A01 Global Radio User Guide

Your radio will arrive pre-programmed with predefined groups and assigned to your assembly default groups. Please contact your account administrator to be added to specific groups (channels).

Battery Charging:

The batteries do not leave the factory fully charged, please condition batteries for the best performance. To condition the battery, install in radio and fully discharge the battery before recharging. Once the battery is fully discharged, recharge the battery until fully charged. The red LED light indicates battery is charging and will turn green battery if fully charged. Repeat full discharge and recharge of battery three (3) more times to condition battery.

> Caution: Do not charge battery while the radio is powered on; this can cause premature failure or damage to the battery and/or radio. Either remove the battery to recharge or turn off the radio while charging. Note: The A01 radio comes with two batteries, so we recommend you remove and recharge the dead battery if you need to keep your radio operational while charging.
>
> Caution: If the LED light is blinking red while charging, this is due to the battery being too hot to charge or the battery is defective or broken. Allow battery to cool and try again, if the LED continues to blink red, replace battery.
>
> Caution: If the battery has poor capacity, it may need to be replaced, try reconditioning it by discharging and recharging 3 consecutive times. If the issue persists, replace battery.
>
> Caution: Do not put battery into fire or disassemble. The radio/battery should be charged between 32°F and 104°F, otherwise it may damage or affect the normal capacity of the battery.
>
> Caution: The radio may can cleaned with a neutral or mild detergent and a wet cloth after long term use outdoors. Do not use strong or corrosive chemical agents.

Warning: The risk of electrical shock, burn, and/or damage to battery may occur by metal objects such as keys, jewelry, or coins coming into contact with the terminals on the battery pack.

A01 Radio Product Key:

1. Assembled Antenna for Analog
2. Assembled Antenna for Network
3. Power / Volme
4. PTT for Network
5. PTT for Analog
6 &7 & 11. Customized Buttons by Program
8. Universal Connector of Accessories
9. Menu / Confirm
10. Back / Hangup, Long Time Press to Lock / Unlock the Keyboard
12. UP / Down
13. Long Press to Collect Frequency
14. Keyboard, " * " to Switch POC & Analog, " # " Change the Frequency Mode of VFO or CHL

Operating Reference:

To change any of the settings or functions, press the Menu/Confirm (product key #9) button, to enter the menu options. From the menu there are several options to choose from, described below.

Work Modes – This is where you select what operational mode the radio will function in. POC, Analog, Mix or Repeater. This setting determines how the radio functions and communicates. You can choose to operate using the desired mode to meet your needs: **POC**, **Analog**, **Mix**, or **Repeater**.

> **POC –** Selecting POC mode enables the radio's network-based communication functions only. This mode uses the smaller antenna and requires an active SIM and a network connection. If a network connection is unavailable or the SIM is not active, the radio will not function or communicate in POC mode.

Analog – Selecting Analog mode enables the radios VHF/UHF side of the radio only. This mode uses the large antenna and operates independently of the POC side of the radio. Range can be limited based on near line-of-sight in wooded or uneven terrain, and much farther in open areas such as farmland or prairies. Range may be extended when the radio is programmed to use existing repeaters in your area.

Mix – Selecting MIX mode enables both the POC and Analog modules of the radio. This allows for the most robust use case enabling communication with the network-based group channels and the localized analog talk around channels.

Repeater – Selecting Repeater mode enables your radio to function as a bridge repeater, allowing POC or Analog radios in your area to communicate with the selected analog channel or POC group channel selected on the radio. In Repeater mode the radio operates as a bridge between the POC and Analog radio channels selected. This allows analog radios to communicate to the selected POC group channel or the selected POC group channel to communicate with analog radios.

Group (Channel) – This is where you will find all the groups (channels) your radio is a member of which will include the default channel the radio powers up in as well as all other channels the radio is a member of and can be switched over to when needed. Once a channel is entered, the radio will remain on that channel until power cycled, or another channel is selected.

Enter Group – When selecting this option, you are setting the radio to actively receive (listen) and transmit on. Once the radio is power cycled, the default channel will become active again.

Monitor/Remove Monitor – When selecting this option, you are setting the radio to actively monitor the channel or not. If "Remove Monitor" shows when a group is selected, then it is actively monitored so that you receive communications from that channel on your radio, even when not selected as your active channel. If "Monitor" shows, when a channel is selected, the radio is not actively monitoring the channel, and you will not receive any communications that are transmitted on that channel. These can be user defined based on user or departmental needs.

Quick Call – When selecting this, it gives you the option to set a specific button on the radio to quickly select channel or group member without having to navigate through the menu options. Once set, for the channels you select, to access them, Pres SK1 and then select the programed quick call button for the channel desired and the radio will switch to that channel or group member.

Note: Once a group channel is selected, the radio will stay in that group unless you select a different channel or power cycle the radio. If quick call is set for a group member, when selected, it will create a private call channel that will stay

open as long as communicating but will close after 30 seconds of no communication and revert to the previous group channel.

SK1 – Refer to Product Key #6

SK2 – Refer to Product Key #7

Menu – Refer to Product Key #9

UP - Refer to Product Key #12

Down - Refer to Product Key #12

Exit - Refer to Product Key #10

P1 - Refer to Product Key #11

Member – This menu is where you will find the group members and friend members that you asked the administrator to add to your radio. When you select a call sign from either group, you are presented with two options, on is previously discussed in the group (channel) section for above, which is "quick call", the second is "mark".

Group Member – This is where you will find the call signs of the active POC group. If you want to open a private channel with a specific member of the group, select the call sign by highlighting it and key up radio by pressing the PTT for Network (product key #4) button on radio and a private channel will be opened between your radio and the call sign you selected. This channel will remain open for a limited amount of

time before the channel closes, and the previously selected group channel will become active again.

Mark –This option gives you the ability to create a "temporary private" group between your radio and all the group members (call signs) that you "mark". Once you have marked all the group members (call signs) you want to include in the temporary private group, simply key up the PTT for POC and everyone that you marked will be brought into the private group. This channel will stay open as long as radios are communicating but will close after a predefined amount of time if there is no communication and reverts to the previous active group channel.

Quick Call – Please see quick call under Group (Channel) menu option.

Friend Member – This is where you will find friend members (call signs) for users you have asked the administrator to add to your radio profile.

Mark – This option gives you the ability to create a "temporary private" group between your radio and all the members (call signs) that you "mark". Once you have marked all the members (call signs) you want to include in the temporary

private group, simply key up the PTT for POC and everyone that you marked will be brought into the temporary private group. This channel will remain open as long as radios are communicating but will close after a predefined amount of time if communications have stop and reverts to the previous active group channel.

Quick Call – Please see quick call under Group (Channel) menu option.

Channel Setting – This menu is where you will find the settings for the currently selected Analog channel of the radio.

Bandwidth – This is where you set the Analog bandwidth at either wide or narrow.

Output Power – This is where you set the analog radio transmit power to either high or low power. Low power is setting the analog radio to transmit at 5W, and High power is setting the analog radio to transmit at 10W. Caution – Not recommended to use for extended periods of transmissions when set to high power as exposure to elevated levels of radiation can be dangerous.

RX CTCSS & TX CTCSS – This is the analog radio receiver and transmitter squelch menu for the current selected analog channel. This is where you will set the squelch control of the channel to local repeaters or preset settings to enable radio communications on that channel and filter out chatter on the same frequency.

CTCSS – Continuous Tone-Coded Squelch System, is a feature on two-way radios that filters incoming signals based on a specific sub-audible tone embedded in the transmission. It allows the radio to unmute and play audio only when it detects a signal carrying the correct CTCSS tone, typically ranging from 67 to 254 Hz. This reduces interference by blocking signals from other users or devices on the same frequency that does not include the matching tone. Many repeaters require a Continuous Tone-Coded Squelch System (CTCSS) tone to access them, which is separate from the offset but often programmed alongside it. Essentially, RX CTCSS acts like a gatekeeper, ensuring your radio only "listens" to transmissions with the pre-set tone, improving clarity in crowded radio environments.

NDCS – Noise Digital Coded Squelch, which serves a similar purpose to CTCSS but uses digital codes instead of sub-audible tones. While CTCSS relies on continuous analog tones (e.g., 67–254 Hz) to filter incoming signals, NDCS uses a digital data stream transmitted alongside the audio to control the squelch. In NDCS systems, the radio's receiver unmutes only when it detects the correct digital code, blocking unwanted signals.

IDCS – KaYoTom Proprietary Digital Coded Squelch, which serves a similar purpose to CTCSS but uses digital codes instead of sub-audible tones. While

CTCSS relies on continuous analog tones (e.g., 67–254 Hz) to filter incoming signals, IDCS uses a digital data stream transmitted alongside the audio to control the squelch. In IDCS systems, the radio's receiver unmutes only when it detects the correct digital code, blocking unwanted signals.

Offset Setting – The frequency difference between a repeater's input and output frequencies, typically expressed in kHz or MHz.

Offset Direction – Indicates whether the transmit frequency is above (+) or below (-) the receive frequency.

Offset Frequency – Set to the offset frequency of the repeater you are connecting to. Standard offsets vary by band and region, but in the U.S., common offsets are:

2-meter band (136–174 MHz): ±600 kHz

70-centimeter band (420–450 MHz): ±5 MHz

Channel Name – Custom user defined field typically set to the name of the repeater station, city of repeater or call sign.

Jumping Frequency – Used to enable frequency hopping on channel. This is not a standard used much, however, if the repeater is set up to use frequency hopping, then enable this for the channel. Otherwise, leave off.

Study Code – Used to learn the sub-tones of a repeater, not traditionally used as radio can be preprogrammed. Not recommended unless radio is connected to repeaters and cloning the channel wirelessly is not compatible.

Analog Setting – Used to adjust the analog settings of the radio.

Squelch Level – Adjust from level 0 through level 9 to set sensitivity of the squelch to silence static.

TOT – This is the time-out timer (TOT) setting designed to limit the duration of a single transmission to prevent issues like overheating, channel hogging, or interference.

Power Save – This setting is used to adjust the power saving level, zero (0) is no power saving and three (3) is the highest level of power saving.

Zero – When selected, the radio is in standby mode and does not conserve power.

Level 1 – When selected, the radio will rest for one (1) second and normal standby for one (1) second.

Level 2 – When selected, the radio will rest for two (2) seconds and normal standby for one (1) second.

Level 3 – When selected, the radio will rest for three (3) seconds and be in normal standby for one (1) second.

Level 4 – When selected, the radio will rest for four (4) seconds and be in normal standby for one (1) second.

BCLO – Busy Channel Lockout (BCLO) is a feature that prevents a radio from transmitting on a frequency or channel if it detects an active signal (i.e., the channel is "busy"). This ensures you don't interrupt ongoing communications or cause interference. When you press the PTT (Push-to-Talk) button, the radio checks for an active signal on the current frequency or channel. If a signal is detected (e.g., another station is transmitting), BCLO blocks transmission and may emit a warning tone or display an error (e.g., "Busy" or a beep). If the channel is clear, transmission proceeds normally.

Step Size – This is the increment (in kHz or MHz) by which the radio changes the frequency when tuning in VFO mode. It determines how fine or coarse the adjustments are when manually selecting a frequency.

Auto Freq Detect – Auto Frequency Detect (AFD) is the radio's ability to automatically identify active frequencies or channels within a specified band (e.g., VHF or UHF). It involves scanning to detect frequency and learn tones or codes to identify CTCSS/DCS, allowing the radio to lock onto and configure settings for communication.

Channel Clone RX – Channel Clone RX is the process of copying channel configurations (e.g., frequency, offset, CTCSS/DCS, power level) **to** the radio from a radio of the same model. It ensures the radio channels have identical settings for consistent communication, especially in group scenarios (e.g., family, construction, or emergency use). **Note**: The radio receiving the channels needs to be set up and activated prior to the radio transferring the cloned channels.

Channel Clone TX – Channel Clone TX is the process of copying channel configurations (e.g., frequency, offset, CTCSS/DCS, power level) **from** a radio to another radio of the same model. It ensures the radio channels have identical settings for consistent communication, especially in group scenarios (e.g., family, construction, or emergency use).

Programming or changing analog channel frequency – To change the frequency of a programmed channel or to program a new channel, place the radio in VFO mode. To get into VFO mode, press "*A/B" key on the radio until the ► symbol on the left side of the screen is on the analog portion of the screen. Once there, press the "#DTFM" key and the radio screen should reflect the radio is in VFO mode. You can change the frequency to the desired setting. To save to an existing or new channel, simply press and hold the "*A/B" key down until asked which channel you would like to "write" the frequency too. Entering the channel number (001-200) where the frequency will be saved and press the

"*A/B" key again to save/write the frequency to the channel you selected. You can then proceed to make necessary changes to the newly programmed channel by referring to the Analog settings.

POC Setting – Push-to-Talk over Cellular (PoC) uses cellular networks (e.g., 4G LTE) or Wi-Fi to provide instant, walkie-talkie-like communication over vast distances, unlike analog radios limited by radio frequency range. The A01's PoC mode supports global connectivity, group calls, and features like GPS tracking and encryption.

Profile – A predefined audio setting for the radio to reliably work in every environment. The volume of the speaker will change depending on the profile selected.

Outdoor – Speaker audio will be slightly higher than the standard audio specifications.

Standard – Speaker audio profile is set to standard audio specifications.

Indoor – Speaker audio profile is set to slightly less than the standard audio specifications.

Earphone – When selected, this will disable the radio speaker and route it to the earphone or speaker/mic.

Mic Mode – This setting is used to increase or decrease the mic sensitivity to be heard more clearly on the receiving (RX) end of the transmission.

Low – This will be a slightly less sensitive and should be selected if users or dispatch are telling you that your audio is too loud.

Middle – This is the default setting of the radio mic

High – This will enable the mic to be slightly more sensitive and should be selected if users or dispatch are telling you that they are having a hard time hearing you come over the radio.

Power Save Configuration – This setting is where you can select your preferred power saving mode. This uses a heartbeat synchronization to the server in predefined intervals to let the server know the radio is still online and connection is functioning properly.

Power Save Level – Gives you four (4) different profiles to choose from.

High Performance – This setting has is sending a heartbeat every 15 seconds.

Standard – This setting has is sending a heartbeat every 30 seconds.

Power Save – This setting is sending a heartbeat every 45 seconds.

Automatic – This setting is specified by the server for the heartbeat interval.

Sleep Switch – This setting should not be activated in the current version of radio as this could result in abnormal behavior. Recommended to keep disabled (off).

Super Power Save – This setting should not be activated in the current version of radio as this could result in abnormal behavior. Recommended to keep disabled (off).

SIM Select – This menu gives you the choice to manually select between two different SIM cards, if the radio has more than one installed. Since the AO1 radio only has a single SIM Card slot, this menu setting and any sub-menu settings are not applicable

SIM1 – A01 Radios are shipped with one active SIM card activated and installed in SIM1 slot.

SIM2 – No SIM2 slot available on A01 radios

Auto SIM Switch – When enabled (on), the device automatically identify which card slot has a SIM card, due to the A01 radio having a single SIM card slot, this setting has no significant impact on the radio.

Beep – This function enables or disables an audible "beep" when pressing the POC PTT button. This can be turned on or off.

Time Zone – Time zones to select for radio clock to reflect correctly. Set to your current Universal Time Clock zone setting. This will ensure the radio time is correctly set. UTC-12 through UTC+14

Sound Quality – This setting is used to select which audio codecs are used. Both RX and TX radios or dispatch console should be using the same sound codec to ensure there are no issues with sound quality.

Standard – When selected, this is setting the radio to use an 4K sound codec.

High Definition – When selected, this is setting the radio to use an 8K sound codec.

APN Auto Conf. – Sets whether the radio is set to automatically acquire the cellular carrier's APN or not. This is set either on or off and not recommended to turn on as the radios are preconfigured to a specific APN.

Dispatcher – This is where you will find SMS messages from dispatch.

Message List – From this menu, you can see all received messages, read messages, see message details and delete individual messages.

Delete All – This will delete all messages from radio.

Phonebook – Used to add, remove and store contacts to make voice calls, just like a normal cellular phone. The SIM card that is provided is just a basic IoT SIM card and is only capable of POC traffic and cannot make phone calls. If you want to implement the function of making phone calls, you will need to replace the SIM with one that has voice service capabilities. It is important to verify the version of the A01 software is at v1.08.01.04 or higher. If it is not, the radio will need to be upgraded to support voice services. Caution: This has not been tested for full function with the APC system, so there is the possibility of it not working "as advertised".

Phonebook list – Shows you the list of stored contacts.

New – There is where you add a contact name, number and save them to the phonebook list.

Delete All – This will delete all contacts from Phonebook list.

Call Log – This is where you will find the call history of previous calls.

Settings – This is where you will find general radio settings.

Voice Prompt – When enabled (on), the radio will announce the Username (call sign) and default group channel when powered on. It will not do so if disabled (off).

Backlight – This is where the screen backlight and call backlight settings for the radio are found.

Backlight – Can be set to be on continuous or from five (5) to thirty (30) seconds before the screen turns off.

Call Backlight – Is set to either on or off and only applies to voice calls.

Beep – This setting is either On or Off. When turned on, there will be an audible beep when buttons are pressed; when off, no sounds are heard.

Earphone Recognition – This setting can be set to Automatic or Manual. When in automatic mode, the radio will automatically detect when earphones or speaker mic is connected to the radio. When in manual mode, you must select whether the radio is using the built in speaker/mic, earphones, or remote speaker/mic. Highly recommended to leave set to automatic as this can cause problems if end user disconnects earphones or remote speaker/mic, the user will not be able to transmit (TX) or receive (RX).