

Audio, video and
communications
for broadcasters





PRODUCT CONCEPT

Radio has historically proven to be the most flexible, immediate and dynamic media. The 2020 pandemic has sped up the tendency of avoiding unnecessary trips to the studios in favor of promoting work from home or any other place.

Everyone - hosts, DJ's, commentators, panelists and journalist - participating with their voice in a radio production from anywhere, need a piece of equipment to connect remotely. The basic requirement of such equipment is to allow for great audio quality and equivalent to the one captured as if present in the studio. Further, it has to be easy to install and operate and be cost-effective.

TALENT has been specifically designed following this requirement. A portable audiocodec allowing for the transmission of single, high quality encoded audio channel including a broadcast quality microphone source. It connects to a remote unit at the station and provides for the associated feedback or "lazy" through headphones.

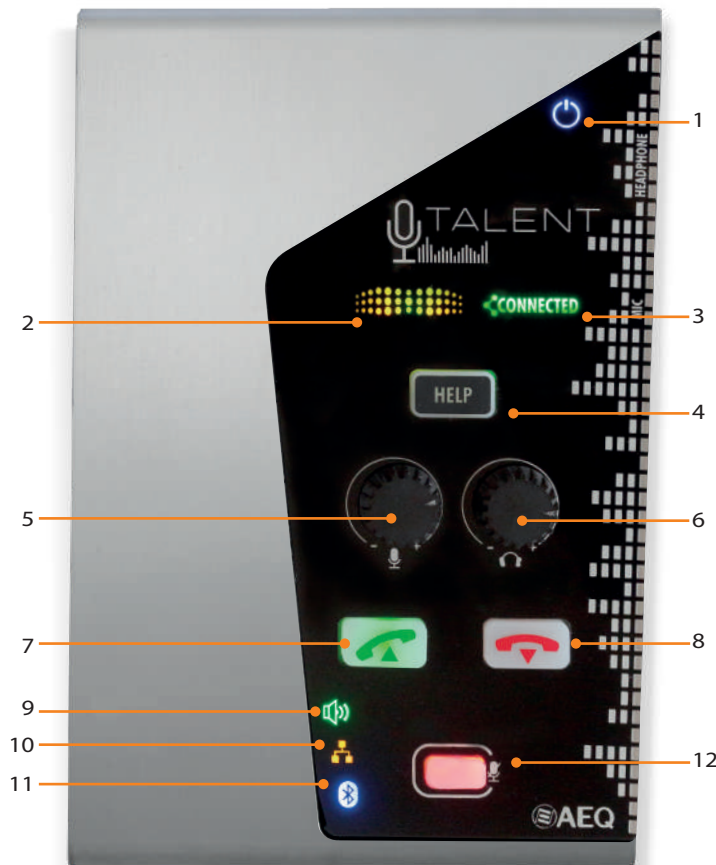
It can also transmit a stereo signal coming from a 3.5mm jack connector or a Bluetooth A2DP connection, or the mix of this signal with the microphone.

In the opposite direction, it can receive a stereo program return signal and, besides listening to it through the headphones, it can be output to a PC or amplification system through the line output or Bluetooth link.

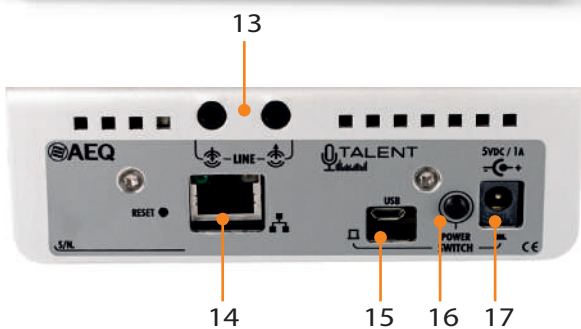
When linked to a Smartphone via Bluetooth, TALENT allows to carry out telephone interviews through the smartphone or applications such as Skype, Whatsapp or Zoom, and that provides great voice quality with the interviewee. Live or recorderd, this can be mixed to the program sent to the studio.

It offers easy connectivity. Regular ADSL/optical fiber domestic Internet connections or wireless 3G/4G/5G data connections using simple router/modems with internal SIM card as the communications channel.

It provides extraordinary quality. TALENT's microphone input is equipped with a very high quality preamplifier with low noise and distortion levels. The signal can be encoded and sent using OPUS family of encoding algorithms, with low latency and great audio bandwidth.



- 1 Power ON indicator.
- 2 Program TX level indicator.
- 3 Active connection Indicator.
- 4 HELP key: request help from the remote technician/operator.
- 5 Microphone / Line input & Bluetooth level adjustment. Indicator of line input & Bluetooth adjustment in process.
- 6 Headphone / Line output & Bluetooth level adjustment. Indicator of line output & Bluetooth adjustment in process.
- 7 Answer / Call key.
- 8 Hang up / end call key.
- 9 Return audio presence indicator.
- 10 Ready IP connection indicator.
- 11 Bluetooth connection indicator.
- 12 Microphone ON/OFF (MUTE) key.
- 13 Stereo input and output on 3.5mm (1/8") jacks.
- 14 Ethernet 10/100 Mbps RJ45 connector.
- 15 Power supplyconnector. Micro-USB connector, compatible with computer +5V/1A USB outputs.
- 16 Power switch.
- 17 Power supply connector (5-15V, 1A to 0.35A).
- 18 Headphone Jack, 6.35mm (1/4").
- 19 Microphone input, female XLR Connector.






CONTROL APPLICATIONS

All the functions on the front panel of the device are also available through software applications that can run in parallel or simply substitute them. It is also possible to lock the physical controls for non-expert users.


Intuitive operation without previous technical knowledge



There are just a few controls and indicators for local operation, but these can be remotely controlled in parallel. This is also why there is a "HELP" key, used to request attention or remote assistance from a technician or operator at the station.



TALENT PILOT is available for iOS and Android smartphones. It easily and intuitively allows for the configuration of the unit and performs less-frequent control operations, complementing the physical controls of the equipment.



ControlPhoenix is available for an expert and advanced remote configuration and control of the unit. This App can be used by the station's technical staff to set it up for the final user. When used for control, it is in parallel and also supplements the local control. Other AEQ audiocodes can be controlled.

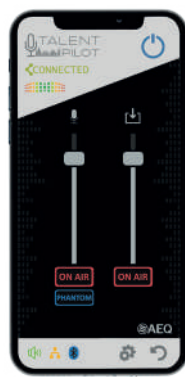
TALENT PILOT

Compatible with Android and iOS phones. Installed on a smartphone or a Tablet, this app complements or substitutes the functions and controls on the front panel of the device. It is a very user-friendly interface. For more complex configurations, guidance is provided to the user about the technical details to introduce. It makes selection of the call destination and mode easy to select.



Main Screen

Status: Indicators showing the state of the device and communications.
 HELP: Request help from the station's technician who is supervising the unit remotely.
 Input adjustment: Provides access to the input level adjustment screen.
 Output level: Provides access to the output level adjustment screen.
 Answer/Call: Answer an incoming call/access the Call menu.
 Hang Up: Ends the current or active communication.
 Setup: Provides access to the configuration screen.



Input level Adjustment screen

Independent microphone and line/Bluetooth level adjustments with separate ON AIR buttons. Microphone Phantom power supply switch.

Output level Adjustment screen

It allows for the selection of the input source for the headphone and line/Bluetooth outputs and adjustment of their respective levels. It includes an adjustment of the program's local feedback level to be sent to the outputs that follow PROGRAM signal.



Call Screen

Allows the user to call: either using the call book, from the latest calls record or by manually dialing the destination's address.

Options within the configuration screen

Mode: Selection of the IP communications mode (RTP, Proxy SIP, Direct SIP).
 SIP Settings: selection of the preconfigured SIP account to use when making SIP calls (needs to be configured previously using ControlPhoenix control software).
 Encoding: Selection of the encoding/decoding algorithm (RTP) or profiles (SIP) to be used to make calls.

CONTROL PHOENIX

ControlPhoenix is a PC software able to simultaneously operate any function of TALENT and also all the other codecs in the AEQ Phoenix family. There is a multicodec version used to control a large pool of audiocodes, even deployed at different locations.



CONTROL PHOENIX allows for audio routing, communication mode selection, call establishment and level measurement and adjustment of incoming and outgoing audio signals for each audiocodec.



CONTROL PHOENIX for TALENT also incorporates an audio mixing screen, able to remotely adjust the level of the sound sources and select the signals to be sent to each output and its volume.



OPERATING MODES

 BASIC	 LIVE PHONE CALLS	 COMMENTATOR
<p>Send a local microphone to the studio, with return, or “lazy”, to the headphones. The signal sent to program can also be monitored through the headphones without delay at an adjustable level.</p>	<p>Make phone interviews using a Bluetooth-connected smartphone. It can connect using the mobile network or conference apps. Audio returned by the phone is mixed with the local microphone and sent to the studio mixer. Clean audio from the mic is sent to the phone to maintain a crystal clear conversation with the interviewee.</p>	<p>Send the local mic mixed with a stereo line input from the auxiliary connector or from a computer or smartphone linked through Bluetooth A2DP. The studio return is monitored through the headphones. It can also be sent, to a local mixing console used for PA or other sound reinforcement apps.</p>

TECHNICAL FEATURES

INPUTS AND OUTPUTS

- **XLR-3 female microphone connector.** Low noise preamplifier. Switchable 12V phantom supply. 2Kohm input impedance. Gain is adjustable from the front panel and via software. MUTE key.
- **Stereo ground-referenced line input via 3.5mm jack.** Compatible with PCs, tablets, phones and other sound players. Software adjustable input level.
- **Bluetooth 5.0 audio input.** Stereo A2DP, software-adjustable level.
- **Stereo ground-referenced line output via 3.5mm jack.** Compatible with PCs, tablets, phones and other sound recorders.. Software adjustable input level.
- **Headphone output: stereo 1/4" jack.** >100mW output on low or high impedance headphones. Volume control and TX/RX panorama selection from the front panel and by software.
- **Bluetooth 5.0 audio output.** Stereo A2DP, software-adjustable level.

OTHER FEATURES

Communication interfaces *

10/100Mbps Ethernet port with RJ45 Connector. Provides access to:

- Wired networks: LAN, DSL, wire or fiber-optics Internet, VLAN.
- Satellite: through a data satellite service IP interface.
- Telephony: 3G, 4G, 5G using an external router connected to this port.
- Wireless data links: using wireless bridge, WiMax antennas or a WiFi interface.

Bluetooth Interface:

- A2DP profile for bidirectional stereo audio exchange with the connected smartphone or computer.
- Using HFP profile, G722 or similar HD-voice is also sent to a phone in order to make interviews by phone, Skype, Whatsapp or other conferencing applications. When there is no access to an IP network, this can provide connectivity with the studio in order to send the voice to the broadcast mixer.

Features and specifications are subject to changes without prior notice. Consult application notes at our website.

ENCODING ALGORITHMS

OPUS coding

AEQ recommends its customers the OPUS family of encoding algorithms. OPUS offer extraordinary sound quality, low delay and great bitrate efficiency. There is a selection of 4 mono and 3 stereo modes provided, with Fs=48 kHz, operating at bitrates between 12 and 192kbps offering audio bandwidths between 6 and 20kHz.

Other coding algorithms

In order to provide compatibility with stationary audiocoders, and the station preferences, a large selection of algorithms can be used, such as G711 (A- or u-law) G.722, AEQ-LD, MPEG 1 and 2 – LII and linear uncompressed PCM, among others (please ask).

Smart RTP and SIP server

In order to simplify the operation of the unit, AEQ offers the Smart RTP automatic call-establishment tool. Also, the service of a corporate SIP server is offered to our customers.

OTHER FEATURES

- Local interface with keys and encoders.
- Three-level LED vumeter at the front panel for program TX level indication.
- Received audio signal presence indicator.
- Operating temperature: -10 to +45 °C (14 to 114 °F).
- Dimensions: Width x Depth x Height: 130x195x45mm.
- Weight: 620gr.
- Power supply: 5 to 15VDC for external adapter (90-263V 50/60 Hz input) or 5V through USB interface. Power consumption: 3.5W approx.
- Optional UPS or power-bank. Duration depends on its capacity. For example: >4h with 15Vah.



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