GLENSOUND EXPEDITION

BROADCASTER'S 4G, 3G, GSM MOBILE PHONE

PRODUCT DETAILS

Glensound Electronics Ltd

Thank you for choosing a new Glensound product.

Information contained in this manual is subject to change without notice, if in doubt please contact us for the latest product information.

If you need any help with the product then we can be contacted at:

Glensound Electronics Ltd
1 – 6 Brooks Place
Maidstone
Kent
ME14 1HE
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Telephone: +44 (0) 1622 753662

Fax: +44 (0) 1622 762330

EMAIL ADDRESSES

General enquires: office@glensound.co.uk

Technical enquires: techinfo@glensound.co.uk

Sales enquires: sales@glensound.co.uk

PRODUCT WARRANTY:

All equipment is fully tested before dispatch and carefully designed to provide you with trouble free use for many years.

We have a policy of supporting products for as long as possible and guarantee to be able to support your product for a minimum of 10 years.

For a period of one year after the goods have been despatched the Company will guarantee the goods against any defect developing after proper use providing such defects arise solely from faulty materials or workmanship and that the Customer shall return the goods to the Company's works or their local dealer.

All non-wear parts are guaranteed for 2 years after despatch and any defect developing after proper use from faulty materials or workmanship will be repaired under this warranty providing the Customer returns the goods to the Company's works or their local dealer.

CE

This equipment manufactured by Glensound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is CE marked and conforms to:

Low Voltage Directive: EN60065

Emissions: EN55103.1

Immunity: EN55103.2

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT REGULATIONS 2006 (WEEE)

Glensound Electronics Ltd is registered for business to business sales of WEEE in the UK our registration number is:

WEE/JJ0074UR

RoHS2 DIRECTIVE

EC directive 2011/65/EU restricts the use of the hazardous substances listed below in electrical and electronic equipment.

This product conforms to the above directive and for this purposes, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Lead	0.1%
Mercury	0.1%
Hexavalent Chromium	0.1%
Polybrominated Biphenyls	0.1%
Polybrominated Diphenyl Ethers	0.1%
Cadmium	0.01%

CONFORMITY STATEMENT FOR:

Cinterion Module PLS8-E

-suitable for   2-band GSM (900/1800 MHz)/GPRS/EDGE and
3-band UMTS/HSPA (900/1800/2100 MHz)
4-band LTE (800/900/1800/2600 MHz)

to which this declaration relates, are in conformity with the following standards and/or other normative documents, by specific reference to the essential requirements of Article 3 of the Directive 1999/5/EC:

Health and Safety   (Art. 3.1 a):   EN 60950-1 :2006+A11 :2009+A1 :2010 +A12:2011 EN 62311 :2008
EMC   (Art. 3.1 b):   EN 301489-1:v.1.9.2; EN 301 489-7:v.1.3.1 EN 301 489-24:v.1.5.1,
RF spectrum efficiency   (Art. 3.2):   EN 301 511:v .9.0.2; EN301 908-1:v .5.2.1 ; EN301 908-2:v.5.2.1; EN301 908-13:v.5.2.1

Cinterion Module PLS8-US

-suitable for   4-band GSM (850/900/1800/1900 MHz)/GPRS/EDGE and
3-band UMTS/HSPA (FDD Band II, IV,V)
4-band LTE (FDD Band 2,4,5,17)

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Health and Safety   (Art. 3.1 a):   EN 60950-1 :2006+A11 :2009+A1 :2010 +A12:2011 EN 62311 :2008
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RF spectrum efficiency   (Art. 3.2):   EN 301 511:v .9.0.2;

GLENSOUND EXPEDITION Broadcaster's Mobile Phone Handbook Contents

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OVERVIEW

The Glensound Expedition is a high quality audio interface for broadcasters. It is designed to provide the best possible bi-directional audio across the World's mobile phone networks and it includes the telecom standard of HD Voice which provides a switched telephone circuit with 7kHz audio bandwidth. The mechanical design of the unit is highly robust making it ideal for portable use by journalists, reporters, engineers and broadcasters.

The Glensound Expedition is powered either from batteries (6 x AA cells) or an external DC input.

Internally the Glensound Expedition is a highly sophisticated digital mixer, it has 2 analogue inputs both of which pass through high quality analogue to digital converters and then these signals are handled and routed by the onboard DSP. This DSP then provides a bi-directional digital audio signal to the internal mobie phone modue, and the DSP also supplies audio to an analogue balanced line output and 2 separate headphone amplifiers.

ANTENNA PLACEMENT

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons, must not be collocated or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

ANTENNAS SUPPLIED

The Expedition is supplied fitted with a pair of antennas suitable for general use. It is also supplied with a pair of large antennas which are higher performance tuned antennas capable of dissipating more of the Expedition's phone energy with less reflections back to the mobile phone. Therefore they can be useful in areas of poor network coverage.

PANEL LAYOUT & FUNCTIONS
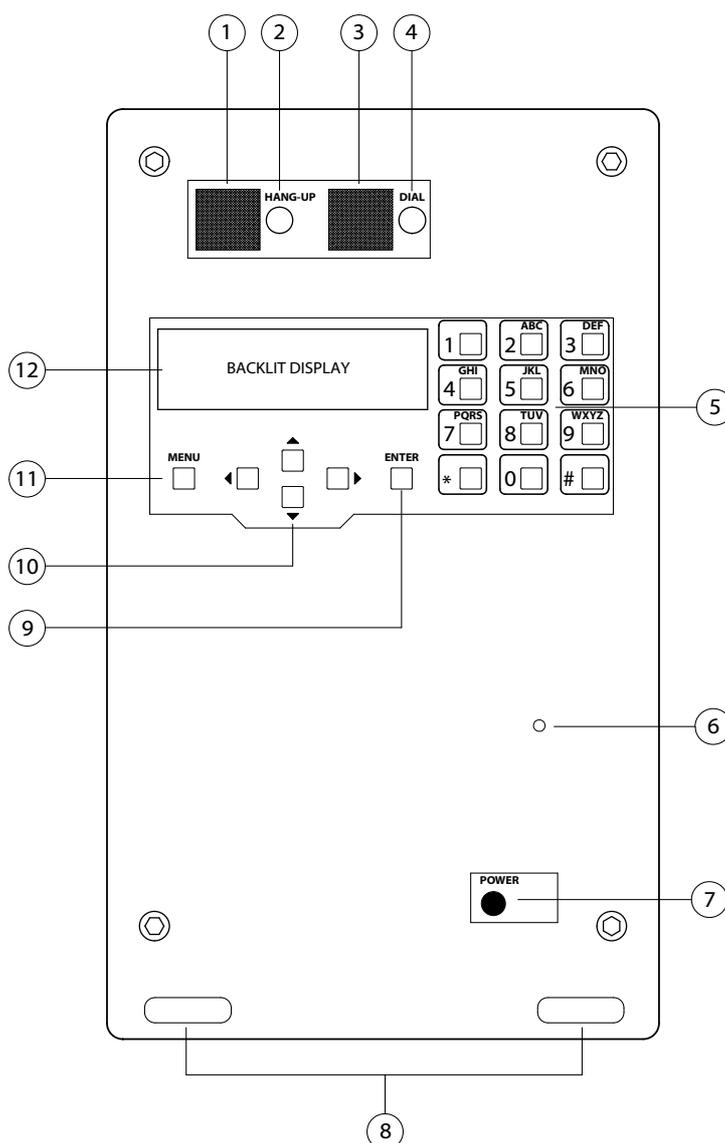
1. HANG-UP Button

When held down for at least 2 seconds ends the current call.

2. HANG-UP Status LED

This 5mm red LED is illuminated when no call is in progress.

3. DIAL Button

Pressing the dial button makes the Expedition dial the currently selected number or answer an incoming call.

4. DIAL Status LED

This 5mm green LED is illuminated when a call is in progress. It flashes to indicate that there is an un-answered incoming call.

5. Keypad

The alpha numeric keypad allows the user to enter a number for dialling or enter text for texting.

6. Sounder Hole

Behind this small hole on the front panel is the Expeditions sounder which is used to alert users to an incoming call. (Please note the sounder can be turned off via the configuration menu)

7. Power Button

The power button turns the expedition on/ off. To prevent accidentally turning the Expedition off this button must be held down for at least 5 seconds.

8. Shoulder Strap Holes

These holes in the lid and base can be used for attached the supplied shoulder strap to or for inserting screws through if the Expedition is to be permanently mounted.

9. Enter Button

This is used in the configuration and other menus to confirm a selected option.

10. Navigation Keys

The four blue navigation buttons are used to navigate between menus and to highlight options when in a particular menu.

11. Menu Button

Pressing the menu button allows the user to enter the available menus for configuration, memory recalls and simple text messages.

12. Backlit Display

The graphical LCD display shows the user information regarding the status of the Expedition. The display is backlit but to save power when running from batteries the back light is only turned on when there is user interaction with the unit.
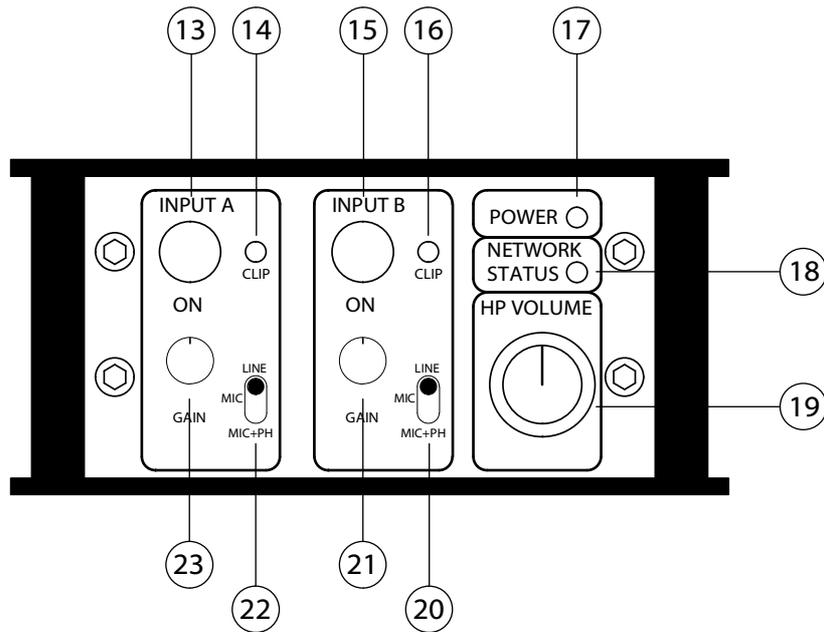
13. Input A ON/ OFF

The illuminated switch silently turns the audio input A on/ off. When the switch is illuminated it indicates that the channel is turned on. The operation of the switch (i.e. Latching/ Momentary/ Momentary & Latching) can be set in the configuration menu.

14. Input A Clip LED

This red LED illuminates when channel A's audio input is too high and the audio is becoming distorted. If this LED comes on then turn the gain down.

15. Input B ON/ OFF

The illuminated switch silently turns the audio input B on/ off. When the switch is illuminated it indicates that the channel is turned on. The operation of the switch (i.e. Latching/ Momentary/ Momentary & Latching) can be set in the configuration menu.

16. Input B Clip LED

This red LED illuminates when channel A's audio input is too high and the audio is becoming distorted. If this LED comes on then turn the gain down.

17. Power LED

The power LED indicates when the Expedition is powered on and the internal microprocessor is operational.

18. Network Status LED

The Network Status LED helps the user to identify the current state of the Expeditions connection to the mobile phone network.

FLASH RATE	MEANING
500ms on/ 500ms off	Limited/ Not Connected to Network Service
10ms on/ 3990ms off	Registered with Network awaiting call
10ms on/ 990ms off	Call in progress or established

19. Headphone Volume

This volume pot adjusts the audio level of both the headphone amplifiers. Turning it clockwise increases the volume and turning it anti-clockwise decreases the volume.

20. Input B Level Select Switch

The 3 position switch sets the channels input to either LINE, MIC or MIC+PH. Where MIC+PH means Microphone input with Phantom Power (+48V).

21. Input B Gain Control

The rotary potentiometer adjusts the input gain of the B input. Turning it right will increase the gain and therefore increase the audio level that you are sending to the outputs and turning it to the left will reduce the gain/ level.

22. Input A Level Select Switch

The 3 position switch sets the channels input to either LINE, MIC or MIC+PH. Where MIC+PH means Microphone input with Phantom Power (+48V).

23. Input A Gain Control

The rotary potentiometer adjusts the input gain of the B input. Turning it right will increase the gain and therefore increase the audio level that you are sending to the outputs and turning it to the left will reduce the gain/ level.
If an input is turned on then when a gain potentiometer is moved the LCD display will automatically display a PPM style meter to allow the user to see the level of the audio. This meter will stay on the display for approximately 15 seconds after the gain potentiometer was last adjusted.
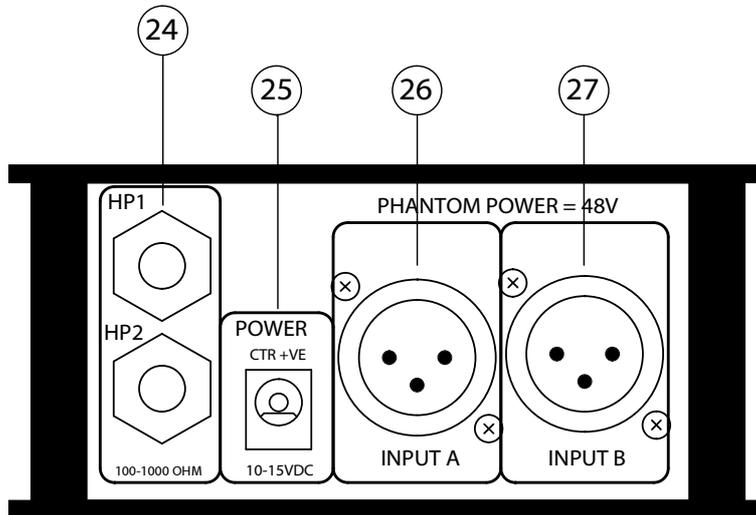
24. 6.35mm Professional Headphone Jack Socket

Connect headphones here. This headphone outputs are suitable for professional high impedance (100 – 1000 Ohm). Using lower impedance domestic headphones will reduce battery life and potentially produce too high audio levels in the headphones.

25. POWER (External DC Input)

This is a 2 pin barrel type DC input connector. The centre pin is 2.5mm. It is wired centre pin + Volts. It is designed to accept a + volt DC input between 10 and 15 volts.

26. Input A XLR Balanced Audio Input

This balanced standard 3 pin XLR audio input socket is the input of the A channel of the mixer.

27. Input B XLR balanced Audio Input

This balanced standard 3 pin XLR audio input socket is the input of the A channel of the mixer.
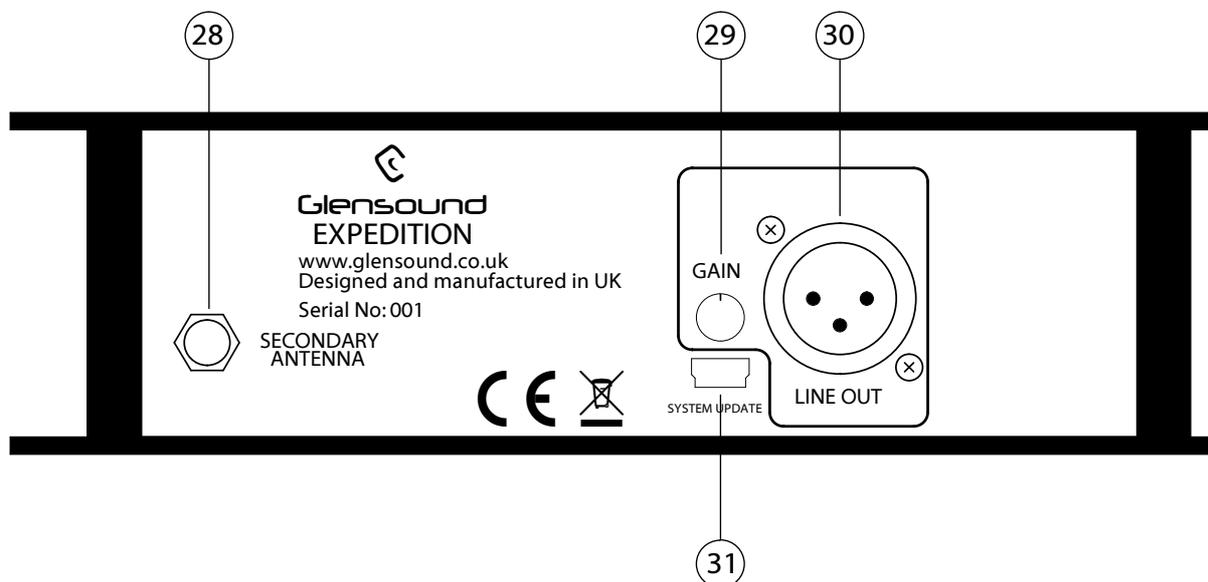
28. SMA Connector For Secondary Antenna

The Expedition requires 2 antennas for diversity purposes (provides better network connections than just 1 antenna). The 2 antennas are called primary & secondary but both are equally required for trouble free working.

29. Line Out Gain Control

A rotary gain (level) control is provided to allow the user to adjust the output level of the analogue Line Out circuit to match equipment that it is connected to. The gain control provides a gain range of -21 to +10dB. When the gain control is moved a small box pops up on the display showing the gain/ loss level in dBs currently being applied to the output.

30. Line Out XLR

This balanced analogue output provides an output from the Expedition to connect to other audio equipment such as mixers, recorders, headphone amps etc. The audio that is present on the output can be altered in the configuration menu.

31. USB Update

This USB connector can be used for connecting to a PC and updating the Expeditions firmware. Only use/ connect to a PC if/ when advised to by Glensound technical support.

32 . Battery Compartment Access Thumbscrew

Two stainless steel thumbscrews hold the battery and SIM card cover in place. To remove the battery & SIM card cover turn the thumbscrews anti-clockwise until they are completely undone and then gently slide the cover away taking care not to damage the antenna.
***Please note removing the battery cover will disconnect the battery compartment and make the Expedition turn off if no external supply is connected.

33. Battery Compartment Access Thumbscrew

See no 32. above.

34. SMA Connector For Primary Antenna

The Expedition requires 2 antennas for diversity purposes (provides better network connections than just 1 antenna). The 2 antennas are called primary & secondary but both are equally required for trouble free working.
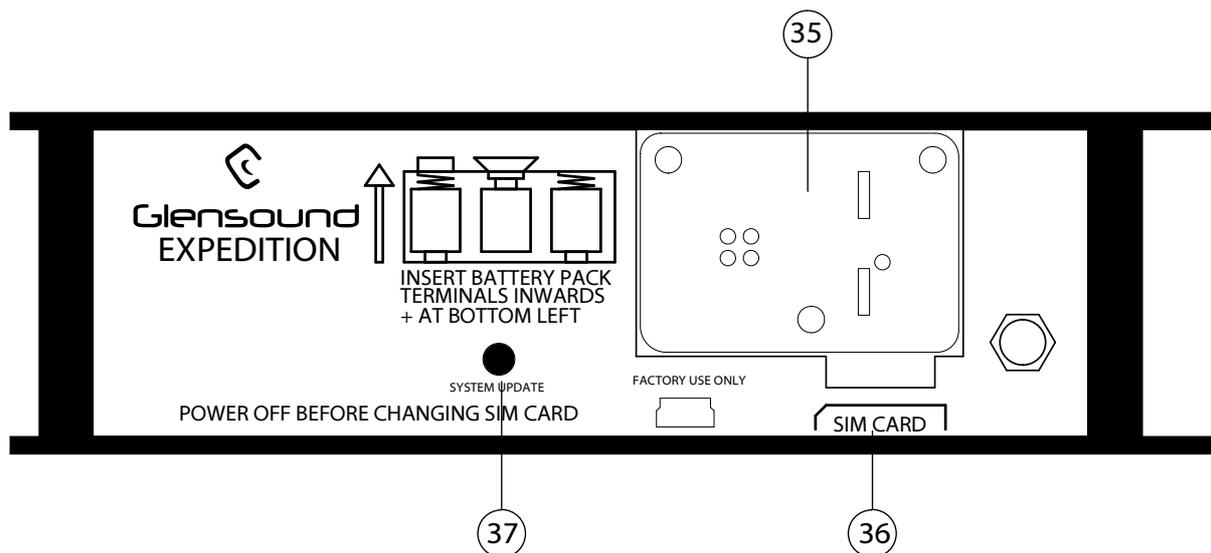
35. <u>Battery Pack</u>

Slide the battery pack out from the Expedition to remove it.
The battery pack holds 6 x AA size cells. For best battery performance use Lithium cells, Alkaline cells can also be used. The Expedition does not charge batteries if rechargeable batteries are inserted.
Make sure when inserting batteries to the battery pack that the 'Flat' negative end of the battery is inserted next to the spring end of the batteries compartment as per the printed diagram on the panel.
When putting the battery pack back into the Expedition do so with the battery packs terminals facing inwards to the unit and also rotated so as they are closest to the rear panel and furthest away from the front.

36. <u>Sim Card Holder</u>

The expedition is supplied as an 'unlocked' mobile phone without a SIM card. Therefore you must insert your SIM card here to allow the unit to connect to a mobile phone network.
The Expedition requires a 'Micro' SIM card.
Slide the SIM card into the slot provided (with the terminals of the SIM card towards the base of the Expedition) until it 'clicks' into place.
To remove the SIM card first push the SIM card slightly into the Expedition until a 'click' is heard and then it will spring out.

37. <u>System Update Button</u>

This button is recessed so as it cannot be pressed accidentally and must NEVER be pressed unless advised to by our technical department.

INSERTING/ REMOVING A SIM

1. Power Off

Before inserting or removing the SIM please make sure the Expedition is turned off.

2. Remove Battery Cover

Two stainless steel thumbscrews hold the battery and SIM card cover in place. To remove the battery & SIM card cover turn the thumbscrews anti-clockwise until they are completely undone and then gently slide the cover away taking care not to damage the antenna.
***Please note removing the battery cover will disconnect the battery compartment and make the Expedition turn off if no external supply is connected.

3. Inserting/ Removing SIM

The expedition is supplied as an 'unlocked' mobile phone without a SIM card. Therefore you must insert your SIM card here to allow the unit to connect to a mobile phone network.
The Expedition requires a 'Micro' SIM card.
Slide the SIM card into the slot provided (with the terminals of the SIM card towards the base of the Expedition) until it 'clicks' into place.
To remove the SIM card first push the SIM card slightly into the Expedition until a 'click' is heard and then it will spring out.

4. Replace Battery Cover

After changing the SIM please replace the battery cover making sure it is attached firmly.

TURNING THE EXPEDITION ON/OFF

1. Power

Before turning the expedition on please make sure that it is either connected to the external power supply (supplied) or has had batteries inserted.

2. SIM Card

Please make sure the SIM card is inserted before you turn the Expedition on. Do not remove the SIM card without first turning the Expedition off.

3. Turning On

Press and hold the small recessed red power button located at the front of the top panel until a 'beep' is heard and the front panel LCD display is illuminated.

****Please note it can take nearly a minute for the Expedition to boot up and in low signal areas it can take another minute to find a network***

4. Turning Off

Press and hold the small recessed red power button located at the front of the top panel for at least 6 seconds until a "SHUTDOWN?" message appears on the LCD screen. Use the right navigation arrow key to select "YES" and then press the 'ENTER' button.

BASIC OPERATION

1. Making a Call

A. Insert a SIM card and turn the Expedition on.

B. Using the top panel keypad dial the number that you wish to call

C. Press and release the top panel green 'DIAL' button until the display shows 'dialing'

D. The display will then show 'call in progress'

2. Answering a Call

A. To indicate that there is an incoming call the green 'DIAL' LED will flash, the LCD display will display 'incoming call' and if on the sounder will 'ring'

B. If available the LCD display will display the number of the originator of the incoming call.

C. Press and release the green 'DIAL' button until the LCD display shows 'answered'

D. The green 'DIAL' LED will then be on and the display will show 'call in progress' and if available the originator's number.

3. Ending a Call

A. To end a call press and hold the top panel red 'HANG-UP' button. The call will end and the display will return to the home screen.

LCD DISPLAY & MENUS

General

The backlit LCD display provides general information useful to the operator.

If the Expedition is being powered from an external DC supply then the back light of the display will on permanently. However if the Expedition Is being powered from batteries then to help preserve battery life the back light of the display will only be illuminated while and shortly after a button has been pressed.

The menus within the Expedition are meant to be simple user friendly ways of setting the unit up top meet a user's requirements.

Before You Can Access The Menus

The Expedition must be turned on **and** it must also be connected to a network before you can access the menus.

'Home' Screen

The picture below shows the main points of the home screen.

MAIL ICON
If present indicates TXT message

NETWORK NAME

NETWORK TYPE

POWER SOURCE
'EXT' = external DC
Battery Icon = Batteries + Icon indicates battery state

EE
Ready for call.
HD VOICE

STATUS INDICATION

RF STRENGTH
The more bars the better the RF connection to the network is
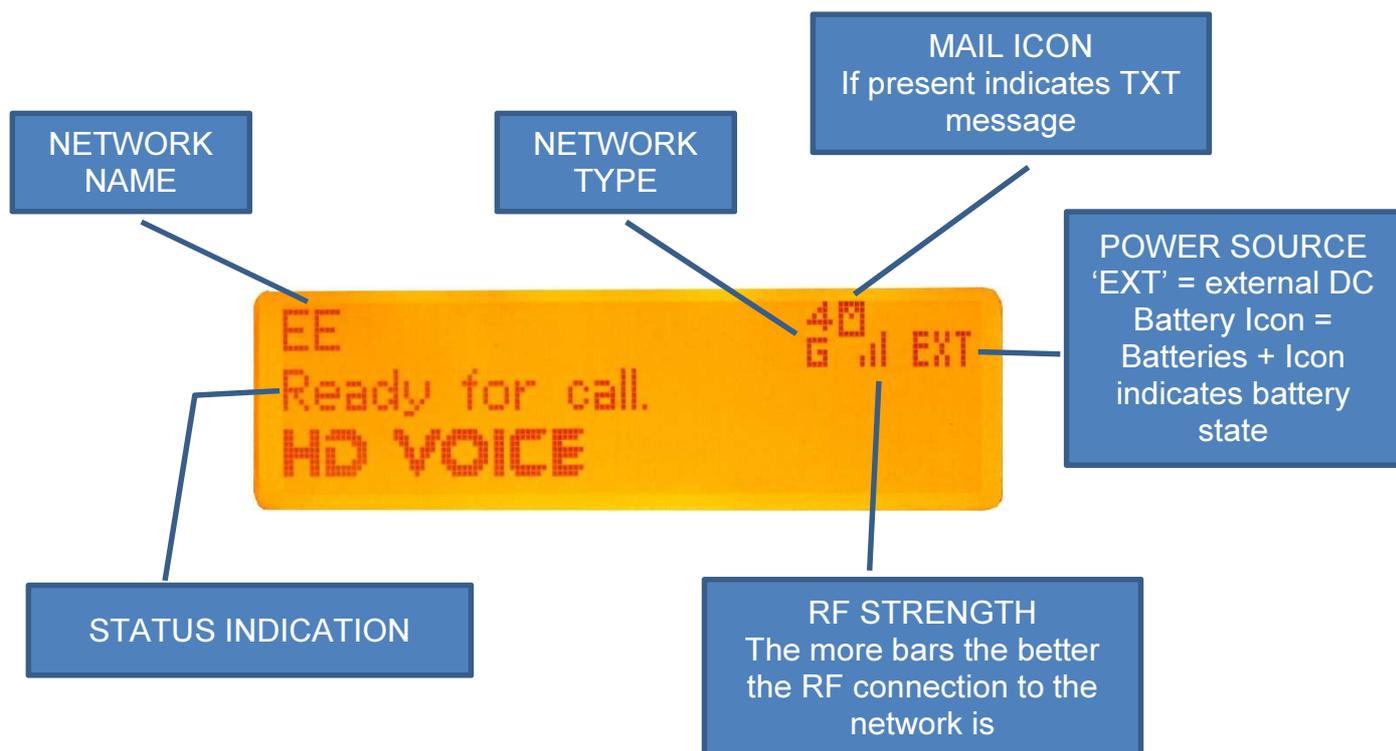
Entering/ Exiting The Menu System

To enter the menu system press the yellow 'MENU' button on the top panel.

Please note the menu system auto times out and reverts to the home screen after a short length of time.

To exit the menu press the red 'HANG-UP' button.

Navigating Within The Menu System

The 4 navigation 'arrow' keys just under the display allow the user to move around the menus.

Generally the up/ down arrows move between menus and the left/ right arrows change the option within a menu.

Once a menu has been changed the 'ENTER' button needs to be pressed to make the Expedition remember the selection.

List Of Menus/ Sub Menus (In Order)

Number Recall (memory)

Sounder

Auto Answer

Block Outgoing ID

Network Mode

Audio Input A switch configuration

Audio Input B switch configuration

Message Centre No

Create SMS (Text)

      RECIP – MSG –SEND –EXIT

Receive SMS (View Received Texts)

      OPEN –DEL   -EXIT x/X

View own Telephone Number

Headphone Mix Menu

      Outgoing Phone:

      Phone RET AVC:

      Phone RET:

Line Out Mix Menu

      Outgoing Phone:

      Phone RET AVC:

      Phone RET:

Ringing Melody (sounder)

Ringing Melody Volume (sounder)

DTMF Duration

Saving a Number For Recall Later

To save a number to be stored for later recall, first from the home screen enter the number that you want to saved then press 'MENU'. The display will then say:

'*Save to memory.*

Select mem key 0-9'

Then press the number of the memory location (0 – 9) that you want to save the number to and the number will be saved and the display will return to the home screen.

Number Recall

From the home screen press the 'MENU' button.

The first screen that appears is number recall.

Press the number of the memory location of the telephone number that you want to recall (0 – 9) and the number stored in that location will be displayed on the screen. Then to dial this number press the green 'DIAL' button.

Sounder On/ Off

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Sounder:*' menu.

There are 2 options for the sounder '*ON*' or '*OFF*'

If the sounder is ON and you want it OFF press the navigational left arrow and then press ENTER (The display will then show '*Exit*' which confirms the change has been made).

If the sounder is OFF and you want it ON press the navigational right arrow and then press ENTER (The display will then show '*Exit*' which confirms the change has been made).

Auto Answer On/ Off

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Auto Answer:*' menu.

There are 2 options for Auto Answer '*ON*' or '*OFF*'

If Auto Answer is ON and you want it OFF press the navigational left arrow and then press ENTER (The display will then show '*Exit*' which confirms the change has been made).

If Auto Answer is OFF and you want it ON press the navigational right arrow and then press ENTER (The display will then show '*Exit*' which confirms the change has been made).

Block Outgoing ID On/ Off

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Block Outgoing:*' menu.

There are 2 options for Block Outgoing ID '*ON*' or '*OFF*'

If Block Outgoing ID is ON and you want it OFF press the navigational left arrow and then press ENTER (The display will then show '*Exit*' which confirms the change has been made).

If Block Outgoing ID is OFF and you want it ON press the navigational right arrow and then press ENTER (The display will then show '*Exit*' which confirms the change has been made).
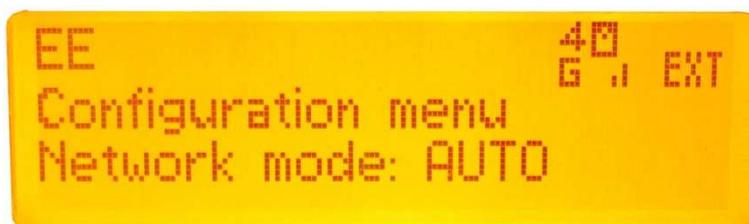
****With Block Outgoing ID OFF the person you are calling will be able to see the number that you are calling from.

With Block Outgoing ID ON the number that you are calling from will not be seen by the person that you have called.****

Network Mode

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the 'Network mode:' menu.

There are 3 options for Network Mode '2G Only', '3G Only' or 'AUTO' where auto offers access to 2G, 3G and 4G depending service is available from the network.

To change the network mode press the navigational left or right arrows until the desired option is selected and then press ENTER (The display will then show 'Exit' which confirms the change has been made).

Input A Switch Configuration

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the 'Config SW A:' menu.

There are 4 options for A Switch Configuration which change how the front panel push switch that turns audio channel A on/ off to the output operate.

'MOM' where the switch only operates in a momentary mode (i.e. only while be pressed will the channel be on).
'LATCH' where the one press of the switch turns it on and the next press of the switch turns it off.
'MOM/ LATCH' sometimes referred to as 'intelligent lever key' where a short press of the switch will toggle it on or off and a long press of the switch will make it work as momentary only.
'OFF' where the switch is disabled and pressing it will not turn the channel on.

To change the switch mode press the navigational left or right arrows until the desired option is selected and then press ENTER (The display will then show 'Exit' which confirms the change has been made).

Input B Switch Configuration

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Config SW B:'* menu.

```
EE                        40
                          G .ıl EXT
Configuration menu
Config SW B: MOM
```

There are 4 options for B Switch Configuration which change how the front panel push switch that turns audio channel B on/ off to the output operate.

'MOM' where the switch only operates in a momentary mode (i.e. only while be pressed will the channel be on).
'*LATCH'* where the one press of the switch turns it on and the next press of the switch turns it off.
 '*MOM/ LATCH'* sometimes referred to as 'intelligent lever key' where a short press of the switch will toggle it on or off and a long press of the switch will make it work as momentary only.
'OFF' where the switch is disabled and pressing it will not turn the channel on.

To change the switch mode press the navigational left or right arrows until the desired option is selected and then press ENTER (The display will then show '*Exit'* which confirms the change has been made).

Message Centre Number

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Message Centre No.'* menu.

```
EE                        40
                          G .ıl EXT
Message Centre No.
Press ENTER to start
```

It is fairly unlikely that you will ever need to change this number as there should be a default number provided by the SIM card.

The message centre number is a number that is used to handle texts by your phone operator. When you send a text the text is actually sent to the message centre who in turn forward it to your intended recipient.

Create SMS (Text)

NOTE: The texting options on the Expedition have been included to allow customers to send and receive network critical communications such as when setting up a new SIM card. The Expeditions texting functions are not designed for day to day texting!

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Create SMS message*' menu.

You will then see the above screen. Press ENTER to access the texting menu.

Within the texting menu there are 4 options.

The currently selected option will be highlighted. To access an option first select it by using the navigation left and right keys and then press ENTER.

To EXIT an option press the MENU button and you will return to the options.

To EXIT the options select '*EXIT*' and press enter.

The four options are:

'*RECIP*' This is the number that you want send your text to.
'*MSG*' This is the message that you wish to send. Use the keypad to enter the message. The navigation up and down arrows change the case of the text between upper and lower case (a lower case 'a' or upper case 'A' is displayed after 'EXIT' on the top line of the display to indicate which case is currently selected). The '0' key provides the following letters:
'*SEND*' Highlighting *SEND* and pressing ENTER will send your text message.
'*EXIT*' Highlighting *EXIT* and pressing ENTER will exit the Create SMS menu.

Receive SMS (Text)

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Rec SMS messages'.*

You will then see the above screen. Press ENTER to access and view the texts.

Along the top of the display are 3 options: '*OPEN', 'DEL'* and '*EXIT'.* The x/X numbers after '*EXIT'* show how many texts you have received and the number of the text that you are currently viewing.

This display also shows you who sent the text (in the case of the screen shot above 'EE') and what date and time it was received on.

To view the contents of a text use the navigation left and right arrows to highlight OPEN and press ENTER.
The text will now open. If the text is longer than the 2 lines that can be viewed on the display you can scroll through it by using the navigation up and down arrows.
Once finished reading the text press ENTER to return to the previous screen.

To see different received texts use the navigation up/ down buttons to select the x/X text that you wish to view.

To delete a text first select it then use the navigation left/ right arrows to highlight '*DEL'* and press ENTER….the text will now be deleted.

Selecting '*EXIT'* and pressing ENTER will return you to the home screen.

View Own Telephone Number

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Own Telephone No.'* menu.

The screen will now display your own telephone number.

****Note the Expedition cannot display the number if your network or SIM does not provide it.

Headphone Mix

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Headphone mix menu'* menu.

```
EE                    40
                      G .| EXT
Headphone mix menu
Press Enter
```

There are 3 settings within the Headphone mix menu which allow 2 sources to be routed to the headphone mix. To access these settings press ENTER.

```
EE                    40
                      G .| EXT
Headphone mix menu
Outgoing Phone: ON
```

The first setting within the Headphone mix menu is '*Outgoing Phone'* this option allows' you to route what you are sending the outgoing phone (i.e. the output of the 2 audio input channels) to your headphones for monitoring. The options for this are '*ON'* or '*OFF'* to select between the 2 options use the navigation left and right arrows and once the desired option is selected press ENTER to set.

Pressing the navigation up/ down arrows allows you to select the other Headphone mix menu settings.

```
EE                    40
                      G .| EXT
Headphone mix menu
Phone RET AVC: OFF
```

The second setting of the Headphone mix menu is '*RET AVC:'* this option turns on/ off the 'Automatic Volume Control' of the 'Return' audio circuit. This is the audio that is being received by the phone and this option does NOT turn the return audio on/ off but it turns the audio circuit on or off that can automatically adjust the return audio volume for you and increase it if it is too low and turn it down if it is too high.

Pressing the navigation up/ down arrows allows you to select the other Headphone mix menu settings

```
EE                    40
                      G .| EXT
Headphone mix menu
Phone RET: ON
```

The last option in the Headphone mix menu is '*Phone RET:'* This allows the option of routing the Return audio to the Phone ON or OFF to the headphone mix.

Line Out Mix

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Line Out mix menu*' menu.

```
EE                    40
                      G ... EXT
Line Out mix menu
Press Enter
```

There are 3 settings within the Line out mix menu which allow 2 sources to be routed to the balanced Line output XLR on the side of the Expedition. To access these settings press ENTER.

```
EE                    40
                      G ... EXT
Line Out mix menu
Outgoing Phone: ON
```

The first setting within the Line out mix menu is '*Outgoing Phone*' this option allows' you to route what you are sending the outgoing phone (i.e. the output of the 2 audio input channels) to the Line Output. The options for this are '*ON*' or '*OFF*' to select between the 2 options use the navigation left and right arrows and once the desired option is selected press ENTER to set.

Pressing the navigation up/ down arrows allows you to select the other Line out mix menu settings.

```
EE                    40
                      G ... EXT
Line Out mix menu
Phone RET AVC: OFF
```

The second setting of the Line out mix menu is '*RET AVC:*' this option turns on/ off the 'Automatic Volume Control' of the 'Return' audio circuit. This is the audio that is being received by the phone and this option does NOT turn the return audio on/ off but it turns the audio circuit on or off that can automatically adjust the return audio volume for you and increase it if it is too low and turn it down if it is too high.

Pressing the navigation up/ down arrows allows you to select the other Headphone mix menu settings

```
EE                    40
                      G ... EXT
Line Out mix menu
Phone RET: ON
```

The last option in the Line out mix menu is '*Phone RET:*' This allows the option of routing the Return audio to the Phone ON or OFF to the Line out.

Ringing Melody

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Ringing Melody:'* menu.

The Ringing Melody menu allows you to choose between 9 different 'ring tones'. Use the navigation left/ right arrows to select the required ringing melody. Once you've selected the desired number of the ring tone press ENTER to save and return to the home screen.

Ringing Melody Volume

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*Ringing Melody Vol:'* menu.

The Ringing Volume menu allows you to choose between 5 different ringing volumes. Use the navigation left/ right arrows to select a ringing volume between 0 & 4, where 0 is off and 4 is maximum volume.
****NOTE: The ringing volume adjusts the volume of the ringing noise generated in the headphone feed to indicate an incoming call…….it does not adjust the volume of the front panel sounder****

DTMF Duration

From the home screen press the 'MENU' button.

Then press the navigational down arrow until you see the '*DTMF duration:'* menu.

Once a call is in progress pressing one of the keypad buttons (0 – 9, * and #) will send the appropriate equivalent 'DTMF' tone to the phones output. The length of this DTMF tone can be changed in this menu between 500mS, 1000mS and 2000mS. To change the current setting use the navigation left/ right arrows to select the desired duration and press ENTER to save.

UPDATING FIRMWARE

The firmware is the code that runs internally in the Expedition and provides the structure of the internal DSP and Microcontroller. The firmware can be updated without the need to return the Expedition to Glensound. You should only ever update the firmware if instructed to by a Glensound engineer.

How To Update The Firmware:

1) Install on a pc a program called Dfuse. This is a program that is supplied by ST Microelectronics who are the manufacturer of the intelligent microprocessor that we us in the Expedition. Just googling Dfuse should provide the link to ST Microelectronics Dfuse download page. Follow the download instructions to download and install Dfuse on your PC.
2) Make sure you know where the latest version of the Expedition's firmware is located on your pc (this is a .dfu file). This is a file that Glensound will have sent you or told you the location off.
3) Start with the Expedition turned off
4) Connect the Expedition to a DC power source (but do not turn it on yet).
5) Connect the Expedition to a USB port on your PC via the 'system update' USB connector (located next o the Line Out XLR.
6) Remove the battery lid to allow access to the recessed 'system update' button.
7) Simultaneously press and hold the 'POWER' button and the 'SYSTEM UPDATE' button (you'll need a pencil or pointed object to push the recessed system update button. Do not press too hard, it only moves a small amount).
8) KEEP PRESSING THE POWER BUTTON (if you stop pressing the power button at any time during the firmware update the Expedition will quit the update).
9) Stop pressing the system update button.
10) If this is the first time you have connected the Expedition to the PC then windows will load drivers for it.
11) Open the Dfuse software.
12) Use the 'choose' button in the Dfuse software to locate the .DFU file provided by Glensound.
13) Use the 'update' button in the Dfuse software to start the update.
14) Wait for the update to be completed.
15) Release the power button when completed.
16) Unplug the USB cable from the Expedition and turn it on…..the new firmware will now be loaded.

BATTERY LIFE

When running from batteries there are a number of things that effect the duration and life of the batteries.

1) Brand & Type Of Battery

Not all batteries are equal in the amount of energy that they store. In fact they vary hugely. A battery that does not store much energy will of course not keep the Expedition running as long as one that stores a lot of energy.

Traditionally Alkaline batteries have always been the choice of Broadcasters, and we still recommend them over most other battery types, however Lithium Ion batteries are now commonly available and generally far exceed alkaline batteries.

A very good website providing a huge range of comparisons between different brands of batteries and well worth a visit is: www.batteryshowdown.com

2) Temperature

The energy from batteries dissipates much quicker at lower temperatures. Using the Expedition (or any battery operated equipment) in very cold temperatures will greatly reduce battery life.

3) Phantom Power

Microphones that require Phantom power drain energy from the internal batteries. Phantom power is +48 Volts, so although the headline figure of for example 6 mA current requirement of a phantom powered microphone may not seem too great, once this has been converted down to the maximum 9 Volts available from 6 x AA cells, the current drain shoots up!
Therefore for best results use a dynamic microphone that does not need Phantom Power.

4) Headphone Impedance

Traditionally the impedance of the headphones that you use will make a huge difference to battery life, with low impedance headphones taking much more current from a circuit designed to run broadcast spec high impedance headphones.
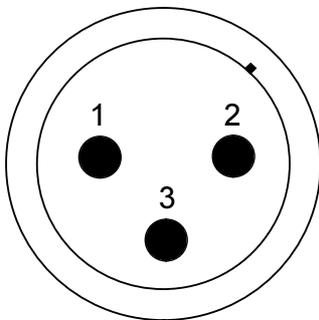
WIRING INFORMATION
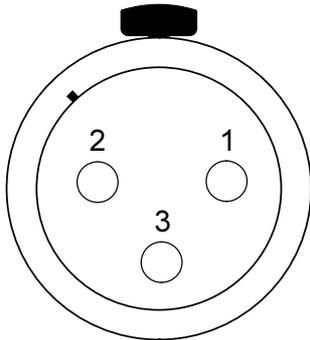
STANDARD XLR AUDIO PINOUTS:

XLR SOCKET (FEMALE)

1: Ground/ Earth

2: INPHASE/ POSITIVE/ MIC +

3: MATE/ NEGATIVE/ MIC -

XLR PLUG (MALE)

STANDARD HEADPHONE WIRING:

TIP: A/ LEFT Ear

RING: B/ RIGHT Ear

SLEEVE: Common/ Earth

RING

TIP
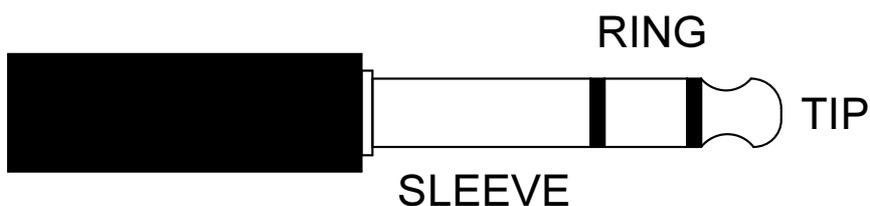
SLEEVE

HEADPHONE WIRING NOTE:
The Tip and Ring on the Expeditions headphone outputs are wired in parallel from the output of the same internal IC. This means that Mono headphone jacks CANNOT be used as the longer sleeve element on a mono jack will end up shorting the outputs of the IC to ground which could potentially cause damage.

EXPEDITION External DC power input: 2.5mm Barrel, Centre +Ve, 10 to 15 Volts, 1 Amp