



FTM-350 SERIES

APRS MANUAL

The **FTM-350** series transceiver is equipped with a 1200/9600bps AX.25 Data Modem to enable APRS® (Automatic Packet Reporting System) operation. The Automatic Packet Reporting System (APRS®) is a software program and registered trademark of Bob Bruninga, WB4APR.

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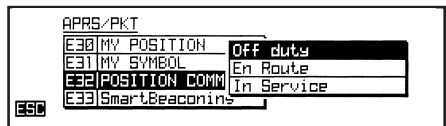
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PREPARATIONS

Before performing any APRS® operations, set your callsign, SSID (Secondary Station Identifier), and symbol into the **FTM-350**, and activate the AX.25 Data Modem via the Set Mode.

1. Press the **[SET]** key to enter the Set Mode.
2. Rotate the *left side* **[DIAL]** knob to select “APRS/PKT” group, then press the *left side* **[DIAL]** knob.
3. Rotate the *left side* **[DIAL]** knob to select Set Mode item “E28 MY CALLSIGN”, then press the *left side* **[DIAL]** knob *twice*.
4. Rotate the *left side* **[DIAL]** knob, or press one of the microphone keypad buttons, to select the first letter or number in your callsign.
5. After selecting the first digit of the DTMF string, using the *left side* **[DIAL]** knob, press the **[→]** key to move to the next digit.
6. Repeat steps 4 and 5 as many times as necessary to complete your call sign.
7. You may backspace the cursor by pressing the **[←]** key.
8. When you have completed entering your callsign, press the **[→]** key to move to the SSID slot.
9. Rotate the *left side* **[DIAL]** knob to select the SSID, then press the **[→]** key to save the new setting.
10. Press the **[ESC]** key to exit from Set Mode item “E28 MY CALLSIGN”, then rotate the *left side* **[DIAL]** knob to select Set Mode item “E31 MY SYMBOL”.
11. Press the *left side* **[DIAL]** knob, then select the desired preset symbol by pressing one of the **[ICON1]** ~ **[ICON3]** or **[USER]** keys. To choose another icon, rotate the *left side* **[DIAL]** knob to select the desired symbol after having pressed either key. You may choose 1 of 46 different symbols.
12. Press the **[ESC]** key to save the new setting and exit from Set Mode item “E31 MY SYMBOL”, then rotate the *left side* **[DIAL]** knob to select Set Mode item “E32 POSITION COMMENT”.
13. Press the *left side* **[DIAL]** knob, then rotate the *left side* **[DIAL]** knob to select the desired comment. You may choose 1 of 15 different comments.
14. Press the **[ESC]** key to save the new setting and exit from Set Mode item “E32 POSITION COMMENT”, then rotate the *left side* **[DIAL]** knob to select Set Mode item “E29 MY POSITION SET”.
15. Press the *left side* **[DIAL]** knob. When the optional GPS Antenna Unit is connected to the transceiver, select “GPS” by rotating the

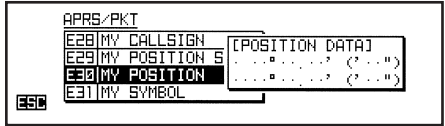


PREPARATIONS

left side [DIAL] knob then press the *left side* [DIAL] knob to save the new setting, and then skip to step 19. Otherwise, select “MANUAL” by rotating the *left side* [DIAL] knob and advance to the next step.

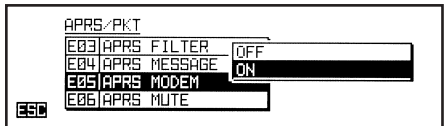
Note: You may choose your position from the “Point” memories stored on the GPS Point List.

- Press the [ESC] key to save the new setting and exit from Set Mode item “E29 MY POSITION SET”, then rotate the *left side* [DIAL] knob to select Set Mode item “E30 MY POSITION”.

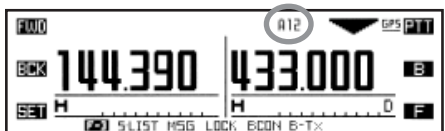


- Press the *left side* [DIAL] knob *twice*, then enter your position (Longitude/Latitude) by using the *left side* [DIAL] knob (select the number/character) and [←] / [→] key (to move the cursor).
- Press the [ENT] key to save the new setting, then press the [ESC] key to exit from Set Mode item “E30 MY POSITION”.
- Rotate the *left side* [DIAL] knob to select Set Mode item “E05 APRS MODEM”.

- Press the *left side* [DIAL] knob, then rotate the *left side* [DIAL] knob to select “ON”.
- Press the *left side* [DIAL] knob to save the new setting, then press the [ESC] key *twice* to exit from Set Mode.



When the APRS modem is activated, an “A12” icon appears above the “Right” band frequency display.



The **FTM-350** provides many convenient functions for APRS operation. Refer to the “APRS/PKT Set Mode” chapter beginning with page 20 for details.

SSID List

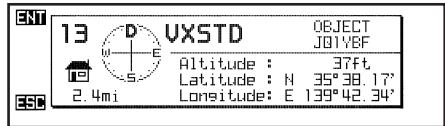
SSID	DETAILS
Non	Home Station, Home Station IGate
-1	Digipeater
-2	Digipeater
-3	Digipeater
-4	HF to VHF Gateway
-5	IGate (not Home Station)
-6	Operation via Satellite
-7	Hand-held Transceiver, such as VX-8R
-8	Maritime Mobile
-9	Mobile Transceiver, such as FTM-350R
-10	Operation via Internet
-11	APRS touch-tone User (and the Occasional Ballooes)
-12	Portable Units, such as Laptops, Camp Sites etc.
-13	Not Used
-14	Trackers
-15	HF Operation

RECEIVING AN APRS® BEACON

1. Set the “Sub” band to the APRS frequency. 144.390MHz is generally used in North America. If you don’t know the APRS frequency of your country, ask your dealer.

Note: In the factory default, the APRS operation uses the “Sub” band (The “A” icon will appear at the right side of the “Sub” band S/PO meter). You may change the APRS operating band via Set Mode item “E16 DATA BAND SELECT” in the “APRS/PKT” group.

2. When another stations APRS beacon is received, the APRS pop-up window opens and an APRS alert beep is heard. After ten seconds, the APRS pop-up window closes automatically.

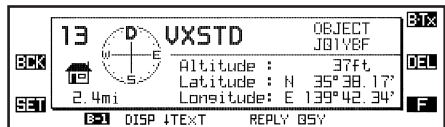


3. To confirm the details of the received beacon, press the [F] key repeatedly, until the [SMART FUNCTION] key’s category changes to “F-3” mode, if necessary, then press the [S•LIST] key to open the “Station List” window.



4. Rotate the *left side* [DIAL] knob to select the desired station, then press the [ENT] key to display its received data.

5. Rotate the *left side* [DIAL] knob to scroll through the additional lines or pages of the received information.



When the “Comment” or “Status Text” is included in the received data, you may jump to the head of the “Comment” or “Status Text” instantly by pressing the [↓TEXT] key.

6. When the confirmation is finished, press the [BCK] key to return to the “Station List” window.

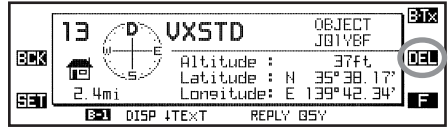
THE F-3 FUNCTION COMMANDS OF THE [SMART FUNCTION] KEY FOR APRS OPERATION

F-3	S•LIST	Open the “Station List” window.
	MSG	Open the “Message List” window.
	LOCK	Toggles the key lockout feature “on and “off” by pressing the key. Toggles the transceiver’s power “on and “off” by pressing and holding the key.
	B•CON	Changes the APRS beacon: ON, OFF or AUTO.
	B-TX	Transmit the APRS beacon.

RECEIVING AN APRS® BEACON

DELETING A RECEIVED BEACON FROM THE “STATION LIST”

1. Press the [**S•LIST**] key to open the “Station List” window.
2. Rotate the *left side* [**DIAL**] knob to select the beacon station to be deleted.
3. Press the [**ENT**] key to display the received data, then confirm that you really want to erase this beacon data.
4. Press the [**DEL**] key, then press the [**OK?**] key to delete the selected beacon station from the “Station List”.



DELETING ALL RECEIVED BEACONS FROM THE “STATION LIST”

1. Press the [**S•LIST**] key to open the “Station List” window.
2. Press the [**F**] key repeatedly, until the [**SMART FUNCTION**] key’s category changes to “S-2” mode, if necessary.
3. Press and hold in the [**DEL**] key for two seconds, then press the [**ALLOK?**] key to delete all messages from the “Message List”.



THE FUNCTION COMMAND OF THE [**SMART FUNCTION**] KEYS WHILE THE STATION LIST IS OPEN

S-1	FAST	Enables scrolling of the station list using a fast stepping rate (4 rows/click).
	TOP	Jump to the top column of the Station List.
	REPLY	Jump to the “TX MESSAGE EDIT” window (Reply operation).
	QSY	An opposite bands frequency of the APRS operation band changes in accordance with the frequency information included in the received APRS beacon.
S-2	S•FLT	Jump to the “APRS/PKT” Set Mode item “E34 SORT FILTER”.
	SORT	Initiates sorting.
	QUERY	Jump to the “TX MESSAGE EDIT” window with Query command (?APRSP).
	GPS	Jump to the “GPS Information” page.
S-3	S•LIST	Jump to the “Point List Mode” window.
	POINT	Stores the received position data (Lat/Log) to the “Point” memory.
		—
B-1	DISP	Toggles the compass display between “North Up” and “Heading Up”.
	↓TEXT	↓TEXT: Jump to the top of the “Status Text Message”.
	↑TOP	↑TOP: Jump to the top column of the received APRS beacon.
	REPLY	Jump to the “TX MESSAGE EDIT” window (Reply operation).
B-2	QSY	An opposite bands frequency of the APRS operation band changes in accordance with the frequency information included in the received APRS beacon.
	RAW	Displays the “Raw” data of the received APRS beacon.
B-2	QUERY	Jump to the “TX MESSAGE EDIT” window with Query command (?APRSP).
	GPS	Jump to the “GPS Information” page.
		—

RECEIVING AN APRS® BEACON

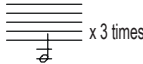


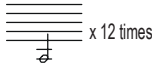














APRS FILTER SETTING

The APRS filter option allows you to select the specific types of the data to receive.

1. Press the **[SET]** key to enter the Set Mode.
2. Rotate the *left side* **[DIAL]** knob to select “APRS/PKT” group, then press the *left side* **[DIAL]** knob.
3. Rotate the *left side* **[DIAL]** knob to select Set Mode item “E03 APRS FILTER”, then press the *left side* **[DIAL]** knob to enable modification of this Set Mode item.
4. Rotate the *left side* **[DIAL]** knob to select the “filter” you wish to exclude.
5. Press the *left side* **[DIAL]** knob, and then rotate the *left side* **[DIAL]** knob to select “OFF”.
6. Press the *left side* **[DIAL]** knob to save the new setting.
7. Repeat the above steps and select “OFF” for any other filters you wish exclude.
8. When you have completed your selection, press the **[ESC]** key several times to exit from Set Mode.

The **FTM-350** provides many convenient functions for APRS operation. Refer to the “APRS/PKT Set Mode” chapter beginning on page 20 for details.

APRS ALERT BEEP LIST

EMERGENCY COMMENT Set	BEACON Received (Duplicate Beacon)	OWN MESSAGE Received
 x 3 times		
EMERGENCY BEACON Received	OWN BEACON (MY POSITION) Received	MESSAGE ACK Received
 x 12 times		
BEACON Received (APRS Filter "ON")	MESSAGE Received	MESSAGE REJ Received
		
BEACON Received (APRS Filter "OFF")	GROUP/BULLETIN MESSAGE Received	BEACON Transmit
		
BEACON Received (Range Ringer Station)	MESSAGE Received (for Other Station)	MESSAGE Transmit
		
BEACON Received (Callsign Ringer Station)	MESSAGE Received (Duplicate Message)	MESSAGE REJ Transmit
		

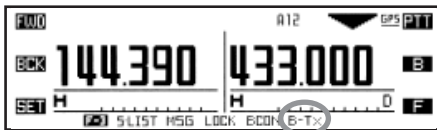
RECEIVING AN APRS® BEACON

NOTE

TRANSMIT AN APRS® BEACON

MANUAL TRANSMISSION

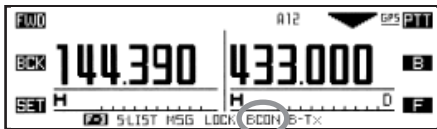
To transmit your APRS beacon manually, press the [F] key repeatedly, until the [SMART FUNCTION] keys category changes to “F-3” mode, if necessary, then press the [B-TX] key.



AUTOMATIC TRANSMISSION

The **FTM-350** allows you to transmit your APRS beacon automatically and repeatedly.

1. Press the [F] key repeatedly, until the [SMART FUNCTION] keys category changes to “F-3” mode, if necessary.
2. Press the [BCON] key repeatedly to select



the “Auto” beacon mode (“OFF”, “ON (FIX)” or “SMART”).

OFF: Disables Automatic Transmission (no icon)

ON (FIX): Enables Automatic Transmission (“☉” icon appears at the left of the “A12” icon).

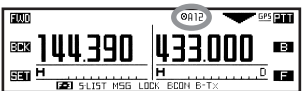
Transmits your APRS beacon in accordance with the interval determined by “2 INTERVAL” of the Set Mode item “E14 BEACON TX” in the “APRS/PKT” group.

SMART: Enables Automatic Transmission (“○” icon appears)

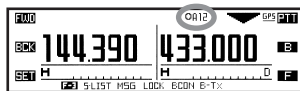
Transmits your APRS beacon in accordance with the interval determined by Set Mode item “E33 SmartBeaconing[Ⓜ]” in the “APRS/PKT” group.



OFF



ON (FIX)



SMART

- When the APRS frequency is busy (squelsch is open), the **FTM-350** will not transmit an APRS beacon in manual or automatic modes. Insure that the squelsch is closed.
- You may transmit the APRS beacon manually by pressing the [B-TX] key, even if the **FTM-350** is in automatic mode.

Ⓜ: SmartBeaconingTM is an algorithm created by Tony Arnerich KD7TA and Steve Bragg KA9MVA of HamHUD for adjusting the transmit rate using the speed and heading changes of the vehicle.

Visit www.hamhud.net for more information about SmartBeaconingTM.

TRANSMIT AN APRS® BEACON

OPTIONAL SETTINGS

DIGIPEATER PATH SETTING

The **FTM-350** allows you to set up to eight digipeaters for the APRS packet path.

The **FTM-350** is preset to “WIDE1-1” and “WIDE1-1, WIDE2-1” digi-path to insure that your transmitted APRS beacon is repeated by the New-N paradigm digipeaters. We recommend that you use this default setting.

1. Press the [**SET**] key to enter the Set Mode.
2. Rotate the *left side* [**DIAL**] knob to select “APRS/PKT” group, then press the *left side* [**DIAL**] knob.
3. Rotate the *left side* [**DIAL**] knob to select Set Mode item “E19 DIGI PATH SELECT”, then press the *left side* [**DIAL**] knob to enable selection of this Set Mode item.
4. Rotate the *left side* [**DIAL**] knob to select the desired path you wish to set, then press the *left side* [**DIAL**] knob.
5. When you have completed your selection, press the [**ESC**] key several times to exit from Set Mode.

THE F-3 FUNCTION COMMANDS OF THE [SMART FUNCTION] KEY FOR APRS OPERATION

F-3	S•LIST	Open the “Station List” window.
	MSG	Open the “Message List” window.
	LOCK	Toggles the key lockout feature “on and “off” by pressing the key. Toggles the transceiver’s power “on and “off” by pressing and holding the key.
	B•CON	Changes the APRS beacon: ON, OFF or AUTO.
	B-TX	Transmit the APRS beacon.

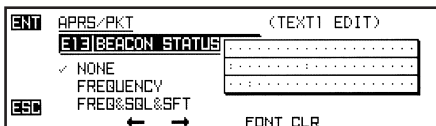
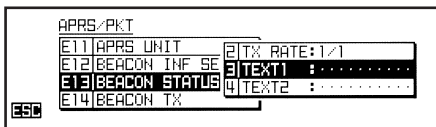
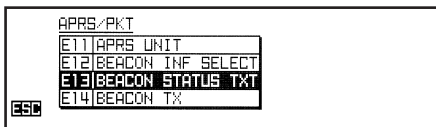
TRANSMIT AN APRS® BEACON

OPTIONAL SETTINGS

STATUS TEXT MESSAGES

You may store five Status Text Messages (up to the 60 characters for each memory), and you may transmit one of these Status Text Messages with the APRS beacon.

1. Press the **[SET]** key to enter the Set Mode.
2. Rotate the *left side* **[DIAL]** knob to select “APRS/PKT” group, then press the *left side* **[DIAL]** knob.
3. Rotate the *left side* **[DIAL]** knob to select Set Mode item “E13 BEACON STATUS TXT”, then press the *left side* **[DIAL]** knob to enable selection of this Set Mode item.
4. Rotate the *left side* **[DIAL]** knob to select the Status Text Resister (“3: TEXT 1” through “7: TEXT 5”) you wish to store the text message to.
5. Press the *left side* **[DIAL]** knob, then rotate the *left side* **[DIAL]** knob to select additional text to add to your message.



- NONE:** There is no additional text in your message.
- FREQUENCY:** Appends the opposite band frequency data of the APRS operation band into your message.
- FREQ&SQL&SFT:** Appends the opposite band frequency data of the APRS operation band, sub audio information (squelch type and its tone frequency/code), and repeater shift frequency data into your message.
6. Press the *left side* **[DIAL]** knob, then enter the desired comment (up to 60 characters) using the following examples.
Example 1: Press the one of the microphone keypad button. Press the **[A]** or **[B]** key to move the cursor forward or backward, and press the **[C]** key to delete all data after the cursor.
Example 2: Rotate the *left side* **[DIAL]** knob to select a character/number, and press the **[←]** or **[→]** key to move the cursor forward or backward. You may change the character (capital alphabet, small alphabet, numeric, and symbol) by pressing the **[FONT]** key.
 7. When you have completed your entry, press the **[ENT]** key to save your message.

TRANSMIT AN APRS® BEACON

OPTIMAL SETTINGS

8. Rotate the *left side* [DIAL] knob to select “1: SELECT” item, then press the *left side* [DIAL] knob.

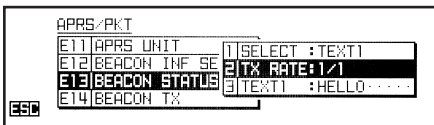


```
APRS/PKT
E11|APRS UNIT      |1|SELECT :TEXT1
E12|BEACON INF SE  |2|TX RATE:1/1
E13|BEACON STATUS |3|TEXT1 :HELLO.....
E14|BEACON TX     |
ESC
```

9. Rotate the *left side* [DIAL] knob to select the Status Text register (“TEXT 1” through “TEXT 5”) you wish to send, then press the *left side* [DIAL] knob.

10. Rotate the *left side* [DIAL] knob to select “2: TX RATE” item, then press the *left side* [DIAL] knob.

11. Rotate the *left side* [DIAL] knob to select the frequency where you want to transmit your Status Text Message (“1/1” through “1/8”). Then press the *left side* [DIAL] knob.



```
APRS/PKT
E11|APRS UNIT      |1|SELECT :TEXT1
E12|BEACON INF SE  |2|TX RATE:1/1
E13|BEACON STATUS |3|TEXT1 :HELLO.....
E14|BEACON TX     |
ESC
```

12. Press the [ESC] key several times to exit from Set Mode.

When the APRS beacon transmits, the Status Text Message is transmitted with the APRS beacon.

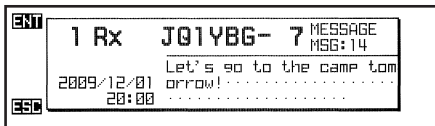
The **FTM-350** provides many convenient functions for APRS operation. Refer to the “APRS/PKT Set Mode” chapter beginning with page 20 for details.

RECEIVING AN APRS® MESSAGE

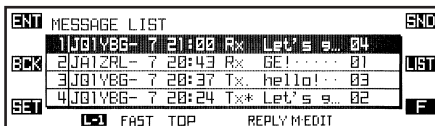
1. Set the “Sub” band to the APRS frequency used in your area. 144.390MHz is generally used in North America. If you don’t know the APRS frequency of your country, ask your dealer.


Note: In the factory default, the APRS operation uses the “Sub” band (the “A” icon will appear at the right side of the “Sub” band S/PO meter). You may change the APRS operation band via Set Mode item “E21 DATA BAND SELECT” in the “APRS/PKT” group.

2. When an APRS message is received, the APRS pop-up window opens and an APRS alert beep is heard. After ten seconds, the APRS pop-up window closes automatically.

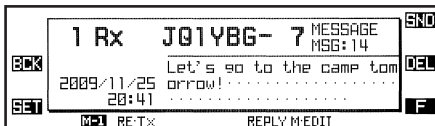


3. To confirm the details of the received message, press the [F] key repeatedly, until the [SMART FUNCTION] key’s category changes to “F-3” mode, if necessary, then press the [MSG] key to open the “Message List” window.



When the received call is unread, the “” icon will appear behind the “Rx” icon of the Message.

4. Rotate the *left side* [DIAL] knob to select the desired station, then press the [ENT] key to display the received message.



5. When the confirmation is finished, press the [BCK] key to return to the “Message List” window.

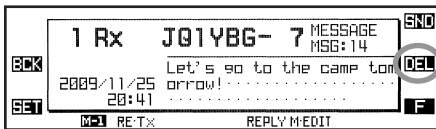
THE F-3 FUNCTION COMMANDS OF THE [SMART FUNCTION] KEY FOR APRS OPERATION

F-3	S-LIST	Open the “Station List” window.
	MSG	Open the “Message List” window.
	LOCK	Toggles the key lockout feature “on and “off” by pressing the key. Toggles the transceiver’s power “on and “off” by pressing and holding the key.
	B-CON	Changes the APRS beacon: ON, OFF or AUTO.
	B-TX	Transmit the APRS beacon.

RECEIVING AN APRS® MESSAGE

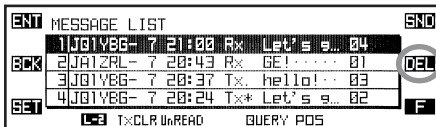
DELETING A RECEIVED MESSAGE FROM THE “MESSAGE LIST”

1. Press the [MSG] key to open the “Message List” window.
2. Rotate the *left side* [DIAL] knob to select the station which includes the message to be deleted.
3. Press the [ENT] key to display the message data, then confirm that you really want to erase this message data.
4. Press the [DEL] key, then press the [OK?] key to delete the selected message from the “Message List”.



DELETING ALL RECEIVED MESSAGES FROM THE “MESSAGE LIST”

1. Press the [MSG] key to open the “Message List” window.
2. Press the [F] key repeatedly, until the [SMART FUNCTION] keys category changes to “L-2” mode, if necessary.
3. Press and hold in the [DEL] key for two seconds, then press the [ALLOK?] key to delete all messages from the “Message List”.



THE FUNCTION COMMANDS OF THE [SMART FUNCTION] KEYS WHILE MESSAGE LIST IS OPEN

L-1	FAST	Enables scrolling of the message list using a fast stepping rate (4 rows/click).
	TOP	Jump to the top column of the Message List.
	—	—
	REPLY M•EDIT	Jump to the “TX MESSAGE EDIT” window (Reply operation). Jump to the “TX MESSAGE EDIT” window.
L-2	TXCLR UnREAD	Clears the remaining number of transmissions of the APRS message. Toggle the unread flag “on” and “off”.
	—	—
	QUERY POS	Jump to the “TX MESSAGE EDIT” window with Query command (?APRSP). Displays the beacon information of the selected station.
	—	—
M-1	RE•TX	Resends the APRS Message.
	—	—
	—	—
	REPLY M•EDIT	Jump to the “TX MESSAGE EDIT” window (Reply operation). Jump to the “TX MESSAGE EDIT” window.
M-2	RAW	Displays the “Raw” data of the message.
	—	—
	—	—
	QUERY POS	Jump to the “TX MESSAGE EDIT” window with Query command (?APRSP). Displays the beacon information of the selected station.

RECEIVING AN APRS® MESSAGE

MESSAGE GROUP SETTING

The Message group option allows you to choose to receive only specific types of message information.

1. Press the **[SET]** key to enter the Set Mode.
2. Rotate the *left side* **[DIAL]** knob to select “APRS/PKT” group, then press the *left side* **[DIAL]** knob.
3. Rotate the *left side* **[DIAL]** knob to select Set Mode item “E26 MESSAGE GROUP”, then press the *left side* **[DIAL]** knob to enable modification of this Set Mode item.
4. Rotate the *left side* **[DIAL]** knob to select the “group” you wish to utilize (**GROUP1: ALL, GROUP2: CQ, GROUP3: QST, or GROUP4: YAESU**).
5. If you add a new message group code and/or bulletin group code, select “**GROUP5**”, “**GROUP6**” (for message group code) or “**BULLETN1**” ~ “**BULLETN3**” (for bulletin group code) by rotating the *left side* **[DIAL]** knob, then press the *left side* **[DIAL]** knob.
6. Use the **[←]** / **[→]** key to navigate to each column, the use the *left side* **[DIAL]** knob to select the desired characters/numbers in each column.
7. Repeat for each column to complete the message (up to 9 characters) or bulletin (up to 5 characters).
8. When you have completed your selection, press the **[ENT]** key to save the new setting, then press the **[ESC]** key several times to exit from Set Mode.

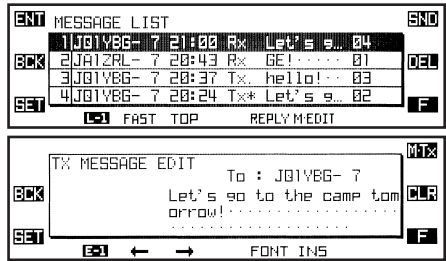
The **FTM-350** provides many convenient functions for APRS operation. Refer to the “APRS/PKT Set Mode” chapter beginning on page 20 for details.

RECEIVING AN APRS[®] MESSAGE

NOTE

TRANSMIT AN APRS® MESSAGE

1. Press the [F] key repeatedly, until the [SMART FUNCTION] keys category changes to “F-3” mode, if necessary.
2. Press the [MSG] key to open the “Message List” window.
3. Press the [M•EDIT] key to enter the “TX Message Edit” mode.
4. Press the [CLR] key to clear any previously stored callsign, if necessary.
5. Enter the callsign (with SSID) of the station you wish to contact using the following examples.

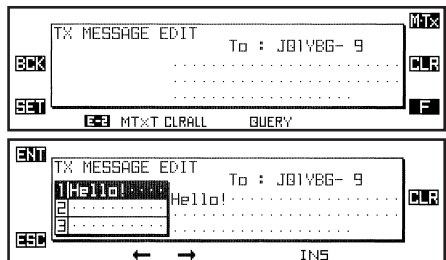


Example 1: Press one of the microphone keypad button. Press the [A] / [B] key to move the cursor forward or backward, and press the [C] key to delete all data after the cursor.

Example 2: Rotate the *left side* [DIAL] knob to select a character/number and press the [→] key to move the cursor to the next digit. Press the [←] key to backspace the cursor.

6. When you have completed entering the callsign (with SSID), press the microphone [B] key or [→] key.
7. Press the [CLR] key to clear any previous messages, if necessary.
8. Enter the message using the same procedures as above. Additionally, you may select/add/delete the characters/message using the following procedure:
 - a. Press the [FONT] key to change the character (upper-case alphabet, lower-case alphabet, numeric, and symbol).
 - b. If you want to add a previously stored message (select a message from the list stored in “APRS/PKT” Set Mode item “E04 APRS MESSAGE TEXT”; see next page):

- 1) Press the [F] key to change the [SMART FUNCTION] keys category to “E-2” mode.
- 2) Press the [MTXT] key to open the “MESSAGE TEXT” window, then rotate the *left side* [DIAL] knob to select the desired previously stored message.

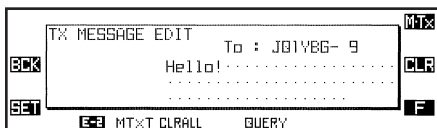


- 3) Press the [ENT] key to insert the message, then press the [ESC] key to close the window.

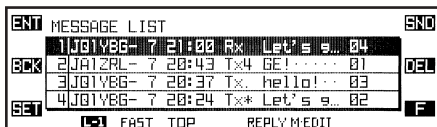
- c. Press the [INS] key to add a character.
- d. Press the [CLR] key or microphone [C] key to delete all data after the cursor.

TRANSMIT AN APRS® MESSAGE

9. When the message entry is complete, press the [M•TX] key to transmit the message and return to the “Message List” window. The transmitted message is stored into the “Message List”.



10. The APRS message is transmitted repeatedly, up to five times, once each minute until an acknowledgment packet (“ack”) is received. If an acknowledgment packet (“ack”) is received, the beeper will sound and the “*” icon will appear on the display.
11. Each time the APRS message is repeated, the remaining number of transmissions of the message is shown on the display. If there is no acknowledgment packet (“ack”), even after the message transmits five times, the “.” (period) icon will appear on the “Message List” window, (Or, the “TXOUT” notation will appear on the Detailed Message screen,) instead of the remaining number of transmissions.



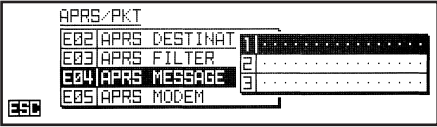
THE FUNCTION COMMANDS OF THE [SMART FUNCTION] KEYS WHILE MESSAGE LIST APPEARS

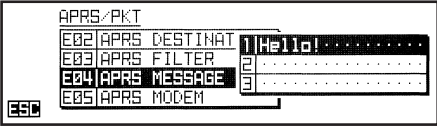
L-1	FAST	Enables scrolling of the message list using a fast stepping rate (4 rows/click).
	TOP	Jump to the top column of the message List.
	—	—
	REPLY M•EDIT	Jump to the “TX MESSAGE EDIT” window (Reply operation). Jump to the “TX MESSAGE EDIT” window.
L-2	TXCLR	Clears the remaining number of transmissions of the APRS message.
	UnREAD	Toggle the unread flag “on” and “off”.
	—	—
	QUERY POS	Jump to the “TX MESSAGE EDIT” window with Query command (?APRSP). Displays the beacon information of the selected station.
M-1	RE•TX	Resends the ACK request signal when the acknowledgment packet (“ack”) is not received.
	—	—
	—	—
	REPLY M•EDIT	Jump to the “TX MESSAGE EDIT” window (Reply operation). Jump to the “TX MESSAGE EDIT” window.
M-2	RAW	Displays the “Raw” data of the message.
	—	—
	—	—
	QUERY POS	Jump to the “TX MESSAGE EDIT” window with Query command (?APRSP). Displays the beacon information of the selected station.
E-1	←	Moves the cursor to the left.
	→	Moves the cursor to the right.
	—	—
	FONT INS	Change the character (upper-case alphabet, lower-case alphabet, numeric, and symbol). Inserts a character into the current digit.
E-2	MTXT	Opens the “MESSAGE TEXT” window.
	CLRALL	Clears all data.
	—	—
	QUERY	Clear the all data and add Query command (?APRSP).

TRANSMIT AN APRS® MESSAGE

STORE THE FIXED FORM MESSAGE

The **FTM-350** allows you to store eight fixed form messages (up to 16 characters for each message).

1. Press the **[SET]** key to enter the Set Mode.
2. Rotate the *left side* **[DIAL]** knob to select “APRS/PKT” group, then press the *left side* **[DIAL]** knob.
3. Rotate the *left side* **[DIAL]** knob to select Set Mode item “E04 APRS MESSAGE TXT”, then press the *left side* **[DIAL]** knob to enable modification of this Set Mode item.

The screenshot shows a menu titled "APRS/PKT" with four options: "E02 APRS DESTINAT", "E03 APRS FILTER", "E04 APRS MESSAGE", and "E05 APRS MODEM". To the right of each option is a small box containing a number (1, 2, 3, or 4). The "E04 APRS MESSAGE" option is highlighted with a white background, and its corresponding box contains the number "4". An "ESC" key icon is visible in the bottom left corner of the menu.
4. Rotate the *left side* **[DIAL]** knob to select the Message register (1 - 8) you wish to store your message to.
5. Press the *left side* **[DIAL]** knob to begin message entry into the selected register.
6. Enter the message using the same procedure as described previously.

The screenshot shows the same "APRS/PKT" menu as above. The "E04 APRS MESSAGE" option is still highlighted. The box to its right now contains the number "5" and the text "Hello!". The other options and the "ESC" key icon remain the same.
7. When you have completed your message entry, press the **[ENT]** key to save the new setting, then press the **[ESC]** key several times to exit from Set Mode.

The **FTM-350** provides many convenient functions for APRS operation. Refer to the “APRS/PKT Set Mode” chapter beginning with page 20 for details.

TRANSMIT AN APRS® MESSAGE

NOTE

APRS/PKT SET MODE

SET MODE ITEM	FUNCTION	AVAILABLE VALUES (DEFAULT: BOLD)
E01 APRS COMPASS	Selects the compass display heading	NORTH UP / HEADING UP
E02 APRS DESTINATION	Displays the model code of this transceiver.	APY350 (Fixed)
E03 APRS FILTER	Selects the filter type option allowing you to receive only specified types of APRS beacon data.	1 Mic-E: ON / OFF 2 POSITION: ON / OFF 3 WEATHE: ON / OFF 4 OBJECT: ON / OFF 5 ITEM: ON / OFF 6 STATUS: ON / OFF 7 OTHER: ON / OFF 8 RANGE LIMIT: OFF / 1-3000
E04 APRS MESSAGE TXT	Programming the fixed form APRS message.	8 messages (up to 16 character)
E05 APRS MODEM	Enables/Disables the APRS modem.	ON / OFF
E06 APRS MUTE	Enables/Disables the AF mute function on the APRS band.	ON / OFF
E07 APRS POPUP	Sets the timer parameter of the pop-up window.	1 BEACON: OFF / 1 ~ 10 ~ 30sec / CONTINUOUS 2 MESSAGE: OFF / 1 ~ 10 ~ 30sec / CONTINUOUS
E08 APRS RINGER	Enables/Disables the alert ringer while APRS operation.	1 TX BEACON: ON / OFF 2 TX MESSAGE: ON / OFF 3 RX BEACON: ON / OFF 4 RX MESSAGE: ON / OFF 5 CALL RINGER: ON / OFF 6 RNG RINGER: OFF / 1 ~ 100 7 MSG VOICE: ON / OFF
E09 APRS RINGER (CALL)	Call Sign register for the "CALL RINGER" function.	8 stations (8 characters plus SSID)
E10 APRS TXDELAY	Select the transmission delay time between transmitting the APRS data and transmitting a preamble (flag code) prior to APRS data.	100ms / 150ms / 200ms / 250ms / 300ms / 400ms / 500ms / 750ms / 1000ms
E11 APRS UNIT	Selects the unit for the APRS beacon information.	1 POSITION: MM.MM' / MM' SS" 2 DISTANCE: Km / mile 3 SPEED: km/h / knot / mph 4 ALTITUDE: m / ft 5 BARO: hPa / mb / mmHg / inHg 6 TEMP: °C / °F 7 RAIN: mm / inch 8 WIND: m/s / mph / knot The default value depends on the transceiver version.
E12 BEACON INF SELECT	Sets the information of the TX Beacon.	1 AMBIGUITY: OFF / 1digit / 2digits / 3digits / 4digits 2 SPD/CSE: ON / OFF 3 ALTITUDE: ON / OFF
E13 BEACON STATUS TXT	Store the status text for the APRS Beacon.	1 SELECT: OFF / TEXT 1 ~ TEXT 5 2 TX RATE: 1/1 ~ 1/8 3 TEXT 1: 4 TEXT 2: 5 TEXT 3: 6 TEXT 4: 7 TEXT 5:

APRS/PKT SET MODE

SET MODE ITEM	FUNCTION	AVAILABLE VALUES (DEFAULT: BOLD)
E14 BEACON TX	Enables/Disables the automatic transmission of the APRS Beacon.	1 AUTO: OFF / ON(FIX) / SMART 2 INTERVAL: 30sec / 1min / 2min / 3min / 5min / 10min / 15min / 20min / 30min / 60min 3 PROPORTIONAL: ON / OFF 4 DECAY: ON / OFF 5 LOW SPEED: 1 ~ 3 ~ 99 6 RATE LIMIT: 5sec ~ 30sec ~ 180 sec
E15 COM PORT SETTING	Sets the COM port setting.	1 SPEED: 4800bps / 9600bps / 19200bps 2 OUTPUT: OFF / GPS OUT / PACKET
E16 DATA BAND SELECT	Selects the operating band for APRS and DATA operation.	1 APRS: MAIN BAND / SUB BAND / L-BAND FIX / R-BAND FIX / L=TX/R=RX / L=RX/R=TX 2 DATA: MAIN BAND / SUB BAND / L-BAND FIX / R-BAND FIX / L=TX/R=RX / L=RX/R=TX
E17 DATA SPEED	Selects the Baud Rate for APRS and DATA operation.	1 APRS: 1200 bps / 9600 bps 2 DATA: 1200 bps / 9600 bps
E18 DATA SQUELCH	Configure the Squelch settings for APRS, DATA and TX.	1 APRS: RX BAND / TX/RX BAND 2 DATA: RX BAND / TX/RX BAND 3 TX: ON / OFF
E19 DIGI PATH SELECT	Selects the APRS packet path you wish to path through.	OFF / WIDE1-1 / WIDE1-1, WIDE2-1 / PATH1 / PATH2 / PATH3 / PATH4 / FULL1 / FULL2
E20 DIGI PATH 1	Sets the APRS packet path.	(up to 2 Digipeater Address)
E21 DIGI PATH 2	Sets the APRS packet path.	(up to 2 Digipeater Address)
E22 DIGI PATH 3	Sets the APRS packet path.	(up to 2 Digipeater Address)
E23 DIGI PATH 4	Sets the APRS packet path.	(up to 2 Digipeater Address)
E24 DIGI PATH FULL 1	Sets the APRS packet path.	(up to 8 Digipeater Address)
E25 DIGI PATH FULL 2	Sets the APRS packet path.	(up to 8 Digipeater Address)
E26 MESSAGE GROUP	Sets the filter type option allowing you to receive only specified types of APRS Group/Bulletin message information.	1 GROUP1: ALL***** 2 GROUP2: CQ***** 3 GROUP3: QST***** 4 GROUP4: YAESU***** 5 GROUP5: 6 GROUP6: 7 BULLETN1: BLN?***** 8 BULLETN2: BLN? 9 BULLETN3: BLN?
E27 MESSAGE REPLY	Enable/Disable the message reply feature, and program its details.	1 STATUS: ON / OFF 2 CALLSIGN: ***** - ** 3 TEXT:
E28 MY CALLSIGN	Program your callsign.	***** - NN

APRS/PKT SET MODE

SET MODE ITEM	FUNCTION	AVAILABLE VALUES (DEFAULT: BOLD)
E29 MY POSITION SET	Select your position to send by APRS.	GPS MANUAL P.LIST GRP1-POINT1 P.LIST GRP1-POINT2 P.LIST GRP1-POINT3 P.LIST GRP1-POINT4 P.LIST GRP2-POINT1 P.LIST GRP2-POINT2 P.LIST GRP2-POINT3 P.LIST GRP2-POINT4 P.LIST GRP3-POINT1 P.LIST GRP3-POINT2 P.LIST GRP3-POINT3 P.LIST GRP3-POINT4 P.LIST GRP4-POINT1 P.LIST GRP4-POINT2 P.LIST GRP4-POINT3 P.LIST GRP4-POINT4
E30 MY POSITION	Determine and memorize your location (Lat/Log).	POSITION DATA: NS°. (' ") / EW°. (' ")
E31 MY SYMBOL	Selects your icon which will be displayed on the monitor of other stations as you.	46 symbols
E32 POSITION COMMENT	Selects position comment depending on your situation.	Off Duty / En Route / In Service / Returning / Committed / Special / Priority / Custom 0 / Custom 1 / Custom 2 / Custom 3 / Custom 4 / Custom 5 / Custom 6 / Emergency!
E33 SmartBeaconing	Sets the SmartBeaconing™ feature. (SmartBeaconing™ from HamHUD NicheTronix)	1 STATUS: OFF / TYPE1 / TYPE2 / TYPE3 2 LOW SPEED: 2 ~ 5 ~ 30 3 HIGH SPEED: 3 ~ 70 4 SLOW RATE: 1min ~ 30min ~ 100min 5 FAST RATE: 10sec ~ 120sec ~ 180sec 6 TURN ANGLE: 5° ~ 28° ~ 90° 7 TURN SLOPE: 1 ~ 26 ~ 255 8 TURN TIME: 5sec ~ 30sec ~ 180sec
E34 SORT FILTER	Selects the Sort method and Filter type.	1 SORT: TIME / CALLSIGN / DISTANCE 2 FILTER: ALL / MOBILE / FREQUENCY / OBJECT / ITEM / DIGIPEATER / VOIP / WEATHER / YAESU / OTHER PKT / CALL RINGER / RNG RINGER / OTHER

APRS/PKT SET MODE

E01: APRS COMPASS

Function: Selects the display format of the APRS compass.

Available Values: NORTH UP or HEADING UP

Default: NORTH UP

E02: APRS DESTINATION

Function: Displays the model code of this transceiver.

Default: APY350

This model code can not be changed.

E03: APRS FILTER

Function: Selects the filter type option allowing you to receive only the specified types of APRS Beacon data.

Available Values: 1 Mic-E: OFF or ON

2 POSITION: OFF or ON

3 WEATHER: OFF or ON

4 OBJECT: OFF or ON

5 ITEM: OFF or ON

6 STATUS: OFF or ON

7 OTHER: OFF or ON

8 RANGE LIMIT: OFF, 1mi ~ 10mi (1mi/step), 20 ~ 3000mi (10mi/step)

Default:

1 Mic-E: ON

2 POSITION: ON

3 WEATHER: ON

4 OBJECT: ON

5 ITEM: ON

6 STATUS: ON

7 OTHER: OFF

8 RANGE LIMIT: OFF

E04: APRS MESSAGE TXT

Function: Programming the Fixed form APRS message.

See page 18 for details.

E05: APRS MODEM

Function: Enables/Disables the APRS modem (AX.25 Data modem).

Available Values: OFF or ON

Default: OFF

When this item is set to “ON”, the “A12” (for 1200 bps packet) or “A96” (for 9600 bps packet) icon appears in the display.

APRS/PKT SET MODE

E06: APRS MUTE

Function: Enables/Disables audio output of the “APRS Operation Band” during APRS operation.

Available Values: OFF or ON

Default: OFF

When this item is set to “ON”, the “A12” or “A96” icon in the display blinks.

E07: APRS POPUP

Function: Sets the timer parameter of the pop-up window.

Available Values: 1 BEACON: OFF, 1 ~ 30 sec, or CONTINUOUS

2 MESSAGE: OFF, 1 ~ 30 sec, or CONTINUOUS

Default: 1 BEACON: 10 sec, 2 MESSAGE: 10 sec

E08: APRS RINGER

Function: Enables/Disables the alert ringer during APRS operation.

Available Values: 1 TX BEACON: OFF or ON

2 TX MESSAGE: OFF or ON

3 RX BEACON: OFF or ON

4 RX MESSAGE: OFF or ON

5 CALL RINGER: OFF or ON

6 RNG RINGER: OFF/1 - 100

7 MSG VOICE: OFF or ON

Default: 1 TX BEACON: ON

2 TX MESSAGE: ON

3 RX BEACON: ON

4 RX MESSAGE: ON

5 CALL RINGER: OFF

6 RNG RINGER: OFF

7 MSG VOICE: OFF

CALL RINGER: When this item is set to “ON”, emits the alert ringer when receive the station which have a callsign in the Set Mode item “**E09 APRS RINGER (CALL)**”.

RNG RINGER: When this item is set to “ON”, emits the alert ringer when receive the station which there is within the selected range (The range unit is determined from the Set Mode item “**E11 APRS UNIT**”).

MSG VOICE: When this item is set to “ON”, announces the received APRS message and callsign when receive the message (requires optional **FVS-2** Voice Guide Unit).

APRS/PKT SET MODE

E09: APRS RINGER (CALL)

Function: Program the callsign, which causes a ringing bell sound when the “5 CALL RINGER” function of the Set Mode item “E08 APRS RINGER” is set to ON.

E10: APRS TXDELAY

Function: Select the transmission delay time between transmitting the APRS data and transmitting a preamble (flag code) prior to the APRS data.

Available Values: 100ms, 150ms, 200ms, 250ms, 300ms, 400ms, 500ms, 750ms, or 1000ms

Default: 250ms

E11: APRS UNIT

Function: Selects the unit for the APRS operation.

Available Values: 1 POSITION: . mm’ or ’ ss”

2 DISTANCE: mile or km

3 SPEED: mph, knot, or km/h

4 ALTITUDE: ft or m

5 BARO: mb, mmHG, inHg, or hPa

6 TEMP: °F or °C

7 RAIN: inch or mm

8 WIND: mph, knot, or m/s

Default: Depends on the transceiver version.

E12: BEACON INF SELECT

Function: Sets the TX Beacon format.

Available Values: 1 AMBIGUITY: OFF, 1digit, 2digits, 3digits, 4digits

2 SPD/CSE: ON or OFF

3 ALTITUDE: ON or OFF

Default: 1 AMBIGUITY: OFF

2 SPD/CSE: ON

3 ALTITUDE: ON

AMBIGUITY: Cut off the selected digit below from the position data (Lat/Log).

SPD/CSE: Enables/Disables transmission of the speed and course data.

ALTITUDE: Enables/Disables transmission of the altitude data.

APRS/PKT SET MODE

E13: BEACON STATUS TXT

Function: Enables/Disables the transmission of the Status Text and programs its message.

Available Values: 1 SELECT: OFF / TEXT 1 ~ TEXT 5

2 TX RATE: 1/1 ~ 1/8

3 TEXT 1:

4 TEXT 2:

5 TEXT 3:

6 TEXT 4:

7 TEXT 5:

Default:

1 SELECT: OFF

2 TX RATE: 1/1

SELECT OFF: Do not transmit the Status Text Message.

SELECT TEXT 1 ~ TEXT 5: Transmits the Status Text Message corresponding to the slot which you selected in this item.

TX RATE 1/1 ~ 1/8: Selects the transmit frequency on which to transmit the Status Text Message. Transmits the Status Text Message at selected frequency (“1/1” ~ “1/8”).

TEXT 1 ~ 5: Store the Status Text Message. Each memory stores up to 60 characters.

APRS/PKT SET MODE

E14: BEACON TX

Function: Enables/Disables the automatic transmission feature of the APRS beacon and selects its parameter.

Available Values: 1 AUTO: OFF, ON(FIX), or SMART
2 INTERVAL: 30sec, 1min, 2min, 3min, 5min, 10min, 15min, 20min, 30min, or 60min
3 PROPORTIONAL: ON or OFF
4 DECAY: ON or OFF
5 LOW SPEED: 1 ~ 99
6 RATE LIMIT: 5sec ~ 180 sec

Default: 1 AUTO: OFF
2 INTERVAL: 5min
3 PROPORTIONAL: ON
4 DECAY: ON
5 LOW SPEED: 3
6 RATE LIMIT: 30 sec

PROPORTIONAL: When this item is set to “ON”, the APRS packet path route changes among “WIDE1-1, WIDE2-1”, “WIDE1-1”, and “OFF” automatically. The changing timing is set by the “INTERVAL” item of this Set Mode. When the Set Mode item “**E19 DIGI PATH SELECT**” is set to “OFF”, “FULL1”, or “FULL2”, this item is ignored.

DECAY: When this item is set to “ON”, extends the setting value of the “INTERVAL” item one by one when the vehicle was stopped.

LOW SPEED: When the vehicle speed lowers than a selected speed, the **FTM-350** considers the vehicle has stopped. (The speed unit is determined from the Set Mode item “**E11 APRS UNIT**”).

RATE LIMIT: Cancel the transmission of the APRS beacon in selected time from last APRS beacon transmission.

E15: COM PORT SETTING

Function: Sets the COM port setting.

Available Values: 1 SPEED: 4800 bps, 9600 bps, or 19200 bps
2 OUTPUT: OFF, GPS OUT, or PACKET

Default: 1 SPEED: 9600 bps
2 OUTPUT: OFF

APRS/PKT SET MODE

E16: DATA BAND SELECT

Function: Selects the operating band for the DATA mode.

Available Values: 1 APRS: MAIN BAND, SUB BAND, L-BAND FIX, R-BAND FIX,
L=TX / R=RX, or L=RX / R=TX
2 DATA: MAIN BAND, SUB BAND, L-BAND FIX, R-BAND FIX,
L=TX / R=RX, or L=RX / R=TX

Default: 1 APRS: SUB BAND
2 DATA: MAIN BAND

E17: DATA SPEED

Function: Selects the baud rate for the DATA mode.

Available Values: 1 APRS: 1200 bps or 9600 bps
2 DATA: 1200 bps or 9600 bps

Default: 1 APRS: 1200 bps
2 DATA: 1200 bps

E18: DATA SQUELCH

Function: Configure the Squelch settings for APRS, DATA and TX.

Available Values: 1 APRS: RX BAND or TX/RX BAND
2 DATA: RX BAND or TX/RX BAND
3 TX: OFF or ON

Default: 1 APRS: RX BAND
2 DATA: RX BAND
3 TX: ON

RX BAND: Does not transmit the APRS/DATA data when the RX band's squelch circuit is open.

TX/RX BAND: Does not transmit the APRS/DATA data when the TX and RX band's squelch circuits are both open.

TX: Determine the SQL port (pin 6 of the DATA jack). When this item is set to "ON", the external TNC can not initiate transmit while the **FTM-350** is transmitting.

E19: DIGI PATH SELECT

Function: Selects the APRS packet path you wish to path through.

Available Values: OFF / WIDE1-1(fixed value) / WIDE1-1,WIDE2-1(fixed value) /
PATH 1 / PATH 2 / PATH 3 / PATH 4 / FULL 1 or FULL2

Default: WIDE1-1,WIDE2-1 (fixed value)

APRS/PKT SET MODE

E20: DIGI PATH 1

Function: Sets the APRS packet path.

Program the address information (callsign or alias etc) of the digipeater that you selected as “PATH 1” in Set Mode item “E19 DIGI PATH SELECT”.

E21: DIGI PATH 2

Function: Sets the APRS packet path.

Program the address information (callsign or alias etc) of the digipeater that you selected as “PATH 2” in Set Mode item “E19 DIGI PATH SELECT”.

E22: DIGI PATH 3

Function: Sets the APRS packet path.

Program the address information (callsign or alias etc) of the digipeater that you selected as “PATH 3” in Set Mode item “E19 DIGI PATH SELECT”.

E23: DIGI PATH 4

Function: Sets the APRS packet path.

Program the address information (callsign or alias etc) of the digipeater that you selected as “PATH 4” in Set Mode item “E19 DIGI PATH SELECT”.

E24: DIGI PATH FULL 1

Function: Sets the APRS packet path.

Program the address information (callsign or alias etc) of the digipeater that you selected as “FULL 1” in Set Mode item “E19 DIGI PATH SELECT”.

E25: DIGI PATH FULL 2

Function: Sets the APRS packet path.

Program the address information (callsign or alias etc) of the digipeater that you selected as “FULL 2” in Set Mode item “E19 DIGI PATH SELECT”.

E26: MESSAGE GROUP

Function: Sets the filter type option allowing you to receive only the specified types of APRS Group/Bulletin Message information.

Available Values: 1 GROUP1: ALL*****
2 GROUP2: CQ*****
3 GROUP3: QST*****
4 GROUP4: YAESU*****
5 GROUP5:
6 GROUP6:
7 BULLETN1: BLN?*****
8 BULLETN2: BLN?
9 BULLETN3: BLN?

APRS/PKT SET MODE

E27: MESSAGE REPLY

Function: Enable/Disable the message reply feature, and program its details.

Available Values: 1 STATUS: OFF or ON
2 CALLSIGN: *****-**
3 TEXT:

Default: 1 STATUS: OFF
2 CALLSIGN: *****-**
3 TEXT:

CALLSIGN: Program the callsign here when you wish to reply to a specific station only.

TEXT: Enter the reply message.

E28: MY CALLSIGN

Function: Program your callsign.

See page 2 for details.

E29: MY POSITION SET

Function: Determine your location (Longitude/Latitude).

Available Values: GPS, MANUAL, or P.LIST GRP1-POINT1 ~ P.LIST GRP4-POINT4

Default: GPS

GPS: Your location is determined by the optional GPS Unit. When the optional GPS Unit is connected to the transceiver, select this item.

MANUAL: Your location is determined by “APRS/PKT” Set Mode item “E30 MY POSITION”.

P.LIST GRP1-POINT1 ~ P.LIST GRP4-POINT4: Your location is determined from the “Point” list data.

E30: MY POSITION

Function: Program your location (Longitude/Latitude) manually.





See page 2 for details.

APRS/PKT SET MODE

E31: MY SYMBOL

Function: Select your icon which will be displayed on the monitors of other stations as you.

Available Values: ICON1, ICON2, ICON3 (46 symbols each), and USER (free select character)

Default: ICON1: , ICON2: , ICON3: , USER: 

You may replace the default icon of the ICON1, ICON2, and ICON3 to another one by rotating the *left side* [DIAL] knob (However, if you wish to replace the USER icon, press E32: POSITION COMMENT

Function: Selects position comment depending on your situation.

Available Values: Off Duty, En Route, In Service, Returning, Committed, Special, Priority, Custom 0 ~ Custom 6, EMERGENCY!

Default: Off Duty

E33: SmartBeaconing

Function: Selects the various parameter of the SmartBeaconing™.

Available Values: 1 STATUS: OFF, TYPE1, TYPE2, or TYPE3

2 LOW SPEED: 2 ~ 30

3 HIGH SPEED: 3 ~ 70

4 SLOW RATE: 1 min ~ 100 min

5 FAST RATE: 10 sec ~ 180 sec

6 TURN ANGLE: 5° ~ 90°

7 TURN SLOPE: 1 ~ 255

8 TURN TIME: 5 sec ~ 180 sec

Default:

1 STATUS: OFF

2 LOW SPEED: 5

3 HIGH SPEED: 70

4 SLOW RATE: 30 min

5 FAST RATE: 120 sec

6 TURN ANGLE: 28°

7 TURN SLOPE: 26

8 TURN TIME: 30 sec

Note: In the factory default, the same data suitable for mobile operation is saved in TYPE1, TYPE2 and TYPE3 status. You may customize this status data for each situation. SmartBeaconing™ from HamHUD Nichetronix

APRS/PKT SET MODE

E34: SORT FILTER

Function: Selects the Sort method and Filter type.

Available Values: 1 SORT: TIME, CALLSIGN, or DISTANCE
2 FILTER: ALL, MOBILE, FREQUENCY, OBJECT, ITEM,
DIGIPEATER, VOIP, WEATHER, YAESU, OTHER PKT,
CALL RINGER, RNG RINGER

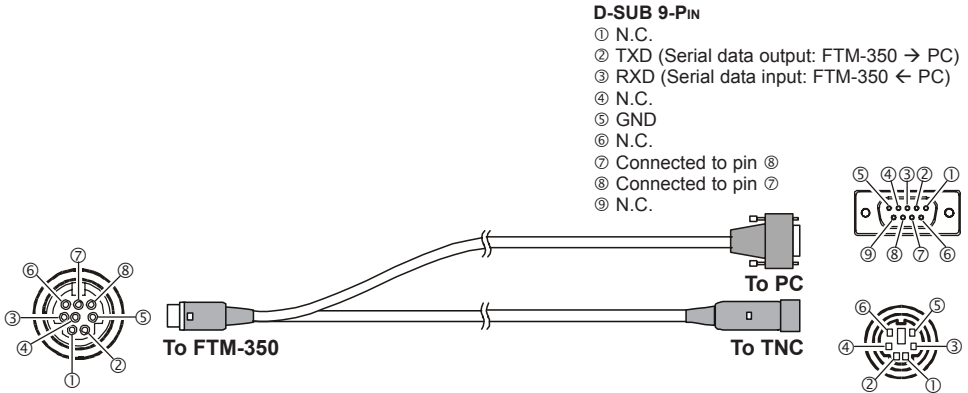
Default: 1 SORT: TIME
2 FILTER: ALL

APRS/PKT SET MODE

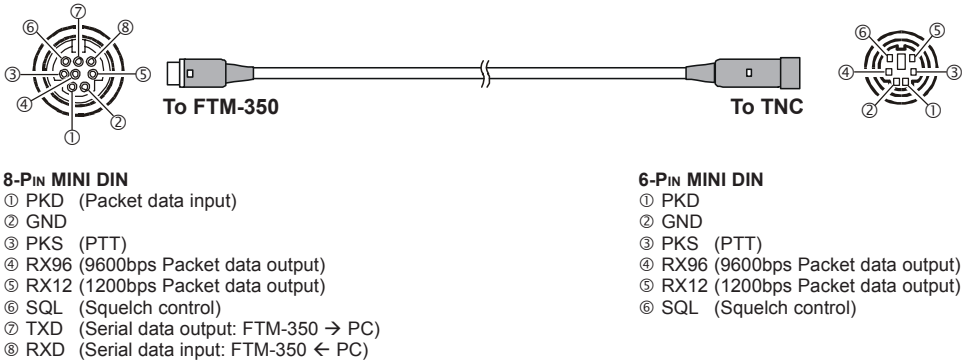
NOTE

APPENDIX

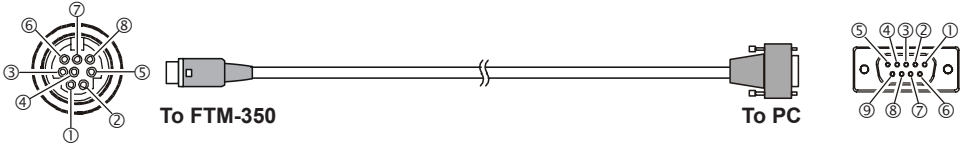
CT-140 CABLE CONNECTIONS



CT-141 CABLE CONNECTIONS



CT-142 CABLE CONNECTIONS



8-PIN MINI DIN

- ① PKD (Packet data input)
- ② GND
- ③ PKS (PTT)
- ④ RX96 (9600bps Packet data output)
- ⑤ RX12 (1200bps Packet data output)
- ⑥ SQL (Squelch control)
- ⑦ TXD (Serial data output: FTM-350 → PC)
- ⑧ RXD (Serial data input: FTM-350 ← PC)

D-SUB 9-PIN

- ① N.C.
- ② TXD (Serial data output: FTM-350 → PC)
- ③ RXD (Serial data input: FTM-350 ← PC)
- ④ N.C.
- ⑤ GND
- ⑥ N.C.
- ⑦ Connected to pin ⑧
- ⑧ Connected to pin ⑦
- ⑨ N.C.

FTM-350 SERIES DATA JACK PIN ASSIGNMENT



(Viewed from rear panel)

- ① PKD (Packet data input)
- ② GND
- ③ PKS (PTT)
- ④ RX96 (9600bps Packet data output)
- ⑤ RX12 (1200bps Packet data output)
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- ⑦ TXD (Serial data output: FTM-350 → PC)
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