ZARES - ZLUHF02 UHF Amateur Transceiver

This compact transceiver provides clear communications & selectable HI/LO transmit. Keypad or optional PC frequency entry with up to 99 user defined channels. Comes pre-programmed with the 23 most popular 70cm NI/SI repeater channels, which you can change. Each channel stores user defined TX/RX split for repeaters & CTCSS tone or DCS code for squelch. Cool blue LCD shows frequency, channel, TX power, battery condition & RX signal strength. Scan functions to monitor channels or step through the entire frequency range.

Features

- LCD display & direct frequency keypad entry
- 99 user programmable channels.
- Supports channel & frequency scanning
- Selectable 1W or 4W transmit power
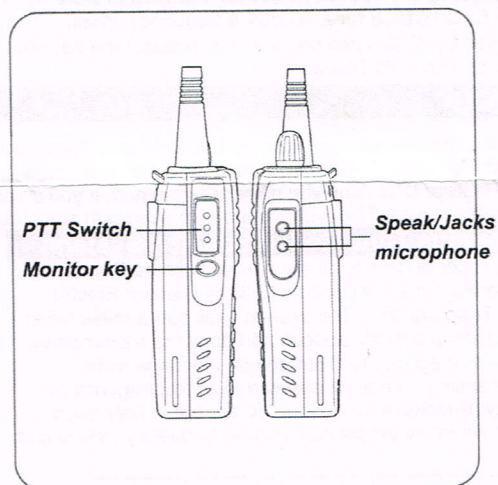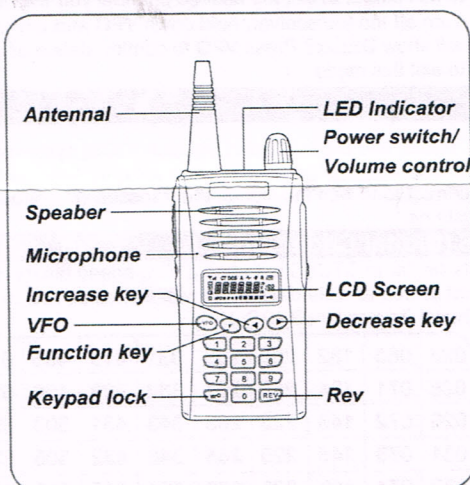- LCD and Keypad blue back light & Keypad key lock

Package Contents

1x UHF Transceiver
1x Drop-in battery charger & 12V charge lead
1x Antenna
1x Ni-MH rechargeable battery
1x Belt clip
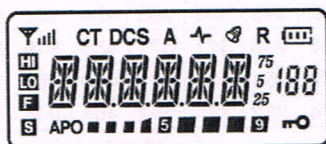1x Speaker / Microphone cover & 1x Cover Screw

IMPORTANT WARNINGS

- You need a license from the Ministry of Economic Development to legally operate this transceiver.
- This transceiver is not a toy. Do not allow children or infirm persons to play with it.
- The recommended use of this transceiver is 1 minute talk to 4 minutes receive. If you talk longer, the back will get hot. Beware of this and take adequate precautions.
- This transceiver is not waterproof. Do not leave it or store it in a humid, hot or damp environment or expose it to direct sunlight for prolonged periods.
- This transceiver has been optimized for use within the NZ amateur 70cm band only. If operated outside this band the stated specifications are not guaranteed.

- **DO NOT TRANSMIT WITHOUT THE ANTENNA** or you could permanently damage the transceiver beyond repair.
- This transceiver is not designed for, or use in, life support appliances, devices, or systems where malfunction of the product can reasonably be expected to result in personal injury.
- Do not use this transceiver near flammable liquids, fumes or where a spark could cause a fire.
- Do not short-circuit the transceiver battery, charge it with anything other than the provided charger, disassemble it or throw it away in a fire.
- This transceiver contains no user serviceable parts. Refer all repairs to authorized service personal only.

LAYOUT

Antennal
LED Indicator
Power switch/ Volume control
Speaker
Microphone
Increase key
VFO
Function key
Keypad lock
LCD Screen
Decrease key
Rev

PTT Switch
Monitor key
Speak/Jacks microphone

LCD SCREEN

Displays the working frequency menu selection and other function selection.

Displays the memory channel number in the MR mode.

Displays the HL/LO power output when transmittng.

ICON	EXPLANTION
Yull	Sigral strength indicator
A	Sigral scan indicator
⌁	Turn the speaker on
⌀	Turn key sound on
R	Reverse freqnency
HI	High power oupnt
LO	Lower power oupnt
S	Battery save
⌁O	Keypad Lock
▥	Battery indicator

CHARGE THE BATTERY BEFORE USE

The battery is supplied without a charge and MUST be charged before you use the transceiver. Screw on the antenna, attach the battery, plug in the charger and drop it into the charge cradle. When charged, the red light on the charge cradle will turn green.

www.zares.co.nz

OPERATION

The transceiver can operate in VFO, MR or Channel mode. VFO allows you to directly enter in the frequency you wish to use via the keypad. In channel mode, up to 99 pre-programmed channels can be selected, only the channel number is displayed. In MR mode, both the channel number and frequency are displayed. To switch between VFO and Channel modes, turn the transceiver off, hold down **F** and turn the transceiver on. If CH-xx (where xx is a number between 01 & 99) is displayed, it is in channel mode, otherwise it is in frequency mode. MR mode is selected by first entering VFO mode and then pressing **VFO**. If at least one channel has been programmed, the channel number will be displayed to the left of the frequency. Various operating parameters can be set in various modes as per the following table.

VFO	MR	CH	To adjust or set..	press	then press	and then press ◀ or ▶ to select these options..
✓	✓	✓	Squelch	F	1	**0** (off), **1** (min) to **9** (max)
✓	✓	✓	TX Power	F	2	**Lo, Hi**
✓	✓	✓	Scan	F	3	◀ to scan down or ▶ to scan up
✓	✓	✓	Backlight	F	4	**Auto, off, on**
✓	✓	✓	Key beep	F	5	**On, off**
✓	✓	✓	Key Lock	F	6	**Manual, auto.** You can also press and hold ⤶ for 2 seconds to cycle between locked & unlocked.
✓	✓	✓	Maximum Transmit Time	F	7	**Off, 10, 20, 30, 40, 50, 60, 70, 80** or **90** (seconds)
✓	✗	✗	Frequency Offset Amount	F	8	Key in the desired offset (00.000~99.995 MHz)
✓	✗	✗	Receive DCS or CTCSS	F	9	**OFF, CTCSS** tone or **DCS** code (as per forward tables). Pressing **F** again cycles between CTCSS or DCS.
✓	✗	✗	Transmit DCS or CTCSS	F	0	**OFF, CTCSS** tone or **DCS** code (as per forward tables). Pressing **F** again cycles between CTCSS or DCS.
✓	✗	✗	Frequency Step	F	⤶	**5.0KHz, 6.25KHz, 10.0KHz, 12.5KHz, 25.0KHz**
✓	✗	✗	Frequency Offset	F	REV	**S** (simplex), **+** (TX above RX) or **–** (TX below RX)

Ensure you are in the correct mode, press **F**, select the indicated key for the function you wish to change, use the ◀ or ▶ key to change the option (or as otherwise indicated above) and then **press the PTT button to save the option you have just changed.**

MEMORY CHANNELS

Adding a channel
- In VFO mode, set up the desired frequency you wish to store including any CTCSS/DCS tone or code & frequency offset.
- Press **F** followed by **VFO**. Then press ◀ or ▶ to select the desired channel number. Press PTT to store it.

Deleting a channel
- In MR mode, select the desired channel you wish to delete.
- Turn off the transceiver, hold down **VFO** and turn on. The display will show DELxx? Press **VFO** to confirm delete or any other key to exit this mode.

CTCSS & DCS

This transceiver is compatible with systems using Continuous Tone Control Squelch (CTCSS) and Digital Coded Squelch (DCS) systems. You can code each frequency with a specific CTCSS or DCS tone. When enabled and your transceiver receives multiple signals, you will only hear the transmission with the correct CTCSS or DCS tone you have programmed. If you do not receive the correct tone with the signal, the transceivers squelch remains "closed" and you hear nothing. The systems are also used with some radio repeater systems.

CTCSS (Continuous Tone Coded Squelch System)
Also known by a number of different trade names such as Private Line® (PL) by Motorola, Channel Guard® (CG) by General Electric and generically as Tone Squelch. The system uses sub-audible tones that are transmitted along with the speech portion of the transmission to allows more than one agency (or fleet) to use the same radio frequency without causing undue interference to another agency on the same frequency. Receivers for agency "A" are set to only open their audio squelch when the proper sub-audible frequency tone is part of the transmission.

67.0	85.4	107.2	136.5	165.5	186.2	210.7	254.1
69.3	88.5	110.9	141.3	167.9	189.9	218.1	
71.9	91.5	114.8	146.2	171.3	192.8	225.7	
74.4	94.8	118.8	151.4	173.8	196.6	229.1	
77.0	97.4	123.0	156.7	177.3	199.5	233.6	
79.7	100.0	127.3	159.8	179.9	203.5	241.8	
82.5	103.5	131.8	162.2	183.5	206.5	250.3	

50 groups of CTCSS (Hz)

DCS (Digital Code Squelch)
This is similar to CTCSS but uses a slow speed binary data stream passed as sub-audible data along with the transmission. Motorola calls this Digital Private Line® (DPL).

023	065	132	205	255	331	413	465	612	723
025	071	134	212	261	332	423	466	624	731
026	072	143	223	263	343	431	503	627	732
031	073	145	225	265	346	432	506	631	734
032	074	152	226	266	351	445	516	632	743
036	114	155	243	271	356	446	523	*645	754
043	115	156	244	274	364	452	526	654	
047	116	162	245	306	365	454	532	662	
051	122	165	246	311	371	455	546	664	
053	125	172	251	315	411	462	565	703	
054	131	174	252	325	412	464	606	712	

104+1 groups of DCS

SPECIFICATIONS

Frequency Coverage: 410.000MHz – 479.995MHz
Frequency Step: 5KHz, 6.25KHz, 10KHz, 12.5KHz, 25KHz
Programmable Channels: 99
TX/RX Split: User programmable from 00.000 to 99.995MHz
Emission Type: F3E (FM)
Antenna Connector: SMA
Antenna Impedance: 50 Ohms
Other Connectors: Speaker, Microphone
Standby Current: 10mA
Approximate Standby Time: 100 hours.
Supply Voltage: 6.0V
Battery: 6.0V 1200mAh Ni-MH
Charger: Drop-in. Requires 12~16V at least 100mA

Receiver Type: Dual conversion superhetrodyne
Receiver Sensitivity (12dB SINAD): ≤0.16µV
Adjacent Channel Selectivity: ≥70db
Audio Output: 0.5W
Audio Distortion: ≤5%
Transmit Power: 3.5~4.1W - selectable Hi or Lo
Frequency Stability: ±2.5PPM
Modulation Type: Variable reactance
Deviation (Max.): ±5KHz
NZ Supplier Code: Z726
Weight: Approx. 250g
Size (WxHxD): 56x106x32
Country of Manufacture: China

Specifications subject to change without notice or obligation.