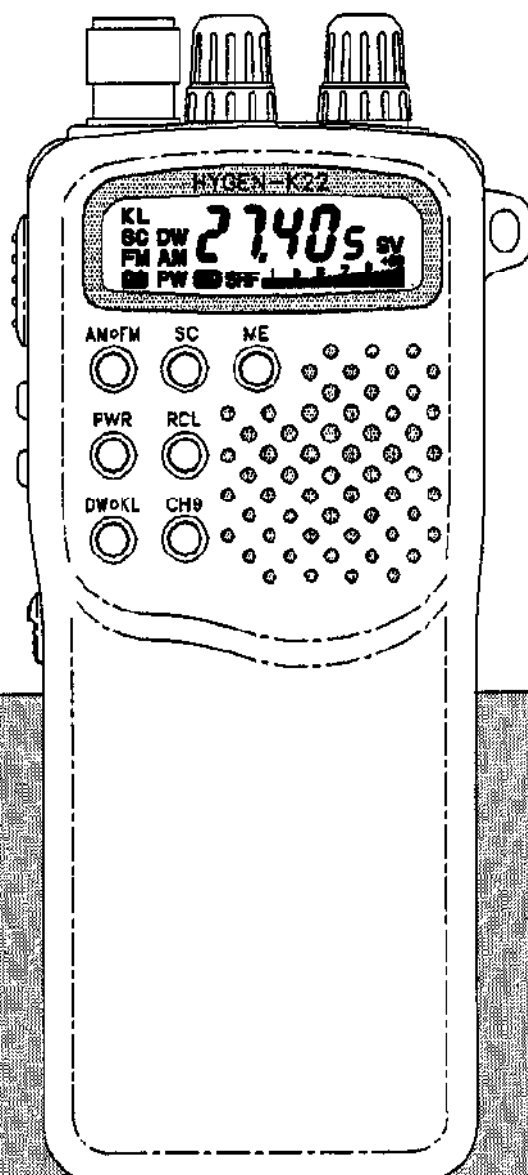


CB Com

HYGEN – K22

INSTRUCTIONS MANUAL



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**CITIZENS BAND
AM/FM 40 CHANNEL
BATTERY CASE DETACHABLE**

GENERAL INFORMATION SPECIFICATIONS

General information

Frequency Range : 26.965 - 27.405 MHz

Channel : 40CH

Model of Operation : F3E(FM), A3E(AM)

Antenna Impedance : 50ohm

Controls : Volume control with Power on-off,

Switch Variable Squelch, Auto Squelch switch,

UP/DOWN busy SCAN, POWER HI/LOW,

CH9, Light-On switch, AM/FM Switch, memory switch,

RPS switch

Speaker : 1 1/2 Inches 8ohm 0.5W

Microphone : Condenser Microphone

Power Supply : 10.9 Volt - 15.6 Volt, Nominal 13.8 Volt

Dimensions : 53.5(W) x 37.5(D) x 124(H) mm

Receiver

Sensitivity at S/N 10dB : 0.8uV(AM), 0.5uV(FM)

Selectivity : 6dB @ 5 KHz

AGC Figure of Range : 70dB

Squelch Range : 0.5uV - 1000uV

Audio Output Power : 0.5 Watts 8 ohm(10% Distortion)

Distortion at input 1mV : 3%

Audio Frequency Response : 400-2400 Hz

If Frequency : 1st 10,695 MHz, 2nd 455 KHz

Spurious Response : More than 45dB

Current Drain at Standby : 45mA standby current

20mA the save mode on.

Transmitter

RF output Power : 4.0 Watts

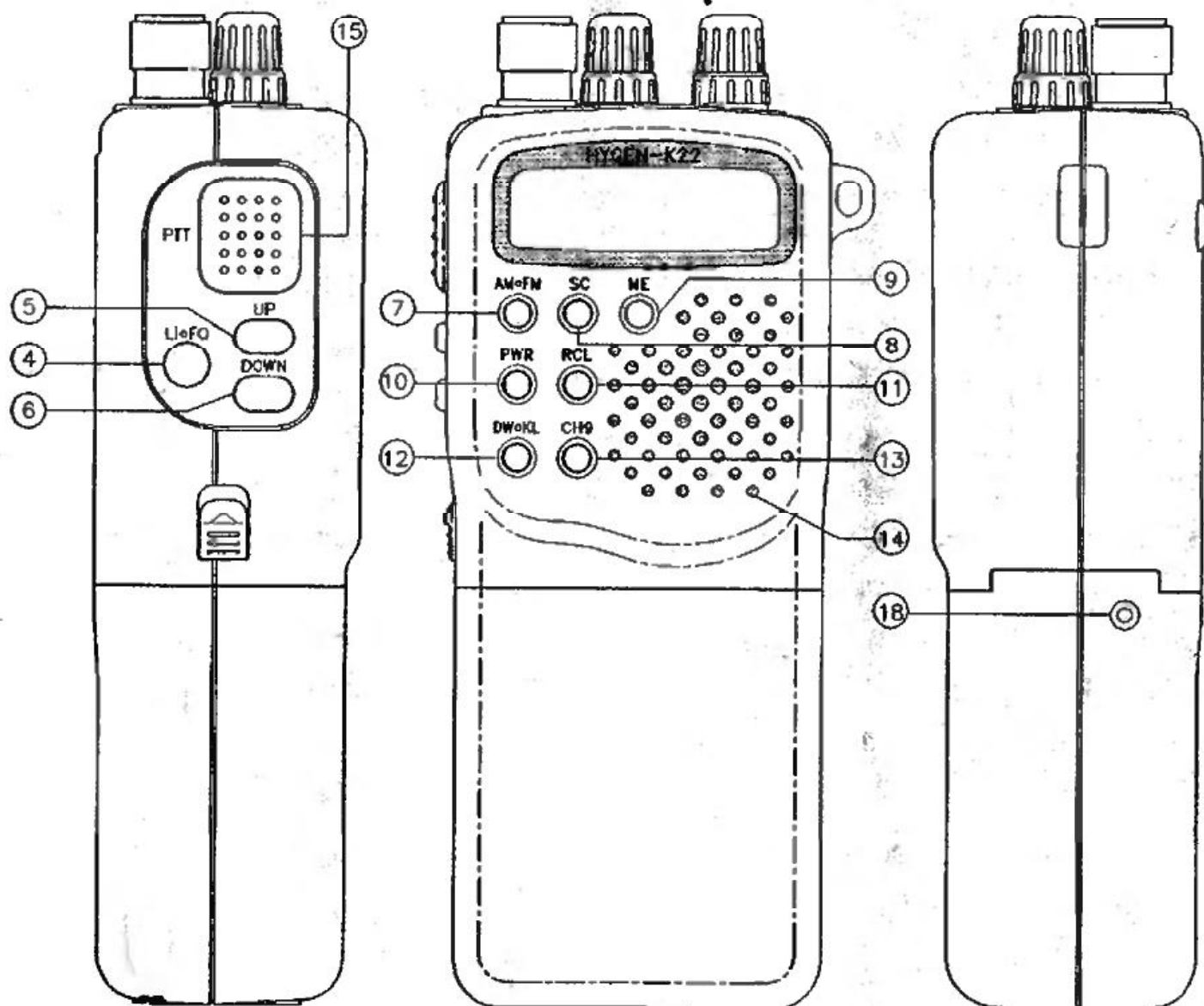
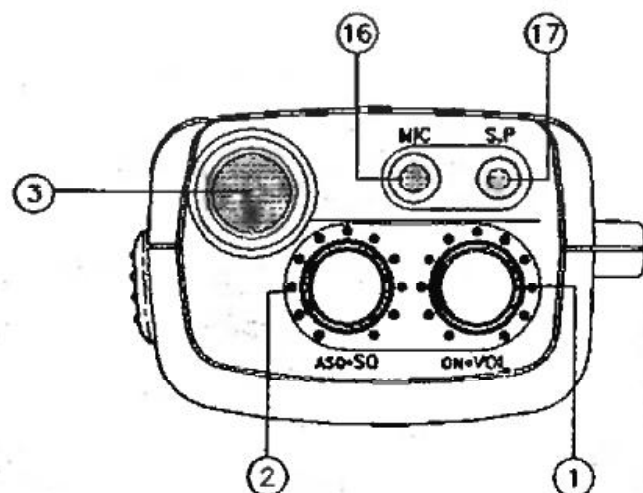
Frequency Tolerance : 0.005%

Harmonic Suppression : More than 70dB

Current Drain : 900mA

Modulation : AM 90% ($\pm 5\%$), FM Dev 2.0 KHz

DESCRIPTION OF FEATURES



DESCRIPTION OF FEATURES

1. **OFF/ON/VOLUME** : Turn clockwise to turn power on and set the desired listening volume.
2. **AUTO SQUELCH** : For the convenient use for noise reduction autosquelch function is very helpful. Off position of squelch knob makes auto squelch functioning so you don't need to adjust squelch knob any more.
SQUELCH . This control is used to cut off or eliminate receiver back-ground noise in the absence of an incoming signal. For maximum receiver sensitivity, it is desired that the control be adjusted only to the point where the receiver back ground noise or ambient back-ground noise is eliminated. Rotate clockwise until the receiver noise just disappears. This will require the incoming signal to be slightly stronger than the average receiver noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clock wise setting.
Automatic Noise Limiter : This is a non-switchable feature that is always on to reduce back ground noise.
3. **ANTENNA RECEPTACLE** . TNC connector for custom flexible antenna. For greater distance, it's recommended that a telescoping antenna be used. To order see accessories order form.
4. **BRIGHT FREQUENCY BUTTON** : Slight push of this button provides light for easier viewing of display in darkness. If you push this button for more than 2 seconds there shows frequency number of the channel with which you are communicating now.
5. **CHANNEL UP BUTTON** : Selects an upper channel when is pressed.
6. **CHANNEL DOWN BUTTON** : Selects an lower channel when is pressed.
7. **AM/FM SELECTOR** : AM/FM selection switch we recommend to use AM mode in case of distant communication. Then if you need clear hearing is better to use FM mode.

DESCRIPTION OF FEATURES

8. **SCAN BUTTON** : Press this button, the unit automatically SCAN to a busy channel when a busy channel is encountered. Then If this button is not pressed again after 5 seconds, the unit will scan on the another channel.

9. **ME(MEMORY)** : You can select preset memory from through 4 by pressing this button.

10. **POWER HIGH/LOW** : There are two levels of power available in CB mode.

Power high is for long range while power low for short range to save power consumption. There shows "PW" on LCD display when in power high and no indication is power low.

11. **RCL(RECALL)** . This button is used for 5 memory preset let the channel which you want to memorize appear on LCD.

Push this switch shortly then number 1 will appear. At upper-right side of LCD display. Push this switch again.

Now the channel was memorized at number and form number 2 through 5 which can be seletible with "ME" button be preset as above operation(by pushing RCL button).

12. DUAL WATCH/KEY LOCK

DUAL WATCH : This feature is like having two receivers in this model. It gives you the ability to monitor any two different channels in the given channels. Decide two channels which you want to monitor(say 10CH and 20CH).

when 10CH appears on the LCD. Press DW switch. There appeas "DW" symbol on the LCD. Next, please adjust 20CH with UP/DOWN switch and adjust squelch volume so as not come out noise.

Then 10CH or 20CH will appear attenatively by 0.5 second interval. If any channel stops and is fixed you can communicate with your partner of the fixed channel.

when communication is finished 10CH and 20CH is repeated as before. Pressing once more dual watch is released.

KEY LOCK . To prevent accidental change or activation of front panel keys, in CB mode press DW/KL switch and hold down for 3 seconds. You will hear two beeps when keys are locked. To unlock, Press DW/KL again for 3 seconds.

DESCRIPTION OF FEATURES

- 13. CH9** : Used for instant selection of emergency.
- 14. SPEAKER**
- 15. PRESS TO TALK(PTT)SWITCH** : The receiver and transmitter are controlled by the press-to-talk switch.
Press the switch and the transmitter is activated release switch to receive when transmitting(on a clear channel), Hold the HYGEN-K22 two inches from the mouth and speak clearly in a normal voice into the "MIC" microphone.
- 16. MICROPHONE JACK** : 2.5mm jack for connection of optional PTT microphone(see accessories order form).
- 17. EARPHONE JACK** : 3.5mm jack for connection of earphone for private listening(disconnects main speaker when earphone is in use.)
- 18. BATTERY POWER/CHARGE JACK** : This jack is used to provide power your HYGEN-K22 from your automobile, boat, RV, truck, etc. a power cord with a cigarette lighter plug is supplied for this purpose.
This jack is used to recharge the battery case when ni-cad batteries are used (see battery case instructions). An AC charger is supplied for this purpose. You can not charge your batteries using the cigarette lighter plug power cord.
Battery case of 6 cells are used AA battery only so this can't be used for recharge. Battery case of 8 or 10 cells for recharge with NI-CAD are used.

CAUTION

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

DISPLAY PANEL INFORMATION

Liquid Crystal Display

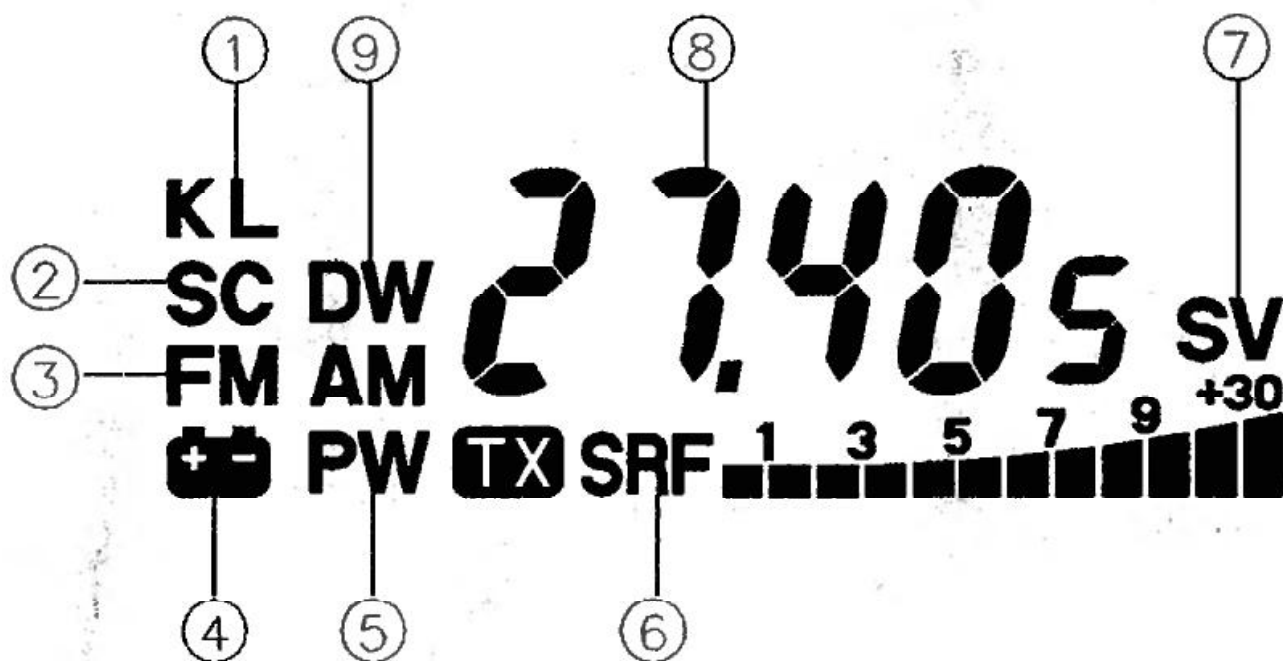
Your CB is equipped with a custom-designed liquid crystal display to indicate channel number, and operating modes.

CAUTION

Because of inherent limitations, liquid crystal display should not be subjected to extremes of temperature or humidity. If the unit is exposed to temperature below $-20^{\circ}\text{C}(-5^{\circ}\text{F})$ or above $+60^{\circ}\text{C}(+140^{\circ}\text{F})$, the liquid crystal display may temporarily cease to function properly, and in some cases permanent damage may result.

Do not subject radio to extreme conditions, such as a closed automobile in direct sunlight or continuous sub-zero temperatures.

All liquid crystal displays have a preferred viewing angle when the display contrast is maximum. The best viewing point depends on design considerations, temperature, and battery condition. Optimum viewing of the display is achieved by holding the unit so that the battery end is pointed about half-way between straight down and straight at the user.



DISPLAY PANEL INFORMATION

1. **KEY LOCK** : This function is used to prevent accidental change of channel with which you are now communicating or stand-by channel once key lock is activated function of DW, RA, AM/FM, SC and Channel UP/DOWN will not be operated until it is released. Press once again to release.
2. **SCAN** : Your HYGEN-K22 incorporates a scanning feature.
The HYGEN-K22 will scan through all 40 channels. It will stop at any busy channel. It will stay on that channel until five seconds after conversation has ceased and then it will resume scanning. To activate this feature, turn on the power and adjust the volume. Adjust the "SQUELCH". Depress the SCAN button to start scanning. The word B-SC will appear in the LCD display window and the unit will start scanning.
If you want to stop scanning you can push the scan button again or touch the push to talk switch. If the unit is scanning and stops on a channel that you want to talk to the other party, simply depress the push to talk switch. This will shut off the scanning function and transmit on that channel.
3. **AM/FM** : The selected operating mode will be displayed here.
4. **BATTERY LOW(BATT LOW)** : To let you know of a low battery condition, This symbol will appear.
5. **PW(POWER HIGH)** : When power button is pushed(see front panel) and shows "PW" you are now in power high mode for distant range communication.
6. **SRF** : Shows relative transmitter RF output and input signal strength when receiving.
7. **SAVE** : Your HYGEN-K22 Incorporates a battery save circuit. This extends the life of your batteries. If you are on a specific channel and no one is transmitting on for five seconds, the word "SAVE" will appear. If a signal appears, the receiver will go back to normal operation.
The SAVE switch is also overridden when you operate SCAN. This feature will greatly enhance the life of your batteries.

DISPLAY PANEL INFORMATION

8. **CHANNEL DISPLAY** : The selected operating channel (CB) or frequency will be displayed here.
9. **DUAL WATCH** : If you press DW button to monitor two receiver symbol of "DW" will be shown on the LCD.

BATTERY CASE INSTRUCTIONS

BATTERY INSTALLATION

We recommend using alkaline "AA" or rechargeable nickel cadmium batteries. Your battery case requires six "AA" alkaline cell. But you may use NI-CAD battery of 8 cells or 10 cells of which case we supply as option.

BATTERY RECHARGING

Caution

Use only the AC charger supplied with your Freecom K22. So as to avoid the possibility of improper charging, damage to the batteries, the unit, or an injury from burn or explosion of the battery or charger.

NEVER USE THE CHARGER WHEN USING ALKALINE BATTERIES. YOU CANNOT RECHARGE ALKALINE BATTERIES. Push gently on the battery door in the rear cabinet and slide out as arrow indicate. Please note, battery polarity is correctly positioned as indicated by embossed mark in side battery house.

INITIAL OPERATION

1. Rotate the power ON-OFF volume clockwise to turn the unit on.
Adjust the volume for normal listening levels.
2. Adjust the SEQUELCH control per previous instructions.
3. Select the desired channel by touching channel
"UP▲" or "DOWN▼" buttons

NOTE : IF THE CHANNEL WILL NOT CHANGE THE MEMORY SWITCH
MAY BE ENGAGED. IF THIS OCCURS.
TURN THE "EMERGENCY" MEMORY SWITCH OFF

4. Put the high/low power switch in the "H" position.

NOTE : IF YOU WISH TO USE SCAN ECT. REFER TO PREVIOUS
INSTRUCTIONS.

TO TRANSMIT

Press and hold in the push to talk button on the left side of the unit. Hold the HYGEN-K22 from your mouth and speak into the microphone in a normal voice.

TO RECEIVE

Simply release the push to talk switch.