

# ***YAESU***

***The radio***

## **FT2DR**

**144/430 MHz  
DIGITAL/ANALOG TRANSCEIVER  
C4FM/FM**

## **Instruction Manual**

## **(WIRES-X Edition)**

Thank you for purchasing this Yaesu product.

This instruction manual explains information related to the "WIRES-X Function".

For information on basic operation of the transceiver, please refer to the supplied FT2DR Operating Manual.

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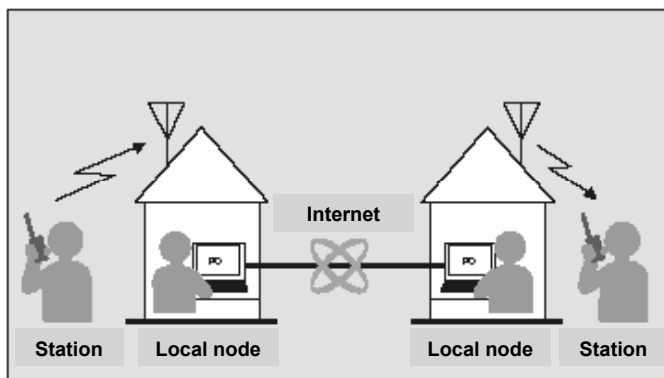
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## What is WIRES-X?

WIRES (Wide-coverage Internet Repeater Enhancement System) is an Internet communication system which expands the range of amateur radio communication. By relaying radio signals via the Internet, stations can be connected where radio waves cannot reach each other.

WIRES uses local nodes (stations connected to the Internet via PCs) as access points which repeat communications of conventional amateur radio stations. When the local nodes are connected to each other via the Internet, amateur stations all over the world can communicate with each other just by connecting conventional stations to the local nodes.



In addition to the WIRES features, WIRES-X also supports digital communications. Using WIRES-X, you can transmit and receive digitalized data such as text, image data and audio.

Using the WIRES-X in conjunction with the transceiver allows you to have analog/digital communications with stations outside the communication range. In digital communication mode, you can search stations by call signs or keywords, and exchange data such as messages and location information.

Since you can also use WIRES-X together with the GM (Group Monitoring) function on a compatible transceiver to create a group including local nodes, you can also establish a network covering a wider range.

### Caution

You cannot connect to a currently in service WIRES-II node from a WIRES-X node, or vice versa.

### Terminology

#### Node

Radio repeater connected to the Internet via a PC, which repeats communications of conventional amateur radio stations as an access point

##### Local node

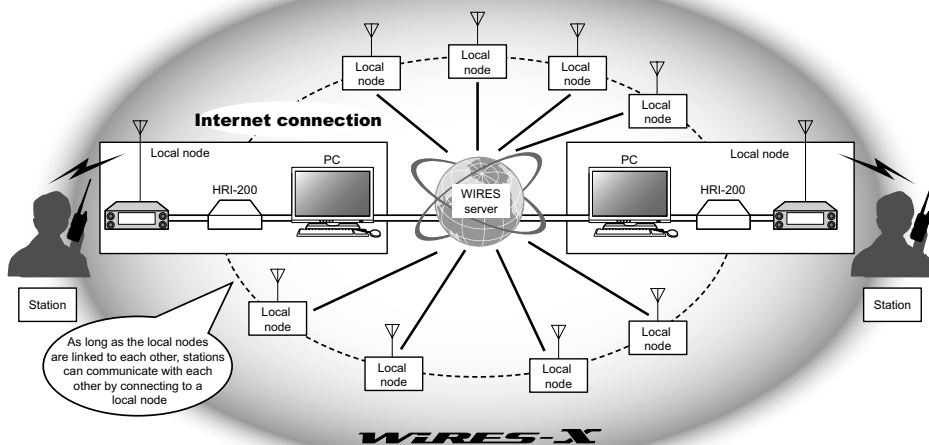
Node within the radio communication range of a conventional amateur radio station

##### Analog node

Node which is a transceiver or repeater using the conventional FM format and can only repeat DTMF (Dual Tone Multi Frequencies) codes and analog audio transmissions/receptions

##### Digital node

Node which is a transceiver or repeater compatible with digital communications in C4FM (Continuous 4 level FM) format. With this type of node, you can transmit/receive audio as well as text and image data. You can also repeat DTMF codes and analog audio transmissions/receptions.



## ■ WIRES-X user ID

YAESU provides identification names with the WIRES-X nodes. For each node, a DTMF ID (5-digit number) and user ID (alphanumeric characters consisting of up to 10 digits) are provided.

If you know the ID of the node you want to connect with, you can transmit the DTMF code from the transceiver, and directly specify the node to connect to by searching by characters (only for digital nodes).

### ● ID list

Nodes and rooms which are currently operating WIRES are listed and published on our website. We provide information such as IDs, call signs and operating frequencies (some may not be published due to the wishes of owners).

## ■ Room (Round QSO Room)

WIRES system community space to which multiple nodes can connect simultaneously. As well as voice communications, you can also chat with text messages on the PC used for the local node.

### ● Open room

Room which allows all nodes to connect to

### ● Closed room

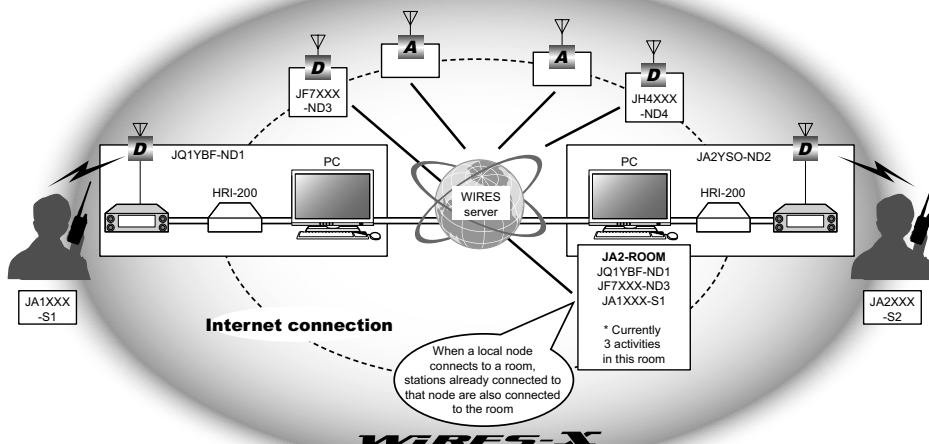
Room only registered nodes can connect to

### ● Owner

Node which opens and organizes a room

### ● Activity

Nodes currently connected to a specific room



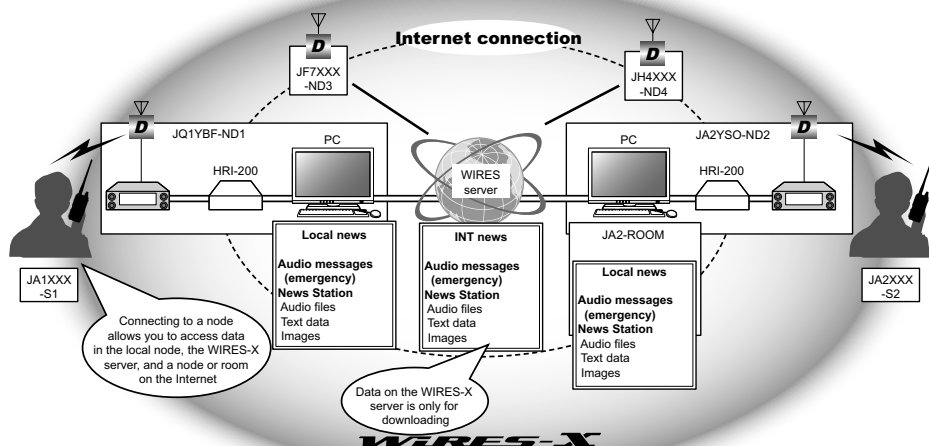
**Tip** In the illustration, **D** refers to digital nodes and **A** refers to analog nodes.

### ■ News function

This feature allows you to save digital data such as text, image and audio data on the PC used for the local node, and access the data from the connected digital station. From the digital transceiver, you can access the local node (LOCAL NEWS) and the data storage area (news station) in the node or room you connect to, and import (upload) and export (download) data.

The owners of a node or room can import/export data from/to their own station via a PC. The owner can also delete data and change information such as its name and attribution.

The WIRES-X server also has its own news station (INT NEWS) where you can read information and data supplied by YAESU.



### ■ Preset search function

If the preferred channel for connecting to a local node is programmed (preset) in the transceiver, the channel can be scanned automatically when you start up WIRES-X. Utilize this function as follows:

- Quickly connect to the local node you usually access by presetting its frequency in advance.
- By presetting to a shared channel frequency with your friends nodes, you can quickly connect the transceiver to a local node even while you are traveling in other areas.

You can use two transceivers as nodes, one for the preset search channel (receive only channel) and the other for the voice channel (operation channel).

## Entering Letters

You assign names to categories, etc., using alphanumeric characters. For details on how to enter letters, refer to “Entering Letters” on page 19 in the FT2DR Operating Manual.

## Connecting to a Faraway Station Using WIRES-X

### Finding a local node

To communicate using WIRES-X, a WIRES-X node station (local node) must be established within radio contact range of the user transceiver.

WIRES-X nodes are stations users voluntarily registered with Yaesu. Their information such as locations and operation styles are listed on our website:

<https://www.yaesu.com/jp/en/wires-x/index.php>

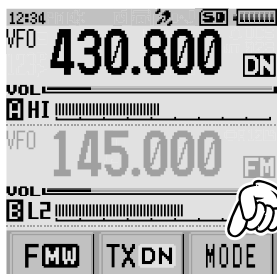
First use this list to search for a nearby local node, and nodes on the Internet used by people you want to communicate with; write down the node names and frequencies. Since the connection procedure differs between digital stations and analog stations, confirm whether the node is an analog station or a digital station.

- When the local node is a digital station:  
Connect from your transceiver in digital mode.  
(Nodes on the Internet can connect to both digital and analog stations.)
- When the local node is an analog station:  
Connect from your transceiver in analog mode.  
(Nodes on the Internet can connect to both analog and digital stations.)

### Connecting in digital mode

#### Caution

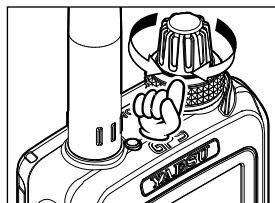
Before using WIRES-X, touch **[MODE]** to set the communication mode of the band-A (shown on the top part of the screen) to any mode other than [FM]. For details, refer to “Selecting the Communication Mode” in the basic operating manual.



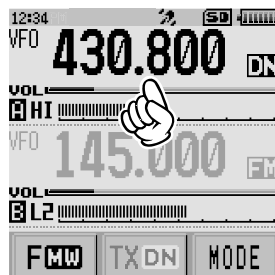
## Connecting to a Faraway Station Using WIRES-X

### Connecting to local nodes

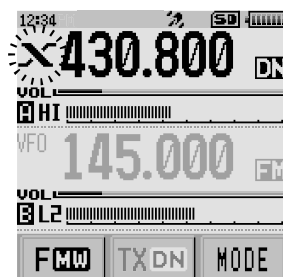
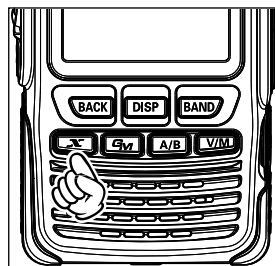
- 1 Rotate the DIAL to set the A-band to the frequency of the desired local node.



**Tip** You can directly enter the frequency using the numerical keypad by touching the A-band display.



- 2 Press the  key.  
[X] flashes on the left side of the frequency display.



When a local node is found, [X] is lit solid, and the node name and city name appear on the bottom part of the screen.

**Tip** Depending on the connection status, the screen will show one of four display patterns.

- (1) Connected to the local node, but unable to connect to Internet nodes or rooms (never before established connection to Internet nodes or rooms)



- (2) Connected to the local node, but unable to connect to Internet nodes or rooms (previously succeeded in establishing connection to Internet nodes or rooms)



- (3) Connected to the local node, successfully connected to an Internet node or room (the Internet node or room is the same as the one most recently used)



- (4) Connected to the local node, successfully connected to an Internet node or room (the Internet node or room is different from the one most recently used)



## Connecting to a Faraway Station Using WIRES-X

When ► is displayed, rotate the DIAL. Call signs of nodes and rooms on the Internet you previously connected to flash.



**Tip** While [X] is flashing, briefly press the  key to re-establish connection to the local node.

**Tip** When any local node cannot be found, [X] will disappear in 30 seconds.

### Caution

WIRES-X can only be used on the A-band.

If using the B-band (shown on the bottom part of the screen) as the operation band, pressing the  key automatically switches the operation band to the A-band (shown on the top part of the screen).

## Connecting to a node or room on the Internet

You can connect to the desired node or room in one of the following ways:

- Selecting an accessible node or room from the list
- Specifying the node name or room name
- Selecting the most recently connected node or room
- Specifying the DTMF ID of the node or room you want to connect to

### ● Searching from the node & room lists

- 1 While displaying the local node, touch [SEARCH & DIRECT].

Displays the category list.



- 2 Touch [ALL].

Displays the list of accessible nodes and rooms.

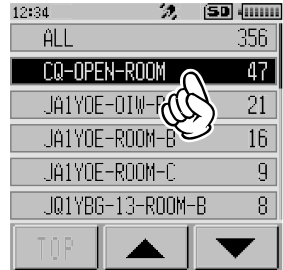
- Tips**
- Connection destinations are displayed from the room list and then node list.
  - On the connection destination room columns, the number of activities (the number of nodes connected to each room) appears on the right side.



## 3 Touch the node or room you want to connect to.

Starts connection.

**Tip** By pressing , you can also establish connection while talking.



Once connection is successfully established, the menu list of the node (room) you are connected to will appear.

**Tip** If connection is unsuccessful, an error message appears and the screen returns to the list of nodes and rooms.



### Tip

You can list items in order according to the number of activities or access history from **[WIRES-X]→[2 SEARCH SETUP]** in setting mode.

## ● Searching by node or room name

### 1 While displaying the local node, touch **[SEARCH & DIRECT]**.

Displays the category list.



### 2 Touch **[SEARCH & DIRECT]**.

Displays the character input screen.



## Connecting to a Faraway Station Using WIRES-X

### 3 Enter all or part of the room name.

The characters you have just entered appear on the screen.

**Tip** For details on how to enter letters, refer to “Entering Letters” on page 7.



### 4 Touch [ENT].

If connection destinations with the first part of a name partially matching the name you entered are found, they will be listed.

**Tip** • If there is no connection destination matching the entered name, “No Matches” appears and then the screen returns to the character input screen.



- If the name you entered is found, the transceiver establishes connection immediately.
- The screen displays the room list search results followed by the node list search results.
- On the room columns in the search results, the number of activities (the number of nodes connected to each room) appears on the right side.



### 5 Touch the node or room you want to connect to.

Starts connection.

**Tip** By pressing , you can also establish connection while talking.

Once connection is successfully established, the menu list of the node (room) you are connected to will appear.

**Tip** If connection is unsuccessful, an error message appears and the screen returns to the list of nodes and rooms.



### Tip

You can list items in order according to the number of activities or access history from **[WIRES-X] → [2 SEARCH SETUP]** in setting mode.

## ● Connecting to the node or room you have most recently connected

If you have previously connected to a node or room on the Internet, it appears and flashes at the bottom of the screen.

Touch the flashing node or room to start connection, and once connection is established, the menu list of the node (room) you are connected to will appear.

If there is ► on the left side of the node name on the bottom part of the screen, rotate the DIAL to display the node you have most recently connected to.

**Tip** If connection is unsuccessful, an error message appears and the name flashes again.



## ● Specifying the DTMF ID of the node or room you want to connect to

- 1 While displaying the local node, touch **[SEARCH & DIRECT]**.

Displays the category list.



- 2 Touch **[SEARCH & DIRECT]**.

Displays the character input screen.



## Connecting to a Faraway Station Using WIRES-X

### 3 Touch [ID].

Displays the DTMF input screen.



### 4 Enter the 5-digit DTMF ID.

### 5 Touch [ENT].

Once connection is successfully established, the node or room appears on the bottom part of the screen.

### 6 Touch the node or room on the bottom part of the screen.

Displays the menu list of the node or room you are connected to.



## Communicating with others

### 1 While displaying the station you are currently connected to, press .

The transceiver switches to transmission mode.

### 2 Speak into [MIC].

**Tip** Place the microphone about 5 cm away from your mouth when you speak.

**Caution** Do not continuously transmit over an extended period of time to reduce the risk of overheating, malfunction, and injury.

### 3 Release .

The transceiver switches to reception mode.



### Tip

You can communicate with the node or room you are connected to by pressing  even when viewing data in a node or room on the Internet using the NEWS function in digital mode on page 26.

## Useful functions in digital mode

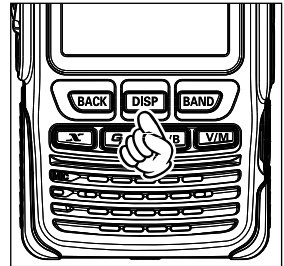
### Using preset channels

Programming (presetting) a channel frequency allows you to easily connect to a local node.

By sharing a channel frequency with other nodes, you can connect the transceiver to a local node even while you are out. This is useful for a group to operate a station.

#### ● Presetting a channel

- 1 Press and hold the **[DISP]** key for over one second.  
The transceiver switches to setting mode.



- 2 Touch **[WIRES-X]**.  
Displays the menu list.



- 3 Touch **[1 RPT/WIRES FREQ.]**.  
Displays the selection items.

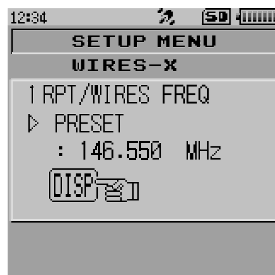


## Connecting to a Faraway Station Using WIRES-X

- 4 Rotate the DIAL to select **[PRESET]**, then press the **[DISP]** key.

Displays the frequency.

- Tips**
- Every time the DIAL is rotated, the setting switches between **[MANUAL]** and **[PRESET]**.
  - The default setting is **MANUAL**.



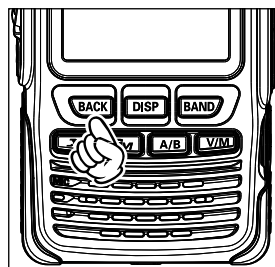
- 5 Rotate the DIAL to select the frequency.

- Tips**
- Rotating the DIAL changes the frequency by the increments specified in setting mode.
  - Touching **[BAND]** switches the preset frequency band.
  - The default settings are 146.550 for the A-band and 446.500 for the B-band.



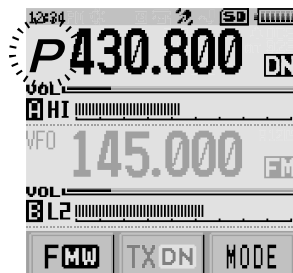
- 6 Press the **[BACK]** key four times.

Sets the frequency and returns the screen to the frequency display screen.



### ● Connecting to a preset channel

- 1 Follow the procedure in "Presetting a channel" on page 15 to make the preset channel available in advance.
- 2 Press the **[X]** key.  
**[P]** flashes on the left side of the frequency display.



When a local node is found, [X] lights up, and the node name and city name appear on the bottom part of the screen.

**Tip** When any local node cannot be found, [P] disappears in 30 seconds.



### Tip

If the frequency of the detected local node is different from that of the preset channel, the frequency automatically switches to the node frequency.

### ● Ending searching by a preset channel

- 1 Follow steps 1 to 3 in “Presetting a channel” on page 15 to display the selection items of [1 RPT/WIRES FREQ].
- 2 Rotate the DIAL to display [MANUAL].

**Tip** Every time the DIAL is rotated, the setting switches between [MANUAL] and [PRESET].



- 3 Press the [BACK] key three times.  
Returns the screen to the frequency display screen.

### ■ Connecting to registered nodes or rooms

You can register names of nodes and rooms on the Internet and sort them into 5 categories. Up to a total of 20 nodes and rooms can be registered in each category.

#### ● Registering category names

- 1 Press and hold the [DISP] key for over one second.  
The transceiver switches to the setting mode.

## Connecting to a Faraway Station Using WIRES-X

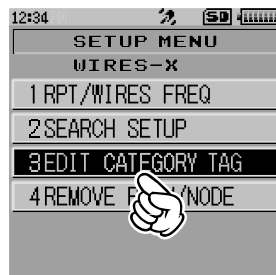
### 2 Touch [WIRES-X].

Displays the menu list.



### 3 Touch [3 EDT CATEGORY TAG].

Displays the category name setting screen.



### 4 Rotate the DIAL to select one of [C1] to [C5], then press the [DISP] key.

Displays the character input screen.



### 5 Enter the category name.

The characters you have just entered appear on the screen.

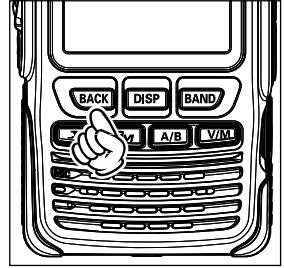
**Tip** For details on how to enter letters, refer to "Entering Letters" on page 7.



- 6 Press the **BACK** key.

Returns the screen to the menu list.

**Tip** Repeat steps 3 to 6 to set more category names.



- 7 Press the **BACK** key two times.

Sets the category name and returns the screen to the frequency display screen.

## ● Registering a node or room

- 1 Touch the node or room you want to connect to.  
Displays the menu list of the node (room) you are connected to.



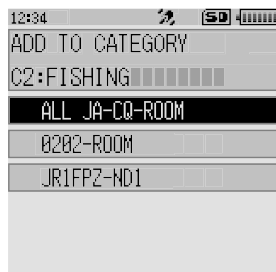
- 2 Touch **[ADD]**.  
Displays the category list.



## Connecting to a Faraway Station Using WIRES-X

### 3 Touch the desired category.

The name of the node or room you are currently connected to is added to the list of the registered node and room lists.



### 4 Press the [BACK] key.

Returns the screen to the menu list.

## ● Connecting to registered nodes or rooms

### 1 Touch [SEARCH & DIRECT].

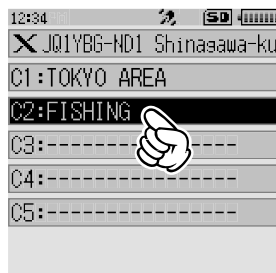
Displays the category list.



### 2 Touch one of [C1] to [C5].

Displays the node and room lists.

**Tip** On room columns, the number of activities (the number of nodes connected to each room) appears on the right side.



## 4 Touch the node or room you want to connect to.

Starts connection.

**Tip** By pressing , you can also establish connection while talking.



If connection is successful, the menu list of the node or room you are connected to appears.

**Tip** If connection is unsuccessful, an error message appears and the screen returns to the list of nodes and rooms.



### Tip

You can list items in order according to the number of activities or access history from [WIRES-X]→[2 SEARCH SETUP] in setting mode.

## ● Disconnecting from the node or room

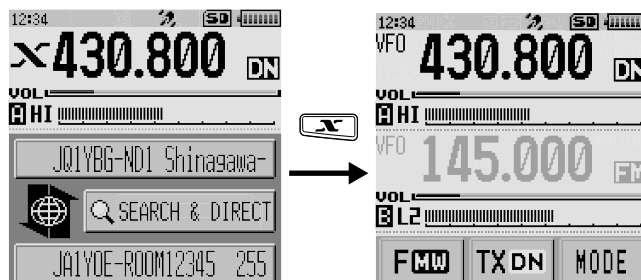
### 1 Press and hold the key for over one second.

If disconnection is successful, the screen returns to the local node connection screen.

## Releasing the WIRES-X connection

Pressing and holding the  key for over one second switches the screen to the frequency display screen, and [X] displayed on the left side of the frequency display disappears.

**Tip** The local node and the node or room remain connected.



### Connecting to analog nodes

When the node you want to connect to is an analog station, use the DTMF function on the transceiver. For details on how to use the DTMF function, refer to “Using the DTMF Function” in the basic operating manual.

### Connecting to nodes or rooms on the Internet

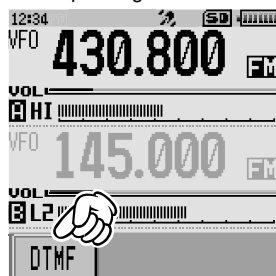
1 Set the main band frequency to the local node frequency.

2 Touch **[MODE]** to switch to analog FM mode.

**Tip** For details, refer to “Selecting the communication mode” in the basic operating manual.

3 While pressing , touch **[DTMF]** displayed on the screen.

Displays the numeric keypad.



4 Touch the DTMF ID key of the room or node you connect to.

Transmits the DTMF code.



5 Release , and keep the transceiver in reception mode for about 10 seconds.

Once connection is established, you will be able to hear audio.

**Caution** The connection destination screen does not appear.

### Tip

You can store DTMF codes consisting of up to 16 digits for 10 channels on the transceiver. If you register the codes of frequently-used connection destinations in advance, you can easily transmit a code by pressing its abbreviated number while pressing . For details, refer to “Using the DTMF Function” in the basic operating manual.

## Communicating with others

- 1 Press .  
The transceiver switches to transmission mode.
- 2 Speak into **[MIC]**.  
**Tip** Place the microphone about 5 cm away from your mouth when you speak.  
**Caution** Do not continuously transmit over an extended period of time to reduce the risk of overheating, malfunction, or injury.
- 3 Release .  
The transceiver switches to reception mode.

## Disconnecting from the node or room

- 1 While pressing , touch **[DTMF]** displayed on the screen.
- 2 Press the #99999 (DTMF disconnection command) key.  
Disconnects the node or room.

## Various display functions

### Confirming the location of the local node and the partner station

When the signal from the local node you have connected to contains location information, you can display the location information on the screen.

Pressing the **[DISP]** key on any screen of WIRES-X switches the screen to the compass screen which displays the name of the partner station as well as the direction and distance to the partner station from your station. Pressing the **[X]** key displays the local node name and the direction and distance to the local node from your station. Pressing the **[X]** key again displays the information of the partner station.



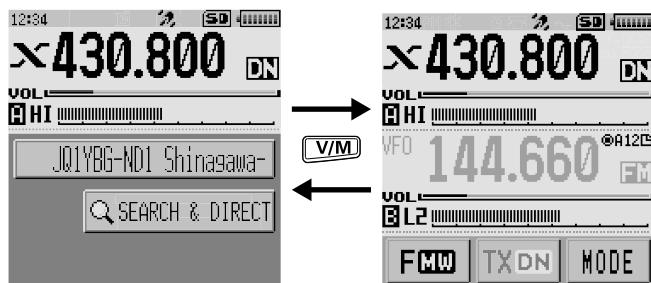
### Tip

When "NUMERIC" is selected from **[DISPLAY]→[1 TARGET LOCATION]** in the setting mode, the latitude & longitude screen appears instead of the compass screen.

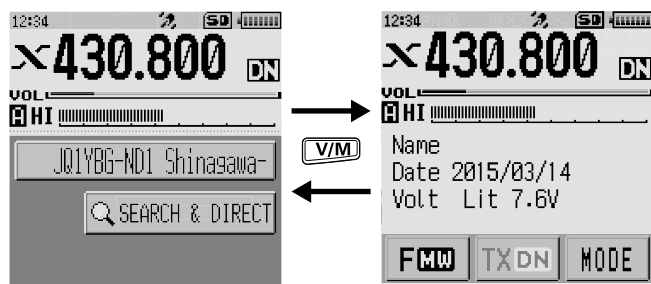
### Confirming the frequency

On the WIRES-X screen, press **[V/M]** to change to the frequency display screen that was displayed before using WIRES-X. Press **[V/M]** again to return to the WIRES-X screen.

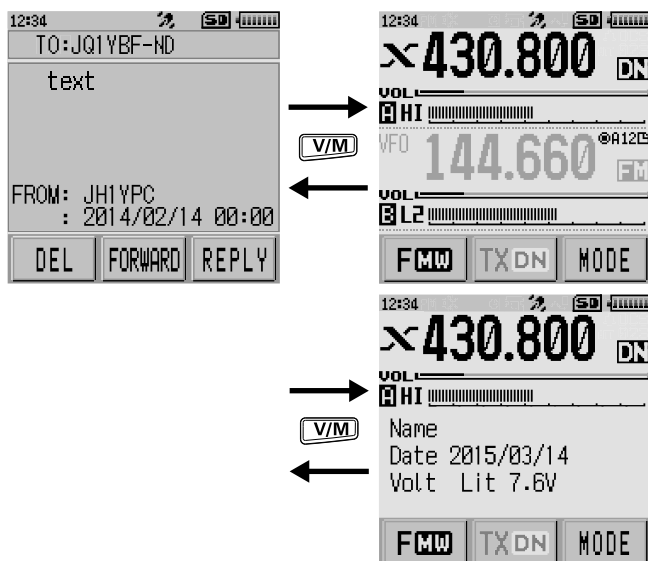
#### [Dual band screen]



#### [Single band screen]



[When viewing text data of the local node]



## Returning to the initial screen

While on the WIRES-X screen, press and hold **A/B** for over one second to display the frequency display screen.

On the frequency display screen, press and hold **A/B** for over one second to return to the WIRES-X startup screen (initial screen).

## Using the News Function of WIRES-X

When using WIRES-X in digital mode, you can transmit/receive messages (text data) and images; you can also record/play audio messages.

### Viewing messages

You can read messages (text data) that are transmitted/received by either a local node, or a node or room on the Internet, from the transceiver.

#### Caution

To read messages, insert a microSD memory card into the transceiver in advance. For details, refer to "Using a microSD Memory Card" in the basic operating manual.

### Viewing text data in local nodes

- 1 Touch the local node.

Displays the menu list of the local node.



- 2 Touch the local node name displayed in [LOCAL NEWS].

If data reception is successful, the menu list of the local node appears.



- 3 Touch [NEWS STATION].

Displays the upload (transmission)/download (reception) select screen.



**4 Touch [DOWNLOAD].**

Displays the data type select screen.



**5 Touch [MESSAGE].**

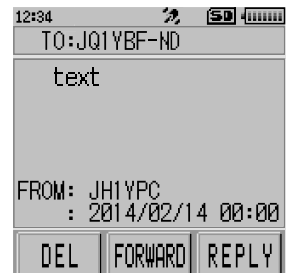
If data reception is successful, the list of data appears.

**Tip** The list shows the registered data in reverse chronological order.

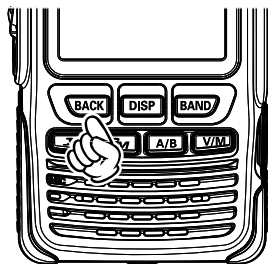


**6 Touch the message you want to view.**

Downloads the data and displays the content of the message.



- 7 Press the **BACK** key.  
Returns the screen to the data list.



### Tips

- On the data content display screen, press the **DISP** key to display the sender's location information at the time the data was sent.
- On each screen, press the **BACK** key to return to the previous screen.

### ● Operations on the data list

When there is a large number of data items available, the list will be divided into smaller lists with 20 data items each. At the end of each list, the following icons appear to allow you to move to the previous/next lists. Touch the item to switch the display.

**[TOP]** Displays the beginning of the first list.

**[▲]** Displays the previous list.  
Not available on the first list.

**[▼]** Displays the next list.  
Not available on the last list.



### ■ Viewing text data on the WIRES-X server (INT NEWS)

You can read text information provided by Yaesu on the WIRES-X server from the transceiver.

- 1 Touch the local node, or node or room you want to connect to.  
Displays the menu list of the local node, or node or room you connect to.



- 2 Touch [INT NEWS].  
Displays the menu of the WIRES-X server.



- 3 Touch [NEWS STATION].  
Displays the data type select screen.



- 4 Touch [MESSAGE].  
If data reception is successful, the list of data appears.  
**Tip** The list shows the registered data in reverse chronological order.

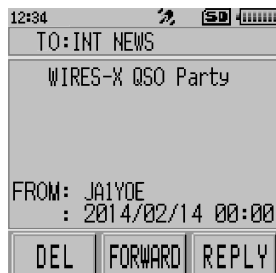


- 5 Touch the message you want to view.



## Using the News Function of WIRES-X

Downloads the data and displays the content of the message.



- 6 Press the **BACK** key.  
Returns the screen to the data list.

### Viewing text data in nodes or rooms on the Internet

- 1 Touch the node or room on the Internet you want to connect to.  
Displays the menu list of the node or room on the Internet.



- 2 Touch **[NEWS STATION]**.  
Displays the upload (transmission)/download (reception) select screen.



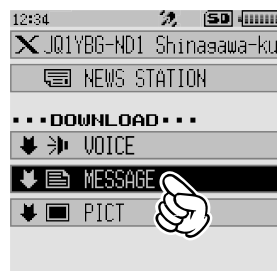
- 3 Touch **[DOWNLOAD]**.  
Displays data type select screen.



#### 4 Touch [MESSAGE].

If data reception is successful, the list of data appears.

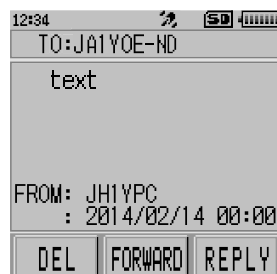
**Tip** The list shows the registered data in reverse chronological order.



#### 5 Touch the message you want to view.



Downloads the data and displays the content of the message.



#### Tip

On the content display screen, press the **DISP** key to display the sender's location information at the time the data was sent.

#### Caution

When the category list or data list is displayed, pressing  readies the transceiver to transmit audio to the node or room on the Internet you are currently connected to.

## Importing images

You can import images transmitted/received by either a local node, or a node or room on the Internet onto the transceiver.

### Cautions

- To import images, insert a microSD memory card into the transceiver in advance. For details, refer to "Using a microSD Memory Card" in the basic operating manual.
- Imported images cannot be viewed on the transceiver. To view images after importing, remove the microSD memory card from the transceiver, and then copy the data to your PC, etc.

## Importing images from local nodes

1 Follow steps 1 to 4 in "Viewing text data in local nodes" on page 26 to display the data type select screen.

2 Touch [PICT].

Displays the data list.

**Tip** The list shows the registered data in reverse chronological order.



3 Touch the image you want to download.

The confirmation message appears.



4 Touch [OK].



Starts downloading and “Waiting” appears.



After data import completes, the image appears.

- Tip**
- Data in unsupported formats cannot be imported. In such a case, “NOT COMPLETED” appears, and then the screen returns to the data type select screen.
  - When the microSD memory card does not have enough free space, data cannot be imported. In such a case, “Memory is full” appears, and then the screen returns to the data list.

## Importing images from the WIRES-X server (INT NEWS)

You can import images provided by Yaesu on the WIRES-X server onto the transceiver.

- 1 Follow steps 1 to 4 in “Viewing text data on the WIRES-X server (INT NEWS)” on page 28 to display the data type select screen.

- 2 Touch **[PICT]**.

Displays the data list.

- Tip** The list shows the registered data in reverse chronological order.



- 3 Touch the image you want to download.  
The confirmation message appears.



### 4 Touch [OK].



Starts downloading and “Waiting” appears.

After data import completes, the image appears.

### 5 To save the data onto the microSD memory card, touch [SAVE].

**Tip** If you do not want to save the data onto the microSD memory card, touch [DEL].

“Waiting” appears.

After the image saving process completes, “COMPLETED” appears.

### 6 Touch [OK].

Returns the screen to the data list.

- Tips**
- Data in unsupported formats cannot be imported. In such a case, “NOT COMPLETED” appears, and then the screen returns to the data type select screen.
  - When the microSD memory card does not have enough free space, data cannot be imported. In such a case, “Memory is full” appears, and then the screen returns to the data list.

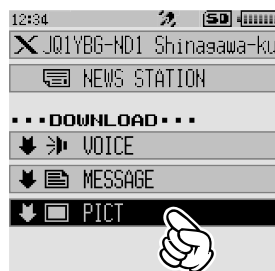
## Importing data from nodes or rooms on the Internet

1 Follow steps 1 to 3 in “Viewing text data in nodes or rooms on the Internet” on page 30 to display the data type select screen.

### 2 Touch [PICT].

Displays the data list.

**Tip** The list shows the registered data in reverse chronological order.



3 Follow step 3 in “Importing images from local nodes” on page 32 to import data.

### Caution

When the category list or data list is displayed, pressing  readies the transceiver to transmit audio to node or room on the Internet you are currently connected to.

## Viewing imported data later

You can also view the imported data later.

1 Touch the local node.

Displays the menu list of the local node.



2 Touch the local node name displayed in [LOCAL NEWS].

If data reception is successful, the menu list of the local node appears.



3 Touch [LOG].

Displays the data type select screen.



## Using the News Function of WIRES-X

### 4 Touch [MESSAGE] or [PICT].

Displays the data list.

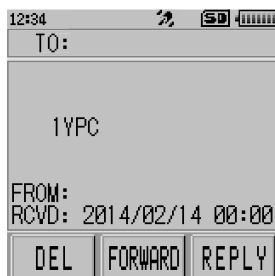
**Tip** The list shows the registered data in reverse chronological order.



### 5 Touch the data you want to view.



Displays the content of the message or the image.



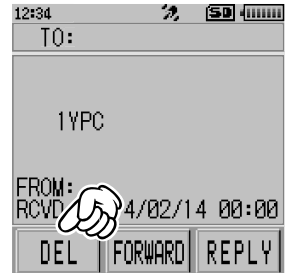
### 6 Press the [BACK] key.

Returns the screen to the data list.

## Deleting imported data

### Deleting a file

- 1 Follow steps 1 to 5 “Viewing imported data later” on page 35 to display the content of the message or image data.
- 2 Touch **[DEL]**.  
The confirmation message appears.



- 3 Touch **[OK]**.  
Deletes the data and returns the screen to the data list.



## Listening to audio messages

You can play and listen to audio files transmitted/received by a local node, or node or room on the Internet.

Audio files are categorized into the following two types:

**EMERGENCY:** Emergency information. Depending on the node or room settings, mandatory updates are supplied to connected nodes and rooms in five-minute intervals for two hours starting from the initial dissemination of the news.

**NEWS STATION:** Normal message. You can listen to the message anytime you want as long as the message is not deleted from the node or room.

### Caution

You can play and listen to audio files using the transceiver but you cannot save audio files onto the transceiver.

### Listening to emergency information in the local node

- 1 Follow steps 1 to 2 in “Viewing text data in local nodes” on page 26 to display the menu list of the local node.

- 2 Touch **[EMERGENCY]**.

Displays the data list.

- Tip**
- The list shows the registered data in reverse chronological order.
  - Data registered within the past 2 hours flashes.



- 3 Touch the audio file you want to play.

Starts audio playback. “DOWNLOAD” appears and flashes.

After playback ends, the screen returns to the data list.



#### Tip

During audio playback, press the **[DISP]** key to display the sender's location information at the time the audio file was recorded.

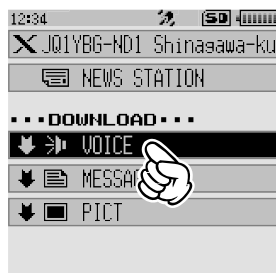
### Listening to routine messages in local nodes

- 1 Follow steps 1 to 4 in “Viewing text data in local nodes” on page 26 to display the data type select screen.

- 2 Touch **[VOICE]**.

Displays the data list.

- Tip**
- The list shows the registered data in reverse chronological order.



- 3 Touch the audio file you want to play.  
Starts audio playback. “DOWNLOAD” appears and flashes.  
After playback ends, the screen returns to the data list.

**Tip**

During audio playback, press the **[DISP]** key to display the sender's location information at the time the audio file was recorded.

## ■ Listening to routine messages on the WIRES-X server (INT NEWS)

- 1 Follow steps 1 to 4 in “Viewing text data on the WIRES-X server (INT NEWS)” on page 28 to display the data type select screen.  
2 Touch **[VOICE]**.

Displays the data list.

**Tip** The list shows the registered data in reverse chronological order.



- 3 Touch the audio file you want to play.  
Starts audio playback. “DOWNLOAD” appears and flashes.  
After playback ends, the screen returns to the data list.

## ■ Listening to emergency information in nodes or rooms on the Internet

- 1 Follow step 1 in “Viewing text data in nodes or rooms on the Internet” on page 30 to display the menu list of the node or room you want to connect to.  
2 Touch **[EMERGENCY]**.

Displays the data list.

**Tips**

- The list shows the registered data in reverse chronological order.
- Data registered within the past 2 hours flashes.



- 3 Touch the audio file you want to play.  
Starts audio playback. “DOWNLOAD” appears and flashes.  
After playback ends, the screen returns to the menu list of the node or room you are connected to.

### Tip

During audio playback, press the **[DISP]** key to display the sender's location information at the time the audio file was recorded.

## ■ Listening to routine messages in nodes or rooms on the Internet

- 1 Follow steps 1 to 3 in “Viewing text data in nodes or rooms on the Internet” on page 30 to display the data type select screen.

- 2 Touch **[VOICE]**.

Displays the data list.

**Tip** The list shows the registered data in reverse chronological order.



- 3 Touch the audio file you want to play.  
Starts audio playback. “DOWNLOAD” appears and flashes.  
After playback ends, the screen returns to the data list.



### Tip

During audio playback, press the **[DISP]** key to display the sender's location information at the time the audio file was recorded.

## Transmitting messages and images

You can transmit data such as messages (text data) and images saved on the microSD memory card inserted into the transceiver, to a local node, or a node or room on the Internet. You can also create a new message and transmit it.

### Tips

- For details on microSD memory cards, refer to “Mounting and Dismounting microSD Memory Card” in the basic operating manual.
- You can also transmit photos taken with the camera that is built into the optional speaker microphone “MH-85A11U”. For details on how to take photos, refer to “Taking Picture Using the Optional Camera-Mounted Speaker Microphone” in the basic operating manual.

## Creating and transmitting messages to local nodes

- 1 Follow steps 1 to 3 in “Viewing text data in local nodes” on page 26 to display the upload (transmission)/download (reception) select screen.
- 2 Touch **[UPLOAD]**.  
Displays the data type select screen.



- 3 Touch **[MESSAGE]**.  
Displays the data list.



- 4 Touch **[NEW]**.  
Displays the character input screen.



## Using the News Function of WIRES-X

5 Touch [EDIT].

6 Enter a message.

**Tip** For details on how to enter letters, refer to “Entering Letters” in the FT2DR Operating Manual on page 19.

The characters you have just entered appear on the top part of the screen.



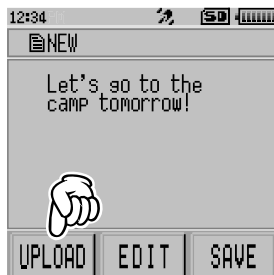
7 Press and hold the [BACK] key for over one second.

Displays the screen for confirming the entered message.

8 Touch [UPLOAD].

Starts message transmission.

After message transmission completes, the screen returns to the data list.



### Tip

On the character input screen, touch **MTXT** to select one of the 19 routine messages.

|   |              |    |               |    |              |
|---|--------------|----|---------------|----|--------------|
| 1 | QRM          | 8  | Good job      | 15 | wait for you |
| 2 | QRP          | 9  | Good day      | 16 | Pick me up   |
| 3 | QRT          | 10 | Good evening  | 17 | Thank you    |
| 4 | QRX          | 11 | Good night    | 18 | OK           |
| 5 | QRZ          | 12 | Send messages | 19 | urgent       |
| 6 | QSY          | 13 | Send pictures |    |              |
| 7 | Good morning | 14 | on my way     |    |              |

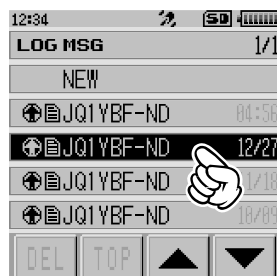
**Transmitting saved messages or images to local nodes**

1 Follow steps 1 to 2 in “Creating and transmitting messages to local nodes” on page 41 to display the data type select screen.

2 Touch **[MESSAGE]** or **[PICT]**.  
Displays the data list.



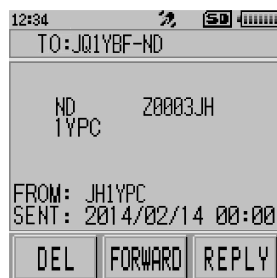
3 Touch the message or image you want to transmit.



4 Touch **[UPLD]** for MESSAGE. Touch **[FORWARD]** for PICT.

Starts data transmission. “UPLOAD” appears and flashes.

After data transmission completes, “Completed” appears and then the screen returns to the data type select screen.



### ■ Creating and transmitting messages to nodes or rooms on the Internet

1 Display the menu list of the node or room on the Internet.

2 Touch **[NEWS STATION]**.

Displays the upload (transmission)/download (reception) select screen.



3 Touch **[UPLOAD]**.

Displays the data type select screen.



4 Follow steps 3 to 7 in “Creating and transmitting messages to local nodes” on page 41 to create and transmit a message.

### ■ Transmitting saved messages or images to nodes or rooms on the Internet

1 Follow steps 1 to 3 in “Creating and transmitting messages to nodes or rooms on the Internet” on page 44 to display the data type select screen.

2 Follow steps 3 to 7 in “Creating and transmitting messages to local nodes” on page 41 to select and transmit data.

## Transmitting audio messages

You can transmit audio messages spoken into the microphone as data to a local node, or node or room on the Internet.

Audio files are categorized into the following 2 types:

**EMERGENCY:** Emergency information. Depending on the node or room settings, mandatory updates are supplied to connected nodes and rooms in five-minute intervals for two hours starting from the initial dissemination of the news.

**NEWS STATION:** Routine message. You can listen to the message anytime you want as long as the message is not deleted from the node or room.

## Transmitting emergency information to local nodes

- 1 Follow steps 1 to 2 in “Viewing text data in local nodes” on page 26 to display the menu list of the local node.
- 2 Touch **[EMERGENCY]**.



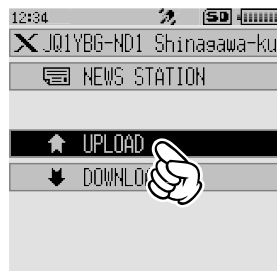
- 3 While pressing , speak into **[MIC]**.
- 4 Release  after completing audio transmission.

**Tip** The maximum recording time is one minute.

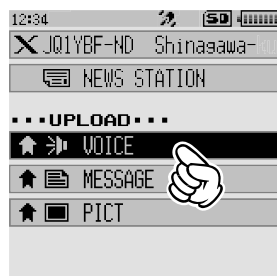
After message transmission completes, “COMPLETED” appears and then the screen returns to the menu list of the local node.

### Transmitting routine voice messages to local nodes

- Follow steps 1 to 3 in “Viewing text data in local nodes” on page 26 to display the upload (transmission)/download (reception) select screen.
- Touch **[UPLOAD]**.  
Displays the data type select screen.



- While pressing **[MIC]**, speak into **[MIC]**.  
**Tip** The maximum recording time is one minute.



- Release **[MIC]** after completing audio transmission.  
After message transmission completes, beep sounds and then the screen returns to the data type select screen.

### Transmitting emergency information to nodes or rooms on the Internet

- Display the menu list of the node or room on the Internet.



- Follow steps 2 to 5 in “Transmitting emergency information to local nodes” on page 45 to transmit a message.

### **Transmitting routine messages to nodes or rooms on the Internet**

- 1** Follow steps 1 to 2 in “Creating and transmitting messages to nodes or rooms on the Internet” on page 44 to display the upload (transmission)/download (reception) select screen.
- 2** Follow steps 2 to 5 in “Transmitting routine voice messages to local nodes” on page 46 to transmit a message.

## Using WIRES-X and the GM Function Simultaneously

You can use WIRES-X even when using the GM (Group Monitor) function on the transceiver. By forming a group including local nodes and operating the GM function, group members can also utilize WIRES-X to communicate with nodes or rooms on the Internet, including exchanging data.

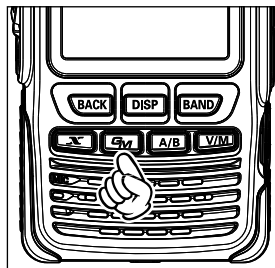
This section explains how to use a local node which is registered as a group member. For details on how to use the GM functions, refer to the separate GM instruction manual available on our website.

### Cautions

- The local node must be a digital station and have the GM function enabled as well.
- Before using the GM functions, touch **[MODE]** to set communication mode of the A-band (shown on the top part of the screen) to any mode other than [FM]. For details, refer to “Selecting the Communication Mode” in the basic operating manual.

### Registering a local node to a group

- 1 Check the call sign of the local node.
- 2 Set the A-band to the frequency used for the GM operation.
- 3 Press **[GM]**.  
Displays the group list.



- 4 Touch **[ALL]**.  
Displays the call signs, distance and direction to other nearby stations.

**Tip** Stations within communication range are highlighted.



- 5 Touch the local node.  
The local node appears and flashes.



- 6 Touch [GROUP].  
Displays the group list.



- 7 Touch the group to which you want to register the local node.  
Registers the local node to the selected group.



- 8 Press .  
Returns the screen to the frequency display screen.

## Tip

Use the SYNC function after registering the local node as a group member so that other members can check the local node from their stations. For details, refer to the separate GM instruction manual.

### Confirming the frequency

While on the group list screen or the WIRES-X screen, press **[V/M]** to switch to the frequency screen that was displayed before starting GM operation.

Pressing **[V/M]** again returns the screen to the group list or WIRES-X screen.

### Returning to the group list screen

While on the WIRES-X screen, press and hold **[A/B]** for over one second to return to the group list screen.

## WIRES-X Setting Mode Menus

### WIRES-X setting mode list

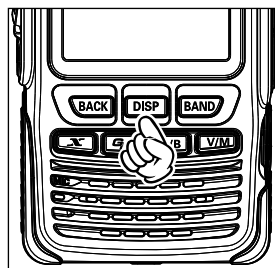
| Menu/Item          | Functions                                                                                  | Setting items<br>(Bold items are default settings.)                                                |
|--------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1 RPT/WIRES FREQ   | Setting the operating frequencies for repeaters/ WIRES-X<br><br>Setting preset frequencies | <b>MANUAL/PRESET</b><br><br>144.000 to 146.000 <b>145.780</b><br>430.000 to 440.000 <b>438.980</b> |
| 2 SEARCH SETUP     | Setting the item order on the node & room lists                                            | <b>HISTORY/ACTIVITY</b>                                                                            |
| 3 EDT CATEGORY TAG | Deleting registered nodes/rooms                                                            | C1 to C5                                                                                           |
| 4 REMOVE ROOM/NODE | Deleting registered nodes/rooms                                                            | C1 to C5<br>1 to 20 in total in each category                                                      |

### Using the WIRES-X setting mode

#### Setting the operating frequencies for repeaters/WIRES-X

Select whether to set the frequency manually or use the preset (registered in advance) frequency when connecting to a local node.

- 1 Press and hold the **[DISP]** key for over one second.  
Switches the transceiver to setting mode.



- 2 Touch **[WIRES-X]**.  
Displays the menu list.



## WIRES-X Setting Mode Menus

### 3 Touch [1 RPT/WIRES FREQ].

Displays the selection items.



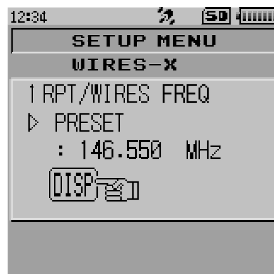
### 4 Rotate the DIAL to select [MANUAL] or [PRESET].

Every time the DIAL is rotated, the setting switches between [MANUAL] and [PRESET].

**MANUAL:** Set the frequency every time you look for a local node.

**PRESET:** Preset the frequency you use to look for the local node.

Selecting [PRESET] and pressing the **[DISP]** key displays the frequency select screen.



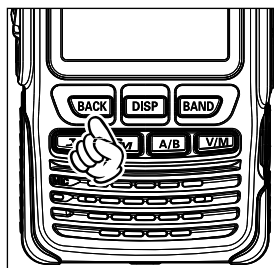
### 5 Rotate the DIAL to select the frequency you want to preset.

- Tips**
- Rotating the DIAL changes the frequency by the increments specified in setting mode.
  - Touching [BAND] switches the band of the preset frequency.
  - The default settings are 146.550 for the A-band and 446.550 for the B-band.



### 6 Press the **[BACK]** key four times.

Sets the frequency and returns the screen to the frequency display screen.



## Setting the item order on the node & room lists

You can select the criteria to sort the list of connection destinations on the Internet.

- 1 Press and hold the **[DISP]** key for over one second.  
Switches the transceiver to setting mode.
- 2 Touch **[WIRES-X]**.  
Displays the menu list.



- 3 Touch **[2 SEARCH SETUP]**.  
Displays selection items.



- 4 Rotate the DIAL to select **[HISTORY]** or **[ACTIVITY]**.  
Every time the DIAL is rotated, the setting switches between **[HISTORY]** and **[ACTIVITY]**.  
HISTORY: Displays the list sorted in order of the connection destination that your station most recently connected to.  
ACTIVITY: Displays the list sorted in descending order from the room with the most nodes connected. Nodes come after rooms.
- 5 Press the **[BACK]** key three times.  
Returns the screen to the frequency display screen.



## Editing category names

You can name 5 categories where nodes and rooms are registered. Up to 16 alphanumeric characters can be used for each category name.  
For details, refer to "Registering a node or room" on page 19.

## Deleting the registered nodes and rooms

You can delete nodes and rooms registered in the 5 categories.

- 1 Press and hold the **[DISP]** key for over one second.

Switches the transceiver to setting mode.

- 2 Touch **[WIRES-X]**.

Displays the menu list.



- 3 Touch **[4 REMOVE ROOM/NODE]**.

Displays the node and room lists.



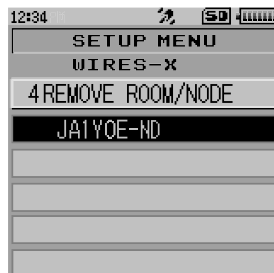
- 4 Rotate the DIAL to select the desired category, then press the **[DISP]** key.

Displays the node and room lists.



- 5 Rotate the DIAL to select the node or room you want to delete, then press the **[DISP]** key.

The confirmation message appears.



- 6** Touch **[OK]**.  
Deletes the selected node or room.



- 7** Touch the **BACK** key twice.  
Returns the screen to the frequency display screen.



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