USING THE ICOM IC-7100 HF RADIO

HF STATION LAYOUT IN COMM TRAILER

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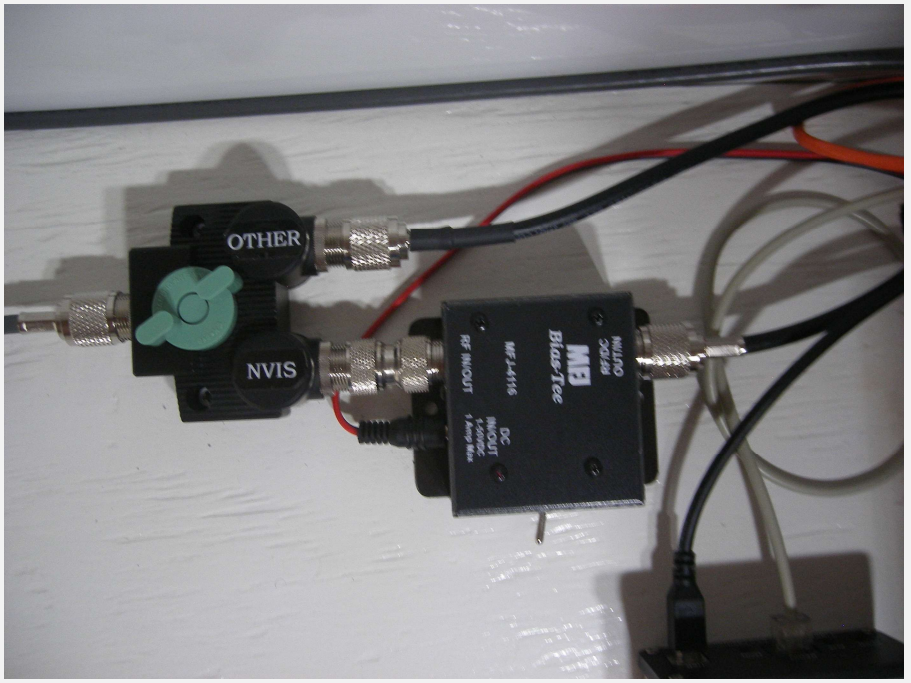
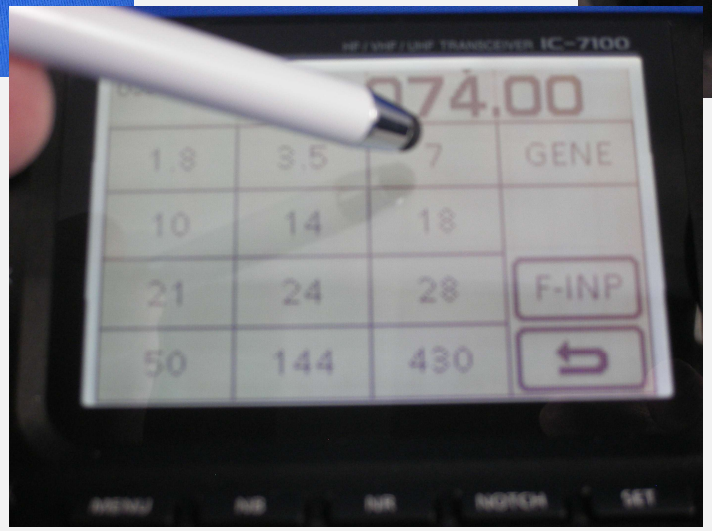
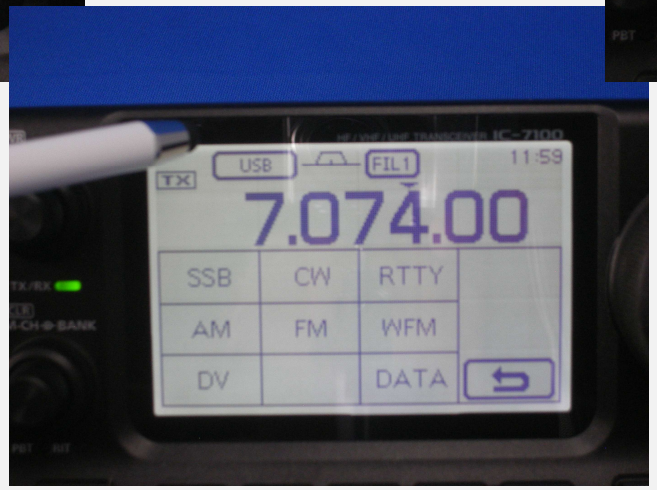


CHANGING BANDS

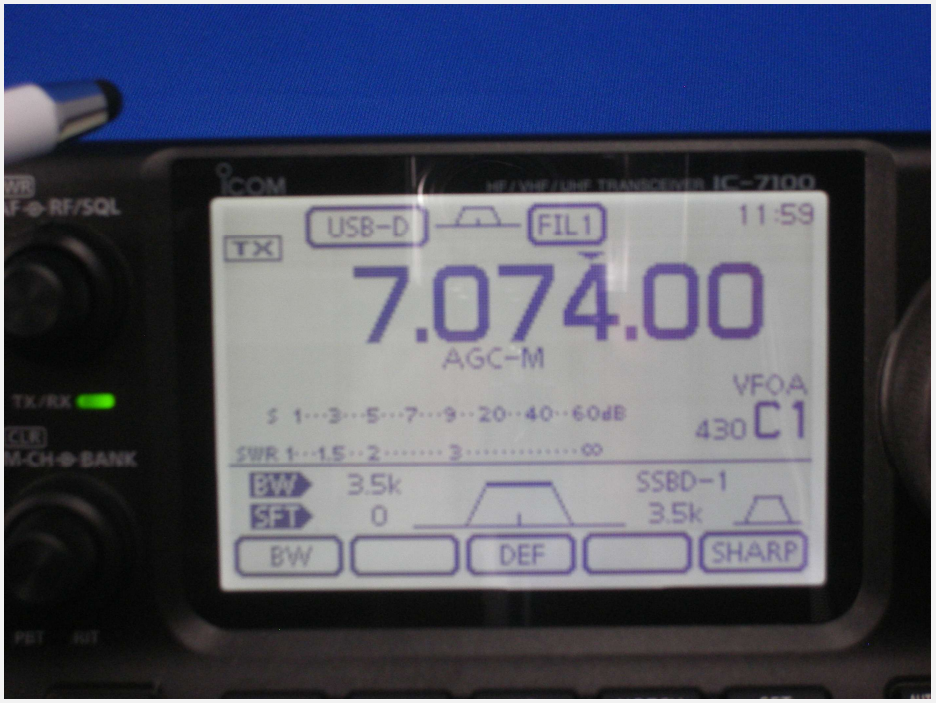


CHANGING MODES



CHANGE FILTER BANDWIDTH

FILTER FOR FT8



POWER & MIC GAIN SETTING

- When useing voice (SSB), set power level to 100%
- When using digital (USB_D), set power level to 50%. Do not run digital at 100%

- When use voice (SSB), set mic gain so the ALC indication does not exceed the ALC range.
- More on next slide.

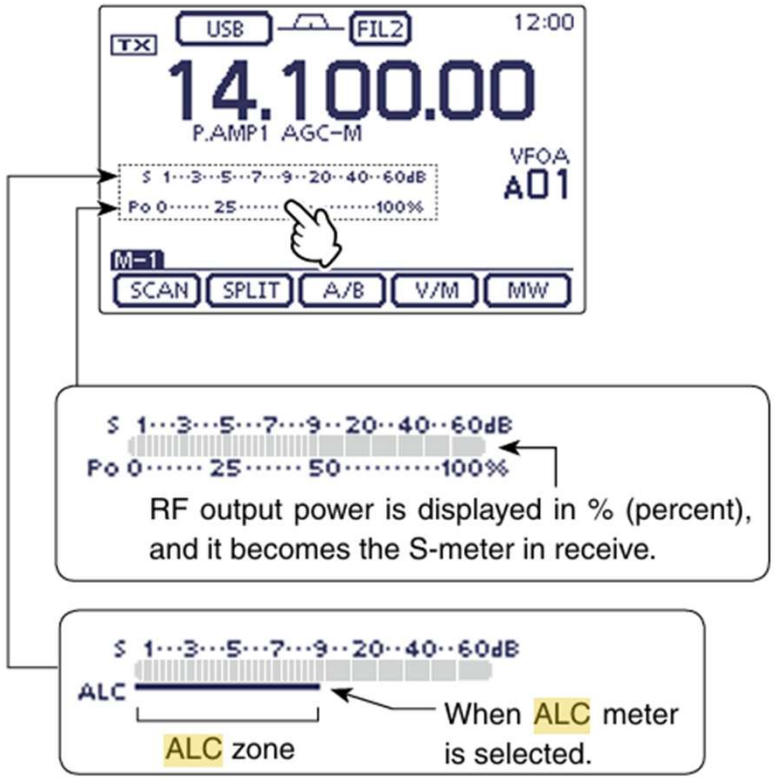
METER & ALC USE

➥ Touch the Meter one or more times to select the TX meter function, RF power meter, SWR meter, ALC meter or COMP meter.

- Po : Displays the relative RF output power.
- SWR : Displays the SWR of the antenna at the frequency.
- ALC : Displays the ALC level. When the meter movement shows the input signal level exceeds the allowable level, the ALC limits the RF power. In such cases, decrease the microphone gain level.
- COMP : Displays the compression level when the speech compressor is in use.

➥ Touch the Meter for 1 second to select the Multi-function meter.

- Touch the Multi-function meter to cancel the meter.



METER & ALC USE

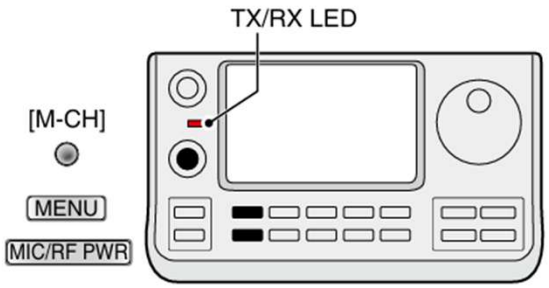
◇ Microphone gain adjustment
(Mode: SSB/AM/FM/DV)

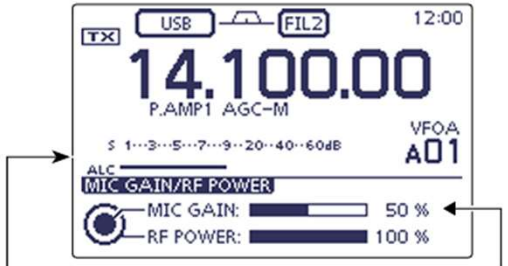
① Push [MIC/RF PWR](C) to open the MIC gain/RF power adjustment display.
② Push [PTT] to transmit.
- Speak into the microphone at your normal voice level.

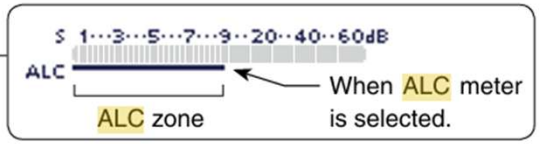
③ Rotate [M-CH](L) to adjust the MIC gain.
When the MIC gain is adjusted too high, your transmitted voice may be distorted.
④ Release [PTT] to receive.
⑤ Push [MENU](C) to close the display.

❍ **In the SSB mode:**
Touch the TX meter to select the ALC meter. Then, while speaking into the microphone, rotate [M-CH](L) so that the ALC meter reading stays within the ALC zone.

❍ **In the AM, FM and DV modes:**
While speaking into the microphone, rotate [M-CH](L) with another station listening to your voice for clarity.







AUTOMATIC GAIN CONTROL (AGC) USE

The AGC (Auto Gain Control) controls receiver gain to produce a constant audio output level, even when the received signal strength greatly varies.
The transceiver has 3 pre-set AGC time constants: fast, mid and slow for SSB, CW, RTTY and AM modes.

In the FM , WFM and DV modes, the AGC time constant is fixed as "FAST" (0.1 second).

◇ AGC speed selection

① On the Mode selection screen, select either the SSB, CW, RTTY or AM mode. (p. 3-17)
② Push [MENU](C) one or more times to select the "M-2" screen (M-2 menu).
③ Touch [AGC](D) to select AGC-F (FAST), AGC-M (MID) or AGC-S (SLOW).

"AGC OFF" appears when the selected AGC speed's time constant is set to OFF.

- When using voice (SSB mode), use AGC-S (Slow) or AGC-M (Medium) for best results.
- When using USB-D (Upper Side Band – Digital) use AGC-F (Fast)
- Fast mode has been set to turn off the AGC for digital use.

RF GAIN/SQUELCH CONTROL

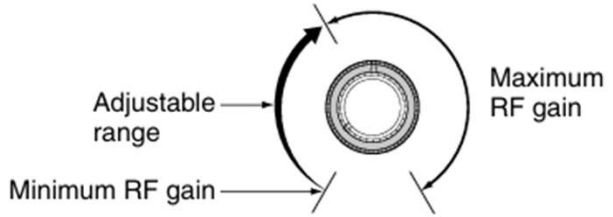
❷ RF GAIN CONTROL/ SQUELCH CONTROL [RF/SQL] (p. 3-19)

Rotate to adjust the RF gain and squelch threshold levels.

The squelch removes noise output to the speaker when no signal is received. (closed condition)

- The squelch is particularly effective for AM and FM, but also works in other modes.
- The 12 to 1 o'clock position is recommended for the most effective use of the [RF/SQL] control.
- [RF/SQL] operates as only an RF gain control in SSB, CW and RTTY (Squelch is fixed open), or a squelch control in AM, FM, WFM and DV (RF gain is fixed at maximum sensitivity), when "Auto" is selected as the "RF/SQL Control" item in the "Function" Set mode. (p. 17-18)
  SET > Function > ***RF/SQL Control***

- **When used as an RF gain control**
  (Squelch is fixed open; SSB, CW and RTTY only)



While rotating the RF gain control, a faint noise may be heard. This comes from the DSP unit and does not indicate an equipment malfunction.

OTHER FUNCTIONS

❾ ANTENNA TUNER/CALL KEY [TUNER/CALL]

❍ ANTENNA TUNER KEY Operation
(pp. 16-5, 16-6)
(Frequency band: HF/50 MHz)

➥ Push to turn an optional automatic antenna tuner ON or OFF (bypass).

➥ Hold down for 1 second to manually tune the antenna tuner.

• If the tuner cannot tune the antenna within 20 seconds, the tuning circuit is automatically bypassed.

⓬ NOISE BLANKER KEY [NB] (p. 5-8)
(Mode: SSB/CW/RTTY/AM)

➥ Push to turn the noise blanker ON or OFF.
The noise blanker reduces pulse-type noise such as that generated by vehicle ignition systems. The noise blanker is not effective for non-pulse-type noise.

• "NB" appears when the noise blanker is ON.

➥ Hold down for 1 second to display the "NB" screen. Push to return to the previous screen.

OTHER FUNCTIONS

⓯ PREAMP•ATTENUATOR KEY [P.AMP/ATT]

❍ PREAMP KEY Operation (p. 5-2)

(Frequency band: HF, 50/70 MHz)

Push to select one of two receive RF preamplifiers, or to bypass them.

- "P. AMP1" is a wide dynamic range preamplifier. It is most effective for the 1.8 to 21 MHz bands.
- "P. AMP2" is a high-gain preamplifier. It is most effective for the 24 to 70 MHz bands.
- No indicator appears when the preamplifiers are not selected.

✔ What is the preamplifier?

The preamplifier amplifies signals in the front end to improve the S/N ratio and sensitivity. Select "P. AMP1" or "P. AMP2" when receiving weak signals.

❍ ATTENUATOR KEY Operation (p. 5-2)

➥ Hold down for 1 second to turn ON the attenuator.
- "ATT" appears when the attenuator is ON.

➥ Push to turn OFF the attenuator.
- "ATT" disappears.

✔ What is the attenuator?

The attenuator prevents a desired signal from being distorted when very strong signals are near it, or when very strong electromagnetic fields, such as from a broadcasting station, are near your location.

⓰ NOTCH KEY [NOTCH] (p. 5-10)

(Mode = Auto notch: SSB/AM/FM
Manual notch: SSB/CW/RTTY/AM)

➥ In the SSB and AM modes, push to toggle the notch function between auto, manual and OFF.
- Either the Auto or Manual notch function can be turned OFF in the "[NOTCH] Switch (SSB)/(AM)" items of the "Function" Set mode. (p. 17-21)
  [SET] > Function > ***[NOTCH] Switch (SSB)***
  [SET] > Function > ***[NOTCH] Switch (AM)***

⓮ NOISE REDUCTION KEY [NR] (p. 5-9)

➥ Push to turn DSP noise reduction ON or OFF.
- "NR" appears when noise reduction is ON.

➥ Hold down for 1 second to display the "NR" screen. Push to return to the previous screen.
- Rotate the Dial to adjust the DSP noise reduction level. Set for maximum readability.

IC-7100 USE

- Any Questions??