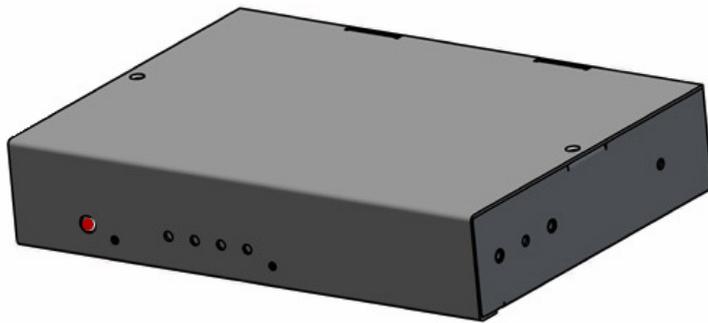# eela audio

EA815/2

Telephone hybrid

User guide

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, refer servicing to qualified personnel.

CE-Product

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

$$C \, \varepsilon$$

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.

SYSTEM DESCRIPTION

The design goal for **EA815/2**was to produce a telephone hybrid with the best results and the easiest operation. There is only ONE operator control; the **ON** switch to connect the PTT-line to the hybrid instead of a telephone. The function can be remote controlled.

The power supply is a wide range "universal" adapter suitable for 100 to 240 Volts, 50/60 Hz and comes with Euro, UK and US/Japan style wall plugs. Please note that these power supplies will not work with older hybrids nor will the previous transformer adapters work with the new units.

The hybrid itself is composed around two transformers with a **PRESET BALANCE NETWORK**. This preset network needs to be trimmed only at installation for best balance on an average line. Practice has shown, that the connection to the first exchange is determining for the setting and in most cases this is always the same line.

The best results can be obtained when a **DIRECT** telephone line is used, not routed via a house telephone system.

To achieve the best damping of the send signal in the receive signal, this hybrid employs **VOICE CONTROL** in combination with the preset balance.

The following processing is done:

The **SEND** signal is bandfiltered and limited, so not to spoil the damping by too much level and out of band signals.

The **RECEIVE** signal has:

*   **VOICE CONTROL** of the gain by the **SEND** signal. As soon as the studio starts talking, the gain of the receive chain is reduced to lower the crosstalk over the hybrid. By this action, the direct signal of the microphone is not spoiled by the crosstalk from the hybrid and so gives a cleaner result.

*   Also some filtering is employed to reduce out of band signals like hum, dailing pulses etc.

GAINS for **SEND** and **RECEIVE** are adjustable through the frontpanel.

CONNECTIONS

The **SEND** and **RECEIVE** signals are on **XLR** connectors. The **PTT**-connection and the **TELEPHONE**-connection are on universal telephone connectors. The **REMOTE** connections are on a **D-9** connector. On this **D-9** connector are also the **SEND** and **RECEIVE** signals and an optocoupler-**RING** output available. The pinning of these connectors are drawn elsewhere in this manual.

INITIAL SETUP

* Connect the unit to the mains, a mixing console, a telephone and a PTT connection.

* Leave the **HYBRID ON** switch (green button) off and make a connection with a remote caller. It is the best to use a distant connection; a local or house-line can give other results. If possible, have the caller on the other end his mouth piece covered or simply keep him/her quiet.

* Then press the **HYBRID ON** switch. After a short delay of 0.7 seconds the **EA815** is switched on.

* Send programm, preferably speech at nominal level, to the line and use the console PFL system to listen to the hybrid output. Adjust the **SEND** level on the **EA815/2** in such a way that the limiter LED on the front of the **EA815/2** only lights up at peaks in your send signal.

* Then adjust both balance controls **(R- and C-balance)**, behind the frontpanel, for minimum bleed through from the send signal to the output. Use first the center position of both controls and adjust them several times untill a clear minimum is reached. Try eventually several connections to get the best compromise. Only in case the PTT has done changes on the exchange or line a new line-up is needed.

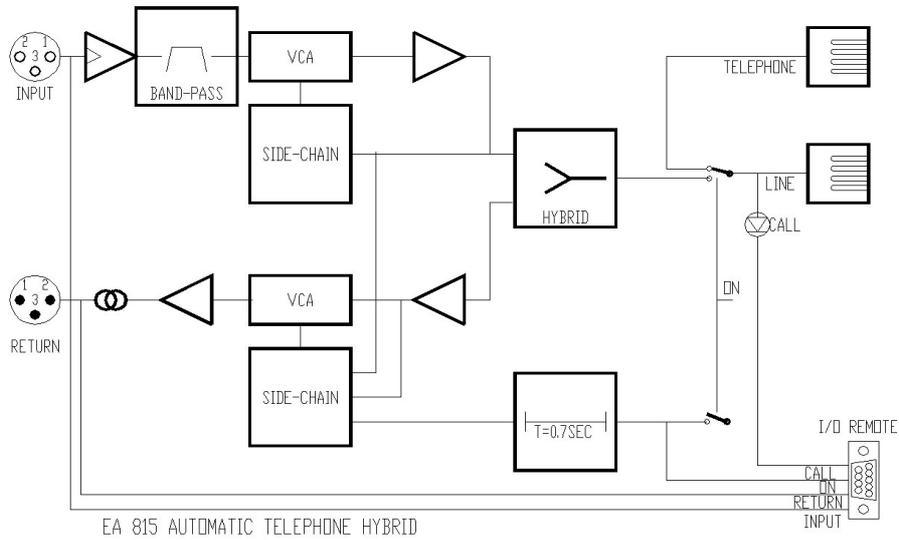* Adjust the **RECEIVE** gain until the required level is reached.

USING PROCEDURE:

* When an outgoing call is made, the **EA815/2** is still switched off. The connection has to be made with the connected telephone. Once the connection is made the **EA815/2** can be switched on. The phone is now disconnected.

* In case of an incoming call the phone will ring normally, and the call LED on the **EA815/2** lights up. You can either pick up the phone or switch the **EA815/2** on. When the unit is switched on, the phone is disconnected again.
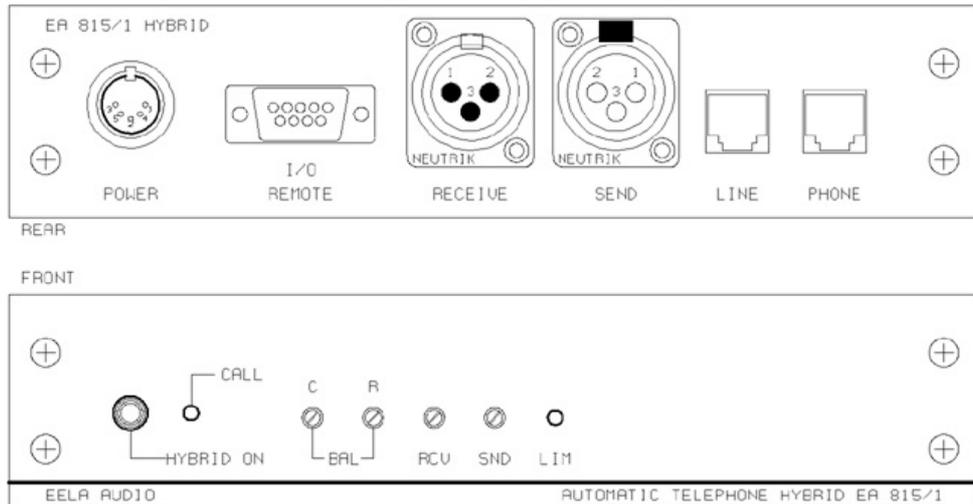
ACCESSORIES:

Also available are a 19" rack mounting kit for one unit (an empty housing and 19" brackets are supplied under code EA800/3) and a rackmounting kit for mounting with another unit from the EA815 / EA816 series equipment (19" brackets under code EA800/4).
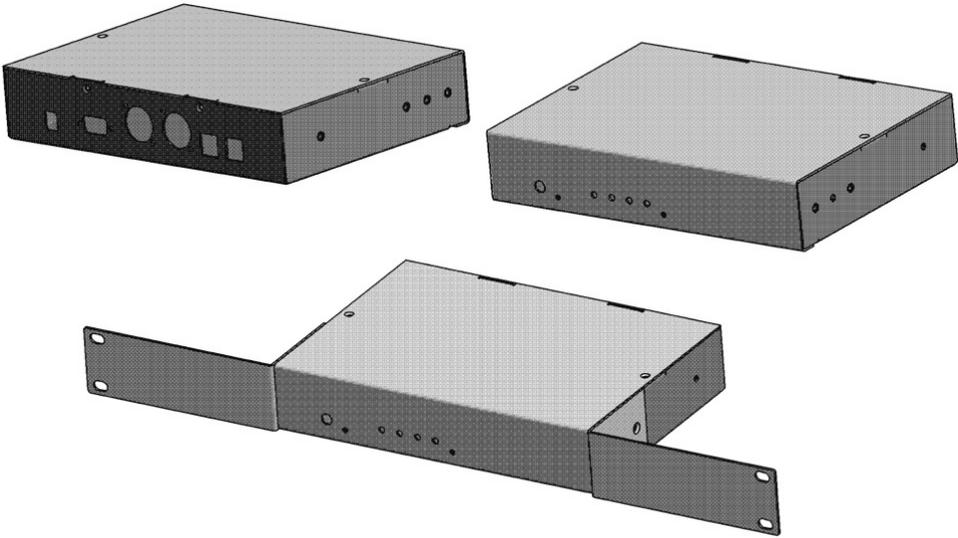
EA815/2DIAGRAMS

EA 815 AUTOMATIC TELEPHONE HYBRID

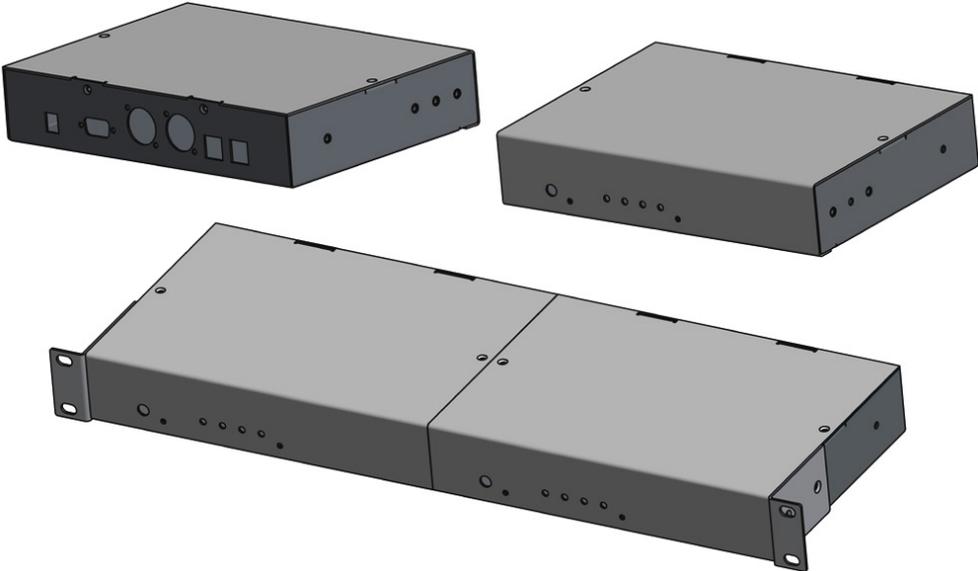| I/O REMOTE			
PIN	SUB-D 9P FEM.	RECEIVE	SEND
1	SCREEN	XLR3P	XLR3P
2-6	RCV+ / RCV-	1= GND	1= GND
3-7	SEND+ / SEND-	2= RCV+	2= SEND+
4-8	ON- / ON+	3= RCV-	3= SEND-
5-9	RING+ / RING-		

Please note: Remote connector has changed in SMD versions!
                Power supply units of older versions do not match!

EA Broadcast / Eela Audio
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5431NM Cuijk
The Netherlands
http://www.eela-audio.com

Optional rackmounts:

EA800/3, 19" 1HE rack mount kit for 1 unit (130 mm)

EA800/4, 19" 1HE rack mount kit for 2 units (20 mm)

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