OPERATION OF THE IC 207H

BY: STEPHEN RIDDLE VA3FLF

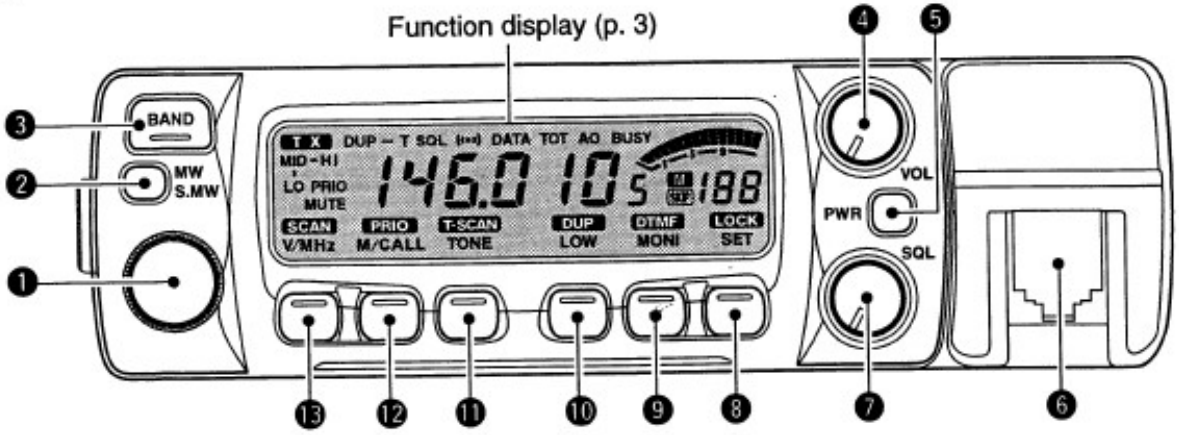
SPECS OF RADIO

- Dual Band 2M / 70CM
- Up to 50 Watts (4 levels).
- Can receive 118-174 Mhz
- Digital Interface
- 150 Memory Channels
- Requires 12A at 50 Watts
- Operate via front panel or Mic

FRONT PANEL

1 PANEL DESCRIPTION

■ Front panel



❶ TUNING DIAL
Selects the operating frequency (p. 17), the memory channel (p. 29), the contents of the set mode display and the scanning direction. (p. 39)

❷ SELECT MEMORY/MEMORY WRITE SWITCH [S.MW(MW)]
➥ Selects a memory channel for programming. (p. 30)
➥ Programs selected memory when pushed and held. (p. 30)

❸ BAND SWITCH [BAND]
➥ Toggles between 144 and 430(440) MHz operation. (p. 15)
➥ When a call channel is selected, this switch toggles between the 2 available call channels. (p. 34)

❹ VOLUME CONTROL [VOL]
Adjusts the audio level. (p. 20)

❺ POWER SWITCH [PWR]
Turns power ON and OFF when pushed for 1 sec.

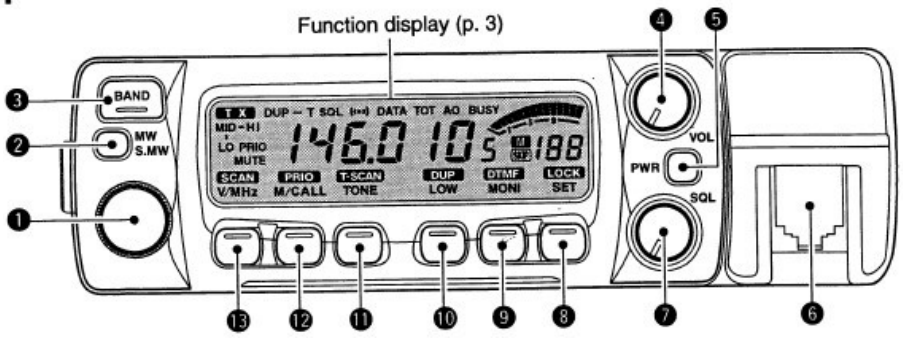
❻ MICROPHONE CONNECTOR
Connects the supplied microphone. (p. 11)

❼ SQUELCH CONTROL [SQL]
Varies the squelch level. (p. 20)
• RF attenuator activates and increases the attenuation when rotated clockwise to the center position and further.

FRONT PANEL

1 PANEL DESCRIPTION

■ Front panel



❽ SET/LOCK SWITCH [SET(LOCK)]
- ➥ Selects SET mode when pushed. (p. 70)
- ➥ Toggles the lock function ON and OFF when pushed and held. (p. 16)

❾ MONITOR/DTMF SWITCH [MONI(DTMF)]
- ➥ Toggles squelch opened and closed when pushed. (pgs. 20, 24)
- ➥ Turns the DTMF memory encoder ON and OFF for auto patch operation when pushed and held. (p. 46)

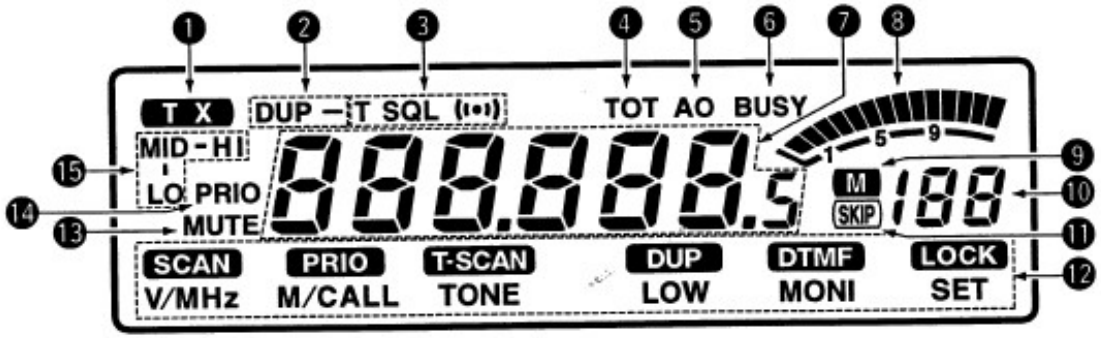
❿ OUTPUT POWER/DUPLEX SWITCH [LOW(DUP)]
- ➥ Each push changes the output power selection. (p. 22)
  - • There are 4 output powers available: low, mid-low, mid-high and high.
- ➥ Push and hold to select a duplex setting. (p. 24)
  - • There are 3 duplex settings available: minus duplex ("– DUP" appears, plus duplex ("+ DUP" appears) and simplex.

⓫ TONE/TONE SCAN SWITCH [TONE(T-SCAN)]
- ➥ Each push selects a tone function. (p. 50)
  - • Tone encoder, pocket beep, tone squelch or tone function OFF can be selected.
- ➥ Push and hold to start/stop the tone scan function. (p. 52)

⓬ MEMORY/CALL CHANNEL SWITCH [M/CALL(PRIO)]
- ➥ Selects and toggles memory mode or a call channel (pgs. 29, 34)
- ➥ Activates the priority watch function when pushed and held. (p. 44)

FRONT PANEL DISPLAY

■ Function display



❶ **TRANSMIT INDICATOR** (p.22)
- ➥ Appears while transmitting.
- ➥ Flashes while transmitting with the one-touch PTT function (p. 23).

❷ **DUPLEX INDICATORS** (p. 24)
"DUP–" or "DUP" appears during semi-duplex operation (repeater operation).

❸ **TONE INDICATORS**
- ➥ "T" appears while the subaudible tone encoder is in use. (p. 26)
- ➥ "T SQL" appears while the tone squelch function is in use. (p. 51)
- ➥ "T SQL ((•)) " appears while the pocket beep function is in use. (p. 50)

❹ **TOT (TIME-OUT TIMER) INDICATOR** (p. 59)
Appears while the time-out timer has been activated.

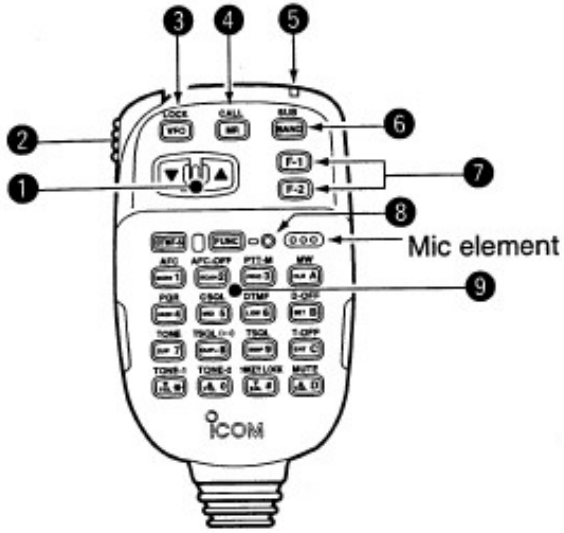
❺ **AUTO POWER-OFF INDICATOR** (p. 60)
Appears while the auto power-off function is in use.

❻ **BUSY INDICATOR** (p. 20)
Appears while a signal is being received or the squelch is open ([MONI] is being pushed).

❼ **FREQUENCY READOUT**
Shows the operating frequency, set mode contents, etc.
- The decimal point of the frequency flashes while scanning. (p. 39)
- "d" appears in place of the 100 MHz digit while the DTMF memory function is in use.

HANDSET / MIC SETTINGS

■ Microphone (HM-98*)



❶ UP/DOWN SWITCHES [▲]/[▼]
- ➥ Push either switch to change the operating frequency, memory channel, set mode contents, etc. (pgs. 17, 29)
- ➥ Push and hold either switch to start scanning. (p. 39)

❷ PTT SWITCH
- ➥ Push and hold to transmit; release to receive. (p. 22)
- ➥ Toggles between transmitting and receiving while the one-touch PTT function is in use. (p. 23)

❸ VFO SWITCH [VFO(LOCK)]
- ➥ Push to select VFO mode.
- ➥ Push and hold to toggle the lock function ON and OFF.

❹ MEMORY SWITCH [MR(CALL)]
- ➥ Push to select memory mode. (p. 29)
- ➥ Push and hold to select the call channel. (p. 34)

❺ ACTIVITY INDICATOR
Lights red while a key is pushed; lights green while the one-touch PTT function is in use.

❻ BAND SWITCH
Push to toggle the operating band. (p. 15)

❼ FUNCTION SWITCHES [F-1]/[F-2] (p. 61)
Assign your desired key function from the front panel switches.
- Default settings are [LOW] for [F-1] and [TONE] for [F-2].

❽ FUNCTION INDICATOR
- ➥ Lights orange while [FUNC] is activated—indicates the secondary function of switches can be accessed.
- ➥ Lights green when [DTMF-S] is activated—DTMF signals can be transmitted with the keypad. (p. 48)

❾ KEYPAD
Used for controlling the transceiver, transmitting a DTMF encoder, etc. See the following 2 pages for details.

*Some versions are supplied with the HM-96 instead.

SETTING FREQUENCY (KEYPAD METHOD)

■ Using the keypad

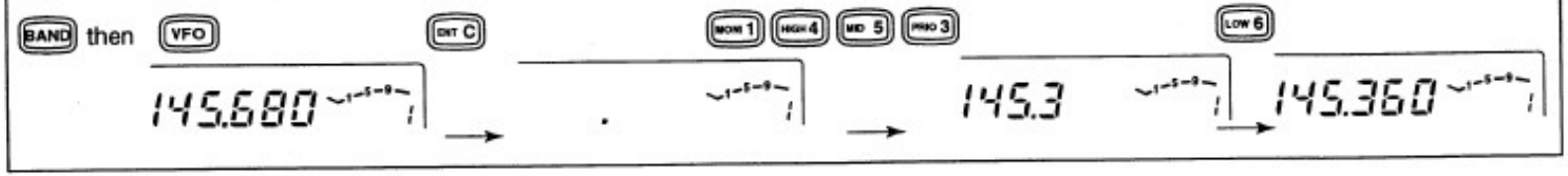
ENT C

The frequency can be directly set via numeral keys on the microphone.

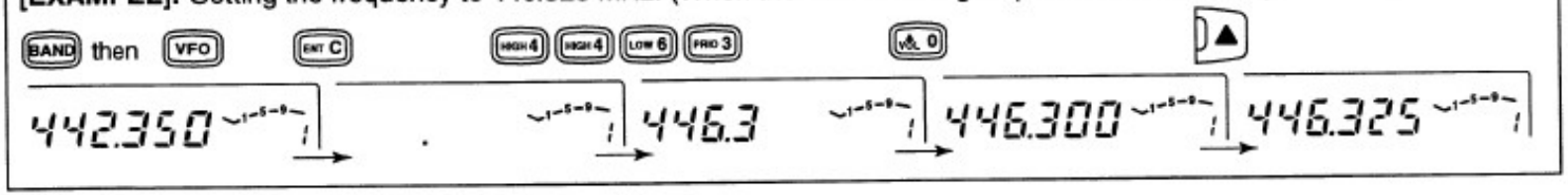
1 Push [BAND] to set the operating band, if necessary.
2 Push [VFO] to select VFO mode.
3 Push [ENT] to activate the keypad for digit input.
4 Push 5 keys to input a frequency.
- When a digit is mistakenly input, push [ENT] to clear the input, then input from the 1st digit.
- Pushing [CLR] clears input digits and retrieves the frequency.

5 Push [▲] or [▼] to make adjustments below the 10 kHz digit, if desired.

[EXAMPLE]: Setting the frequency to 145.360 MHz.



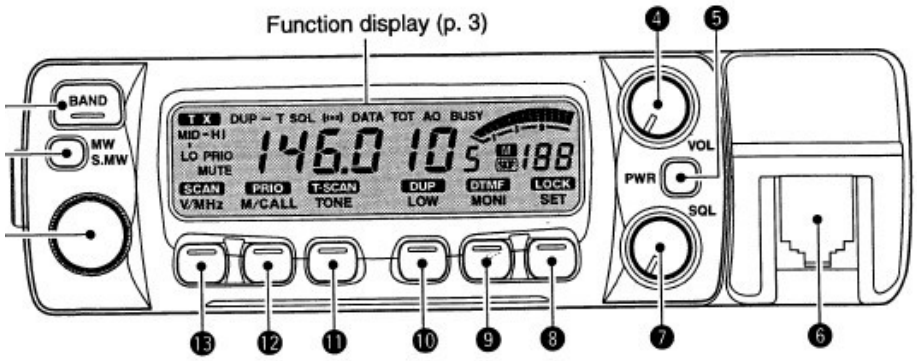
[EXAMPLE]: Setting the frequency to 446.325 MHz. (When the 25 kHz tuning step is selected in UHF.)



SETTING FREQUENCY (VFO MODE)

1 PANEL DESCRIPTION

■ Front panel

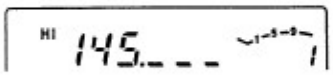


3 SETTING A FREQUENCY

■ Using the tuning dial

① Push [BAND] to select the desired band, if necessary.
② Rotate the tuning dial to set the frequency.
- If VFO mode is not selected, push the [V/MHz] to select VFO mode.
- Frequency changes according to the selected tuning steps. (p. 18)

③ For the 1 MHz frequency setting, rotate the tuning dial after pushing [V/MHz].
- Pushing [V/MHz] for 1 sec. starts a scan function. If this happens, push [V/MHz] again to stop the scan.

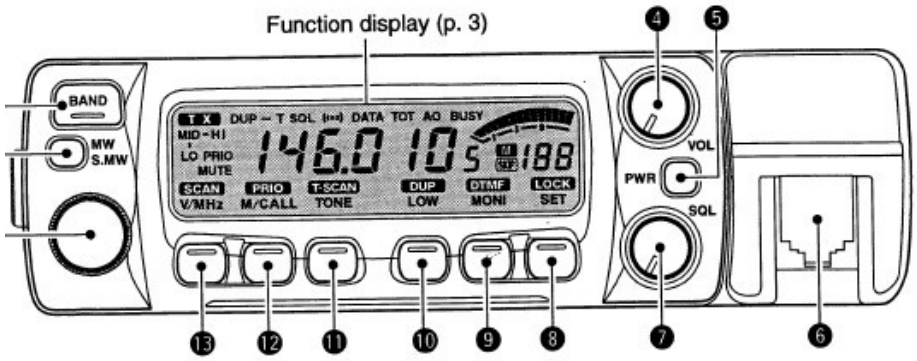


The display shows that the 1 MHz tuning step is selected for the VHF band.

SETTING FREQUENCY (VFO MODE)

1 PANEL DESCRIPTION

■ Front panel

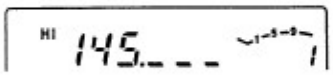


3 SETTING A FREQUENCY

■ Using the tuning dial

① Push [BAND] to select the desired band, if necessary.
② Rotate the tuning dial to set the frequency.
- If VFO mode is not selected, push the [V/MHz] to select VFO mode.
- Frequency changes according to the selected tuning steps. (p. 18)

③ For the 1 MHz frequency setting, rotate the tuning dial after pushing [V/MHz].
- Pushing [V/MHz] for 1 sec. starts a scan function. If this happens, push [V/MHz] again to stop the scan.

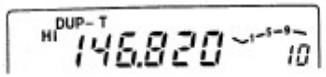


The display shows that the 1 MHz tuning step is selected for the VHF band.

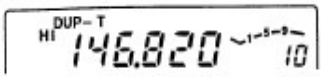
REPEATER OPERATION SETTINGS

■ Accessing a repeater

① Push [BAND] one or more times to select the desired band.
② Set the receive frequency (repeater output frequency). (pgs. 15–19)
③ Push and hold DUP for 1 sec., one or more times, to select – duplex or + duplex.
- "DUP –" or "DUP" appears to indicate the transmit frequency for minus shift or plus shift, respectively.
- When the auto repeater function is turned ON, (available for the U.S.A. version only), steps ②, ③ are not necessary. (p. 31)



④ Push [TONE] one or more times to turn ON the subaudible tone encoder, according to repeater requirements.
- Refer to p. 26 for tone frequency settings.
- When the repeater requires a different tone system, see the page at right.



⑤ Push and hold [PTT] to transmit.
- The displayed frequency automatically changes to the transmit frequency (repeater input frequency).
- The operating condition is automatically programmed into a scratch pad memory. See p. 36 for details.
- If "oFF" appears, confirm the offset frequency. (p. 27)

⑥ Release [PTT] to receive.
⑦ Push [MONI] to check whether the other station's transmit signal can be directly received or not.
⑧ To return to simplex, push DUP for 1 sec., once or twice, to clear the "DUP" indicator.
⑨ To turn OFF the subaudible tone encoder, push [TONE] one or more times until no tone indicators appear.

MON: Reverse check
TONE: Use tuning dial

STORING MEMORY (FRONT PANEL)

■ Programming a memory channel

VFO mode settings, including the set mode contents such as subaudible tone frequency, etc., can be programmed into a memory channel.

① Set the desired frequency in VFO mode:
- ➥ Push [V/MHz] to select VFO mode.
- ➥ Set the frequency using the tuning dial.
- ➥ Set other data (e.g. tone frequency, etc.) if required.

② Push [S.MW] momentarily.
- • "M" and the memory channel number flash.

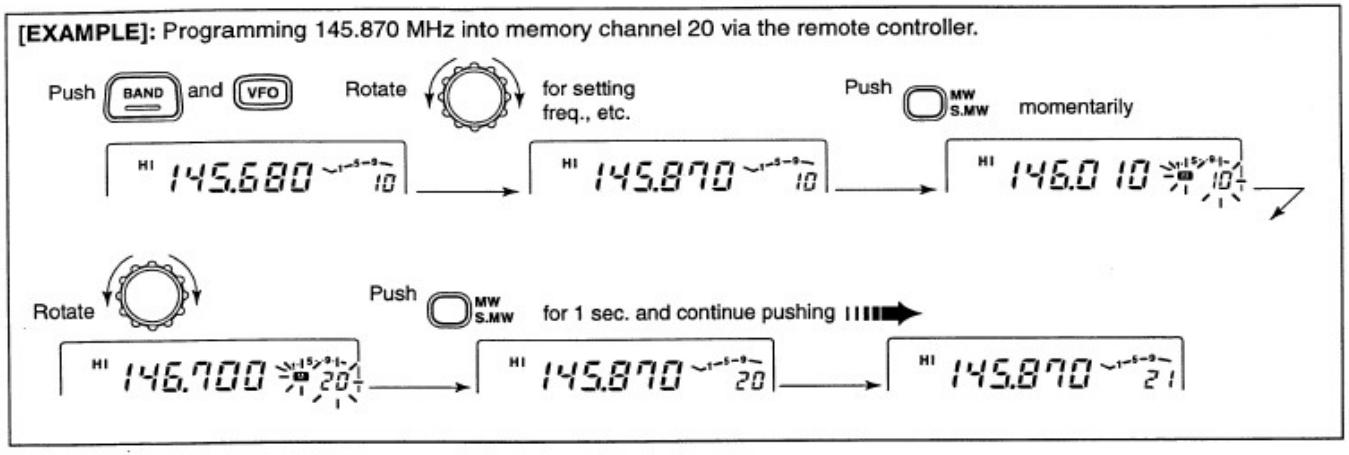
③ Rotate the tuning dial to select the memory channel to be programmed.
- • Memory channels not yet programmed are blank.

④ Push [S.MW] for 1 sec. to program.
- • 3 beeps may sound.
- • Memory channel number automatically advances when continuing to push [S.MW] after programming.

✔ *CONVENIENT*

Memory programming can be performed in versatile ways e.g. memory channel to the same (or different) memory channel, memory channel to the call channel, etc.

[EXAMPLE]: Programming 145.870 MHz into memory channel 20 via the remote controller.



Store location saves tones and offsets.

STORING MEMORY (KEYPAD)

■ Programming a memory channel via the microphone

MW

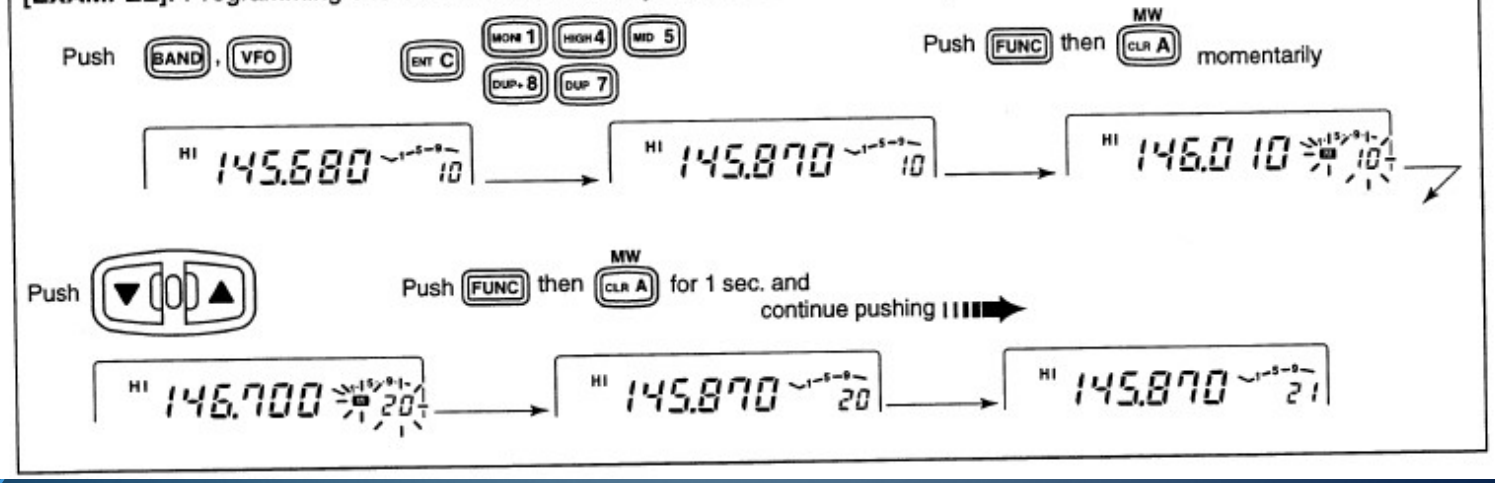
Memory channel programming can be performed via the microphone.

1 Push [BAND] to select the desired band, if necessary.
2 Set the desired frequency in VFO mode:
- ➥ Push [VFO] to select VFO mode.
- ➥ Set the frequency using the keypad.
- ➥ Set other data (e.g. offset frequency, duplex direction, subaudible tone encoder ON/OFF and its frequency), if required.

3 Push [FUNC] then [Ⓐ MW] momentarily.
4 Select the memory channel to be programmed:
- ➥ Push [▲] or [▼] to select the memory channel (direct numeral input cannot be used).

5 Push [FUNC] then [Ⓐ MW] for 1 sec. to program.
- ➥ 3 beeps may sound and the VFO contents (including the subaudible tone frequency, etc.) are programmed.
- ➥ Memory channel number advances when continuing to push [MW] after programming.

[EXAMPLE]: Programming 145.870 MHz into memory channel 20 via the microphone.



DATA/PACKET SETTINGS

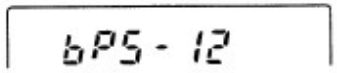
■ Packet operation

◇ Data speed

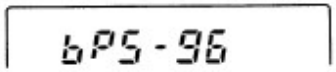
USING *INITIAL SET MODE*

For packet operation the transceiver can be set to one of two data speeds: 1200 bps (default) or 9600 bps.

① Push [PWR] to turn power OFF.
② While pushing [SET], turn power ON to enter initial set mode.
③ Push [SET] one or more times until "bPS" appears.
• Pushing [MONI] reverses the order of selection.
④ Rotate the tuning dial to select the desired data speed.



The display shows the data speed set to 1200 bps.



The display shows the data speed set to 9600 bps.

⑤ Push [PWR] momentarily to exit initial set mode.

NOTE:

For 1200 bps operation—

• Disconnect the microphone plug from the microphone connector during data transmission, otherwise the data signal and voice signal are simultaneously transmitted.

For 9600 bps operation—

• When the transceiver is set for 9600 bps data transmission in INTIAL SET MODE, the microphone signal is automatically cut. Therefore, it is not necessary to disconnect the microphone plug from the connector in this case.
• When pushing [PTT] during data transmission, data transmission is interrupted and voice signals have priority.

Questions ???