eela-audio

EA816

Telephone Hybrid

Mobile telephone hybrid

User manual

EA Broadcast / Eela Audio, Het Riet 8 A, 5431NM Cuijk, The Netherlands
http://www.eela-audio.com e-mail: sales@eela-audio.com

WARNING

Do not expose this appliance to rain or moisture. To reduce the risk of electrical shock, do not remove cover. There are no user-serviceable parts inside. Do not attempt to repair the unit yourself; this voids the right of warranty. Refer servicing to qualified personnel.

CE-Product

This product is in conformity with the requirements of the CE directives.

This product should only be installed and used in installations as specified in this manual and should only be used with the ancillary equipment and options and in the right environment according the recommendations.
The supplier will not take any responsibility of damage to or induced by this product caused by using the equipment in any not specified application or connecting items or equipment, in any way or environment other than specified.

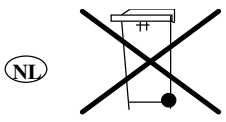
General Information

Cleaning

Clean the outside of this product with a soft cloth. Do not use any cleaning detergents like alcohol, white spirit or ammonia based fluids to clean this product. This can severely damage the finish of the product.

For waste separation:

At the end of the lifecycle of this product dispose it in accordance with local procedures for disposal of hazardous or chemical waste. Do not dispose the unit or batteries in the ordinary way, but if possible hand it in as Small Chemical Waste.



Thank you for the purchase of this *EA816 GSM Hybrid*. First read this manual carefully before starting to use the apparatus. Please keep this manual so you can refer to it at a later stage.

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Eela Audio EA816 GSM hybrid:

GENERAL REMARKS:

The EA816 is a stationary telephone hybrid for the GSM network. It is an industrial quality quad band GSM module with AMR-WB codec and the facilities for use as a broadcast hybrid.

For use in areas without cabled telephone connections.

To make use of the new HD-voice (Advanced Multirate - Wideband) facilities more and more mobile telephone companies are offering. The audio bandwidth is extended from 50 Hz to 7 kHz for a crystal clear sound, ideal for the radio reporter in combination with the S25 Reportophone.

Depending on your network provider and system used it can be a huge money saver. In a lot of countries a call from mobile to mobile is much cheaper than from mobile to fixed or visa versa.

Facilities for broadcast applications include remote control on GPIO. For special applications the unit has an auto answer and auto disconnect mode as well as a switch that can be operated from the dial pad of a remote telephone. An external switch can also be connected to the unit to dial the number stored in pos 1 of the memory.

HD-VOICE:

HD Voice based on AMR-WB (Adaptive Multi Rate) Wideband technology provides enhanced audio quality to 7 kHz bandwidth on mobile networks. This system is being rapidly implemented by various telecom providers. A large number of phones including Nokia, Samsung, HTC and LG have the codec installed. Also our S25 Reportophone will do fine. With improved sound quality (and low cost) within a reliable network, this system is ideal for reporting purposes. More information about availability in your country can be found on the website of the Global mobile Suppliers Association (GSA) www.gsacom.com.

The system is automatically activated when both devices are equipped with such a codec. The EA816 offers the solution on the studio side: An industrial quality GSM module in a half 19 "housing for fixed installation. The EA816 will interface to the studio mixing desk as a regular hybrid including balanced audio input and output and opto isolated GPIO for control.

The unit is housed a 1 U half 19" rack unit. Rackmount kits are available as an option.

Please note:

The SIM card used should not have a PIN code other than pin code 0000!

This is done to avoid several problems involved with PIN codes, amongst others to make the unit restart automatically after a power shut off.

Additional information can be found on the internet: http://www.eela.nl/EA816

Quick start manual

Half 19" GSM telephone hybrid with built-in industrial quad band GSM module.

APPLICATIONS:

The Eela Audio EA816 is designed for use with modern radio and television broadcast systems. With the AMR-WB or HD-voice system you can make optimum use of the 7 kHz bandwith of course depending on availability in your network. In a lot of countries telephone calls from mobile to mobile are also much cheaper than from mobile to landline.

The "auto-answer" mode and GPO switch makes the unit suitable for all kinds of remote applications.

A technician can listen in and by means of the remote switch reset an automatic broadcast or start an emergency player.

A reporter can dial in, listen to a suitable point in the broadcast, interrupt the program by means of his telephone keypad, make his report and switch back to the unatended automatic program.

In combination with PA systems: In large event halls it can sometimes be easy for staff to do an announcement using a mobile phone. Simply dial a phone number and use the keypad to turn off the background music and make the anouncement.

For use as a backup for an STL or other similar audio connections.

IMPORTANT:

<u>To avoid several problems involved with PIN codes, amongst others to make the unit restart automatically after a power shut off, you can only use SIM cards with pin code 0000.</u>

CONNECTIONS AND INSTALLATION:

BACK PANEL CONNECTIONS:

LINE INPUT: On XLR type connector the balanced line input of the unit.

LINE OUTPUT: On XLR type connector the balanced line output.

GPIO: D-9 female connector to interface with most radio broadcast mixing desks.

HPH: RJ-11 connector for a standard telephone handset or headset for local operation.

SIM: Slot for a standard SIM card, push in- push out type. Place the SIM card with the contacts facing towards the bottom of the unit. The bevelled side first.

Make sure to use a SIM card with PIN code 0000.

This way you can quickly change telephone numbers by replacing the SIM card. If the SIM card is changed disconnect and reconnect the power to restart the unit in order to initiate the new SIM.

RF: SMA antenna connector. A standard antenna is delivered with the unit. Under special circumstances e.g. in case the unit is built in a closed metal 19" rack, it may be necessary to use an external, wired, antenna.

PWR: 12 Volts power connector. A suitable wide range adapter is included. Please note there is no power switch on the unit. The EA816 can also be powered from a car battery in case it is used in a mobile reporter unit.

FRONT PANEL CONTROLS:

LIMIT LED: A red LED indicating the internal limiter is activated to prevent overloading the system.

16 Push buttons to control the unit:

ON "Connect" button.

OFF "Disconnect" button

BACK key to make correction keying in numbers or returning to a previous state.

PHONES Switches the audio to the headset I/O, when active, disconnects line input / output.

BUTTONS 1..0, #,* to operate the unit as a normal telephone.

DISPLAY: OLED display indicating the status of the unit. It will also display the number of an incomming call.

OPERATION:

Connect the audio output of the unit to the input and the audio input to the cleanfeed output of your mixing desk or other system that you will be using. A normal telephone handset can be connected to the RJ11 connector on the back.
Connect the antenna provided by simply screwing on the SMA connector. In case you will be using the unit in a metal housing like a 19" rack the use of an antenna with cable is recommended. A metal housing acts as a Faraday cage resulting in a bad r.f. reception. An antenna with a cable placed outside of the rack will solve this problem.

Switch on the unit by connecting the power adapter delivered with the unit. (or use a suitable 12V 1A power source). After e few second the unit will be ready to use.

If no SIM card is placed or a SIM card with another PIN code as "0000" a message will be displayed:

Place a suitable SIM card in the slot and switch off and on the unit by removing and reconnect the power to restart the unit.

Key-in a telephone number and press the ON "Connect" button to make a call.

You can store up to 10 telephone numbers in non volatile memory by pressing " * " followed by one of the numeric keys:

To recall one of the stored telephone numbers press " # " followed by one of the numeric keys.

INCOMMING CALL

An incomming call is indicated by a blinking green ON "Connect" button and the telephone number of the caller will be displayed. Answer the call by pressing this button.
In auto answer mode the display will indicate "connect".

To end a call press the OFF "Disconnect" button.

LOCAL OPERATION

The audio is either routed to the main input and output or to the headset. You can connect the audio I/O to the headset by pressing the bottom right headset button. This way you can make a call independently or communicate to a caller off-air. If active a yellow LED underneath the button will light and the loudspeaker icon in the display will change into a headphone icon.

SPECIAL FUNCTIONS:

AUTO ANSWER
The unit can be used in auto-answer mode. As an example this can be used in unattended broadcast applications for your reporter to make his live report on air or in PA applications to make announcements with your mobile phone.

To put the unit in auto-answer mode press and hold the) OFF "Disconnect" button. The following message will appear in the display.

Press "1" to put the unit in auto-answer. Note the telephone icon in the right-top corner of the display. The auto-answer mode is indicated by a lifted handset in the icon. Once in auto answer the unit will stay this way. This mode is stored in non-volatile memory also after a power interrupt.

To switch off the auto answer function press and hold the) OFF "Disconnect" button and press "0". If a connection is lost or the caller ends the unit will auto disconnect and reverts to stand-by again.

REMOTE CALL

The telephone number stored in position 1 in memory can be called by a remote contact. A simple switch connected to pins 2 and 6 on the remote connector will dial the number.

REMOTE CONTACT

The EA816 also has a remote operated electronic contact. Between pins 3 / 7 of the I/O connector is an opto isolated switch. A caller can operate this switch by pressing "1" to switch this on and "0" to switch off on the dial pad of his phone.
Please note that the switch will stay active even if the call is ended. You can de-activate it by calling again and press "0".
Wired correctly to a mixing desk a reporter can listen to the current broadcast to find a suitable pause, press "1" to interrupt the radio automation system, make his announcements and restart the automation again by pressing "0".

REMOTE CONTROL

Like the EA815 and EA915 telephone hybrids the EA816 can be controlled from a suitable broadcast mixing desk. Available functions are:

Ring detect, a remote output contact to indicate an incoming call. Pin 5/9 RING+ / RING-

Remote on, to answer a call from the desk with pfl switch and/or a fader contact. Pin 4/8 ON+ / ON-

Remote control contact. Pin 2/6, REM+ / REM-

Remote call, momentary closing of the contacts between pin 2 and pin 6 will initiate a call using the telephone number stored in memory position 1.

The audio path is transparent for and the unit can be used for dialling with DTM tones.

SPECIFICATIONS:

Connections are "industry standard":

Input:

Balanced Line input,	XLR female	Pin 1 gnd; pin2 +; pin3 –

Output:

Balanced Line Input,	XLR male	Pin 1 gnd; pin2 +; pin3 –
Headphones (back)	RJ11	

Hybrid remote:

	I/O REMOTE
PIN	SUB-D 9P FEM.
1	SCREEN
2-6	REM CALL+ / REM CALL-
3-7	REM + / REM-
4-8	ON+ / ON-
5-9	RING+ / RING-

D-9 hybrid remote connector.

Dual-Band UMTS/HSDPA 900/2100MHz

Quad-Band GSM/GPRS/EDGE 850/900/1800/1900MHz

Output power: UMTS 850/1900: 0.25W; UMTS 900/2100: 0.25W; GSM850/GSM900: 2W; DCS1800/PCS1900: 1W

Power supply: 12V DC, approx 1A (peak).

APPENDIX

EA BROADCAST / EELA AUDIO
www.eela-audio.com