Line signal input (+2dBV) External PTT input When short-circuited to the GND terminal, it will be in transmission status. When connecting the PTT signal output from a personal computer, level conversion etc. is required.
2	EXT PTT IN	
3	GND	Ground

External Output (EXTOUT)

No.	Name	Function
1	LINE OUT	Line signal output (+2dBV)
2	EXT PTT OUT	External PTT signal output It is a photo coupler output.
3	EXT PTT RTN	External PTT ground It is a photo-coupler output and is electrically isolated from the ground.
4	GND	Ground

External Speaker Output (SPOUT)

No.	Name	Function
1	SP OUT+	Speaker Output(+)
2	SP OUT-	Speaker Output(-)

When first used

Microphone cable creation

Please prepare a microphone conversion cable that matches the transceiver and microphone to be used. VOICE201X has RJ-45 connector that is compatible with YAESU FT-817. Please refer to "Connector connection method" for pin assignment.

Cable connection

Connect the cables according to the "Function of each part". The USB cable and microphone cable must be connected.

Through confirmation

The signal goes through VOICE201X with the power turned off. In this state, press PTT on the microphone to check that the radio is transmitting normally. If this doesn't work, double-check the microphone conversion cable connection.

Microphone gain setting

Adjust the microphone gain according to the microphone and voice volume to be used according to the "Microphone gain setting" on the back side. If this is not done correctly, the sound will not be recorded at the correct level, resulting in over-modulation and cracking of the voice, or shallow modulation and a drop in S/N.

Recording confirmation

Follow the "Message recording" on the back side to confirm that the recording was successful.

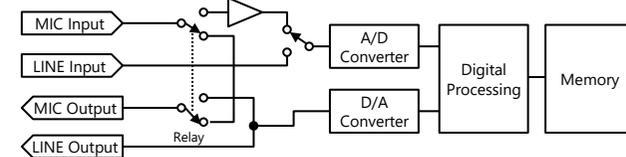
Play confirmation

Confirm that the recorded message can be played normally by following the "Message playback" on the back side.

Internal connection

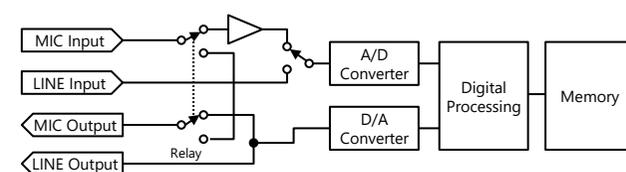
When the power is off

The internal relay switch is turned off, and the MIC input and MIC output are through the relay. LINE input and LINE output cannot be used.



When the power is on

The internal relay switch is turned on, and the MIC input and MIC output are through the internal digital processing. MIC input and LINE input can be switched by setting. The same signal is always output from the MIC output and LINE output at the same time. During recording, the input signal is recorded in the memory. At this time, it is not output from MIC and LINE. During playback, the sound recorded in the memory outputs the same signal from MIC and LINE at the same time.



Normal Operation Method

Power on method

- 1 Turn on the power without pressing anything.
- 2 Morse "OK" will sound.
- 3 The front LED lights up in green.

Microphone transmission

- 1 Press PTT on the microphone to send the microphone sound as is.

Message playback

- 1 Press the FUNC button corresponding to each channel number (1-4) to start playback of that channel.
- 2 The top LED of the corresponding channel lights up during playback.
- 3 If any of the F1 to F4 buttons is pressed, it will be forcibly terminated even during playback. It also stops automatically when the message is finished.
- 4 If PTT is pressed during playback, it will be in the transmission state as it is.

Speaker volume adjustment

- 1 Turn the speaker volume on front to the right to increase the volume.
- 2 If a speaker is connected to the speaker jack (SPOUT), no sound will be output from the built-in speaker.

Repeat Function

Message repeat playback

- 1 If you press the FUNC button corresponding to each channel number (1-4) for 1 second or more, repeat playback of that channel will start.
- 2 The top LED of the corresponding channel lights up during playback. During repeat standby, the top LED of the corresponding channel flashes.
- 3 If any of the F1 to F4 buttons is pressed, it will be forcibly terminated even during playback. In addition, it will automatically stop when the message ends after playing the specified number of times.
- 4 If PTT is pressed during playback, it will be in the transmission state as it is.
- 5 During repeat standby, press PTT for 1 second or more to enter transmission status.

Repeat interval setting

You can set the repeat interval for repeat playback.

- 1 Turn the interval volume on front to the right to increase the repeat interval.
- 2 It can be set within the range of about 0.5 to 15 seconds.

Repeat number of times

It is possible to set the number of repeats for repeat playback.

- 1 Turn on the power while pressing F2.
- 2 Morse "R" will sound.
- 3 The setting value will decrease each time F1 is pressed. Press F2 to increase the set value. The number of top surface LED lights changes according to the set value. (LED1) 5 times, (LED2) 10 times, (LED3) 15 times, (LED4) Infinite repeat
- 4 When the desired set value is reached, press F4 to confirm.
- 5 Return to normal operation mode.

Message Recording

Message recording

You can pre-record your message. The number of messages that can be recorded is 4 channels.

- 1 Turn on the power while pressing F1.
- 2 Morse "M" will sound.
- 3 The front LED lights up in red.
- 4 Press the FUNC button corresponding to each channel to select the channel to record.
- 5 Press PTT to start recording.
- 6 Recording ends when PTT is released or when the recording time exceeds 64 seconds.
- 7 Return to normal operation mode.

Note: The registered message is recorded in the internal memory, so it will not be erased even when the power is turned off.

Settings initialization (all reset)

- 1 Turn on the power while pressing all of F1 to F4.
- 2 The settings are initialized. The initial values are as follows.
Input setting: Microphone input
Repeat times: 10 times
Mic gain: Medium gain
- 3 Return to normal operation mode.

Various Settings

Microphone gain setting

Set the microphone gain to record at the optimum level.

- 1 Turn on the power while pressing F3.
- 2 Morse "G" will sound.
- 3 The setting value will decrease each time F1 is pressed. Press F2 to increase the set value. The top LED that lights up changes according to the set value.
(LED1) small gain (LED2) medium gain (LED3) large gain
- 4 When you press PTT and speak with the microphone, the LED on the top surface lights up according to the volume of your voice. As a guide, it is a good level to adjust so that the 4th LED does not light up.
○○○○ -1.5dB or more
○○○● -6dB or more
○○●● -10dB or more
○●●● -25dB or more
●●●● Less than -25dB
- 5 When the desired set value is reached, press F4 to confirm.
- 6 Return to normal operation mode.

Input switching

Switches between microphone input and line input.

- 1 While pressing F4, turn on the power.
- 2 Morse "I" will sound.
- 3 The setting value changes each time F1 is pressed. The top LED that lights up changes according to the set value. (LED2) Line input 3.5mm, (LED3) Microphone input RJ-45
- 4 When the desired set value is reached, press F4 to confirm.
- 5 Return to normal operation mode.

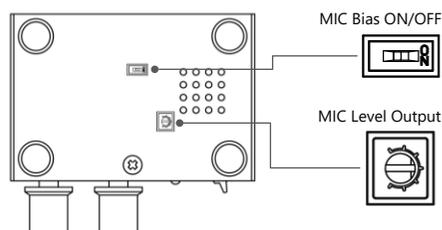
Various Adjustments

Microphone Bias ON/OFF

Set with the DIP switch on the bottom. When turned on, DC bias is injected to the MIC input for condenser microphones. If a DC bias is injected on a dynamic microphone, it may cause a malfunction.

Mic level output

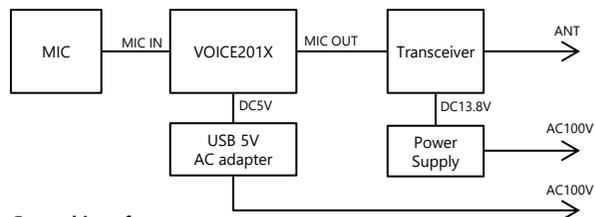
Adjust the volume on the bottom. The standard level at the time of shipment is about 10% from the left.



Interference Measures

This device has been designed with well consideration to the interference, but when combined with other devices such as transceiver, ground loop etc. may occur, and there is a possibility that this device or other devices may be unstable.

In the figure below, if the same power supply is used for the VOICE201X and the transceiver, a ground loop may be created and RF interference may cause unstable operation. In VOICE201X, in order to solve this problem as much as possible, we assume that the power supply is not shared with the transceiver, but we are considering supplying with an independent power supply using the AC adapter.



General interfere measures

If the unstable situation occur due to interference which does not improve, the following measures are recommended.

Improved matching of antenna and cable

Usually, the cause of unstable is when the matching with the antenna is poor. VSWR between the antenna and the transceiver should be as low as possible. If the VSWR is bad, not all the power generated by the transceiver will be supplied to the antenna, and the reflected power may stray on the ground line, etc., which may affect other devices. Be careful of the common mode current when grounding the antenna. Even if VSWR shows a good value, if the antenna grounding is bad, common mode current may be generated and interference may occur.

Inductor added to power line, etc.

If the ground loop is not improved, it is effective to insert an inductance in the power supply line, speaker line, etc. to prevent high frequency current from flowing. A simple inset core TDK ZCAT-1220-3550 is recommended.

Main Specifications

Basic function	Voice message recording (64 seconds x 4 channels) Voice message playback (64 seconds x 4 channels) Voice message repeat playback Voice message stop function Variable repeat number of times Variable repeat playback interval
Other functions	Delay PTT output function Microphone gain setting function Microphone bias ON/OFF function Monitor volume adjustment
Voice quality	Monaural 48kHz sampling 16 bits
Input Level	Line Input (3.5mm Connector) +2dBV MIC Input (RJ-45 Connector) -15dBV (at maximum gain)
Output Level	Line Input (3.5mm Connector) +2dBV MIC Input (RJ-45Connector) -15dBV ~ -55dBV
Operation Voltage	4.5V ~ 5.5V (USB +5V)
Current	90mA (standby state) 200mA (when playing at maximum volume)
Dimension	Width (W) 77 X Depth (D) 52 X Height (H) 23 [mm] Excluding protrusions
Weight	About 100 g
Attachment	Instruction manual, micro USB cable Microphone cable (1m with RJ-45 Connector on both ends)
Power	External +5V (Micro USB Connector)

Trouble shooting

Can not turn on

If you are using the USB port of your computer, this VOICE 201X may not be recognized as a USB device, so +5V may not be output.

Depending on the mobile battery, the mobile battery protection circuit may automatically turn off the output when the current consumption drops below a certain level.

Not recorded

Is the input switching correct? Check the microphone input or line input by switching the input.

Is the input gain appropriate? It is necessary to adjust the microphone gain depending on the type of microphone. Are the microphone cable wiring correct?

It is said that the voice is different

Why don't you play the lively voice you recorded before the contest during the night's sleepy voice?

Support

The warranty for this product is only for initial defects one week after the date of purchase. Anyone with electrical knowledge may modify this product at their own risk. This product is manufactured as part of the amateur radio service, so its support may be discontinued without notice.

If you have any questions about this product, please contact us.

Gejigeji Club JO1YGK
support@gejigeji.com
http://www.gejigeji.com/