Non-Code Ordinance

**City of Wasilla**
**Ordinance Serial No. 22-31**

**An Ordinance Of The Wasilla City Council Amending The Fiscal Year 2023 Budget By Appropriating $46,525 From The General Fund, Fund Balance, And Transferring Funds In The Amount Of $46,525 To The CIP Fund, For An Upgrade To The Audio-Visual System In Council Chambers By Moving To A Fully Digital Microphone System And Adding An Uninterruptible Power Supply Unit (UPS) To The System.**

    **Section 1. Classification.** This is a non-code ordinance.

    **Section 2. Purpose.** To amend the fiscal year 2023 budget by appropriating $46,525 from the general fund, fund balance to upgrade the audio-visual system in Council Chambers by moving to a fully digital microphone system and adding an uninterruptible power supply unit (UPS) to the system.

    **Section 3. Appropriation of Funds.** The funds are appropriated to the following:
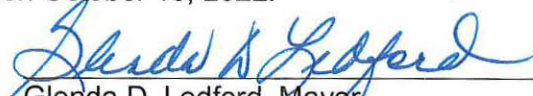
| | | |
|---|---|---|
| Construction Services/Equipment Replacement | 110-4181-499.45-09 | $46,525 |
| Transfer/General Fund | 001-4990-499.99-11 | $46,525 |

**Section 4. Source of Funds.**

| | | |
|---|---|---|
| General Fund, Fund Balance | 001-0000-253.10-00 | $46,525 |
| Transfers/General Fund | 110-0000-391.10-01 | $46,525 |

    **Section 5. Effective Date.** This ordinance shall take effect upon adoption.

ADOPTED by the Wasilla City Council on October 10, 2022.

_Glenda D. Ledford_
Glenda D. Ledford, Mayor

ATTEST:

_Jamie Newman_
Jamie Newman, MMC, City Clerk
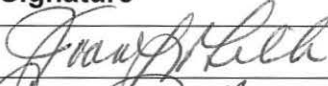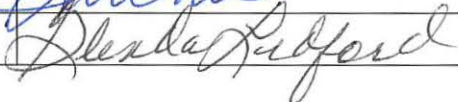
[SEAL]

## City of Wasilla
## Legislative Staff Report
## Ordinance Serial No. 22-31
(Non-Code Ordinance)

**Amending The Fiscal Year 2023 Budget By Appropriating $46,525 From The General Fund, Fund Balance, And Transferring Funds In The Amount Of $46,525 To The CIP Fund, For An Upgrade The Audio-Visual System In Council Chamber By Moving To A Fully Digital Microphone System And Adding An Uninterruptible Power Supply Unit (UPS) To The System.**

Originator: Council Member Graham and City Clerk
Date: 9/6/2022

Agenda of: 9/26/2022

| Route to: | Department Head | Signature | Date |
|---|---|---|---|
| X | Finance Director | *[signature]* | 9/16/22 |
| X | Deputy Administrator | *[signature]* | 9/16/22 |
| X | City Clerk | *[signature]* | 9/16/2022 |
| X | Mayor | *[signature]* Glenda Ledford | 9/16/2022 |

**Fiscal Impact:** ☒ yes or ☐ no          **Funds Available:** ☒ yes or ☐ no

**Account name/number:**
Construction Services/Equipment Replacement     110-4181-499.45-09          $46,525

**Attachments:** Ordinance Serial No. 22-31 (1 pages)
Quotes and Equipment Spec. Sheets (19 page)
AM No. 20-15 (1 page)
2021 Upgrade Information and Invoice (4 pages)

**Summary Statement:** Project History. With the approval of AM No. 20-15, the City contracted with Sound Decisions (vendor) to upgrade the audio-visual (A/V) system in Council Chambers and the Council Conference Room to add equipment for displaying presentations and to prepare Council Chambers for eventual video streaming.

In 2021, the City entered into an agreement to upgrade the A/V system to allow video conferencing. The upgrade added a ceiling microphone, PTZ camera with active tracking, a video stream encoder, and a touch screen system control. This upgrade was funded through CARES Act funding.

On August 22, 2022, the A/V system suffered a system failure likely caused by a power fluctuation. Technicians were dispatched to bring the system online and recommended that the City upgrade the UPS (uninterrupted power supply) to the "Core 110" which keeps the entire system functioning as suggested by the manufacturer.

Through testing, the microphones were also recommended for upgrade due to poor sound quality. The Clerk's Office was aware of the issue with the handheld microphones as complaints have been received. Additionally, the microphones around the dais, if not turned off by the speaker, cause sound quality issues.

<u>Microphone System Upgrade</u>. This Ordinance seeks funding to upgrade the existing microphone system in Chambers to a fully digital wireless microphone system to improve overall sound quality. The system upgrade features Automatic Frequency Management, Automatic Interference Management, and Automatic Sensitivity Management. Each one of these features allows the best speech intangibility as possible.

- The Automatic Frequency Management always finds a free frequency for the system to use.
- The Automatic Interference Management always maintains an S connection which makes the system very reliable.
- The Automatic Sensitivity Management makes setup more convenient and simpler.

This system also features advanced 256-bit AES encryption for secure wireless transmission. The wireless system will run at the 1.9 GHz frequency range, which most other electronics do not use, and that frequency range is license free and requires no registration. Since most other electronics don't use this frequency range there shouldn't be much interference to the system. Each microphone uses lithium-ion batteries and will last 15 hours before needing to recharge. All these features make this system simple to use because it has features to that will eliminate most issues that wireless mic systems face.

<u>UPS Upgrade</u>. The Ordinance also seeks funding to upgrade the UPS, to help with power related issues for the QSC Core 110. The Core 110 keeps the entire system functioning and should be treated like a server thus providing it with a backup power system is essential. If the power drops to the Core, it could damage the internal file and corrupt it. Having that Core on a UPS will help keep the file from corrupting if the power drops out. QSC (manufacturer of the Core) highly recommends using a UPS to power the Core.

**Proposed Action:** Introduce and set the Ordinance for public hearing.

**Sound Decisions**
5837 E Updraft Rd
Palmer, Ak 99645
(907)982-1771

**SD AUDIOVISUAL**

| System: | Qty | Class | Name (model) | Part Number | Brand | Description | Price |
|---|---|---|---|---|---|---|---|
| **City of Wasilla Chambers Mics** | | | | **EQUIPMENT** | | | |
| | 5 | Audio | SL MCR 4 DW-4 | 50855 | Sennheiser | Speechline 4 Channel Receiver | 13029.50 |
| | 8 | Audio | SL Handheld DW-4-US | 505901 | Sennheiser | Speechline Wireless Handheld Mic | 5016.10 |
| | 10 | Audio | SL Tablestand 153-S DW-4 B | 506628 | Sennheiser | Speechline Wireless Table Stand | 7905.25 |
| | 10 | Audio | MEG 14-40-L-II B | 506398 | Sennheiser | Gooseneck Mic | 2304.63 |
| | 2 | Accessory | CHG 4N US | 506802 | Sennheiser | 4 Port Network Charger | 1156.18 |
| | 5 | Accessory | CHG 2W | 506805 | Sennheiser | 2 Compartment Charger for SL Tablestand | 1828.25 |
| | 5 | Accessory | Wall Mount Adapter | 508891 | Sennheiser | Wall Mount Bracktet for Speechline 4 Channel Receiv | 407.17 |
| | 800 | Cable | 24-4P-P-L6SH-WHT | 24-4P-P-L6SH-WHT | Liberty | Shielded Cat-6, Plenum | 648.90 |
| | 1 | Accessory | SLDAN-32-P | SLDAN-32-P | QSC | Q-SYS Dante License, 32 X 32 Chanel License | 419.73 |
| | 1 | shipping | | | | | 1287.50 |
| | | | | | | | 34003.20 |
| | | | | **GEN & LABOR** | | | |
| | 1 | | General Div & Labor | | SD | General Div & Labor | |
| | | | | | | | 10313.91 |
| | | | | **TOTAL** | | | |
| | | | | | | | 44317.10 |

**Sound Decisions**
5837 E Updraft Rd
Palmer, Ak 99645
(907)982-1771

| System: | Qty | Class | Name (model) | Part Number | Brand | Description | Price |
|---|---|---|---|---|---|---|---|
| **City of Wasilla Chambers** | | | | | | | |
| | | | | **EQUIPMENT** | | | |
| | 1 | Power | UPS-S1000R | UPS-S1000R | Middle Atlantic | 1000 VA, 600 W, 1 RU UPS | 796.96 |
| | 1 | shipping | | | | | 386.25 |
| | | | | | | | 1183.21 |
| | | | | **GEN & LABOR** | | | |
| | 1 | | General Div & Labor | | SD | Labor | 1020.22 |
| | | | | **TOTAL** | | | 2203.43 |

# SpeechLine Digital Wireless
## SL Handheld DW

### FEATURES

- Automatic frequency and interference management
- Speech optimized condenser microphone capsule
- Clear and easy focused user interface
- Long operation time (up to 15 hours)
- Advanced power management and Li-Ion rechargeables
- Secure 256 bit AES encryption
- Remote controllable

The sleek but robust SL Handheld DW is optimized for speech in presentations or lectures where every word matters. Thanks to bi-directional communication between transmitter and receiver, no settings need to be adjusted on the transmitter. The automatic frequency and interference management allows convenient and reliable operation. The LC display provides the link name, battery status and reception quality. The ergonomically positioned mute-slider makes the use of the microphone very convenient. The SL Handheld DW comes with a rechargeable Li-Ion battery with external charging contacts - for easy charging with the CHG 2 - and a USB socket.

### SPECIFICATIONS

**System**

| | |
|---|---|
| AF frequency response | 20 to 20,000 Hz |
| Dynamic range | > 120 dB(A) |
| THD (1 kHz) | typ. 0.1 % |
| Audio sampling | 24 bit/48 kHz |
| Signal-to-noise ratio | > 90 dB(A) |
| Encryption | AES 256 |
| RF frequency ranges | EU: 1,880 to 1,900 MHz<br>USA: 1,920 to 1,930 MHz<br>Brazil: 1,910 to 1,920 MHz<br>Taiwan: 1,880 to 1,895 MHz<br>Japan: 1,893 to 1,906 MHz |
| Modulation | GFSK with back channel |
| Transmission method | TDMA, space diversity |
| Latency | 19 ms |
| Relative air humidity | max. 95 % |
| Temperature range* | Operation: -10 °C to 55 °C (14 °F to 131 °F)<br>Storage: -20 °C to 70 °C (-4 °F to 158 °F) |

\* The temperature range is influenced by the battery characteristics

**SL Handheld DW**

| | | |
|---|---|---|
| RF output power | adaptive, up to 250 mW (country-specific) | |
| AF frequency response | 50 to 20,000 Hz | |
| Input sensitivity | automatic sensitivity adjustment | |
| Power supply | Accupack: | BA 10 (Li-Ion, 3.6 V) |
| | Batteries**: | 2 x AA size battery (1.5 V) |
| Operating time | Accupack: | typ. 15 h |
| | Batteries**: | typ. 10 h |
| Display | LCD | |
| Mute switch | available | |
| Weight (w/o accupack) | approx. 262 g incl. microphone head | |

\*\* optional accessory

# SpeechLine Digital Wireless
## SL Handheld DW

## DIMENSIONS
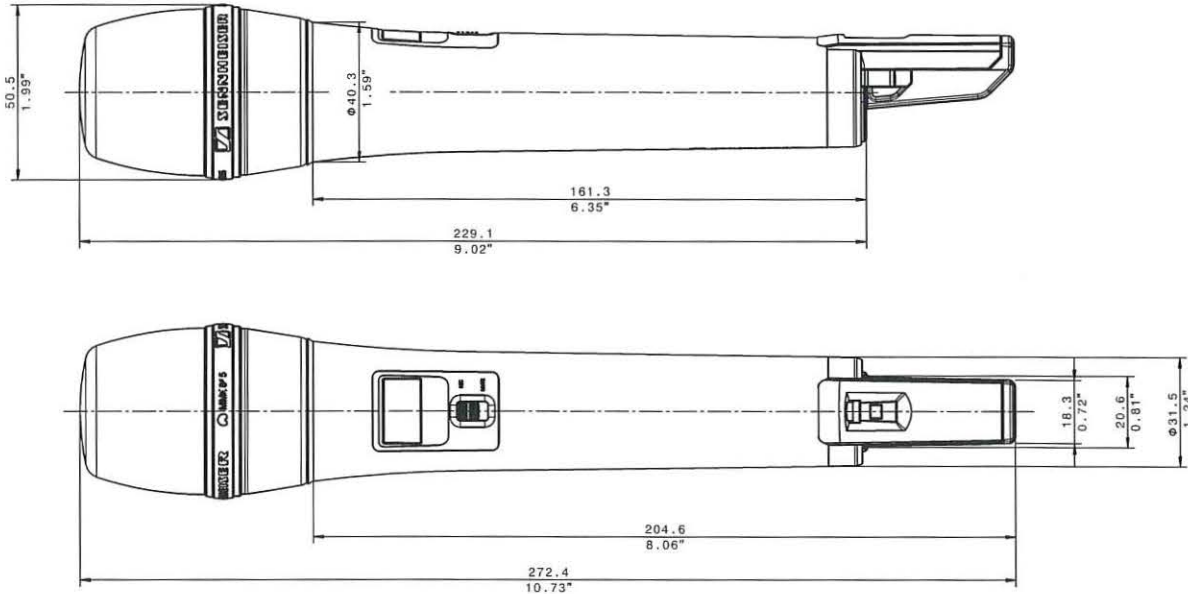


## ARCHITECT'S SPECIFICATION

The handheld transmitter shall be for use with a companion receiver as part of a wireless RF transmission system and shall operate in the license-free 1.9 GHz band (frequency ranges shall be from 1,880 to 1,930 MHz, depending on country-specific regulations).

The transmitter shall be equipped with a mute switch (deactivatable via the receiver's user interface) and shall feature an LC display showing the name of the wireless link, battery status, RF output power, and reception quality.

The AF frequency response shall range from 50 – 20,000 Hz. The dynamic range shall be > 120 dB(A). Total harmonic distortion (THD) at 1 kHz shall be typical 0.1 %. Signal-to-noise ratio shall be > 90 dB(A). RF output power shall be adaptive and up to 250 mW (country-specific). The transmitter shall have automatic sensitivity adjustment.

The transmitter shall be powered by either one Sennheiser Lithium-Ion rechargeable accupack with a typical operating time of 15 hours or with an optional battery case for two 1.5 V AA size batteries.

Dimensions shall be approximately 40 mm (1.57") in diameter and 215 mm (8.46") in length. Weight (with microphone head, without accupack) shall be approximately 262 grams (9.24 oz). Operating temperature shall range from -10 °C to +55 °C (+14 °F to +131 °F).

The handheld transmitter shall be the Sennheiser SL Handheld DW.

The microphone head suitable for use with the handheld transmitter shall be a condenser type with a super-cardioid pick-up pattern and a sensitivity of 1.6 mV/Pa. Maximum sound pressure level shall be 152 dB SPL.

The microphone head shall be the Sennheiser MME 865-1.

# SpeechLine Digital Wireless
## SL Handheld DW

## PRODUCT VARIANTS

| SL HANDHELD DW-3-EU | SL HANDHELD 865 DW-3-EU | SL HANDHELD DW-4-US | SL HANDHELD 865 DW-4-US |
|---|---|---|---|
| Art. No. 505884 | Art. No. 505885 | Art. No. 505902 | Art. No. 505901 |
| without microphone capsule | with e865 microphone capsule | without microphone capsule | with e865 microphone capsule |
| **-3 EU variant** | **-3 EU variant** | **-4 US variant** | **-4 US variant** |
| 1,880 to 1,900 MHz | 1,880 to 1,900 MHz | 1,920 to 1,930 MHz | 1,920 to 1,930 MHz |
| **Europe & UK** | **Europe & UK** | **USA, Canada** | **USA, Canada** |
| **India, Indonesia** | **India, Indonesia** | **Latin America** | **Latin America** |
| **Hong Kong, Singapore** | **Hong Kong, Singapore** | | |
| **Malaysia, Australia** | **Malaysia, Australia** | | |

| SL HANDHELD DW-5-US | SL HANDHELD 865 DW-5-US | SL HANDHELD DW-6-US | SL HANDHELD 865 DW-6-US |
|---|---|---|---|
| Art. No. 505922 | Art. No. 505921 | Art. No. 505912 | Art. No. 505911 |
| without microphone capsule | with e865 microphone capsule | without microphone capsule | with e865 microphone capsule |
| **-5 US variant** | **-5 US variant** | **-6 US variant** | **-6 US variant** |
| 1,893 to 1,906 MHz | 1,880 to 1,900 MHz | 1,880 to 1,895 MHz | 1,880 to 1,895 MHz |
| **Japan** | **Japan** | **Taiwan** | **Taiwan** |

| SL HANDHELD DW-7-BR | SL HANDHELD 865 DW-7-BR |
|---|---|
| Art. No. 506705 | Art. No. 506706 |
| without microphone capsule | with e865 microphone capsule |
| **-7 BR variant** | **-7 BR variant** |
| 1,910 to 1,920 MHz | 1,910 to 1,920 MHz |
| **Brazil** | **Brazil** |

## ACCESSORIES

| | | | | | | |
|---|---|---|---|---|---|---|
| **CHG 2** EU | Charger | Art. No. 505980 | **NT 5-10U** EU | USB DC Adapter | Art. No. 555085 |
| **CHG 2** UK | Charger | Art. No. 506218 | **NT 5-10U** UK | USB DC Adapter | Art. No. 555086 |
| **CHG 2** US | Charger | Art. No. 506219 | **NT 5-10U** US | USB DC Adapter | Art. No. 555087 |
| **CHG 2** AU | Charger | Art. No. 506220 | **NT 5-10U** AU | USB DC Adapter | Art. No. 555088 |
| | | | | | |
| **CHG 4N** EU | Charger | Art. No. 506800 | **BA 10** | Accupack | Art. No. 505972 |
| **CHG 4N** UK | Charger | Art. No. 506801 | | | |
| **CHG 4N** US | Charger | Art. No. 506802 | | | |
| **CHG 4N** AU | Charger | Art. No. 506803 | | | |

# SpeechLine Digital Wireless
# CHG 4N - 4 bay network charger

## FEATURES

- Seamless network integration
- 4 individual charging bays
- Battery status indication for each bay
- Full remote control

The CHG 4N is a network enabled charger featuring four indiviual charging bays. These can either be used for the SL Bodypack DW or the SL Handheld DW. Each bay is combined with 4 LEDs to indicate the corresponding battery status of the mobile device.

The flexible network interface provides IPv4 and IPv6 compatibility for seamless integration. All settings and status information can be monitored and remote controlled with the Sennheiser Control Cockpit.

## DELIVERY INCLUDES

- CHG 4N
- External power supply (EU, UK, US or AU version)
- Quick guide
- Safety guide

## PRODUCT VARIANTS

| | |
|---|---|
| CHG 4N EU | Art. No. 506800 |
| CHG 4N UK | Art. No. 506801 |
| CHG 4N US | Art. No. 506802 |
| CHG 4N AU | Art. No. 506803 |

## ARCHITECT'S SPECIFICATION

The charger shall be network-enabled and shall be capable of simultaneously charging up to four handheld and/or bodypack transmitters of the Sennheiser SpeechLine Digital Wireless series. Four colored LEDs at each charging bay shall indicate charge status.

The charger shall have an RJ-45 network socket and shall support IPv4 and IPv6 network addressing. In addition, the charger shall support the Media Control Protocol to provide for remote control and status monitoring via the Sennheiser Control Cockpit software or a media control system.

The charger shall operate on 12 V DC input voltage supplied from an external power supply unit, the input current shall be maximum 1.1 A. Charging voltage shall be 5 V DC, charging current shall be maximum 1 A per charging bay. The power consumption shall be 2.5 A.

Charging time for full charge shall be approximately 2 hours. Operating temperature shall range from 0 °C to 45 °C (32 °F to 113 °F). Dimensions shall be 270 x 100 x 102 mm (10.63" x 3.94" x 4.02"). Weight (unequipped and without power supply unit) shall be approximately 1.1 kg (2.43 lbs).

The charger shall be the Sennheiser CHG 4N.

## SPECIFICATIONS

| | |
|---|---|
| Network protocol | Media Control Protocol IPv4 (DHCP, manual) / IPv6 |
| Power supply | 12 V DC |
| Current consumption | 2.5 A |
| Network socket | RJ 45 |
| Dimensions | 270 x 100 x 102 mm (10.6" x 3.9" x 4") |
| Weight | 1100 g |
| Charging bays | 4 |
| Charging voltage per bay | 5 V |
| Charging current per bay | 1 A |
| Charging status indicator | 4 LEDs per bay (red, yellow, green, green) |
| Charging time for full charge | SL Handheld DW: 2 h SL Bodypack DW: 2 h |
| Operating temperature | 0 °C to 45 °C (32 °F to 113 °F) |

# SpeechLine Digital Wireless
## CHG 4N - 4 bay network charger

## DIMENSIONS
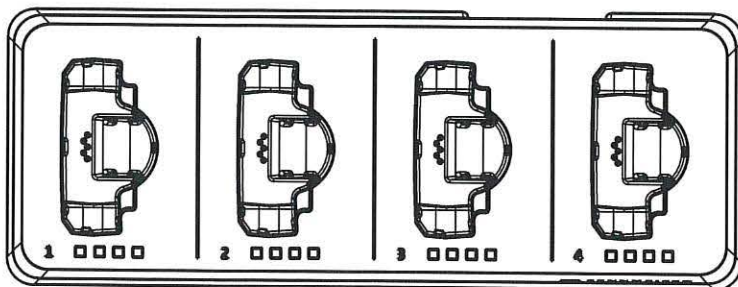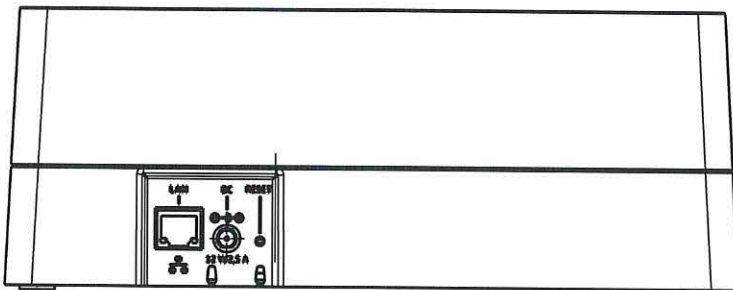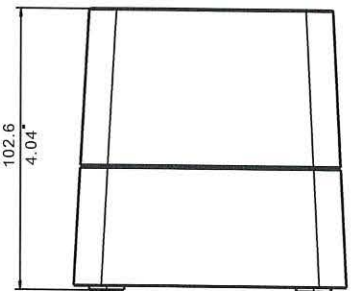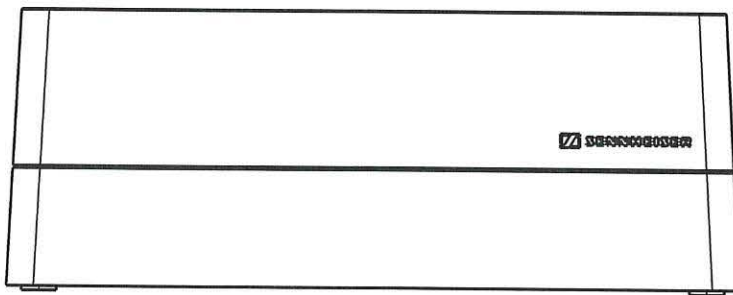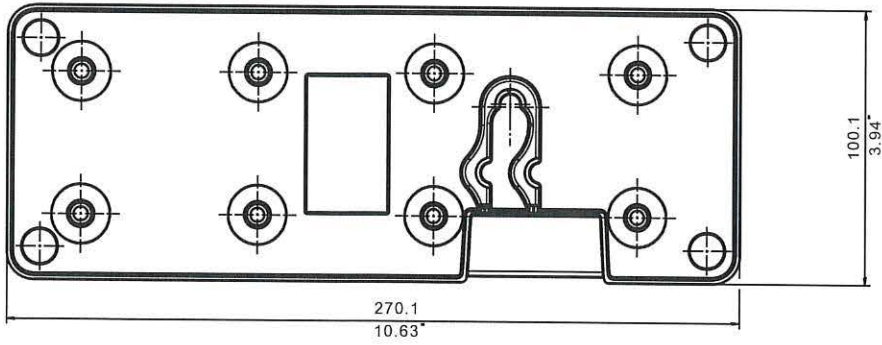
# SpeechLine Digital Wireless
# CHG 2W - Wireless Charging Base

## FEATURES

- Easy wireless charging
- Compatible with SL TableStand 133-S DW, SL Tablestand 153-S DW and SL Boundary 114-S DW

The CHG 2W is a wireless power transmitter. It provides convenient wireless charging.

## ARCHITECT'S SPECIFICATION

The charging base shall use wireless charging technology and shall be capable of wirelessly charging up to two Sennheiser SL DW tablestands and/or boundary layer microphones.

The charging base shall operate on 12 V DC input voltage supplied from an external power supply unit, the input current shall be maximum 1.67 A. Charging voltage shall be 5 V DC, charging current shall be maximum 1 A. The power consumption shall be 2.5 A.

Charging time for full charge shall be approximately 5 hours. Operating temperature shall range from 5 °C to 35 °C (41 °F to 95 °F). Dimensions shall be 278 x 190 x 10 mm (10.9" x 7.5" x 0.4"). Weight shall be approximately 525 grams (1.15 lbs).

The charging base shall be the Sennheiser CHG 2W.

## SPECIFICATIONS

| | |
|---|---|
| Input voltage | 12 V DC |
| Input current | 1.67 A |
| Charging voltage | 5 V DC |
| Charging current | max. 1 A |
| Power consumption | 2.5 A |
| Charging time for full charge | SL Tablestand 133-S DW: on: 5 h / off: 3 h SL Tablestand 153-S DW: on: 5.5 h / off: 3 h |
| Operating temperature | 5 °C to 35 °C (41 °F to 95 °F) |
| Storage temperature | -40 °C to 80 °C (-40 °F to 176 °F) |
| Dimensions | 278 x 190 x 10 mm (10.9" x 7.5" x 0.4") |
| Weight | 525 g (1.15 lbs) |

## DELIVERY INCLUDES

- CHG 2W
- External power supply (incl. EU, UK, US and AU adapters)
- Quick Guide
- Safety Guide

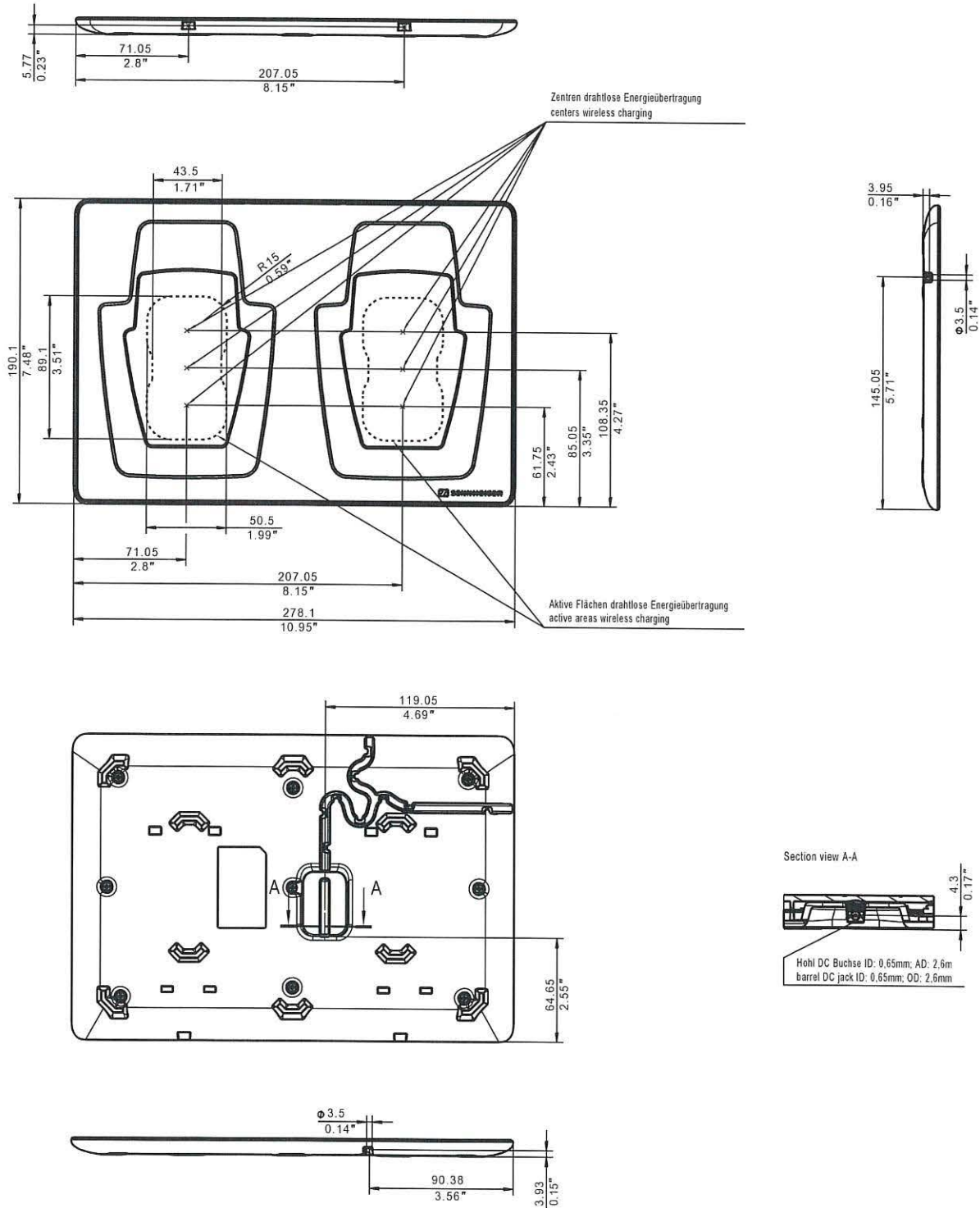## PRODUCT VARIANTS

CHG 2W          Art. No. 506805

# SpeechLine Digital Wireless
## CHG 2W - Wireless Charging Base

**DIMENSIONS**



Zentren drahtlose Energieübertragung
centers wireless charging

Aktive Flächen drahtlose Energieübertragung
active areas wireless charging

Section view A-A

Hohl DC Buchse ID: 0,65mm; AD: 2,6m
barrel DC jack ID: 0,65mm; OD: 2,6mm
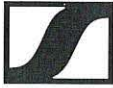
# SpeechLine Digital Wireless
## SL Tablestand 153-S DW

### FEATURES

- Easy wireless charging
- Clear battery life indication via dedicated battery status LEDs
- Compatible with the Sennheiser MEG 14-40-L-II gooseneck microphone for all speech and lecture applications
- Mute button for convenient use
- Can be remote controlled with Sennheiser Control Cockpit

The SL Tablestand 153-S DW is dedicated to speech. For a solid connection with the MEG 14-40-L-II B gooseneck microphone, an XLR-5 socket is featured.

Being utterly wireless, the SL Tablestand 153-S DW is the perfect solution for ad hoc press conferences or podium discussions in any location.

The SL Tablestand 153-S DW can either be charged wirelessly or via USB. The wireless charging base CHG 2W for two mobile devices is available separately. The SL Tablestand 153-S DW provides clear battery life indication via dedicated battery status LEDs.

The SL Tablestand 153-S DW can be monitored and controlled with the Sennheiser Control Cockpit.

### DELIVERY INCLUDES

- SL Tablestand 153-S DW
- Quick Guide
- Safety Guide

### SPECIFICATIONS

| | |
|---|---|
| AF frequency response | 75 to 20,000 Hz |
| Max. input level | 1.7 V RMS |
| Input impedance | 30 kΩ |
| Power supply | BA 40 accupack (Li Ion 3.6 V) |
| Operating time | Accupack: typ. 10 h |
| Relative humidity | max. 95 % |
| Dimensions | 166.7 x 120.2 x 47.9 mm (6.56" x 4.73" x 1.88") |
| Weight | approx. 660 g (without accupack) |
| Operating temperature | 10 °C to 45 °C (50 °F to 113 °F) |

### ARCHITECT'S SPECIFICATION

The wireless tablestand shall be designed for use with the Sennheiser MEG 14-40-L-II gooseneck microphone and be optimized for podium discussions, speeches and lectures. The tablestand shall be powered by one Sennheiser Lithium-Ion rechargeable accupack with a typical operating time of 10 hours and shall support wireless charging as well as charging via USB. In addition, the tablestand shall be capable of being remotely controlled and monitored via the Sennheiser Control Cockpit software.

The tablestand shall feature a 5-pin XLR socket for connection of XLR-5 gooseneck microphones with a logic control and a signal light ring. RF output power shall be adaptive and up to 250 mW (country-specific). The AF frequency response shall range from 75 – 20,000 Hz. The maximum input level shall be 1.7 Vrms and input impedance shall be 30 kΩ. The tablestand shall have automatic sensitivity adjustment.

Dimensions shall be 166.7 x 120.2 x 47.9 mm (6.56" x 4.73" x 1.88"). Weight (without accupack) shall be approximately 660 grams. Operating temperature shall range from 10 °C to 45 °C (50 °F to 113 °F).

The tablestand shall be the Sennheiser SL Tablestand 153-S DW.

# SpeechLine Digital Wireless
## SL Tablestand 153-S DW

## PRODUCT VARIANTS

SL Tablestand 153-S DW-3 B
Art. no. 506612
black
**-3 EU variant**
1,880 to 1,900 MHz
**Europe & UK, India, Indonesia, Hong Kong, Singapore, Malaysia, Australia**

SL Tablestand 153-S DW-4 B
Art. no. 506628
black
**-4 US variant**
1,920 to 1,930 MHz
**USA, Canada, Latin America**

SL Tablestand 153-S DW-5 B
Art. no. 506651
black
**-5 US variant**
1,893 to 1,906 MHz
**Japan**

SL Tablestand 153-S DW-6 B
Art. no. 506641
black
**-6 US variant**
1,880 to 1,895 MHz
**Taiwan**

SL Tablestand 153-S DW-7 B
Art. no. 506967
black
**-7 BR variant**
1,910 to 1,920 MHz
**Brazil**

## ACCESSORIES

| | |
|---|---|
| **MEG 14-40-L-II B** | Art. no. 506398 |
| **CHG 2W** | Art. no. 506805 |
| **BA 40** | Art. no. 506656 |

# SpeechLine Digital Wireless
## SL Tablestand 153-S DW

**DIMENSIONS**

120.21
4.73"

47.86
1.88"

166.71
6.56"

XLR5F

USB2 Micro-USB-B Buchse /
USB2 micro USB-B connector

60.11
2.37"

19.9
0.78"

Zentrum drahtlose
Energieübertragung
center wireless charging

70.31
2.77"
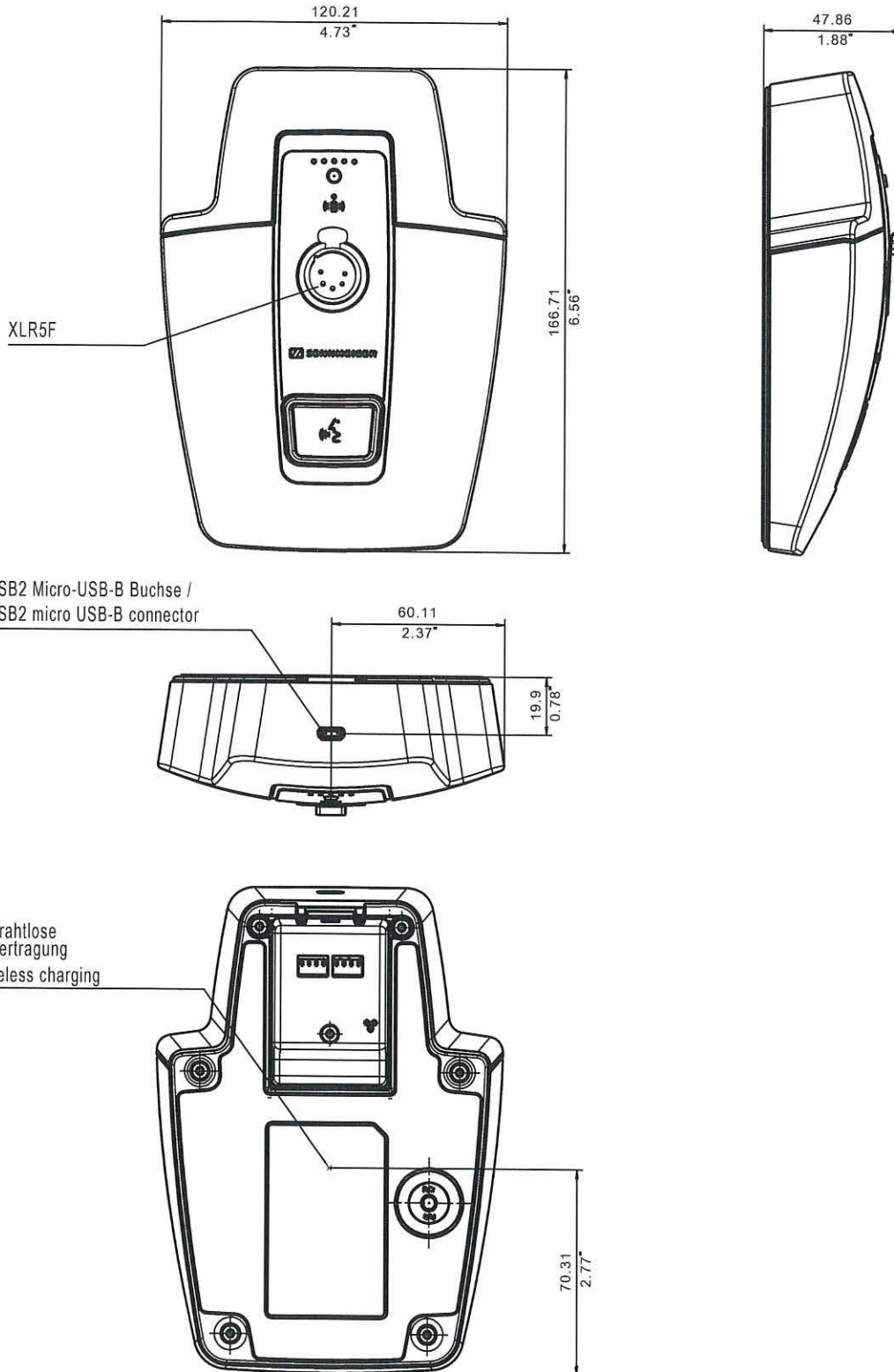
# MEG 14-40-L-II
# Gooseneck Microphone

## FEATURES

- Intuitive handling
- Clearly visible LED ring and microphone button
- Proven Sennheiser KE 10 microphone capsule

The MEG 14-40-L-II features a made in Germany quality gooseneck microphone on an attractive price. A lightring indicates the spokesperson that is allowed to take the floor. It features a Sennheiser KE 10 microphone capsule with cardioid directivity for universal miking. The flexible element of the streamlined 40 cm gooseneck ensures precise alignment of the microphone. An XLR 5M connector delivers power for the green LED ring and connects the microphone signal.

## ARCHITECT'S SPECIFICATION

The microphone shall be a pre-polarized condenser designed for permanent installation or portable applications. It shall have a microphone capsule with a cardioid polar pattern with uniform 120° angle of acceptance (-3 dB). The microphone shall include a lighted ring below the capsule for indicating the activity of the microphone.

It shall have a frequency response of 50 Hz to 20,000 Hz and be capable of handling sound input levels up to 130 dB SPL. Nominal equivalent noise level shall be 26 dBA (37 dB weighted as per CCIR 468-3). Output shall be low impedance balanced (< 100 Ω). Operating temperature shall be 0 °C to 40 °C (32 °F to 104 °F). The microphone shall operate from an external 12 V to 48 V DC phantom power source; current consumption shall be 3 mA. The lighted LED ring shall operate from an external 12 – 30 V DC power source; current consumption shall be 3 mA. The microphone shall offer radio frequency interference (RFI) shielding against intermodulation from wireless equipment or devices.

The microphone shall be a gooseneck design ensuring precise alignment of the microphone. It shall incorporate a self-contained power module with an XLR 5M connector at the base, which includes connection for the lighted ring power. The microphone shall be a small-diameter gooseneck design with a diameter of 8 mm (0.31") and an overall length of 457.2 mm (18"). Head diameter shall be 22.8 mm (0.9"). The microphone weight shall be 147 g (4.72 oz). Finish shall be matte black.

The microphone shall be Sennheiser MEG 14-40-L-II.

## SPECIFICATIONS

| | |
|---|---|
| Pick-up pattern | cardioid |
| Frequency response | 50 Hz - 20 kHz |
| Acoustic principle | gooseneck microphone (condenser) |
| Output impedance @ 1 kHz | < 100 Ω |
| Sensitivity | 15 mV/Pa |
| Max. sound pressure level | 130 dB @ 1 kHz < 3 % |
| Equivalent noise level | 37 dB (CCIR) 26 dB (A) |
| Power supply microphone | 12 V - 48 V phantom power (P 12 - P 48) |
| Current consumption | 3 mA |
| Power supply signal light ring | 12 - 30 V DC 1 - 18 mA green |
| Connector | XLR-5M |
| TemperatureF | Operation: 0 °C to 40 °C (32 °F to 104 °F) |
| | Storage: -25 °C to +70 °C (-13 °F to 158 °F) |

# MEG 14-40-L-II
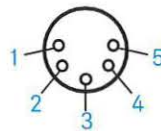## Gooseneck Microphone

## DIMENSIONS



XLR 5

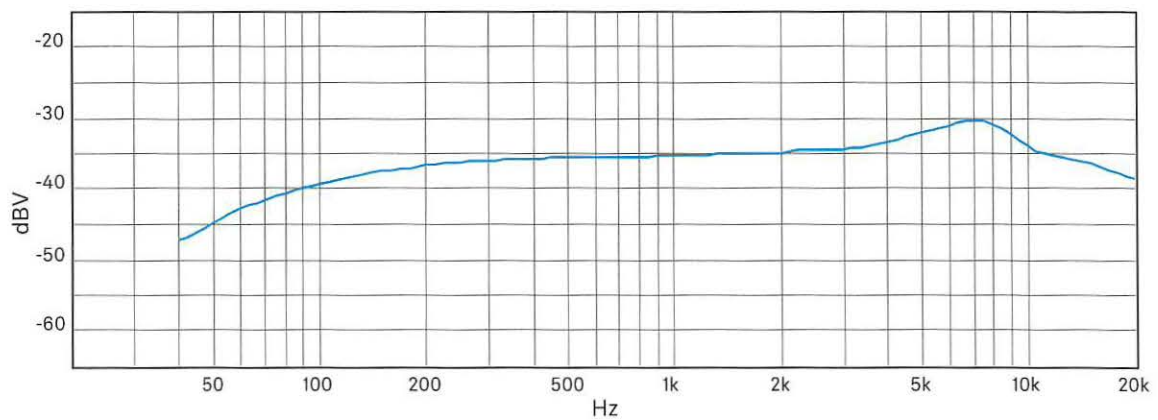Ø 0.73" [19 mm]

Ø 0.9" [22,8 mm]

18" [450 mm]
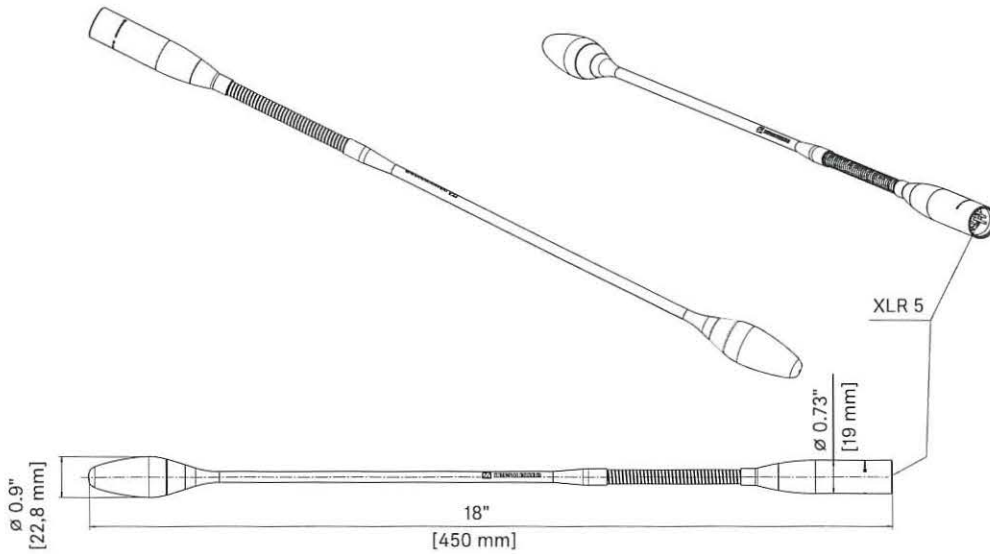
## POLAR PATTERN
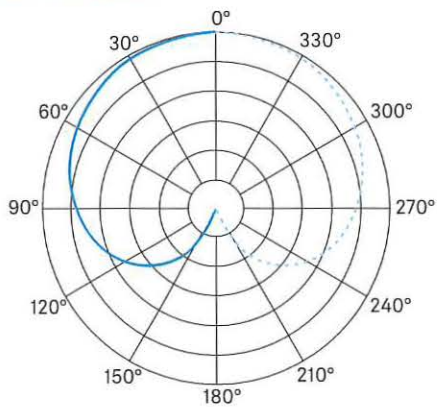


## PIN ASSIGNMENT



1 Microphone Ground
2 Microphone +
3 Microphone –
4 LED Ground
5 LED: 12 – 30 V

## FREQUENCY RESPONSE

# MEG 14-40-L-II
# Gooseneck Microphone

## PRODUCT VARIANTS

| Product | Features | |
|---|---|---|
| **MEG 14-40 B**<br><br>Art. no. 504791 | • Gooseneck with integrated Sennheiser KE 10 microphone capsule<br>• RF shielding against intermodulation from wireless equipment/devices<br>• Streamlined design for seamless integration<br>• Premium quality made in Germany | The MEG 14-40 features a made in Germany quality gooseneck microphone on an attractive price. It features an integrated Sennheiser KE 10 microphone capsule with cardioid directivity for universal miking and a streamlined 40 cm gooseneck with a XLR 3M connector. The flexible element ensures precise alignment of the microphone. |
| **MEG 14-40-L B**<br><br>Art. no. 504792 | • Gooseneck with integrated Sennheiser KE 10 microphone capsule<br>• RF shielding against intermodulation from wireless equipment/devices<br>• Streamlined design for seamless integration<br>• LED ring for speech indication<br>• AC/DC lightring powering<br>• Premium quality made in Germany | The MEG 14-40-L features a made in Germany quality gooseneck microphone on an attractive price. A lightring indicates the spokesperson that is allowed to take the floor. It features a Sennheiser KE 10 microphone capsule with cardioid directivity for universal miking. The flexible element of the streamlined 40 cm gooseneck ensures precise alignment of the microphone. A XLR 5M connector delivers power for the red LED ring and connects the microphone signal. |
| **MEG 14-40-L-II B**<br><br>Art. no. 506398 | • Intuitive handling<br>• Clearly visible LED ring and microphone button<br>• Proven Sennheiser KE 10 microphone capsule | The MEG 14-40-L-II features a made in Germany quality gooseneck microphone on an attractive price. A lightring indicates the spokesperson that is allowed to take the floor. It features a Sennheiser KE 10 microphone capsule with cardioid directivity for universal miking. The flexible element of the streamlined 40 cm gooseneck ensures precise alignment of the microphone. An XLR 5M connector delivers power for the green LED ring and connects the microphone signal. |

## COMPATIBILE PRODUCTS

| Product | compatible with |
|---|---|
| **MEG 14-40 B** | MAT 133, MAT 133 S-B, SL Tablestand 133-S DW |
| **MEG 14-40-L B** | MAT 153, MAT 153-S und MAS 1 |
| **MEG 14-40-L-II B** | SL Tablestand 153-S DW, MAT 153-S B |

# SpeechLine Digital Wireless
# SL MCR DW | Multi-Channel Receiver



## FEATURES

- Wall, ceiling or mic-stand mounted access point
- 2 or 4 SL DW RF links
- Analog output - accounting for existing infrastructure
- 2x Dante interface
- Power over Ethernet (PoE)
- Full control & configuration via Control Cockpit
- Status LED per link
- Integrated IT/Network security standards

The SpeechLine Multi-Channel Receiver with its 2 or 4 channels is the perfect addition to the SpeechLine Digital Wireless series. Thanks to its unobtrusive design, the Multi-Channel receiver can be installed quickly and easily in any room, whether on the wall or ceiling.

# SpeechLine Digital Wireless
# SL MCR DW | Multi-Channel Receiver

## DELIVERY INCLUDES

- SL MCR DW Multi-channel receiver
- Wall mount adapter
- Drilling template
- 3-pin Phoenix connector (3.81)
- Quick guide
- Safety guide
- Manufacturer declarations

## PRODUCT VARIANTS

**SL MCR 2 DW-3**   1,880 to 1,900 MHz   Art. No. 508849

2-channel version | Europe, Hong Kong, Singapore, Malaysia, India, Indonesia, Australia

**SL MCR 2 DW-4**   1,920 to 1,930 MHz   Art. No. 508850

2-channel version | USA, Canada, Latin America

**SL MCR 2 DW-5**   1,893 to 1,906 MHz   Art. No. 508851

2-channel version | Japan

**SL MCR 2 DW-6**   1,880 to 1,895 MHz   Art. No. 508852

2-channel version | Taiwan

**SL MCR 2 DW-7**   1,910 to 1,920 MHz   Art. No. 508853

2-channel version | Brazil

**SL MCR 4 DW-3**   1,880 to 1,900 MHz   Art. No. 508854

4-channel version | Europe, Hong Kong, Singapore, Malaysia, India, Indonesia, Australia

**SL MCR 4 DW-4**   1,920 to 1,930 MHz   Art. No. 508855

4-channel version | USA, Canada, Latin America

**SL MCR 4 DW-5**   1,893 to 1,906 MHz   Art. No. 508856

4-channel version | Japan

**SL MCR 4 DW-6**   1,880 to 1,895 MHz   Art. No. 508857

4-channel version | Taiwan

**SL MCR 4 DW-7**   1,910 to 1,920 MHz   Art. No. 508858

4-channel version | Brazil

## ACCESSORIES

SL MCR Wallmount Adapter          Art. No. 508891

## SPECIFICATIONS

### System

| | |
|---|---|
| AF frequency response | 20 to 20,000 Hz |
| Dynamic range | > 120 dB(A) |
| THD (1 kHz) | typ. 0.1 % |
| Audio sampling | 24 bit/48 kHz |
| Signal-to-noise ratio | > 90 dB(A) |
| Encryption | AES 256 |
| RF frequency ranges | EU: 1,880 - 1,900 MHz<br>USA: 1,920 - 1,930 MHz<br>Brazil: 1,910 - 1,920 MHz<br>Taiwan: 1,880 - 1,895 MHz<br>Japan: 1,893 - 1,906 MHz |
| Modulation | GFSK with back channel |
| Transmission method | TDMA, space diversity |
| Latency | 19 ms |

### SL MCR DW

| | |
|---|---|
| RF sensitivity | < -90 dBm |
| RF output power back channel | adaptive or manual, up to 250 mW (country-specific) |
| Network protocol | Media Control Protocol, UDP IPv4 (DHCP, Manual)/IPv6, mDNS (switchable) |
| Power supply | PoE IEEE 802.3af Class 3 |
| Audio outputs | One 3-pin socket (suitable for Phoenix Contact MCVW 1.5-3-ST-3.81) Two Dante™ Digital Audio Network sockets (RJ-45) |
| Weight | 650 g (incl. wallmount) 560 g (without wallmount) |
| Dimensions | 180 x 180 x 45 mm (incl. wallmount) |
| Operating temperature | –10 °C to +45 °C (14 °F to 113 °F) |
| Storage temperature | –20 °C to +70 °C (–4 °F to 158 °F) |
| Relative air humidity | max. 95 % |

## SpeechLine Digital Wireless
## SL MCR DW | Multi-Channel Receiver

**DIMENSIONS**
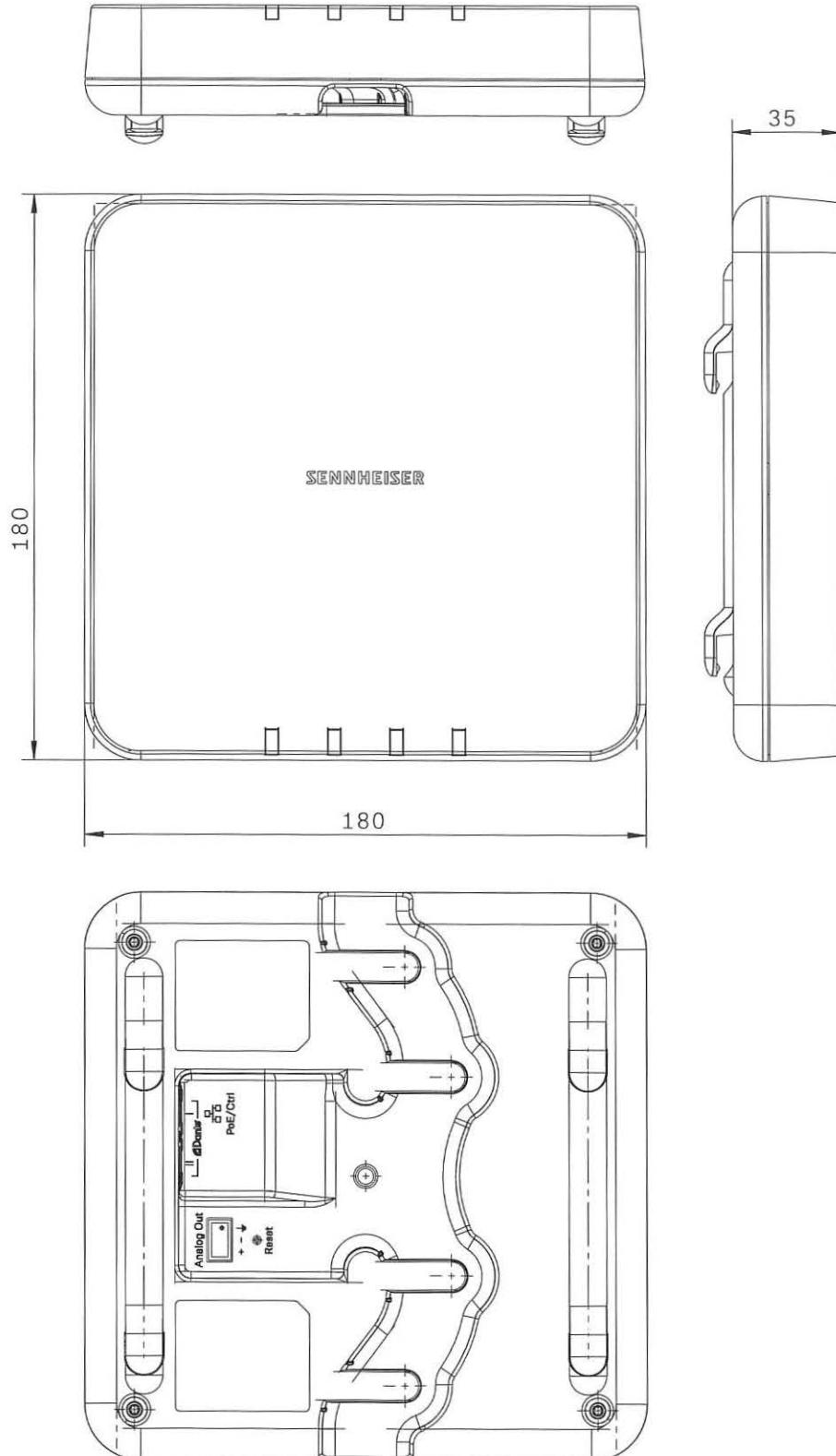
# SpeechLine Digital Wireless
## SL MCR DW | Multi-Channel Receiver

## ARCHITECT'S SPECIFICATION

The multi-channel receiver shall be for use with up to four companion transmitters as part of a wireless RF transmission system.

The receiver shall operate in the license-free 1.9 GHz band (frequency ranges shall be from 1,880 to 1,930 MHz, depending on country-specific regulations) and shall use automatic frequency management to find and select the best available frequency in the spectrum and to automatically start the transmission.

The receiver shall also incorporate automatic interference management, allowing it to inaudibly and seamlessly change to another frequency if any interference is detected. Time Division Multiple Access (TDMA) and space diversity shall be used to provide for increased transmission reliability.

The receiver shall be available as a 2-channel version and a 4-channel version. The receiver shall have a discreet design with fully integrated antennas. With the supplied mounting adapter it shall be mountable to a wall, a ceiling, a tripod or a VESA 100 mount.

The receiver shall have two RJ-45 network sockets for power supply (Power over Ethernet: PoE IEEE 802.3af Class 3) and remote control via a control software solution like the Sennheiser Control Cockpit or a media control system (e. g. Crestron and AMX). The two RJ-45 network sockets shall also output digital audio signals to a Dante™ audio network.

In addition, the receiver shall feature a 3-pin socket for analog audio output. The 3-pin socket shall be compatible with Phoenix Contact MCVW 1.5-3-ST-3.81 plugs.

Control and operation of the receiver shall be performed via the control software solution Sennheiser Control Cockpit. The following features shall be adjustable via the control software: speech-optimized sound profiles, 7-band graphic equalizer for custom audio settings, low-cut filter, automatic gain control (AGC) settings, audio sensitivity settings, audio output level settings, transmitter RF power level, transmitter mute mode and mute switch functionality, RF synchronisation, receiver and transmitter firmware update.

Via the control software the receiver shall support automatic or manual mixing of the audio channels to a sum signal. The analog audio output shall output the sum signal. The digital audio outputs shall be able to output the individual channels or the sum signal.

The receiver's AF frequency response shall range from 20 – 20,000 Hz. The dynamic range shall be > 120 dB(A). Total harmonic distortion (THD) at 1 kHz shall be typical 0.1 %. Signal-to-noise ratio shall be > 90 dB(A). The receiver's RF sensitivity shall be -90 dBm. RF output power of the receiver's back channel shall be adaptive and up to 250 mW (country-specific).

The dimensions shall be approximately 180 x 180 x 45 mm (including the mounting adapter). Weight shall be approximately 560 grams (650 grams with the mounting adapter). Operating temperature shall range from -10 °C to +45 °C (+14 °F to +113 °F).

The receiver shall be the Sennheiser SL MCR 2 DW (2-channel version) or the SL MCR 4 DW (4-channel version).

# City of Wasilla
## Action Memorandum No. 20-15

Contract Award To Sound Decisions In The Amount Of $40,312 For The City Hall Council Chamber Audio Video Upgrade Project.

Originator:  Archie Giddings, Public Works Director
Date:  6/9/2020

Agenda of: 6/22/2020

| Route to: | Department Head | Signature | Date |
|-----------|-----------------|-----------|------|
| X | Public Works Director | *Danielle Bischoff* | 6/12/2020 |
| X | Finance Director | | 6-12-20 |
| X | Deputy Administrator | | 6/12/2020 |
| X | City Clerk | | 6/15/2020 |
| X | Mayor | | 6/14/2020 |

**Fiscal Impact:** ☒ yes  or  ☐ no        **Funds Available:** ☒ yes        $40,312

**Account name/number:** Equipment Replacement        110-4181-499.45-09
**Attachments:** None

---

**Summary Statement:** This project was advertised on February 3, 2020 through Invitation to Bid No. 0203-0-2020/AG. The following bids were received:

| | |
|---|---|
| Sound Decisions | $40,312 |
| IMIG Audio/Video | $44,543 |
| ATS Alaska | $115,761 |

This project consists of upgrading the existing audio system within the city hall council chamber and adjacent conference room, and adding video equipment for displaying presentations, Web streaming and Web Conferencing in the council chamber.

**Staff Recommendation:** Approve the Action Memorandum.

| | |
|---|---|
| **From:** | Scott Wick <scott@sounddecisionspro.com> |
| **Sent:** | Friday, October 1, 2021 11:11 AM |
| **To:** | Jamie Newman |
| **Cc:** | Sarah Stanifer; Jeremy Pennington |
| **Subject:** | Re: City of Wasilla |
| **Attachments:** | EST 1624.pdf |

Good morning Jamie,

This took way too long to get to you. I had to have some input from QSC on implementing the active camera tracking with the Sennheiser microphone. It just so happens that QSC and Sennheiser just teamed up and released exactly the integration we need.

This system configuration is based on using a OFE (owner furnished equipment) computer dedicated to the room for TEAMS or Zoom. This computer would be located in the rack.

This will system will add:
- a ceiling microphone that can pick up the entire room if necessary.
- PTZ camera, with active tracking as required.
- Video stream to be encoded for your icompass software.
- Zoom conferencing (or codec of your choice)
- 8" touch screen for entire system control (replaces Kramer control system)_

Any questions at all on this – please reach out.

Thanks,

Scott Wick
907-982-1771
swick@sd-grp.net

[ x ]

*Please update my contact info to reflect the new email address*

**From:** Jamie Newman <jnewman@ci.wasilla.ak.us>
**Date:** Tuesday, September 7, 2021 at 2:04 PM
**To:** Scott Wick <scott@sounddecisionspro.com>
**Cc:** Sarah Stanifer <sstanifer@ci.wasilla.ak.us>
**Subject:** City of Wasilla

Hi Scott,

Please give me a call to discuss upgrading our Chambers to prepare for remote meetings (Zoom).

Thank you,

**Jamie Newman, MMC** | City Clerk | **City of Wasilla**
**907-373-9090** | 290 E Herning Avenue Wasilla, AK  99654 | **cityofwasilla.com**

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Visit the Public Meetings Portal

Upcoming City holidays:
September 6 – Labor Day

# SOUND))ecisions | SD))
AUDIO | VIDEO | DESIGN | INTEGRATION | RENTAL | CONSTRUCTION

PO Box 3724
Palmer, AK 99645

# Estimate

| Date | Estimate # |
|------|-----------|
| 10/1/21 | 1624 |

| Name / Address |
|----------------|
| City of Wasilla<br>Finance Dept<br>290 East Herning Ave<br>Wasilla, AK 99654 |

| Item | Description | Qty | Rate | Total |
|------|-------------|-----|------|-------|
| | Wasilla Assembly Chambers Upgrade<br>Use Existing Speakers, Amps, Screens, and Blackmagic Video Switcher.<br>OFE Room Computer in the rack | | | |
| CORE 110f | Unified Core with 24 local audio I/O channels, 128x128 network I/O channels, dual LAN ports, POTS and VoIP telephony, 16x16 GPIO, 16 next-generation AEC processors, 1RU. | 1 | 2,800.00 | 2,800.00 |
| SL-QUD-110-P | Q-SYS Core 110 UCI Deployment Software License, Perpetual | 1 | 150.00 | 150.00 |
| SL-QSE-110-P | Q-SYS Core 110 Scripting Engine Software License, Perpetual | 1 | 300.00 | 300.00 |
| TSC-80w-G2-BK | Q-SYS 8.0" PoE Touch Screen Controller for In-Wall Mounting. Includes 1 LAN Port and Power input, available in black only. | 1 | 1,471.25 | 1,471.25 |
| NV-32H | Q-SYS 4K60 4:4:4 Network Video Endpoint for the Q-SYS Ecosystem, software configurable as Encoder or Decoder. 3 HDMI 2.0 Inputs, 2 HDMI 2.0 Outputs, on-board AV Bridging. | 1 | 2,562.50 | 2,562.50 |
| PTZ-12x72 | Q-SYS PoE camera for AV-to-USB Bridging. 12x Optical Zoom 72° horizontal field of view. Includes Lan, 3G-SDI and HDMI; includes Wall Mount Bracket | 1 | 3,125.00 | 3,125.00 |
| NS26-1440++ | 26-port network switch preconfigured for Q-SYS Audio, Video and Control with<br>and 1440 Watts PoE budget. Features advanced QoS and IGMP configuration to also support AES67 and Dante within the same VLAN. | 1 | 3,500.00 | 3,500.00 |
| 509178 | TeamConnect Ceiling 2, a<br>beamforming ceiling array mic with<br>two Dante and one analog audio<br>output, PoE powered. Includes 2x2 mounting bracket. | 1 | 3,422.25 | 3,422.25 |
| IC282A | Black Box 2-Port USB 1.1/2.0 CAT5 Extender Kit | 1 | 147.55 | 147.55 |
| MK570 | Logitech MK570 Wireless Wave Keyboard and Mouse Combo | 1 | 95.99 | 95.99 |
| Misc AV Hardware | Misc Hardware: Organization, Cabling, Connectors as required, and Consumables | 1 | 300.00 | 300.00 |
| Shipping | Shipping Cost | 1 | 343.75 | 343.75 |

**Total**

# SOUND))ecisions | SD))
AUDIO | VIDEO | DESIGN | INTEGRATION | RENTAL    CONSTRUCTION

PO Box 3724
Palmer, AK 99645

# Estimate

| Date | Estimate # |
|------|-----------|
| 10/1/21 | 1624 |

| Name / Address |
|----------------|
| City of Wasilla
Finance Dept
290 East Herning Ave
Wasilla, AK 99654 |

| Item | Description | Qty | Rate | Total |
|------|-------------|-----|------|-------|
| Admin | Administration General Requirements | 1 | 751.40 | 751.40 |
| Labor 120 | AV Labor - Hardware Installation | 32 | 120.00 | 3,840.00 |
| Labor 120 | AV Labor - Program/Integration | 24 | 120.00 | 2,880.00 |
| Labor 120 | AV Labor - Testing/Training | 4 | 120.00 | 480.00 |

| **Total** | $26,169.69 |
|-----------|-----------|