



# EM-16

ORDERCODE D143173

ORDERCODE D143182



**SHOWELECTRONICS FOR PROFESSIONALS**

## **Congratulations!**

You have bought a great, innovative product from DAP Audio.  
The DAP Audio EM-16 brings excitement to any venue.

You can rely on DAP Audio, for more excellent audio products.  
We design and manufacture professional audio equipment for the entertainment industry.  
New products are being launched regularly. We work hard to keep you, our customer, satisfied.  
For more information: [iwant@dap-audio.info](mailto:iwant@dap-audio.info)

You can get some of the best quality, best priced products on the market from DAP Audio.  
So next time, turn to DAP Audio for more great audio equipment.  
Always get the best -- with DAP Audio !

Thank you!



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# WARNING

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY  
BEFORE YOUR INITIAL START-UP!**

## Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- 1 DAP EM-16
- 1 Screwdriver
- 8 colour- coded protection caps
- 1 stand mount
- 1 storage case
- This user manual

# WARNING



 **CAUTION!**   
**Keep this device away from rain and moisture!**

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY  
BEFORE YOUR INITIAL START-UP!**

## SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual

 **CAUTION! Be careful with your operations.**   
**With a dangerous voltage you can suffer  
a dangerous electric shock when touching the wires!**

Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

### **IMPORTANT:**

*The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.*

- Never remove warning or informative labels from the unit.
- Never leave any cables lying around.

- Do not open the device and do not modify the device.
- Do not switch the system on and off in short intervals, as this would reduce the system's life.
- Do not drive the inputs with a signal level bigger, than required to drive the equipment to full output.
- Only use device indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Make sure you don't use the wrong kind of cables or defective cables.
- Please turn off the power switch, when changing the power cord or signal cable, or select the input mode switch.
- If the system has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your system. Leave the system switched off until it has reached room temperature.
- If your Dap Audio device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Dap Audio dealer for service.
- Repairs, servicing and electric connection must be carried out by a qualified technician.

## OPERATING DETERMINATIONS

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.

*Improper installation can cause serious damage to people and property !*

### **Return Procedure**

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail [aftersales@highlite.nl](mailto:aftersales@highlite.nl) and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

**Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:**

- 1) Your name
- 2) Your address
- 3) Your phone number
- 4) A brief description of the symptoms

### **Claims**

The client has the obligation to check the delivered goods immediately upon delivery for any shortcomings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

## Description of the device

### Features

The EM-16 is a professional wireless microphone from Dap Audio. There are two types ranges available:

D143173, frequency range 740 – 764Mhz

D143182, frequency range 822 – 846Mhz

- PLL synthesized 16 switchable frequencies.
- Operation in the UHF range.
- Compatible with Lavalier or headset microphones.

### Overview



Fig. 1

### Installation

Remove all packing materials from the EM-16. Check that all foam and plastic padding is removed.

**Always disconnect from electric mains power supply before cleaning or servicing.**

**Damages caused by non-observance are not subject to warranty.**



Fig. 2

A suitable (optional) receiver is the DAP ER-216 (D143079 or D143082).

You can change the color cap at the end of the microphone, whenever you feel like it.



Fig. 3

## Set Up and Operation

Before turning the EM-16 on, always make sure that the frequency matches your country.

### Placing the batteries



- 1)** Unscrew the grill of the microphone counter clockwise and take the plastic cover off from the back.
- 2)** Once you have removed the grill. You see a small lip, which you have to push.
- 3)** Pull out the battery holder. Put 2 batteries (2x Battery UM3, AA1.5V) in the holder. Pay attention to the polarity of the batteries and put them in correctly.
- 4)** Set the switch on the back to ON. Now the LED will light green. If the LED lights up red, you have to change the batteries.

### Altering the channel setting



- 5)** Use your thumb to unlock the lever and gently remove the color cap from the microphone.
- 6)** Rotate the channel switch using the supplied screwdriver.
- 7)** Place the color cap back.

## Tips for achieving maximum performance.

- Make sure you can always see a receiver antenna from the transmitter position.
- Keep the distance from transmitter to receiver antenna as short as possible.
- Point the receiver antennas away from each other at 45 degrees angle from vertical position.
- Avoid placing the receiver antennas near metal surfaces and obstructions.
- Replace battery as soon as low battery LED lights.
- If stacking or rack mounting receivers in a multiple system setup. Do not allow antennas to cross.
- Perform a walk-through before performance or presentation. If dead spots are found, adjust the location of the receiver. If dead spots remain, mark the dead spots and avoid them.

## Approval

The DAP D141273 and the D141282 are Class II wireless devices.

D143173: 740-764 MHz for use in: Austria, Belgium, Czech Republic, France, Germany, Hungary, Italy, Luxemburg, Netherlands, Poland, Portugal, Romania, Slovakia, Switzerland, Turkey, United Kingdom.

D143182: 822-846 MHz for use in: Denmark, Germany, Hungary, Italy, Luxemburg, Netherlands, Poland, Romania, Sweden, Switzerland, United Kingdom.

## Exclusion of liability

The frequency tables in this publication are made according to national laws and regulations. The frequencies are checked on a regular basis. We don't take any responsibility for eventual discrepancies between our listed frequencies and the frequencies actually approved in a given country. We strongly suggest you to inform in your own country or region for any changes or adaptations regarding the allowed frequencies.

**Be aware that in some countries, you are only allowed to partly use the frequency range of the device. Therefore, we strongly advice you to consult your authority as listed below:**

### Telecoms & Postal Regulatory Authorities in Europe

Austria Rundfunk und Telekom Regulierungs-GmbH	<a href="http://www.rtr.at">www.rtr.at</a>
Belgium Belgian Institute of postal services and telecommunications (BIPT)	<a href="http://www.bipt.be">www.bipt.be</a>
Czech Republic Czech Telecommunication Office	<a href="http://www.ctu.cz">www.ctu.cz</a>
Denmark National Telecom Agency	<a href="http://www.tst.dk">www.tst.dk</a>
Finnland Finnish Communications Regulatory Authority (FICORA)	<a href="http://www.ficora.fi">www.ficora.fi</a>
France Autorité de Régulation des Télécommunications (ART)	<a href="http://www.art-telecom.fr">www.art-telecom.fr</a>
Germany Die Bundesnetzagentur B	<a href="http://www.bundesnetzagentur.de">www.bundesnetzagentur.de</a>
Greece National Telecommunications Commission (EET)	<a href="http://www.eett.gr">www.eett.gr</a>
Hungary Communication Authority (HIF)	<a href="http://www.hif.hu">www.hif.hu</a>
Iceland Post and Telecom Administration (PTA)	<a href="http://www.pta.is">www.pta.is</a>
Ireland Commission for Communications Regulation (ComReg)	<a href="http://www.comreg.ie">www.comreg.ie</a>
Italy Italian Communications Authority (AGC)	<a href="http://www.agcom.it">www.agcom.it</a>
Latvia Telecommunication State Inspection	<a href="http://www.vei.lv">www.vei.lv</a>
Liechtenstein Office for Communications (AK)	<a href="http://www.ak.li">www.ak.li</a>
Lithuania Radio Administration	<a href="http://www.rtt.lt">www.rtt.lt</a>
Luxembourg Institut Luxembourgeois des Télécommunications (ILT)	<a href="http://www.etat.lu/ILT">www.etat.lu/ILT</a>
Netherlands Onafhankelijke Post en Telecommunicatie Autoriteit (OPTA)	<a href="http://www.opta.nl">www.opta.nl</a>
Agentschap Telecom	<a href="http://www.agentschap-telecom.nl">www.agentschap-telecom.nl</a>
Ministry of Economic Affairs	<a href="http://www.ez.nl">www.ez.nl</a>
Norway Norwegian Post and Telecommunications Authority (NPT)	<a href="http://www.npt.no">www.npt.no</a>
Poland Urząd Regulacji Telekomunikacji (URT)	<a href="http://www.urt.gov.pl">www.urt.gov.pl</a>
Portugal Autoridade Nacional De Comunicações (ICP-Anacom)	<a href="http://www.anacom.pt">www.anacom.pt</a>
Slovenia Agencija za telekomunikacije, radiodifuzijo in pošto	<a href="http://www.atrp.si">www.atrp.si</a>



  
**Declaration**  
OF CONFORMITY

This certifies that the following designated product:

**Name:** EM-16 Wireless PLL 740-764MHz Handheld microphone 16 Freq

**Model No.:** D143173

**Brand Name:** DAP AUDIO  
(Product Identification)

**Authorized by the European Union to act as Conformity Assessment  
Body in accordance with the R&TTE Directive 1999/5/EC**

**EN 300 422-2 V1.2.2(2008-03)**

**EN 301 489-1 V1.8.1(2008-04)**

**EN 301 489-9 V1.4.1(2007-11)**

**EN 60065:2002+A1:2006+A11:2008**

The device shall be marked as follows:

**CE 1856 !**



This certificate is issued by:  
(Name/Address)

**Highlite International B.V.**  
Vestastraat 2, 6468 EX Kerkrade  
The Netherlands

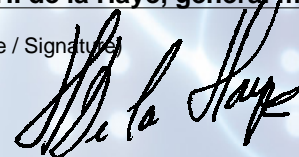
This is the result of tests carried out on those samples of the product referred to above which were submitted for testing, in accordance with the specification for the respective standards. The certificate holder has the right to fix the mark which shows the segment onto each individual product in the series to which the inspection sample belongs, provided that the product is manufactured in accordance with the test report. Instructions available on demand.

**05-Aug-2010**

(Date)

**Mr. H. de la Haye, general manager**

(Name / Signature)



  
**Declaration**  
OF CONFORMITY

This certifies that the following designated product:

**Name:** EM-16 Wireless PLL 822-846 Handheld microphone 16 Freq

**Model No.:** D143182

**Brand Name:** DAP AUDIO  
(Product Identification)

**Authorized by the European Union to act as Conformity Assessment  
Body in accordance with the R&TTE Directive 1999/5/EC**

**EN 300 422-2 V1.2.2(2008-03)**

**EN 301 489-1 V1.8.1(2008-04)**

**EN 301 489-9 V1.4.1(2007-11)**

**EN 60065:2002+A1:2006+A11:2008**

The device shall be marked as follows:

**CE 1856 !**



This certificate is issued by:  
(Name/Address)

**Highlite International B.V.**  
Vestastraat 2, 6468 EX Kerkrade  
The Netherlands

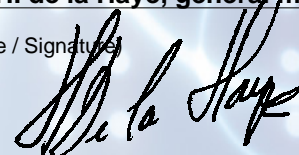
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**05-Aug-2010**

(Date)

**Mr. H. de la Haye, general manager**

(Name / Signature)



## Maintenance

The DAP Audio EM-16 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.

Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

## Troubleshooting

### DAP Audio EM-16

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

1. If the device does not operate properly, set the switch on the EM-16 in OFF position.
2. Check the batteries, etc.
3. If all of the above appears to be O.K., Set the switch in ON position.
4. If you are unable to determine the cause of the problem, do not open the EM-16, as this may damage the unit and the warranty will become void.
5. Return the EM-16 to your DAP Audio dealer.

## Product Specification

Type: Dynamic, moving coil.

Polar pattern: Cardioid

Frequency Response: 50-16.000 Hz

Max. SPL: 138 dB (1% THD)

Power supply: 2x Battery UM3, AA1.5V (not included)

Carrier Frequency Range: 502-960 MHz

RF Output: 10 mW

Stability:  $\pm 0.005\%$

Frequency Deviation:  $\pm 48$  kHz

LCD Display: Frequency, battery fuel gauge

Controls: Power On/Off, mode setting, AF Level Control,

Frequency Up/Down, Lock-on mode

Spurious Rejection:  $< -60$  dBC

Dimensions: mic:  $\varnothing$  50 mm x L 260 mm

Net. Weight: 0,262 kg

Design and product specifications are subject to change without prior notice.



Website: [www.Dap-audio.info](http://www.Dap-audio.info)

Email: [service@highlite.nl](mailto:service@highlite.nl)



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