

EasyHear

Hearing Device

User Manual



TC (Total Communicator)

Powered by Logital Co. Limited

EasyHear _____ TC

EasyHear* Brand Name

EasyHear (EH) Total Communicator (TC) is an assistive hearing device developed by Logital Co. Limited.

The Chinese brand name of EH is “清晰聽” in Hong Kong, “易耳通” in Taiwan and “易耳聽” in China.

* In United States, it is called SuperHear (SH).

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Introduction

Welcome

Thank you for purchasing EasyHear Total Communicator (TC). We are sure that you can enjoy the convenience and reliability of using this hearing device. This manual will offer you guidance on the operation and information about safety and troubleshooting, etc.

Environmental Information

This product has been designed to comply with international directives on the Restriction of Hazardous Substances (RoHS), FCC and CE certification.

Notes on Copyright

This product incorporates copyright protection technology and intellectual property rights (patent pending) owned by Logital Co. Limited. Brand name(s) mentioned in this manual is/are trademark(s) of Logital Co. Limited.

Caution: Please Read

FOR EASYHEAR MAIN UNIT:-

Safety Information

- In order to save power, remember to power off EasyHear (EH) when it is not in use.
- Always supervise children using EH.
- As a matter of auditory training, increase EH's volume level gradually over time, such as in 2 months.
- Listening at uncomfortably high volume levels, particularly over extended periods of time, may damage your hearing.
- Should you notice an abnormality in the AC power adapter, disconnect it from the AC outlet immediately.
- Keep EH dry and away from direct sunlight.
- Do not expose EH to excess liquid, moisture or humidity.
- Do not expose the battery to temperatures above + 40°C or below -10°C.
- Do not expose EH to open flames.
- Do not disassemble EH.
- To avoid the "pop" noise, do not switch off the power in FM radio mode.

- Do not drop EH or subject it to strong shock.
- No user serviceable parts inside.
- Only use power adapter with output DC 5V, 800mA for battery charging.

Notes on Children (3 years or under)

Keep out of children's reach other than child users of EH. Do not allow children to play with your EH or its accessories. They could hurt themselves or others. The children could accidentally damage the product or accessories. EH or its accessories may contain small parts that could become detached and create a choking hazard.

Declaration on the Supplied Accessories

Please use original Logital accessories. Use of third-party accessories may decrease product performance and/or pose a risk to personal safety.

Loudness Warning

Improper use may be harmful to your hearing. On first time of use, please turn down the volume level before listening to EH after its power is on. When you are accustomed to EH's volume, gradually increase it over time.

FOR EARPHONES:-

(1) Safety Information

- Do not use the earphones in other ways than described in this manual.
- Keep the earphones and their accessories out of reach of children. Handling or use by children may pose a threat of death or serious injury. The earphones contain small parts and a cord that may pose a risk of choking or strangulation.
- If an ear bud becomes lodged in your ear, seek medical assistance to remove the ear bud. If removal is performed without proper medical assistance, the ear may be damaged.
- Before inserting the earphones, make sure that the ear buds are attached firmly to the earphones.
- If the earphones cause discomfort or irritation, stop using them. Consult a physician or audiologist if needed.
- Handle the earphones with care and store them in the provided carrying case.
- Do not expose the earphones to extreme temperatures or to strong magnetic fields. Do not immerse them in liquid. Avoid sharp blows to the earphones.

- Keep these instructions and recommendations so you can review them in the future.
- Risk of explosion if battery is replaced by an incorrect type.
- Use only with BL-5J Lithium Battery.

(2) How to Use

Only use the earphones with EH and its original parts. Never use accessories from other manufacturers. They are not compatible with EH and can modify the frequency response of your earphones and/or the EH main unit, damage them or even cause injury.

Original accessories can be purchased from authorized EH dealer(s).

a. Wearing the Earphones

The earphones can deliver the best performance if correctly inserted in the ears and if absolute sealing is achieved. To achieve the best performance, proceed as follows:

1. Identify the left and right earphones.
2. Hold the earphones with the cable pointing down, and the ear buds towards your head.

3. Insert the ear buds into your ear canals with a gentle push. Do not force the earphones into the ears. If you feel that the ear buds are too loose (insufficient sealing) or too tight (discomfort), try using another size.
4. The ear buds should seal the ear canal and fit without any discomfort.

To remove the earphones from the ears, hold them by the bud and pull them out gently with a small rotation in order to break the sealing.

Do not pull on the cable to remove the earphones from your ears!

b. Ear Buds

The earphones come with ear buds and are washable. To change the ear buds, grab each ear bud in the middle and pull it slowly until it comes loose. Do not use your fingernails or any other sharp object to remove the ear buds, as otherwise they could be damaged.

(3) Maintenance of the Earphones

To extend the lifetime of your earphones, keep them clean and follow the recommendations below.

- The ear buds should be cleaned regularly with water and mild soap, or with an antiseptic wipe. Always make sure that the ear buds are dry before reusing.

(4) Optional Accessories

To enhance your listening experience with the earphones and EH, we recommend that you opt for a pair of custom-made earmolds, to be attached to the earphones and replace the standard ear buds. For the severely to profoundly hearing-impaired users i.e., those with hearing loss of 70dB or worse in their better ears, this recommendation is particularly relevant. For further information on how to acquire custom earmolds, please contact authorized EH dealer(s).

Specifications

In the box

- ◆ EasyHear Total Communicator x 1
- ◆ Rechargeable BL-5J 3.7V 1250mAh Battery x 1
- ◆ EasyHear Stereo Earphone Cable x 1 with S size Ear Buds fitted
- ◆ L and M size Ear Buds x 1 pair each
- ◆ USB Charging Cable x 1
- ◆ User Manual x 1
- ◆ Earphone Cable Bag x 1

Operation and Charging Time

- ◆ Normal battery duration:
about 8 – 9 hours if Bluetooth is disabled.
- ◆ Normal charging time:
 - about 2 – 3 hours when using 5V 800mA power adapter
 - about 4.5 hours via PC USB port

Operating and Storage Temperatures

- ◆ Operating : +40°C to -10°C
- ◆ Storage : +40°C to -10°C

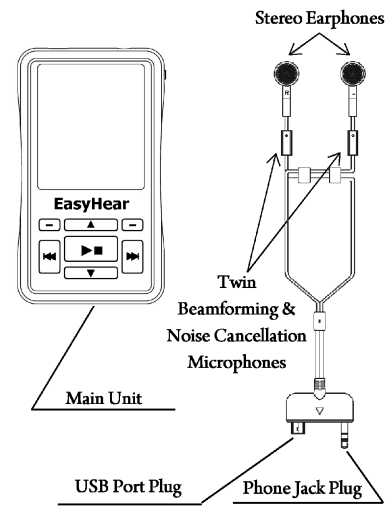


Figure 1: EasyHear-TC and its Stereo Earphone Cable

Functional Overview

Front and Side Panels

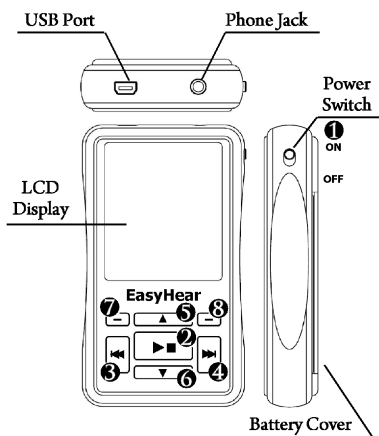


Figure 2

Tables of Functions

Switch / Button	Main Functions	
	EasyHear	Bluetooth
①	Power On / Off Switch	
②	“ENTER” key	BT On / Off
③	BF/NC Mode Change / Volume Up or Down / Functional Setting Selection	---
④		
⑤		
⑥	Select Up	
⑦	Select Down	
⑧	Key Unlock	
⑧	Key Pre-unlock / Language Setting	Key Pre-unlock / Exit

Table 1A

Switch / Button	Bluetooth Functions		Radio
	Phone Call	Music	
①	Power On / Off Switch		
②	---	Play / Pause Music	FM Mono / FM Stereo Selection / "ENTER" key
③		Previous Song	Freq Down Seek / Channel Selection Down
④		Next Song	Freq Up Seek / Channel Selection Up
⑤	Volume Up		
⑥	Volume Down		
⑦	Answer Call	Key Unlock / Menu / Exit from Menu	
⑧	Reject / End Call	Key Pre-unlock / Exit	

Table 1B

LCD Icon Description

Icon	Description
	Radio Setting
	Bluetooth (BT) Setting / Music Mode
	Automatic Gain Control (AGC) Setting
	Equalizer Setting
	Beamforming Mode
	Noise Cancellation Mode
	Left Channel Volume (1 to 20)
	Right Channel Volume (1 to 20)
	Earphone cable being connected
	Language Setting (by pressing ⑧)
	To pre-unlock (by pressing ⑧)
	To unlock (by pressing ⑦)

Table 2A

Icon	Description
	Battery Level (0 to 4)
	Battery Charging Level (0 to 4)
	BT Mode on activation
	BT Devices being paired up
	BT Mode Music Playing
	BT Mode Music On Hold
	BT Mode Volume Level (1 to 16)
	BT Mode Phone Call Answering

Table 2B

Notes:

- EH will lock the LCD screen after it is lit for approximately 30 seconds, in order to save power.
- Hold ⑧ button for 3 seconds, LCD screen will be locked.

Special Advice to User

- It is better for the Twin Beamforming & Noise Cancellation Microphones to point straight forward.
- You are recommended to use BF mode for directionality, and use NC mode to listen to music. Try switch among BF / NC modes for optimal listening in different environments.

Operation Procedure

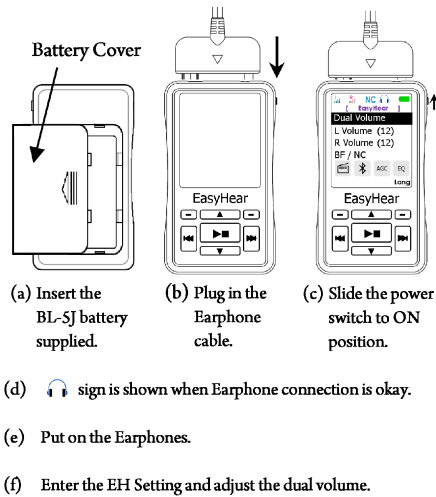


Figure 3

Display & Key Functions

(1) Main Menu



- (a) Press ⑤ - ⑥ to select.
- (b) Press ② to enter one of the Setting Menus. (Radio, Bluetooth, AGC and Equalizer)

Figure 4

i. Cable Detection

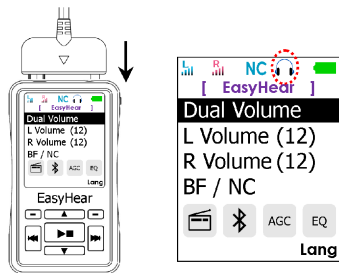


Figure 5

After the power is turned ON, the Earphone icon will appear within 3 seconds after the cable is plugged into the EH TC.

ii. Battery Indication

Battery Level (total 5 levels):

Empty	Level 1	Level 2	Level 3	Full
Needs Recharge	~25%	~50%	~75%	Full

Figure 6: Battery Indicator

iii. Charging Indication



- (a) Battery charging in progress.
- (b) Battery Fully Charged.

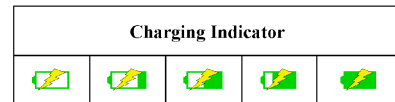


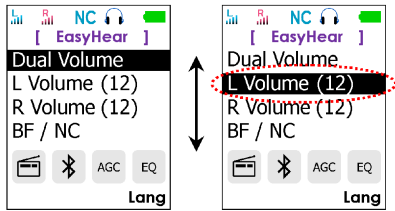
Figure 7

Notes:

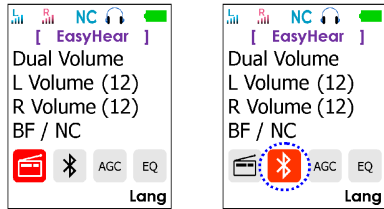
- (a) The above show up when the power is turned ON.
- (b) EH TC can still be charged with power switch at OFF position.

(2) Main Menu > EasyHear Setting

Use 5, 6 and 2 to move cursor up, down and to select.



(a) Use 5 or 6 button to select Volume Control and Operation Mode. (The selected item will be displayed in white font and black background)

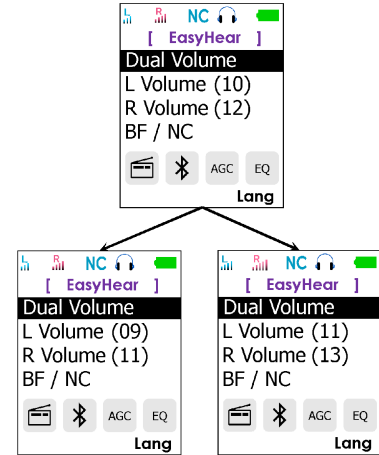


(b) Use 3 or 4 button to select different functional settings, and use 2 button to enter. (The selected function icon will be displayed in red color).

Figure 8: Mode & Volume Control Selection

i. Dual Volume Control

In “Dual Volume” Control, the left/right channel volume level can be changed simultaneously by using left 3 / right 4 button. If the volumes of left and right channel are in different levels, they will be increased / decreased correspondingly.

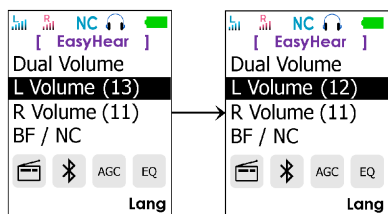


Use 3 or 4 button to decrease/increase the dual volume level.

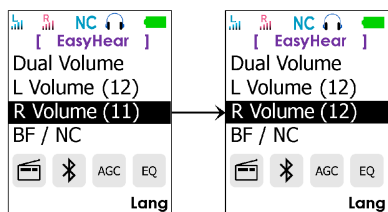
Figure 9: Dual Volume Control

ii. Left/Right Volume Control

Besides dual volume control, user can control the left or right volume independently. In main menu, select “Left Volume” or “Right Volume”, then use 3 or 4 button to decrease or increase the corresponding volume level.



(a) Use 3 button to decrease the volume level.

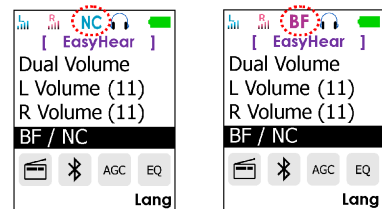


(b) Use 4 button to increase the volume level.

Figure 10: Independent Left / Right Volume Control

iii. BF / NC Mode Change

In “BF / NC” control, use 3 or 4 button to change the operation mode between Beamforming BF and Noise Cancellation NC.



Use 3 or 4 button to change the operation mode of EasyHear. (BF / NC)

Figure 11: Selection of Operation Mode (BF / NC)

(3) Main Menu > Radio Setting

i. Manual Seek Mode: Press **7** to enter the pop-up Menu to select Manual Seek mode.

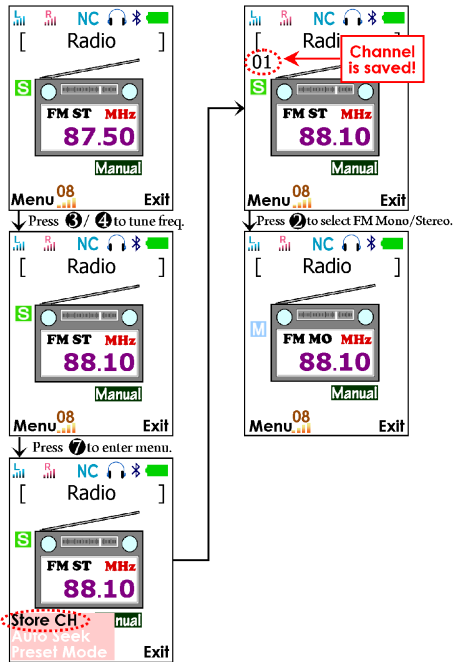
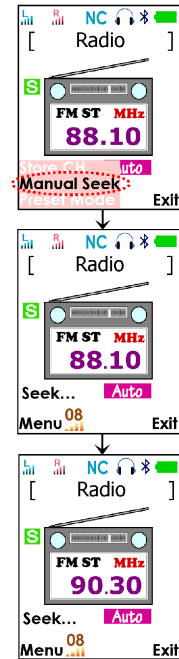


Figure 12

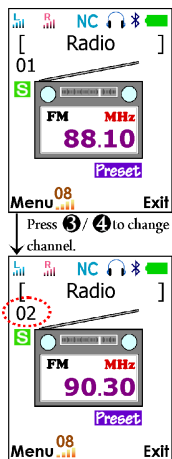
ii. Auto Seek Mode: Press **7** to enter pop-up Menu to select Auto Seek mode.



- (a) Press **5** / **6** to select Auto Seek in pop-up Menu.
- (b) Press **2** to confirm the selection.
- (c) Press **3** / **4** seek radio channel.
- (d) Press **5** / **6** for volume up / down.

Figure 13

iii. Preset Mode: Press **7** to enter pop-up Menu to select Preset mode.



Notes:

- (a) Press **5** / **6** button to select Preset Mode in pop up menu.
- (b) Press **2** to enter the mode.
- (c) Press **3** / **4** button to select previously stored channel e.g. "02".
- (d) "S" icon on left refers to stereo; "M" refers to Mono.

Figure 14

(4) Main Menu > Bluetooth Setting

i. BT Setting > BT ON/OFF

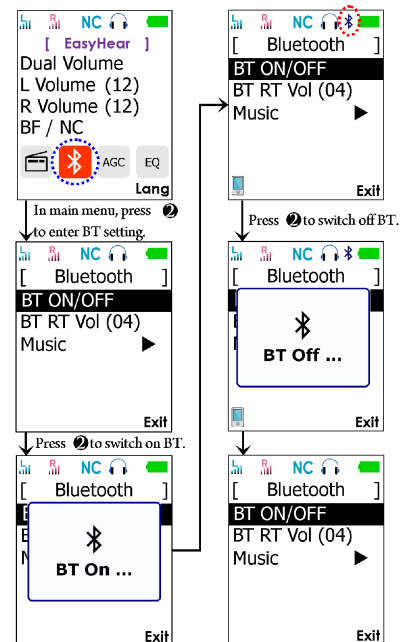
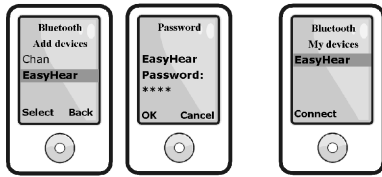


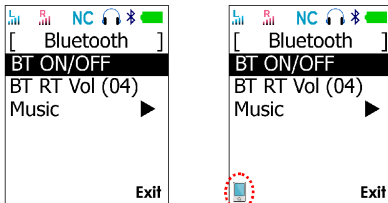
Figure 15: Bluetooth Setting (BT ON/OFF)

ii. BT Device Pairing up

Device Name : EasyHear
 PIN / Password : 0000 (If required, enter this on your BT device such as mobile / cell phone, MPEG player, or TV set.)



(a) In your BT device, search and add "EasyHear" by entering PIN "0000".
 (b) Connect to "EasyHear".



(c) EasyHear detects your BT device with success.

* The diagram above as depicted in (a) and (b) are only an illustration of a possible BT device such as mobile/cell phone.

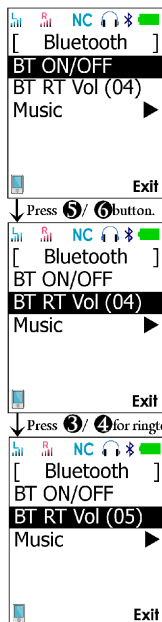
Figure 16: BT Device Pairing up

BT Device pair-up steps:

- (a) Turn on Bluetooth in EasyHear. Refer to Figure 15 "Bluetooth Setting" above.
- (b) In your BT device, search and add EasyHear.
- (c) When "EasyHear" shows up in your BT device, if required, enter the PIN, that is "0000".
- (d) Connect to EasyHear through your BT device.
- (e) While pairing up, EasyHear will detect your BT device automatically. A phone icon will appear after successful pair-up.

iii. BT Ringtone Volume Control*

The Bluetooth ringtone volume (BT RT Vol) for incoming call can be adjusted from 1 to 10. The selected ringtone volume level will be stored in memory automatically and effective for next phone call.



To adjust BT ringtone volume level:

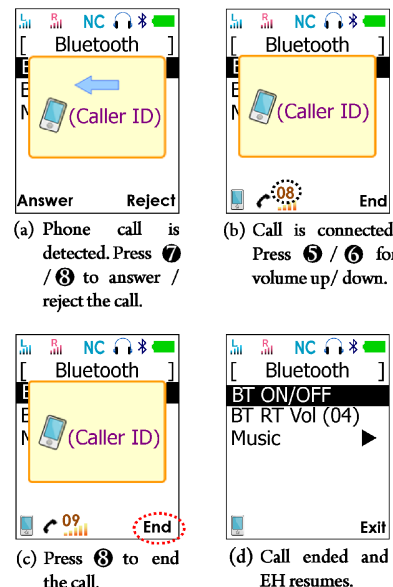
- (a) In Bluetooth page, press 5/6 to select "BT RT Vol" menu.
- (b) Press 3/4 for BT ringtone volume down / up.
- (c) The selected ringtone volume will be stored in memory automatically.

Press 3/4 for ringtone volume down/up.

* Bluetooth ringtone volume can be controlled for many different mobile phone brands and models (e.g. Samsung, Sony Ericsson, LG etc.), except iPhone. For iPhone, the ringtone volume is controlled by the phone call volume (refer to page 34-35).

Figure 17

iv. BT Phone Call Answering



(a) Phone call is detected. Press 7/8 to answer / reject the call.

(b) Call is connected. Press 5/6 for volume up/down.

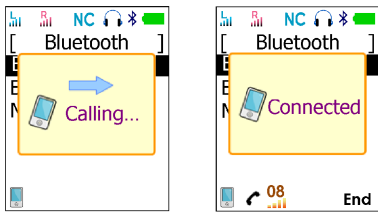
(c) Press 8 to end the call.

(d) Call ended and EH resumes.

Figure 18

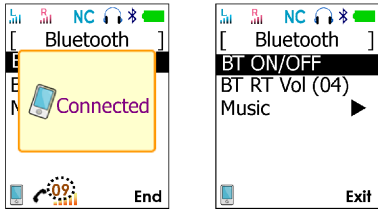
v. BT Phone Call Making

(a) Make phone call by using your EH-connected mobile phone; the phone call can then be detected and controlled by EH.



(b) Outgoing phone call is detected.

(c) Outgoing phone call is established.



(d) Press 5 / 6 for volume up / down.

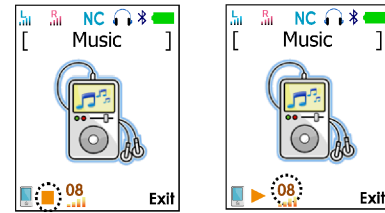
(e) Press 8 to end the call.

Figure 19

vi. Music

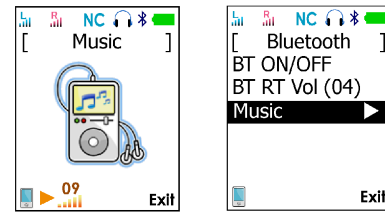
First, select song in your BT device such as mobile/ cell phone or MPEG player.

(a) Press 2 on the Music menu in Bluetooth Page to enter the Music Mode.



(b) Press 2 to play / stop music.

(c) Press 5 / 6 for volume up / down.



(d) Press 3 / 4 for previous/next music / replay music.

(e) Press 8 to exit Music Mode.

Figure 20

(5) Main Menu > AGC Setting

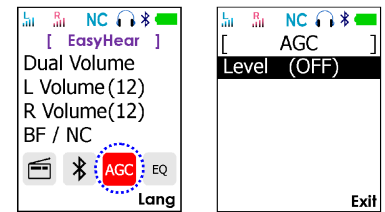
Automatic Gain Control (AGC) is used to automatically adjust the output sound level of EH. It can be enabled or disabled by user manually.

There are three different AGC levels for selection in total (01 to 03); the corresponding recommended environments are listed in the following table:

AGC Level	Recommended Environment
01	Quiet / Indoor Place (e.g. office)
02	Noisy / Outdoor Place (e.g. street)
03	Very Noisy Place (e.g. crowd street or restaurant)

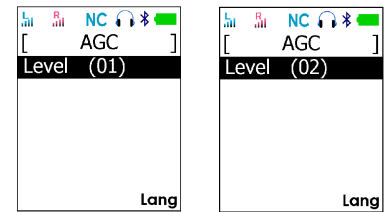
Table 3

If sound input exceeds the specified level, AGC will automatically decrease the EH output sound level. It is especially good for suppressing close speech (e.g. user's own voice).



(a) Press 2 button to enter AGC in main page.

(b) Press 3 / 4 button for ON/OFF AGC.



(c) Press 3 / 4 button for setting different AGC levels.

(d) Press 8 button to exit AGC setting page.

Figure 21: Automatic Gain Control

(6) Main Menu > Equalizer

i. General Settings

In EH TC, a 4-band equalizer (EQ) is applied in the EH output audio signal, which corresponds to low, medium-low, medium-high and high frequency band respectively. For each EQ band, the EQ gain ranges from +6dB to -6dB in steps of 3dB.

	EQ 1 to EQ 4
EQ Gain [dB]	+6, +3, 0, -3 or -6

In EH main menu, press **2** button to enter the equalizer setting mode.

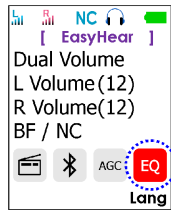
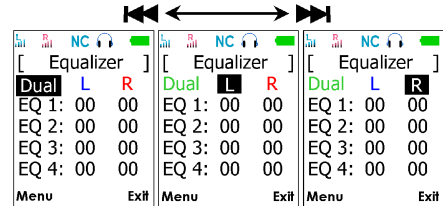


Figure 22: Press **2** button to enter Equalizer Setting Mode

In the equalizer page, use left **3** / right **4** button to select dual / left / right EQ channel. And, use the up **5** / down **6** button to enter the corresponding EQ channel and adjust loudness of each EQ for each car.

(a) Use the left **3** / right **4** button to select dual / right / left EQ channel.



(b) Press up **5** / down **6** button to enter the corresponding EQ channel.

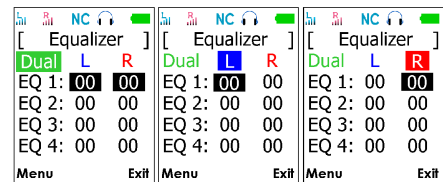
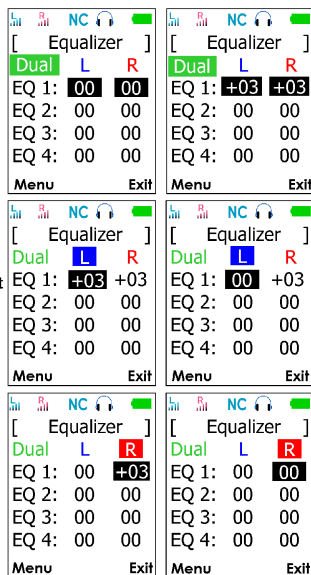


Figure 23: Selection of different EQ channels and EQ bands



(a) Press **5** / **6** button to select different EQ bands.

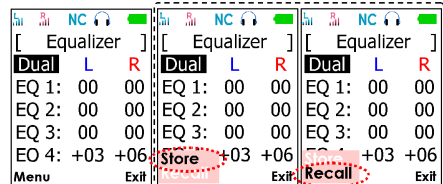
(b) Use **3** / **4** button to decrease / increase the EQ gain respectively.

Figure 24: Adjustment of EQ gain for each EQ band

ii. Storage / Recall

Up to four EQ settings can be stored in memory and can be recalled.

Press **7** button to open the sub-menu in EQ page. Press up **5** / down **6** button to choose "Store" or "Recall".



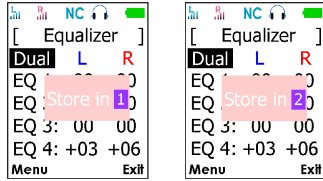
(a) Press **7** button to open the "store or recall" sub-menu.
 (b) Press **5** / **6** button to choose "Store" or "Recall". Press **2** button to confirm selection.

Figure 25: EQ Store & Recall sub-menu selection

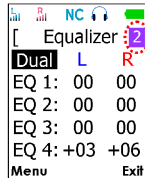
EQ Setting Storage

The current EQ setting can be stored in memory (location 1 to 4).

- (a) Refer to Figure 25, press **2** button to confirm selection of "Store" in EQ sub-menu. The "Store" popup window will appear.



- (b) Press up **5** / down **6** button to choose the memory location (1 to 4).



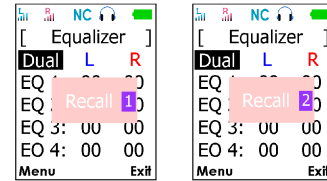
- (c) Press **2** to confirm selection. The stored EQ memory location index will be displayed in the top right-hand corner.

Figure 26: Storage of EQ Setting

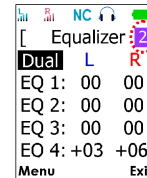
EQ Setting Recall

The stored EQ setting can be recalled and applied to the EH sound output immediately

- (a) Refer to Figure 25, press **2** button to confirm selection of "Recall" in EQ sub-menu. The "Recall" popup window will appear.



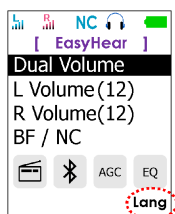
- (b) Press up **5** / down **6** button to choose the memory location (1 to 4).



- (c) Press **2** to confirm selection. The stored EQ setting will be recalled and applied to the EH sound output immediately.

Figure 27: Recall of EQ Setting

(7) Main Menu > Language Setting



- (a) Press **8** to enter Language setting.



- (b) Press **5** / **6** to select language.



- (c) Press **2** to confirm the selection.



- (d) Menu is changed to the selected language.

Figure 28: Language Selection

Troubleshooting

Problem(s)	Suggested Solution(s)
No display is shown when power is on.	(a) Re-insert the battery and power on EH again. (b) Battery is empty, recharge the battery.
EH Earphone cable cannot be detected.	(a) Power off & on the EH and re-plug in the EH cable.
EH powers off automatically.	(a) Battery level is too low. Recharge the battery or replace with a fully charged battery.
BT function cannot work properly.	(a) Turn on the BT function of EH before switching on the pair-up function on your BT device such as mobile/cell phone, MPEG player or TV set.

No sound output.	(a) Make sure the Earphone cable is plugged in completely. (b) Volume is too low, adjust the volume. (c) Battery is empty, recharge the battery.
Charge indicator is not shown when USB cable is connected.	(a) Check the USB connection between EH and PC / power adapter.

Note: EH can still be charged with power switch in OFF position, although the charge indicator will not show up in this case.

Please contact your distributor, if problem(s) cannot be fixed by the above-suggested solutions.

Warning

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, 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 instructions, 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.

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 operation.

Additional Safety Information

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.

To be completely disconnect the power input, the AC/DC adaptor of apparatus shall be disconnected from the mains.

The disconnect device is the AC/DC adaptor of apparatus. The AC/DC adaptor of apparatus should not be obstructed OR should be easily accessed during intended use.

Battery shall not be exposed to excessive heat such as sunshine, fire or the like.

Excessive sound pressure from earphones or headphones can cause hearing loss.

Disclaimer

Logital Co. Limited does not assume any liability, obligation or legal responsibility for any damage to the hearing or any other bodily harm whatsoever that using EasyHear may have caused to the users. Users are strongly advised to read and are supposed to have read this User Manual with care.