eela-audio

EA916

Journalist Unit
USB Audio module with Telephone Hybrid

User manual

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 or the batteries 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.
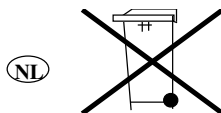
Thank you for the purchase of this *EA916 Journalist unit*. First read this manual carefully before starting to use the apparatus. Please keep this manual so you can refer to it at a later stage.

GENERAL REMARKS:

Eela Audio EA916 is a USB audio module with microphone and line input, Line out and headphones amplifier. It also has an integrated telephone hybrid in one U 19" rack unit.

The ideal tool for a reporter to record and edit a telephone interview in the radio broadcast environment. Also some call centres that playback or record audio can benefit of this unit.

Easy to install just connect the telephone, headphone microphone and a simple USB cable to any Apple or Windows computer. Windows will automatically recognize the unit. No separate drivers to install.

Additional information can be found on the internet: http://www.eela.nl/EA916TI

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Eela Audio EA916 Journalist unit:

Quick start manual

19" microphone and line mixer with built-in USB audio module and telephone hybrid.

APPLICATIONS:

The Eela Audio EA916 is designed for use with modern radio and television broadcast systems to record and edit telephone recordings in a fast and easy way.

The unit will be "recognised" by any modern Windows or Mac computer workstation and will install in minutes. This makes it possible to use any desktop or laptop computer to be used as a recording station.

IMPORTANT:

The SPDIF digital input and output are for convenience purposes only.
Connecting a digital source to the SPDIF input will automatically disable the audio from the EA916 to the computer! Do not connect a device to this input unless it is used to record directly to the computer.

CONNECTIONS:

BACK PANEL CONNECTIONS:

DAW: USB type "B" connector to your computer, the digital audio input and output
Any modern Windows or Mac computer will automatically recognise the unit and install the necessary driver.
Please note: Some older units do require special settings for Windows 7, contact Eela Audio for details.

SPDIF: SPDIF digital input and output to your computer. For convenience purposes only.

Please note: Connecting a digital source to the SPDIF input will disable the audio from the EA916.

LINE OUTPUT: On XLR type connector the balanced line output of the computer signal. During normal operation this carries the same signal that is coming from your computer.
Please note: This depends on the configuration of your computer and the used recording software. Some systems can do playback while recording, others have the output muted in record mode!
Version 2: Internally there are jumpers that can switch the output to carry the full mix output signal. This can be set in situations were the unit is used without the USB connection to a computer. For details see block diagram.

AUX: Stereo jack output, function can be selected by internal jumpers:
A: Carries the output signal of the hybrid.
B: Monitor output to a set of loudspeakers, the signal will mute upon switching on the microphone.

LINE INPUT: On XLR type connector the balanced line input of the unit. This input is routed trough the jack inputs on front. Using the jack connectors of the front panel will interrupt this input. The volume can be adjusted with the level potmeter on the front panel.

• USB type "A" connector. For convenience purposes looped to the front to connect an additional device like USB memory stick. This has no internal function in the unit.

REMOTE: D-9 female connector for remote control of the internal hybrid.

LINE and PHONE: RJ-11 connectors for (POTS, Plain Old Telephone Service) telephone line and telephone set.

MAINS: IEC mains connector, the unit accepts 85 .. 260 Volts AC, 47 .. 440 Hz mains power.

CONTROLS AND CONNECTIONS FRONT PANEL:

POWER: Power switch and LED

DAW LED: A yellow LED indicating an active connection with you computer.

OVL LED: Red LED indicating an audio overload

• USB type "A" connector. For convenience purposes looped from the back to the front to connect an additional device like USB memory stick. This has no internal function in the unit**.**

PHONE SECTION:

HYBRID ON: switches the telephone line from the telephone set to the EA916 unit and hold the line.

CALL LED: Blinking red LED Signals an incoming call.

C BAL, R BAL, SEND: adjustments for damping and send level, this is done once and does not need re-adjustment during normal operation. For details see the technical appendix.

LIM LED: red LED signals the of the built-in limiter.

LEVEL (green): volume control of the incoming telephone signal.

MIC/LINE DAW: Selects the signal TO the telephone line and the mobile telephone, either the mix of the microphone and line signals or the playback signal of your workstation. The red LED is on when the signal of your computer is played to the telephone system.

MOBILE PHONE SECTION:

SEND LED:

MOBILE PHONE: D-15 connector for a mobile telephone, compatible with the cables for the Eela Audio S25 Reportophone for mobile telephone.

LEVEL CONTROL (yellow): volume control of the incoming mobile telephone signal.

LINE INPUT SECTION:

LINE INPUT: On 6,3 mm Jack type connectors, the L + R balanced line input of the unit. Inserting a connector in these inputs will disconnect the signal from the XLR input connectors on the back of the unit.

LEVEL CONTROL (bleu): volume control of the line signal.

MICROPHONE INPUT SECTION:

MIC ON: Switches the microphone on. This will also mute the AUX output if configured as a monitor loudspeaker output. The state is indicated by a red LED.

PP: A switch behind the front panel to switch on the 48 Volt Phantom Powering of the microphone indicated by a yellow LED.

LEVEL CONTROL (red): volume control of the microphone input signal.

MICROPHONE: Balanced XLR-type microphone connector

HEADPHONE OUTPUT SECTION:

HEADPHONE: Standard headphones on 6,3 mm Jack.

HEADPHONE LEVEL (grey): volume control of the headphones output signal.

BUILT IN TELEPHONE HYBRID

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.

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 band filtered 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, dialling pulses etc.

GAINS for SEND and RECEIVE are adjustable through the front panel.

The telephone line connection and the telephone set connections are on RJ-11 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 opt coupler-ring detect 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 **EA916** is switched on.

Send program, preferably speech at nominal level, to the line and use the console headphones to listen to the hybrid output. Adjust the SEND level on the **EA916** in such a way that the limiter LED on the front of the unit only lights up at peaks in your send signal.

Then adjust both balance controls (R BAL and C BAL), behind the front panel, for minimum bleed through from the send signal to the output. Use first the centre position of both controls and adjust them several times until a clear minimum is reached. Try eventually several connections to get the best compromise.

Adjust the RECEIVE gain until the required level is reached.

Connectors:

Connections are "industry standard":

Inputs:

Microphone,	XLR female	Pin 1 gnd; pin2 +; pin3 −
Balanced Line input (back),	XLR female	Pin 1 gnd; pin2 +; pin3 −
Balanced Line input (front),	6,3 mm Jack	Sleeve gnd; tip +; ring −
SPDIF, unbalanced	RCA Cinch	

Outputs:

SPDIF, unbalanced	RCA Cinch	
Balanced Line Input (back),	XLR male	Pin 1 gnd; pin2 +; pin3 −
Aux unbalanced	6,3 mm jack	Tip left; ring right; sleeve gnd
Headphones front	6,3 mm jack	Tip left; ring right; sleeve gnd

Hybrid remote:

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

D-9 hybrid remote connector.
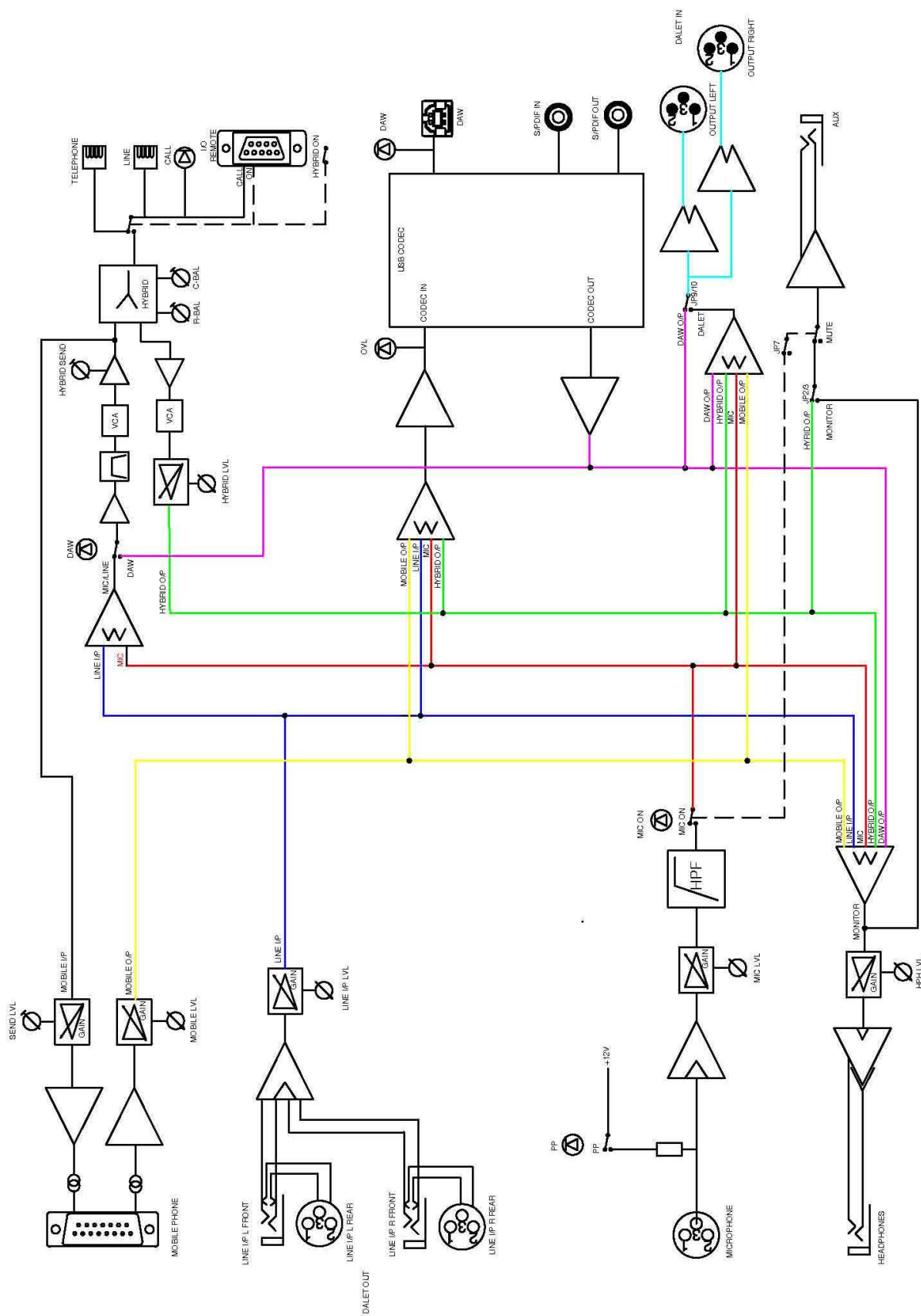
BLOCK DIAGRAM EA916 JOURNALIST UNIT

Eela Audio
http://www.eela-audio.com