

EKKO™ EK-1 Delay Pedal

USER MANUAL

EKKO EK-1 User Manual rev. 1.0.8, September, 2015



CONGRATULATIONS!

You are now the owner of an EKKO EK-1 delay pedal!

EKKO is a high-quality aluminum, standard semi-analog delay pedal with true bypass. Semi-analog means that the direct signal from your guitar is always direct through, whether the pedal is in bypass mode or not. It can be controlled like a stand-alone effects pedal or using the AERO™ AE-1 wireless controller (optional):



FCC Statements

15.19 (a)(3):

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21:

Unauthorized changes or modifications not expressly approved by Aalberg Audio could void the user's authority to operate the equipment.

15.105(b):

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna. —Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/TV technician for help.

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1. GETTING STARTED

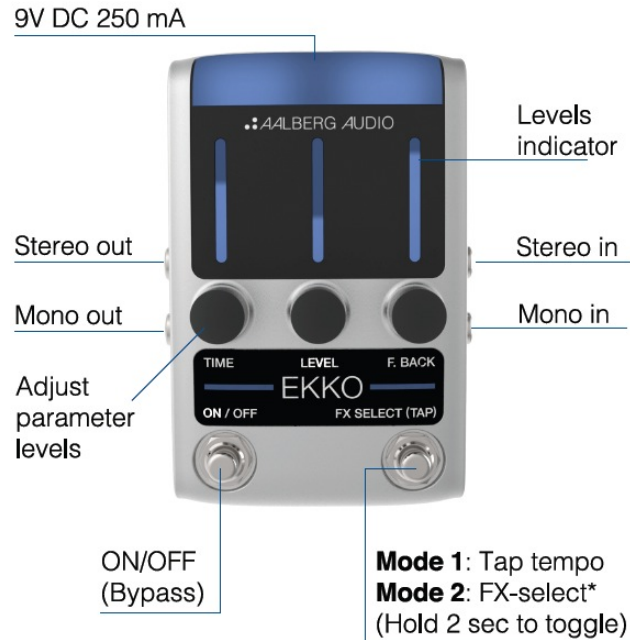
To get your pedal up and running you need a standard 9V DC, 2.1 mm plug, center negative power supply (minimum 250 mA). You will find the connector at the back of your pedal.

The pedal supports both mono and stereo connections. Combinations of these will lead to different properties in the output signal. See the input/output setups section for further explanations.

2. CONTROLS

<i>TIME</i>	Time between echoes
<i>LEVEL</i>	Adjusts the output level of your echo signal relative to the level of the direct signal (0-100%)
<i>FEEDBACK</i>	Controls the number of echoes
<i>FX SELECT/TAP TEMPO</i>	Two modes: <ul style="list-style-type: none"> - TAP – tap the desired delay time using footswitch (TAP) - FX-SELECT – Choose active effect parameter (<i>TIME</i>, <i>LEVEL</i> or <i>FEEDBACK</i>) for wireless control with AERO controller (optional)
<i>ON/OFF</i>	Set the pedal to ON (activated) or OFF (true bypass).

3. OVERVIEW



*Set active parameter for AERO™ AE-1 Wireless Controller

4. SPECIFICATIONS

Power supply	9V DC, 2.1 mm plug (center negative)
Current draw	250 mA
Input impedance@1kHz	~1M Ohm
Output impedance@1kHz	< 1k Ohm
Maximum input signal	3.22 Vp-p (2.28 Vrms)
Delay time	0 ms – 2000 ms
Sound Quality (sample-/bit rate)	48 kHz/24-bits
Connectors	<ul style="list-style-type: none"> - INPUT (mono/stereo) - OUTPUT (mono/stereo) - DC power jack
Controls	TIME, LEVEL, F.BACK, ON/OFF (true bypass), FX SELECT (TAP)
Parameter level indicators	LED bar indicators for <i>TIME</i> , <i>LEVEL</i> and <i>F.BACK</i>
Dimensions incl. knobs (W x H x D)	93 x 57 x 142 mm / 3.7 x 2.2 x 5.6 inches
Weight (excl. packaging)	0.372 kg / 13.0 oz
Weight (incl. packaging)	0.442 kg / 15.6 oz

5. SOFTWARE UPDATE

UPDATE APP ESTIMATED READY: AFTER SUMMER 2015

Performing software updates on your wireless Aalberg Audio product is easy:

1. To set your device in software update mode:
 - **For AERO:**
 - i. Turn off the AERO (slide switch set to '0')
 - ii. Press and hold rotary knob button and preset button 3 (marked: 'III') simultaneously, then turn the AERO on (slide switch set to 'I')
 - iii. The AERO LED will light up (red) to indicate that the AERO is in software update mode
 - **For Aalberg Effect Pedal:**
 - i. Unplug power jack
 - ii. Press and hold ON/OFF and FX-SELECT footswitches simultaneously then plug in power jack
 - iii. The LED at top right of the pedal will light up to indicate that the pedal is in update mode
2. Go to App Store and search for the *AALBERG UPDATER* app (Iphone 5 / Ipad 3 (incl. Ipad Mini) or later is required). *For Android users: the app is currently under development.*
3. Download the app on your mobile device and launch the app.

4. The Aalberg Audio device set to update mode will now show up in a list in the *AALBERG UPDATER*, and you can check the current revision of the software found on the device.
5. You can now choose if you want to update to the latest software available.
6. A status bar indicates the upload process and displays a confirmation when the new software has been successfully updated.

For more information, please visit: www.aalbergaudio.com/support

6. WIRELESS CONTROL – PAIRING

CURRENTLY: ONE AERO-ONE PEDAL COMMUNICATION ONLY!
ONE AERO – MULTIPLE PEDALS READY AFTER SUMMER 2015

In order to control your Aalberg effects pedal using the AERO wireless controller (optional) you need to pair the devices.

Below is a step-by-step guide:

2. Set your devices in pairing mode:

- **AERO:**

- i. Turn off the AERO (slide switch set to '0')
- ii. Press and hold rotary knob button and left button* simultaneously, then turn the AERO on (slide switch set to '1')
- iii. The AERO LED starts blinking (red) to indicate that the AERO is in pairing mode

- **Aalberg effect pedal:**

- i. Unplug power jack
- ii. Press and hold FX-SELECT then plug in power jack
- iii. Lowermost LED in mid row starts blinking to indicate that the pedal is in pairing mode



- iv. Next to lowermost LED in mid row lights up when AERO in pairing mode is detected
 - v. Repeat step i-iv for any additional Aalberg effects pedals
- 3. Confirm pairing:
 - i. When you have repeated the above steps for all of your Aalberg pedals, you need to press and hold the rotary knob button for 3 seconds, then release button.
 - ii. To indicate that pairing is completed, AERO LED (red) and lowermost LEDs in mid row for all pedals will light for 2 seconds
- 4. You are now ready to control your Aalberg effects pedals wirelessly!

For more information, please visit: www.aalbergaudio.com/support

7. INPUT/OUTPUT SETUPS

The Aalberg EKKO™ EK-1 Delay Pedal offers the following mono/stereo configurations:

1. Mono in/Mono out
2. Ping-pong stereo
3. Dry/wet split
4. Dual mono

1. **Mono in/Mono out**

Connect your instrument to *Mono in* and the amplifier to *Mono out*.

2. **Ping-pong stereo**

Connect your instrument to *Mono in* then connect one amplifier to *Mono out* and another amplifier to *Stereo out*. The echoes of the direct signal will now alternate between the two outputs.



3. **Dry/wet split**

Connecting your instrument to *Stereo in* will split the dry wet signal as follows:

- *Mono out*: 100% wet signal
- *Stereo out*: 100% dry signal

4. **Dual mono**

This is useful if you want to maintain the stereo path for pedals in the signal chain. Connect the stereo outs from the previous pedal to both inputs on the EKKO (Mono in = left, Stereo in = right).

8. DISCLAIMERS

All use of our products is undertaken at your own risk and expense and Aalberg Audio cannot be held liable for any direct or indirect losses or cost incurred through use, default or malfunction of our products. Repair or replacement of defective units under our warranty provisions serve as the sole remedy in the unlikely event that our products does not comply with product specifications.

Aalberg Audio accepts no liability for any damages made to persons or equipment when attaching or removing the industry velcro (AERO accessory).

9. WARRANTY

ONLY SEND PRODUCTS THAT:

- YOU HAVE TESTED YOURSELF
- ARE FOLLOWED BY A COPY OF THE RECEIPT
- ARE FOLLOWED BY AN EXPLANATION OF THE FAILURE

We offer a 2-year warranty on all our products. In the unlikely event of a malfunction, please contact us at support@aalbergaudio.com before sending us the product for repair. When the product has been returned to us at the cost of the sender, we will repair or replace your product and send it back to you - free of charge and usually within 4 weeks (shipping not included). The

product needs to be accompanied by a copy of your receipt, serial number, return address, phone number, e-mail address and a brief explanation of the problem. If the product is altered or repaired by someone unauthorized by Aalberg Audio the warranty is no longer valid. Stores and distributors must always check products before sending them to Aalberg Audio for repairs. Please note that we cannot replace a product before we have received it here in Trondheim, Norway.

10. HISTORY

The inspiration for the delay pedals with wireless controller came to guitar player and inventor Rune Aalberg Alstad back in 2009, when he was tired of having to run over to the pedals and bend down all the time to change the effect settings. In 2012 he met the engineer Torkild Indstøy and the entrepreneur Aleksander Torstensen, and five years later, after lots of testing and prototyping we are proud to introduce the world's first EKKO EK-1 Delay Pedal with the AERO AE-1 Wireless Controller. (Below you can see the different development stages (from left to right): *"The Coffee Filter"*, 2010 – *"The Tank"*, 2012 – *"Prototype 3"*, 2013, *"Prototype 4"*, 2014 – The final product, 2015)



11. IPR-RELATED

Design Protection pending in EU & USA

International Patent pending PCT/NO2014/050236

12. COMPLIANCE

Aalberg Audio accept and follow these regulations and directives.



FCC ID: 2AFRR-010304

13. ABOUT AALBERG AUDIO

Aalberg Audio AS is located in Trondheim, Norway. We produce wireless guitar effects with accompanying hardware and software. Please don't hesitate to contact us if you have any questions or inquiries! Visit: www.aalbergaudio.com



www.aalbergaudio.com

Trondheim
NORWAY

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