

4-User Full-Duplex Radio

Yapalong-4000 EU

User's Manual



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License-Free and Licensed Modes for EU Model

EU Model supports 2 modes: License-Free mode and Licensed mode.

License-Free Mode

Each time the EU radio is turned on, it is automatically in License-Free mode. When in License-Free mode, the GREEN LED flashes every 2 seconds while the RED LED is solid on.

Licensed Mode

Here is the procedure to enter Licensed mode:

1/ Turn off all the radios in the group.

2/ Turn on any one radio. After the GREEN LED starts to flash, press and hold the POWER button and the small AUX button together for 2 seconds. The GREEN LED will be off.

3/ Do the same for the rest of the radios ONE BY ONE, not at the same time. Now all the radios in the group are in Licensed Mode.

Frequency Allocation of EU Model

The central frequency of License-Free Mode is
869.525 MHz

The central frequencies of Licensed Mode are
865.651 MHz
866.401 MHz
867.151 MHz
867.901 MHz
868.651 MHz
869.401 MHz
870.151 MHz

Temporary license may be required depending on the region of Europe that the radios are used. When in Licensed mode, the radio itself chooses a clear frequency by its Auto-Scan function.

We apologize for the inconvenience. We try our best to comply with the EU regulations.

SPECIFICATIONS

FCC ID: UJW-4000
 IC: 6695A-4000
 Model: Yapalong4000

Radio Frequency	Unlicensed ISM band 900 MHz (Yapalong4000 AM) 800 MHz (Yapalong4000 EU)
Group Size	8 talkers (Yapalong4000 AM) 4 talkers (Yapalong4000 EU) Unlimited listeners
Wireless Network	Auto channel selection no-master TDMA/peer-to-peer
Digital Modulation	FSK
No. of Channels	8
Range	up to 900 meters line-of-sight
Size	164mm x 64mm x 22mm
Weight	125 grams
Power Rating	27 dBm/ 500 mW
Power Source	Lithium polymer, 3.7 V, 1700 mAh
Power Durability	8 hours or more after being fully charged
Operating Temp Range	-20 °C ~ 50 °C
Sensitivity Adjustment	5-level
Safety Rating	Lead free, RoHS compliance
IP Rating	IP54, splash proof

Full-Duplex Radio

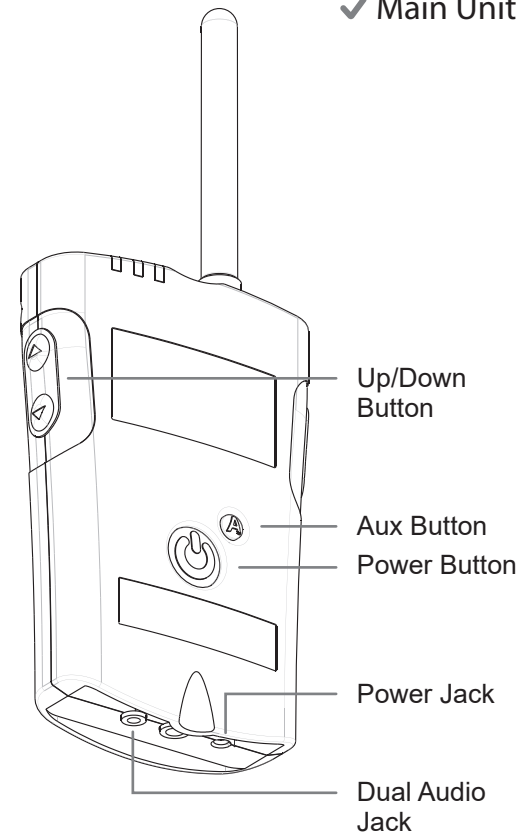
Yapalong4000

User's Manual
 8-User (AM)/4-User (EU)

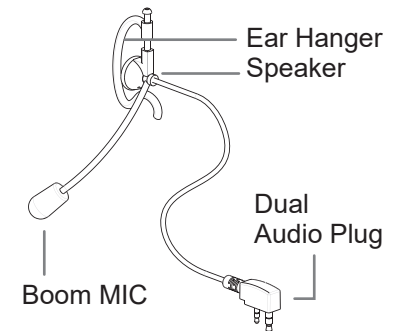
Please activate your warranty @ yapalong.com/pages/warranty

YOU ARE RECEIVING THE FOLLOWING:

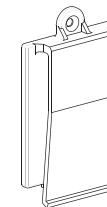
✓ Main Unit



✓ Headset

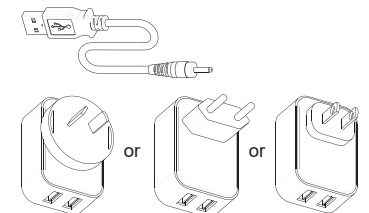


✓ Belt Clip



✓ Charger

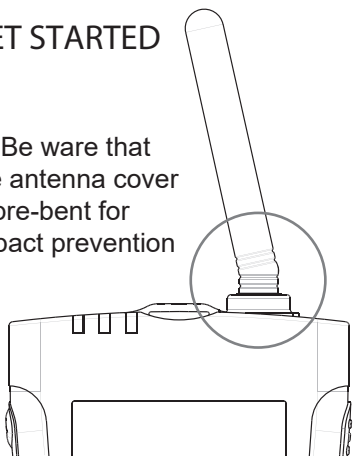
Adaptor with cable(s)



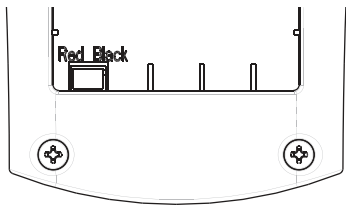
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GET STARTED

1. Be ware that the antenna cover is pre-bent for impact prevention



2. The rechargeable Lithium polymer battery is pre-installed. For future battery replacement, make sure the battery connector is plugged into the socket with the color of the cables matching the polarity "Red Black" shown on the case. For your safety, use only battery provided by Yapalong.

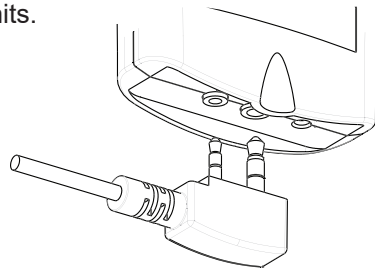


3. Turn Yapalong unit on by holding down POWER button for 2 seconds until RED LED turns on.

4. If the AMBER LED blinks every 2 or 5 seconds or there is no LED light at all, battery needs to be charged. Plug the adaptor to the wall outlet. Then plug the barrel connector of the cable into the power charging jack. Turn off the unit during battery charging will speed up the charge time. AMBER LED turns on during charging and GREEN LED turns on when battery is fully charged.

5. If RED LED remains on with high intensity, it means it cannot detect other group unit due to various reasons: no group unit powered on; group unit out of range; unit in different group (refer to "Binding Procedure" to do grouping).

6. If RED LED remains on with normal intensity, it means it has detected group unit(s). Plug in the headset as show in the figure. The unit is now ready to be used with other powered-on group units.



7. To adjust the sound volume, press UP or DOWN button, repeatedly if necessary, until desired volume is reached. To adjust the microphone sensitivity, while holding down AUX button, press UP or DOWN button, repeatedly if necessary until desired sensitivity is reached. Now every member in the group can talk freely and listen at the same time.

8. To turn Yapalong unit off, hold POWER button 2 seconds until RED LED flashes 3 times. Then the unit powers down.



SAFETY WARNING !

Don't hold Yapalong too close to your head when in use.

INDUSTRY CANADA COMPLIANCE STATEMENT

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power(e.i.r.p.)is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC INFORMATION TO USERS

This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and receiver;
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.


Consult the dealer or an experienced radio/TV technician for help.

WARNING: Changes or modifications not expressly approved by Nautic Devices Inc. could void the user's authority to operate the equipment.

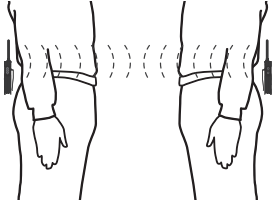
FOR CLASS B – UNINTENTIONAL RADIATORS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operations.

HOW TO MAXIMIZE RANGE

 When worn, always point the antenna upwards for the best range.

To obtain maximum range is to eliminate blocking obstacles at line of sight. The range is greatly reduced when the obstacle is very close to the antenna. We need to avoid the following scenarios:



CLOSE BODY BLOCKING

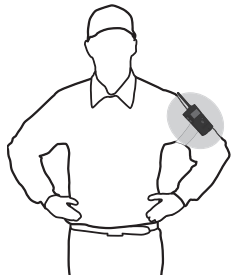
1. placing bodies in between antennas causes communication signs being blocked



ANTENNA TOUCHING BODY

2. Human body is mainly water so it absorbs RF wave. Water absorbs RF (radio frequency) wave.

WEARING POSITION ANALYSES:



★★★

No close body blocking
No RF absorption



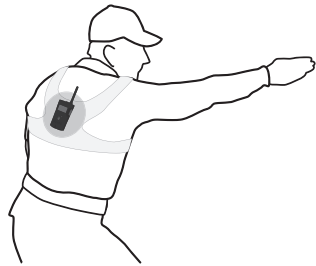
★★★

No close body blocking
Partial RF absorption



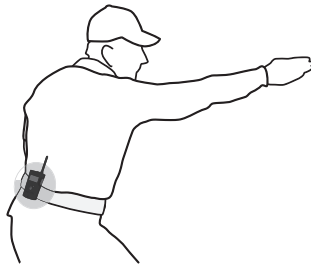
★★★

Partial close body blocking
due to low position
Partial RF absorption



☆☆☆

Total close body blocking
Partial RF absorption



☆☆☆

Total close body blocking
Partial RF absorption

BINDING PROCEDURE

Note:

Binding needs to be done under minimum radio interference environment, which means no cellphone, no computer, no Bluetooth, and no electrical control panel nearby.



After binding, there is NO need to do binding again next time for the same group, until new radio(s) being added to the group.

A. BINDING PROCEDURE FOR REGULAR UNITS

1. Power down all units with good batteries installed.
2. Power up 1st unit until RED LED is solid on. Hold down UP and DOWN buttons simultaneously for 3 seconds until GREEN and AMBER LEDs begin to flash alternately. Release buttons for 5 or more seconds, both LEDs stop blinking and all 3 LEDs remain solid on.
3. Power up 2nd unit until RED LED is solid on. Hold down UP and DOWN buttons simultaneously for 3 seconds until GREEN and AMBER LEDs begin to flash alternately. Release buttons for 5 or more seconds, both LEDs stop blinking and only RED and GREEN remain solid on. If AMBER is also on, restart Binding from Step1.
4. Repeat Step3 for the rest units until the binding for all the units is done. If in doubt, repeat the entire procedure.



Power off all the units to exit binding mode.
The radios in binding mode cannot communicate.

B. ORDER FOR BINDING LISTENER UNITS

LISTENER units can be added to existing Yपालong group as listen-only units. Regardless of the previous grouping state, the entire group has to be bound again. The binding procedure is the same as the one for REGULAR units.

In addition we need to follow the order below to bind:

1. Set 1st REGULAR into Binding mode.
2. Set 2nd REGULAR into Binding mode.
3. Set all LISTENERS into Binding mode one by one.
4. Set the rest REGULARs into Binding mode one by one.

INSTRUCTION FOR USE

TURN ON	Hold down POWER button approx. 2 seconds until RED LED turns on. Then release button.	RED LED will remain on at a lower intensity if your unit hears other unit(s) in the same group; otherwise the RED LED will be extra bright.
TURN OFF	Hold down POWER button approx. 2 seconds until RED LED flashes 3 times. Then release button.	All LEDs are off in power down mode except battery charging indicator.
VOLUME UP	Press UP button to move up one level at a time until desired level.	GREEN LED flashes once unless maximum level is reached. There are 6 volume levels.
VOLUME DOWN	Press DOWN button to move down one level at a time until desired level.	GREEN LED flashes once unless minimum level is reached.
MIC MUTE	Press AUX button until GREEN LED flashes 3 times.	Continuous slow blinking of RED LED indicates microphone being muted. When microphone is muted, other Yapalong units cannot hear you but you can hear the others.
MIC REACTIVATE	Press AUX button until GREEN LED flashes 3 times.	RED LED slow blinking stops. Back to normal operation.
INCREASE MIC SENSITIVITY	Hold down AUX button then press UP button to move up one level at a time until desired level.	GREEN LED flashes twice unless maximum level is reached. Increase microphone sensitivity if you want to speak softly in a quiet environment. There are 5 sensitivity levels.
DECREASE MIC SENSITIVITY	Hold down AUX button then press DOWN button to move down one level at a time until desired level.	GREEN LED flashes twice unless minimum level is reached. Decrease microphone sensitivity when background noise is loud. Speak closer to the microphone to compensate.
FORCE SYNC	Press power button momentarily forces the unit to re-establish sync with the rest of the group.	

LIGHT INDICATIONS

RED LED	Solid with extra brightness	Out of range indicator. Your unit cannot receive RF signal from any unit in the group. Power on other units, or move closer to each other.
GREEN LED	Solid	Battery is fully charged.
AMBER LED	Solid	Battery is being charged.
AMBER LED	Flash every 2 seconds	Battery is low.
AMBER LED	Flash every 5 seconds	Battery is very low. Then the unit turns off automatically.

POWER UP A GROUP

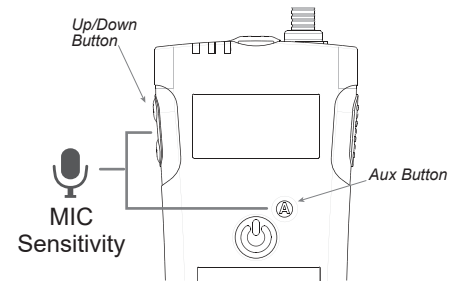
Power on one of the radios at the location where the radios to be used. Wait until the red light of the radio becomes solid, then power on the rest radios.



Power on all the radios at the place where they will be used. It is not recommended to power on all the radios at one location (e.g., locker room), then use them at another (e.g., football field). This is needed because the radios auto scan the surroundings for the cleanest channel upon being powered on.

MIC SENSITIVITY ADJUSTMENT

MIC sensitivity sets the minimum level of sound loudness that the microphone can pick up. The higher MIC sensitivity is, the slighter sound is picked up by the microphone. It is good practice to lower MIC sensitivity in a noisy environment so that other users will not hear so much background noise.



Yapalong4000 MIC sensitivity is divided into 5 levels. The default level is 4. Press Up/Down and AUX buttons simultaneously to adjust MIC sensitivity. Be sure not to press AUX button alone, which will mute the radio.

FORCE SYNC TO RESUME

After the radio is taken out of range and brought back into range, its communication to the group will resume automatically. If the communication is not resumed immediately, as indicated by extra bright red LED light, you may press POWER button 1-3 seconds on this radio to force the sync. Restart the radio is also a good way to resume the communication.