1. **[PWR]** Power Switch
   - Press and hold 1 sec. to turn power On/Off.

2. **[SET•LOCK]** Set, Lock Switch
   - Press to enter Set mode.
   - Press and hold for 1 sec. to switch the Lock function On or Off.

3. **[LOW•Prio]** Output Power, Priority Switch
   - Press to change the power output level.
   - Press and hold for 1 sec. to start the Priority Watch operation.

4. **[TONE•DTMF]** Tone, DTMF Switch
   - Press to select a Tone function.
   - Press and hold for 1 sec. to turn DTMF memory encoder On or Off.

5. **[DUP•MONI]** Duplex, Monitor Switch
   - Press to select between DUP-, DUP+, and Simplex operation.
   - Press and hold for 1 sec. to switch the Monitor function On or Off.

6. **[MAIN•BAND]** L/R Band Switches
   - Press to select the main band for L/R side.
   - Press and hold for 1 sec. to select operating frequency band for L/R side.

7. **[V/MHz•SCAN]** L/R VFO/MHz Tuning, Scan Switches
   - Press to select between VFO mode and 1 MHz Tuning mode for L/R side.
   - Press and hold for 1 sec. to start scan for L/R side.
   - Press to stop a scan for L/R side.

8. **[M/CALL•MW]** L/R Memory/Call, Memory Write Switches
   - Press to select between Memory, Call, and Weather Channel modes for L/R side.
   - Press and hold for 1 sec. to select a memory channel for L/R side for programming.

9. **[VOL]** L/R Volume Control Switches
    - Turn to adjust audio for L/R side.

10. **[DIAL]** L/R Tuning Dials
    - Turn to select operating frequency, memory channel, setting for Set mode item, or scanning direction for L/R side.

11. **[SQL]** L/R Squelch Control Switches
    - Turn to adjust squelch level for L/R side.
Using the HM-133 Microphone

You can use the keypad and buttons on the HM-133 microphone to perform many of the common tasks required for operating the radio, including selecting a frequency band and directly entering a frequency. (Note: Microphone keys only function for the main band.)

Select a Frequency Band

Push [BAND] to toggle main band between left and right sides of radio.

Directly Enter a Frequency

[EXAMPLE]: Setting frequency to 145.3625 MHz.

Using the ▲/▼ Keys

1. VFO/Lock Switch
2. PTT Switch
3. Up/Down Switches →
4. Activity Indicator
5. Keypad
6. Function Indicator
7. 2nd function Switch
8. DTMF Select switch
9. Function Switches
10. Band Switch →
11. Memory/Call Switch

Select a Frequency
Press ▲ or ▼ to select a frequency (in VFO mode) or memory channel (in Memory mode).

Start a Scan
Press and hold ▲ or ▼ for 1 sec. to activate the scan mode.

Stop a Scan
Press ▲ or ▼ to cancel the scan.

Select a Band
Press [BAND] to toggle main band between left and right sides of radio.
Basic Operation

Turning the power On or Off
Press and hold [PWR] for 1 sec. to turn the power On or Off.

Selecting a Frequency Band in VFO Mode
1. Press L/R [MAIN•BAND] for 1 second.
2. Rotate [DIAL] to select the band.
3. Press [MAIN•BAND] to activate the desired band.

Alternatively: See “Using the HM-133 Microphone” section for instructions on using the microphone to select a band.

Operating in VFO Mode
- If necessary, press L/R [V/MHz•SCAN] to activate the VFO mode.
- To change the frequency using 1 KHz steps, rotate [DIAL].
- To change the frequency using 1 KHz, 1 MHz, or 10 MHz steps:
  1. Press [V/MHz•SCAN] one or more times to toggle between 1 KHz, 1 MHz, and 10 MHz tuning steps.
  2. Rotate [DIAL] to change the frequency.
- To start a scan, press and hold [V/MHz•SCAN] for 1 second.
- To stop a scan, press [V/MHz•SCAN].

Activating Memory Mode
Press L/R [M/CALL•MW] to activate Memory mode.

The M indicator icon appears on the appropriate side of LCD display when Memory mode is activated for that side.

Alternatively: Press the HM-133 microphone button [MR/CALL] to activate Memory mode on the main band.
Operating in Memory Mode

- Press L/R [M/CALL•MW] one or more times to activate Memory mode.
- To change the Memory channel, rotate [DIAL].
- To start a scan, press and hold [V/MHz•SCAN] for 1 second.
- To stop a scan, press [V/MHz•SCAN].

Alternatively: See “Using the HM-133 Microphone” section for instructions on using the microphone ▲/▼ and/or keypad buttons to perform these operations.

Memory Bank Selection

The IC-2720H has 10 Memory Banks (A to J), each of which can contain up to 200 Memory channels. To select a Memory channel within a Bank:

1. Press L/R [M/CALL•MW] one or more times to activate Memory mode.
2. Press and hold [MAIN•BAND] for 1 sec. to activate the Memory Bank selection. (The Bank initial blinks on the LCD display.)
3. Rotate [DIAL] to display the desired Memory Bank.
4. Press [MAIN•BAND] to select the Memory Bank. (The Bank initial stops blinking.)
5. Rotate the Dial to select a Memory channel within the bank.

To return to regular Memory mode, press and hold [MAIN•BAND] for 1 sec. then momentarily press [MAIN•BAND] again.

Using the Monitor Function

This function is used to listen to weak signals without disturbing the squelch setting.

- To activate, press and hold L/R [DUP•MONI] for 1 sec. to open the squelch. (The "Busy" icon blinks on the LCD display.)
- To cancel, press and hold [DUP•MONI] for 1 sec.

Alternatively: Press the HM-133 microphone button [BANK•MONI•1] to activate or cancel the Monitor function.

Selecting the Call Channel

Call channel is a pre-programmed Memory channel accessed by pressing the Call channel button.

1. Press L/R [M/CALL•MW] one or more times to activate Call Channel mode.
2. Rotate [DIAL] to select the desired call channel. (In Memory mode, the “C1” or “C2” icon appears. In VFO mode, the “c” icon appears.)
3. To cancel Call Channel mode, press [M/CALL•MW] one or more times.

Alternatively: Press and hold the HM-133 microphone button [MR•CALL] for 1 sec. to activate the Call Channel mode, then press ▲ or ▼ to select the desired call channel in the main Band. To cancel, press [MR•CALL] to return to Memory mode.
Operating through a Repeater

Normally, you will operate the IC-2720H through repeater frequencies that you have already programmed into the radio’s Memory channels. However, the occasion may arise in which you need to operate through a repeater that has not been programmed. This section instructs you in setting up the IC-2720H to operate through a repeater.

1. **Activate VFO mode:** Press L/R [V/MHz•SCAN] to activate the VFO mode.

2. **Select the Frequency Band:** See “Selecting a Frequency Band” for instructions.

3. **Set the Receive Frequency:** See “Operating in VFO Mode” for instructions. This is the frequency on which your radio receives the repeater’s transmissions. (For example, you will receive the Tarrant County R.A.C.E.S. repeater on 146.940 MHz.)

4. **If necessary, Set the Repeater Shift:**

   **Note:** If the Auto Repeater Function is set to On and the repeater uses a standard repeater shift, this step will not be necessary as the IC-2720H will automatically set the shift.

   **To manually set the repeater shift:**

   Press L/R [DUP•MONI] once or twice to select minus duplex or plus duplex shift.
   - For minus duplex, “DUP−” appears on the LCD screen. The repeater’s receive freq. is set lower than its transmit frequency.
   - For plus duplex, “DUP” appears on the LCD screen. The repeater’s receive freq. is set higher than its transmit frequency.
   - If the repeater uses an offset frequency amount other than 0.6 MHz for 2m band or 5 MHz for 70cm band, manually set the offset in Step 5.

5. **If necessary, Set the Repeater Offset Frequency Amount:**

   **Note:** This step is only necessary if the repeater’s offset frequency is an amount other than 0.6 MHz on the 2m band or 5 MHz on the 70cm band.

   a. Press [SET•LOCK] to activate Set mode.
   b. Press either [SET•LOCK] or [LOW•PRIO] one or more times until “DUP” and offset frequency appear.
   c. Rotate [DIAL] to select the offset frequency.
   d. Press [TONE•DTMF] to set the offset and exit Set mode.
6. **Set the Repeater Tone Encoder Type and Tone Frequency:**

   a. Press [SET•LOCK] to activate Set mode.
   b. Press [SET•LOCK] one or more times until “T” and “rT” appear.
   c. Rotate [DIAL] to select the subaudible tone frequency.

   **Example:** Set tone frequency to 110.9 for the 146.940 repeater.
   d. Press [TONE•DTMF] to set the tone frequency and exit Set mode.

You can now operate through the repeater. To ensure you do not lose these settings, you can save this information to a Memory channel.

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**Programming a Memory Channel**

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

1. Press and hold L/R [M/CALL•MW] for 1 sec. to activate memory channel programming mode. Three beeps sound and the M indicator icon appears on the LCD display.
2. Rotate [DIAL] to select a blank Memory channel in which to program the current settings. Be certain you select a blank channel so as to not overwrite any existing channels.
3. Press and hold [M/CALL•MW] for 1 sec. to program the channel. Three beeps will sound indicating the channel was programmed.

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**Assigning a Memory Channel to a Memory Bank**

Each memory channel and the call channel can be programmed with an alphanumeric name for easy recognition. Names can be a maximum of six characters.

1. Press L/R [M/CALL•MW] one or more times to activate Memory mode, then rotate [DIAL] to select the Memory channel.
2. Press and hold [MAIN•BAND] for 1 sec. The “––” icon starts blinking.
4. Press and hold [M/CALL•MW] for 1 sec., then rotate [DIAL] to select the desired Memory bank. The bank initial starts blinking.
5. Press [M/CALL•MW] again to program the channel into the bank. The bank initial stops blinking.