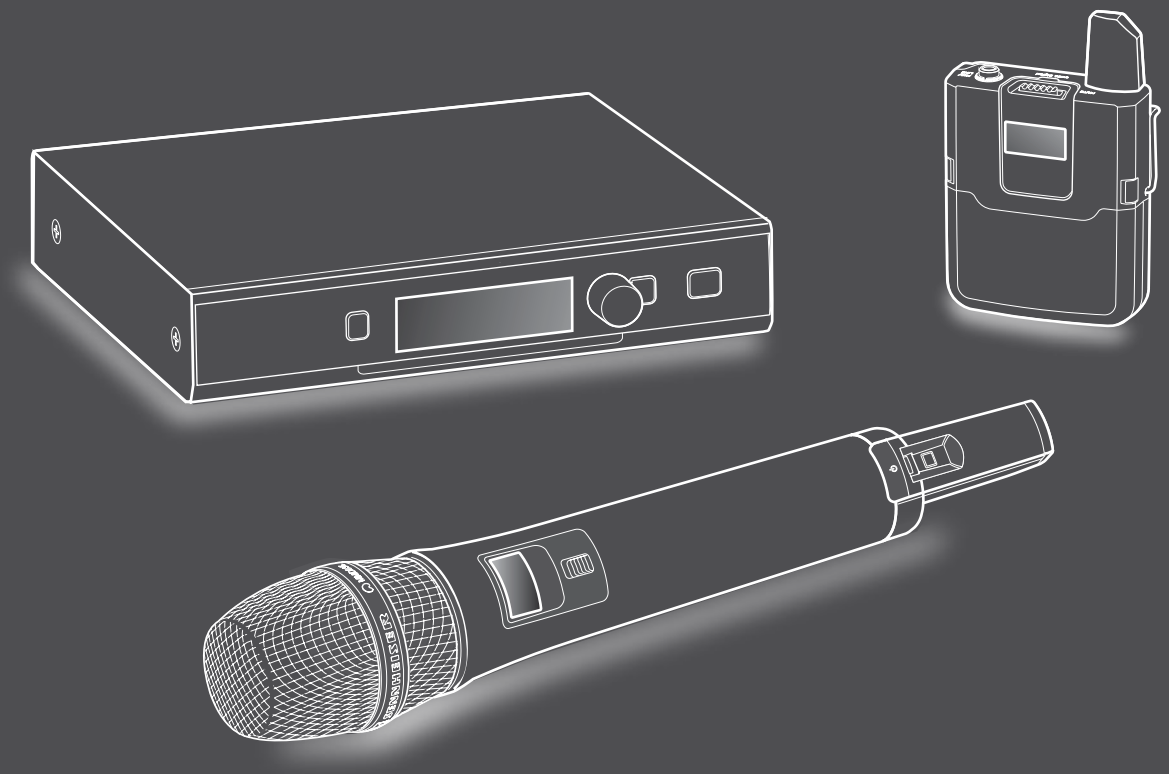
FAQ

evolution wireless D1



General Audio Radio Firmware update

0 or 1, on or off – and when on, then truly on: evolution wireless D1 is a digital sound transmission system that makes no compromise when it comes down to reliability, sound quality and user-friendliness.

Do you still have questions? Find the answers to your questions here.

evolution wireless D1

SENNHEISER

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With systems for vocals or for instruments, a band's life is made simpler: transmitters and receivers automatically pair and select suitable transmission frequencies, while multiple ew D1 systems automatically coordinate themselves.

ew D1 operates in the 2.4 GHz frequency range, which is license-free worldwide so there is no need to register the system or pay for the use of bandwidth. Region-specific particularities are catered for in the respective country variants.

To allow co-existence with WiFi, Bluetooth and other 2.4 GHz systems, each receiver continually scans the RF environment. If any interference is detected, the ew D1 system will inaudibly and seamlessly hop to another frequency.

General

FAQ

Q: Which frequency band does the digital ew D1 system use?

A: The ew D1 system operates in the 2.4 GHz frequency band. The use of the 2.4 GHz band is license-free and free-of-charge.

Q: Where can I set the transmission frequency for the ew D1 system?

A: With an ew D1 system, the manual setting of the transmission frequency is neither necessary nor possible. The system continually scans the entire 2.4 GHz frequency band and automatically selects suitable transmission frequencies. Frequencies already allocated to other systems are not used here.

Q: How long after switch-on are the radio links established and operational?

A: The receivers and transmitters will take up to 10 seconds to establish the radio links. This time can vary depending on the environment, the number of sources of interferences and the number of additional ew D1 radio links in use.

⚠ If more than six radio links are to be established: When switching the devices on and off, proceed as described in the "Multichannel Operation" leaflet (Link)!

A: If the maximum number of radio links has already been reached, additional radio links cannot be established. Up to 15 radio links can be used simultaneously in a completely interference-free environment.

Q: How should I setup the system to get the best transmission results?

A: If possible, change the position of the transmitters and receivers so that there is always a direct line of sight between the associated transmitters and receivers.

A: Switch off all other radio links operating in the 2.4 GHz frequency band or try to keep the distance between potential sources of interference and the ew D1 system components as large as possible. Sources of interference are devices, such a WiFi routers or Bluetooth-enabled devices, that operate in the same frequency band as the ew D1 system components. We recommend a minimum distance of 10 meters between a WiFi router and the ew D1 system components.

A: Certain building layouts (e.g. very large, empty halls) and materials (metal building materials in walls and ceilings) can also reduce the transmission range.

A: When rack-mounting receivers, you should mount their antennas to the front of the rack using the GA4 rack-mount kit.

⚠ If more than six radio links are to be established: When switching the devices on and off, proceed as described in the "Multichannel Operation" leaflet (Link)!

FAQ

General

Q: What is the best position for the receiver in the room?

A: If possible, change the position of the transmitters and receivers so that there is always a direct line of sight between the associated transmitters and receivers.

A: Switch off all other radio links operating in the 2.4 GHz frequency band or try to keep the distance between potential sources of interference and the ew D1 system components as large as possible. Sources of interference are devices, such a WiFi routers or Bluetooth-enabled devices, that operate in the same frequency band as the ew D1 system components. We recommend a minimum distance of 10 meters between a WiFi router and the ew D1 system components.

A: Certain building layouts (e.g. very large, empty halls) and materials (metal building materials in walls and ceilings) can also reduce the transmission range.

Q: Can I use the ew D1 system simultaneously with active WiFi connections?

A: In general, this is possible. You can, for example, control the ew D1 system using the "Wireless System Remote" app. We recommend, however, to use a dual-band WiFi router and deactivate its 2.4 GHz band. If you have to operate the WiFi router in the 2.4 GHz band, ensure the maximum distance possible between the WiFi router and your receivers in order to avoid interference.

"Wireless System Remote" app

Q: Does an ew D1 system interfere with a WiFi connection so that dropouts and errors can occur during data exchange via WiFi?

A: The ew D1 system avoids frequencies that are already allocated to other systems and automatically uses unused frequencies so that, in general, interference should be reduced to a minimum. If, however, the frequency band is heavily occupied, interference can occur in rare cases.

Q: What can I do if my Bluetooth devices do not work when ew D1 radio links are operated in proximity?

A: If your Bluetooth devices are subject to interference, we recommend that you pair the Bluetooth devices again after putting an ew D1 system into operation. As a basic principle, you should keep the distance between Bluetooth devices and the ew D1 system components as large as possible.

Q: Why does the operating time of the transmitter vary (only applies to the -NH country variant for the Americas)?

A: Depending on the number of source of interference in the proximity and the length of the radio link, the handheld or bodypack transmitter transmits using adaptive transmission power (-NH country variant only. This greatly influences the battery power consumption.

A: Please note that the displayed remaining battery life is the minimum battery life.

Q: Which batteries can I use?

A: You require two AA size batteries (1.5 V) per transmitter.

A: You can use all standard alkaline or lithium primary cells.

Q: Can I also power the transmitters using accupacks?

A: You can power the transmitters either with batteries or with one of the following accupacks which are available as accessories:

BA 10 (Cat. No.: 505972) for the handheld transmitter

BA 30 (Cat. No.: 505974) for the bodypack transmitter

A: You can charge the accupack via a standard USB power supply/charger or via the USB port of a computer.

A: We recommend only using original Sennheiser accupacks. Sennheiser accupacks provide a longer battery life and the remaining battery life is displayed in hours.

A: Do not use NiMH rechargeable batteries. They only have a voltage of 1.25 V instead of the required 1.5 V. This causes that the remaining battery life is not displayed correctly.

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General

Q: Why does the status LED on my transmitter or receiver flash red?

A: A red flashing status LED on the transmitter or receiver indicates that the transmitter batteries/ accupack are/is low. The transmitter will switch off within the next minutes. Replace the batteries or recharge the accupack.

Q: What does pairing mean?

A: During pairing, the receiver and the transmitter exchange their unambiguous identification data. This ensures that the two devices automatically reconnect after a restart and are, therefore, ready for immediate use.

Q: Why does the pairing process or the connection establishment take so long?

Your transmitters and receivers are already factory pre-paired and will take up to 10 seconds to connect with each other. This time can vary depending on the environment, the number of sources of interferences and the number of additional ew D1 radio links in use.

A: Switch off all other radio links operating in the 2.4 GHz frequency band or try to keep the distance between potential sources of interference and the ew D1 system components as large as possible. Sources of interference are devices, such a WiFi routers or Bluetooth-enabled devices, that operate in the same frequency band as the ew D1 system components. We recommend a minimum distance of 10 meters between a WiFi router and the ew D1 system components.

A: If possible, change the position of the transmitters and receivers so that there is always a direct line of sight between the associated transmitters and receivers.

A: Check if the antennas are properly mounted and screwed tight. Avoid direct contact between the individual antennas of the receivers.

A: Certain building layouts (e.g. very large, empty halls) and materials (metal building materials in walls and ceilings) can also reduce the transmission range.

If more than six radio links are to be established: When switching the devices on and off, proceed as described in the "Multichannel Operation" leaflet (Link)!

A: If the maximum number of radio links has already been reached, additional radio links cannot be established. Up to 15 radio links can be used simultaneously in a completely interference-free environment.

FAQ

Audio

Q: Why is the audio of my system disturbed?

A: **The transmitters and receivers are inappropriately positioned in the room.** If possible, change the position of the transmitters and receivers so that there is always a direct line of sight between the associated transmitters and receivers.

A: **The antennas are not properly mounted and aligned.** Check if the antennas are properly mounted and screwed tight. Avoid direct contact between the individual antennas of the receivers.

A: **There are sources of interference in the proximity of the ew D1 system components.** Switch off all other radio links operating in the 2.4 GHz frequency band or try to keep the distance between potential sources of interference and the ew D1 system components as large as possible. Sources of interference are devices, such a WiFi routers or Bluetooth-enabled devices, that operate in the same frequency band as the ew D1 system components. We recommend a minimum distance of 10 meters between a WiFi router and the ew D1 system components.

A: **The transmitters and receivers are inappropriately positioned in the room.** For safe operation, we recommend a minimum distance of 10 meters between sources of interference (e.g. a WiFi router) and the ew D1 system components. Certain building layouts (e.g. very large, empty halls) and materials (metal building materials in walls and ceilings) can also reduce the transmission range.

A: **The audio effects are not properly adjusted.** The use of audio effects changes the sound. Make sure that only the desired audio effects are activated on the receiver and deactivate the audio effects if necessary. The Effects Reset menu item allows you to deactivate all audio effects simultaneously.

A: **The receiver's output level is not properly adjusted.** Check if the receiver's output level is adjusted too high or too low. You can use the Output Type menu item to coarsely adjust the receiver's output level to match the input (mic or line) of the connected device. You can increase or reduce the audio level by 12 dB. Additionally, you can use the Audio Level menu item to increase or reduce the audio level in steps of 1 dB. You can adjust the audio level between 0 dB and 30 dB.

A: **There is crosstalk due to improper cabling.** Check if you cabling is installed properly and if all cables are fully functioning.

A: **You are using outdated headset and clip-on microphones or products from other manufacturers.** Preferably, use the headset or clip-on microphone supplied with your ew D1 system.

A: **The guitar pickups are placed to close to the bodypack transmitter.** Keep a minimum distance of 20 cm between your bodypack transmitter and the guitar and electric bass pickups to avoid transmission interference.

If more than six radio links are to be established: When switching the devices on and off, proceed as described in the "Multichannel Operation" leaflet (Link)!

Q: Why is the audio of my system distorted?

A: **The audio effects are not properly adjusted.** The use of audio effects changes the sound. Make sure that only the desired audio effects are activated on the receiver and deactivate the audio effects if necessary. The Effects Reset menu item allows you to deactivate all audio effects simultaneously.

A: **The receiver's output level is not properly adjusted.** Check if the receiver's output level is adjusted too high or too low. You can use the Output Type menu item to coarsely adjust the receiver's output level to match the input (mic or line) of the connected device. You can increase or reduce the audio level by 12 dB. Additionally, you can use the Audio Level menu item to increase or reduce the audio level in steps of 1 dB. You can adjust the audio level between 0 dB and 30 dB.

A: **The settings of the devices in the signal chain are not correct.** Check the settings of the mixing console and of other devices in the signal chain and correct them if necessary,

FAQ

Audio

Q: Why does the receiver's output level overload the mixing console?

A: Check if the receiver's output level is adjusted too high or too low. You can use the Output Type menu item to coarsely adjust the receiver's output level to match the input (mic or line) of the connected device. You can increase or reduce the audio level by 12 dB. Additionally, you can use the Audio Level menu item to increase or reduce the audio level in steps of 1 dB. You can adjust the audio level between 0 dB and 30 dB.

Q: Why is the receiver's output signal too weak at the input of the mixing console?

A: Check if the receiver's output level is adjusted too high or too low. You can use the Output Type menu item to coarsely adjust the receiver's output level to match the input (mic or line) of the connected device. You can increase or reduce the audio level by 12 dB. Additionally, you can use the Audio Level menu item to increase or reduce the audio level in steps of 1 dB. You can adjust the audio level between 0 dB and 30 dB.

Q: Where can I adjust the input sensitivity of the transmitter?

A: The ew D1 transmitters are equipped with automatic sensitivity adjustment, so it is no longer necessary to manually set the input sensitivity. The transmitters automatically set the correct input sensitivity.

A: Additionally, you can use the Audio Level menu item to increase or reduce the receiver's audio level in steps of 1 dB. The audio level can be adjusted between 0 dB and 30 dB.

Q: Why is there noise interference when I connect my guitar to a bodypack transmitter?

A: Keep a minimum distance of 20 cm between your bodypack transmitter and the guitar and electric bass pickups to avoid transmission interference.

Q: Which audio effect should I use when?

A: Low-cut filter: We recommend using the low-cut filter to reduce impact noise and feedback. This filter is suitable for both vocal and speech transmission.

A: The equalizer allows you to individually adjust the sound to your likings.

Q: What is a de-esser?

A: A de-esser attenuates troublesome sibilance in vocals and speech without adversely affecting the perceived sound quality.

Q: Which microphone heads are compatible with the ew D1 system?

A: The ew D1 system can be used with all microphone heads of the evolution wireless series (MMD 835, MMD 845, MME 865, MMD 935, MMD 945, MMK 965).

A: The Sennheiser ME 90002, ME 9004 and ME 9005 microphone heads as well the the Neumann KK 204 and KK 205 microphone heads cannot be used.

Q: Why does the mute switch not function?

A: Check if the mute switch has been deactivated in the receiver's operating menu. If necessary, activate the mute switch. A deactivated mute switch is indicated by the following icon on the receiver display panel:

A: With the mute switch activated, signal transmission is muted as soon as you set the transmitter's mute switch to the position MUTE. The status LED of both the transmitter and the receiver light up yellow after a short delay.

Audio

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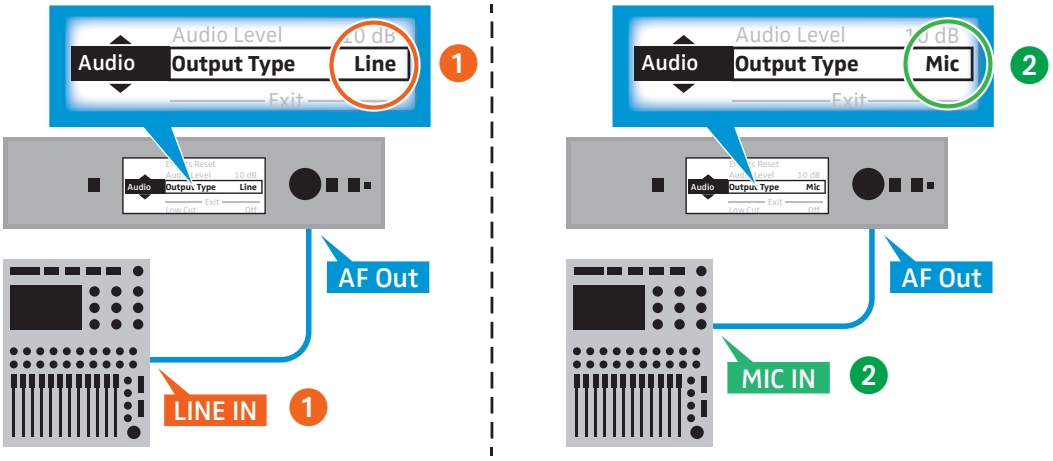
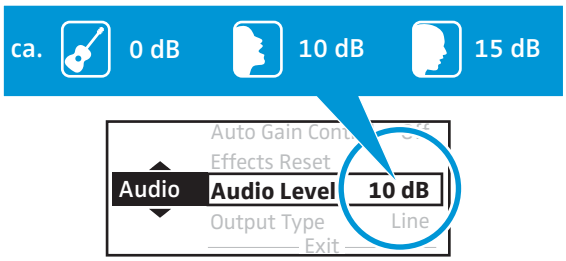
F: How can I optimize the signal-to-noise ratio?

A: Check if the receiver's output level is adjusted too high or too low.
Coarse adjustment: You can use the **Output Type** menu item to to coarsely adjust the receiver's output level to match the input (mic or line) of the connected device. The output level can be increased (Line 1) or reduced (Mic 2) by 12 dB.



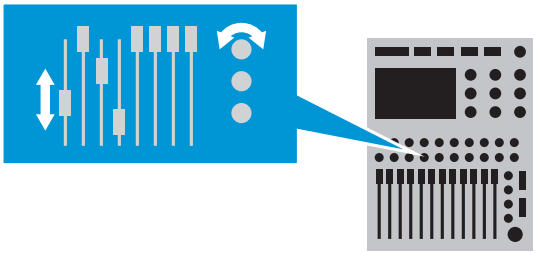
Fine adjustment: You can use the **Audio Level** menu item to to increase or reduce the receiver's output level by up to 30 dB in 1-dB steps. Note that the values given below are starting values only.

Guitar = 0 dB Vocals approx. 10 dB Low voice approx. 15 dB



Use the AF bargraph as a reference. The Audio Level should be adjusted so that the bargraph does not display full-scale deflection. With very low voices, it might be necessary to increase the level above the stated value of 15 dB.

Further individual adjustments can then be made on the mixing console. Note, however, that the increase in level or volume is not necessarily accompanied by an increased signal-to-noise ratio.



FAQ

Radio

Q: Why does the RF signal level display keep changing?

A: The RF signal level can fluctuate greatly depending on the occupancy of the frequency band. The RF signal level depends on the position, number and strength of all radio links currently operating the the 2.4 GHz band in proximity to the ew D1 devices. Transmitters of the -NH country variant have adaptive transmission power and transmit at the requested power needed for a stable signal. All this may cause the RF signal level display to change erratically.

Q: Why are radio links of only a few meters subject to signal dropouts or even link breaks?

A: If possible, change the position of the transmitters and receivers so that there is always a direct line of sight between the associated transmitters and receivers.

A: Check if the antennas are properly mounted and screwed tight. Avoid direct contact between the individual antennas of the receivers.

A: Switch off all other radio links operating in the 2.4 GHz frequency band or try to keep the distance between potential sources of interference and the ew D1 system components as large as possible. Sources of interference are devices, such a WiFi routers or Bluetooth-enabled devices, that operate in the same frequency band as the ew D1 system components. We recommend a minimum distance of 10 meters between a WiFi router and the ew D1 system components.

A: Certain building layouts (e.g. very large, empty halls) and materials (metal building materials in walls and ceilings) can also reduce the transmission range.

Q: Why are some radio links subject to interference?

A: Switch off all other radio links operating in the 2.4 GHz frequency band or try to keep the distance between potential sources of interference and the ew D1 system components as large as possible. Sources of interference are devices, such a WiFi routers or Bluetooth-enabled devices, that operate in the same frequency band as the ew D1 system components. We recommend a minimum distance of 10 meters between a WiFi router and the ew D1 system components.

A: Check if the antennas are properly mounted and screwed tight. Avoid direct contact between the individual antennas of the receivers.

A: Certain building layouts (e.g. very large, empty halls) and materials (metal building materials in walls and ceilings) can also reduce the transmission range.

⚠ If more than six radio links are to be established: When switching the devices on and off, proceed as described in the "Multichannel Operation" leaflet (Link)!

F: Does a signal strength/transmission power of 100 mW help protect against WiFi interference?

A: In general, the maximum permissible transmission power is regulated by the relevant regulatory body in each country.

A: If the WiFi traffic intensity is low, a higher transmission power will indeed result in an increased transmission range.

This effect, however, is significantly reduced by multi-channel operation.

FAQ

Firmware update

Q: Why should I update the firmware of my receivers or transmitters?

A: We recommend to always update all your receivers and transmitters to the latest firmware version available in order to be able to benefit from additional features or improvements on existing features.

Q: How can I update the firmware of my receivers or transmitters?

A: You can update the firmware of the receivers using either the "Sennheiser D1 SL Updater" PC software or the "Wireless System Remote" (WSR) app. The PC software is available free of charge from the Sennheiser website (Link). The app is available free of charge in the Apple App Store or the Google Play Store.

A: In order to update the firmware via the PC software, you have to connect your receivers to your computer network using network cable. The "Sennheiser D1 SL Updater" PC software automatically detects all receivers in the network, reads their firmware version and offers to update the firmware if a newer version is available.

A: In order to update the firmware via the WSR app, you have to connect your receivers to a WiFi router using network cable. The mobile device with the app must be able to access the WiFi network. The app automatically detects all receivers in the network, reads their firmware version and offers to update the firmware if a newer version is available.

A: Once the receiver firmware has been successfully updated, the firmware of the associated transmitter can be updated over the exisitng radio link with the receiver. For this, the two devices must be paired.
If the paired transmitter runs a different firmware version than the receiver, a dialog appears on the receiver display panel prompting you to update the firmware of the transmitter. Confirm the dialog to start the update.

A: We recommend updating the firmware **before** using the devices. **Never update the firmware during a performance.**

A: First, update the firmware of all receivers in one step. Then, step by step, update the firmware of each transmitter individually. Switch off all transmitters apart from the one whose firmware you want to update.

A: A receiver can only be used with a transmitter that runs the same firmware version. If the two devices are running different firmware versions, the receiver will prompt you to update the transmitter firmware each time you try to pair the devices.

A: Make sure to always update the firmware of all your receivers. If a transmitter is paired with a receiver that runs an older firmware version, the newer firmware version of the transmitter can be overwritten. An update is always transferred from the receiver to the transmitter, but not vice versa.

Q: Why is the firmware update from the receiver to the transmitter interrupted?

A: We recommend updating the firmware **before** using the devices. **Never update the firmware during a performance.**

A: First, update the firmware of all receivers in one step. Then, step by step, update the firmware of each transmitter individually. Switch off all transmitters apart from the one whose firmware you want to update.

A: If the firmware update is interrupted, the device restarts automatically. After the restart, the device is ready for immediate use and maintains the previous firmware version.

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