

CITY OF CREST HILL
CITY CENTER

Change Order

Date: 8/15/2022
Project: Crest Hill City Center
Contractor: Low Voltage Solutions, Inc.
Change Order #:

Description:

Council Chambers Additional Microphones
* Per Design Requirement for the Dais and there being (8) Seats in lieu of (4) this is the Add of
(4) Additional Microphones for the Lower Seating Area of the Dais as required.

Note: See Attached RCO / Proposals

Original Contract:	\$ 227,991.00
Previous Change Orders:	<u>\$ -</u>
Contract Total Prior to this CO:	\$ 227,991.00
New Change Order Amount:	<u>\$ 6,260.00</u>
New Contract Amount:	<u><u>\$ 234,251.00</u></u>

Approved:

Administrator Date

Shawn Thompson - Project Manager Date

Sub-Contractor Date

Dan Skiera - Superintendent Date



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Date: July 20, 2022

Change Order# 11-16075 CO#02

Project: City Hall & PD Building- Audio Visual Design - City of Crest Hill City Hall & Police, 20701 Patrick Drive, Crest Hill, IL

Job Number: 11-16075

Submitted By: Erik Sover

We hereby agree to make the change(s) specified below:

CHANGE ORDER #02: -Council Chambers Wireless Microphones

TOTAL CHANGE ORDER: \$6260.00

SUMMARY: Remit original Shure MXA Wireless Microphone Systems due to extensive lead times, Add/Update to Clearone Digital Wireless Microphones

BILL OF MATERIALS:

<CREDIT>

- 1 Shure MXWAPT8 8-Channel Digital Transceiver
- 4 Shure MXW6 Wireless Boundary Microphones
- 6 Shure SB901A Lithium Ion Rechargeable Batteries
- 1 Shure MXWNCS8 8-Mic Network Charging Station
- 1 Shure MXW1 Body Pack Transmitter
- 1 Shure MXW2/SM 58 Handheld

***ABOVE ITEMS ARE ON SEVERE ALLOCATION WITH ETA OF FEBRUARY 2023

ADD/REPLACE

- 1 Clearone 8-Channel Wireless Receiver
- 1 Clearone 4-Channel Wireless Receiver
- 8 Clearone Table Top Caridoid Microphones (Increased from 4 Per request)
- 1 Clearone Wireless Handheld Microphone
- 1 Clearone Beltpack Receiver
- 1 Clearone Lavalier Microphone
- 2 Clearone Wireless EXT Antenna with 75' RG58 Antenna Cables
- LOT: Add CAT6 Cabling and supports for additional receiver

Update Labor, QA/QC & Configuration Services for additional microphones and receiver.

Use case and functionality not impacted by changes. Note: Total Wireless Microphones increased by 4 total units.



Equipment is in stock.

NOTE: This Change Order becomes part of and in conformance with the existing contract.

WE AGREE hereby to make the change(s) specified above at this price→ \$ 6260.00

Authorized Signature

ACCEPTED - The above prices and specifications of this
Change Order are satisfactory and are hereby accepted.
All work to be performed under same terms and conditions
as specified in original contract unless otherwise stipulated.

Date

Authorized Signature





ClearOne's Wireless Microphone System is the most economical, versatile, and easily scalable wireless system in the market today with unprecedented ease-of-use and simple installation.

This microphone system complements other professional audio products from ClearOne including CONVERGE® Pro 1 & 2 Mixers, INTERACT Mixers, CONVERGE Matrix products. WS800 Receiver comes with and without Dante™ built-in audio networking.

Flexibility

- + Reliable digital wireless system is the best for flexible spaces and upgrading existing areas without access to cable paths

Economical

- + Cost-effective and flexible as one system can serve the wireless needs of up to six rooms

Scalability

- + Provides up to 32 channels per RF band allowing channels to be added in the field to respond to future growth

Audio Quality

- + From 20 Hz to 20 kHz very low-latency digital audio, enhanced through the Dante™ interface

Mixed Audio Outputs

- + Balanced line or headphone output and the GUI can be used to send control signals to the main and mixed outputs

Multiple RF Ranges

- + M915: 902 MHz to 928 MHz
- + M715: 712 MHz to 737 MHz
- + M610: 605 MHz to 632 MHz
- + M500: 486 MHz to 512 MHz
- + M550: 537 MHz to 563 MHz
- + M586: 573 MHz to 599 MHz
- + M800: 793 MHz to 819 MHz
- + M930: 917 MHz to 943 MHz



VENUES

Boardrooms

Conference Rooms

Courtrooms

Training Rooms

Auditoriums

Houses of Worship



Model	Part Numbers	RF Range	Available Options*
WS840 (4 output channels)	910-6000-401	M915 (902-928 MHz)	-D : Dante network capability -X : XLR Connector Outputs* -S : Receiver is a Stage Audio receiver -C : Audio Compression
	910-6000-402	M715 (712-737 MHz)	
	910-6000-403	M610 (605-631 MHz)	
	910-6000-404-C	M500 (486-512 MHz)	
	910-6000-408-C	M550 (537-563 MHz)	
	910-6000-405-C	M586 (573-599 MHz)	
	910-6000-406-C	M800 (793-819 MHz)	
	910-6000-407-C	M930 (917-943 MHz)	
WS880 (8 output channels)	910-6000-801	M915 (902-928 MHz)	
	910-6000-802	M715 (712-737 MHz)	
	910-6000-803	M610 (605-631 MHz)	
	910-6000-804-C	M500 (486-512 MHz)	
	910-6000-808-C	M550 (537-563 MHz)	
	910-6000-805-C	M586 (573-599 MHz)	
	910-6000-806-C	M800 (793-819 MHz)	
	910-6000-807-C	M930 (917-943 MHz)	

* Any combination of options are available separate or combined, except for options -C and -S together.
* Euroblock connectors provided unless -X option is ordered

PRODUCT SPECIFICATIONS

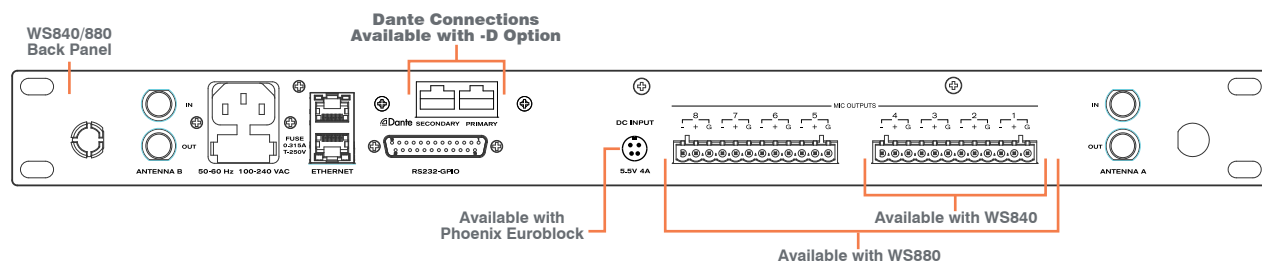
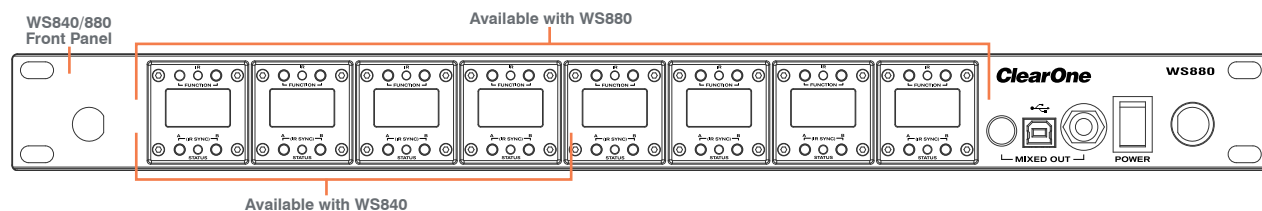
WS800 Wireless Microphone System:

- Wireless System: Up to 24-bit, 48 KHz, digital audio RF technology
- Channels: 4 or 8-channel receivers
- Daisy-chainable up to 32 channels per RF band
- RF Range: M915: 902 MHz to 928 MHz M715: 712 MHz to 737 MHz
M610: 605 MHz to 632 MHz M500: 486 MHz to 512 MHz
M550: 537 MHz to 563 MHz M586: 573 MHz to 599 MHz
M800: 793 MHz to 819 MHz
M930: 917 MHz to 943 MHz
- Working Range: 300 feet (line-of-sight)
- Encryption: 256 bit key (AES) always-on, laboratory-verified NSA FIPS 197 standard
- Frequency Response:
 - 16 channels 20 Hz - 20 KHz (stage)
 - 32 channels 20 Hz - 20 KHz (compressed, conference)
 - 32 channels 20 Hz - 12 KHz (non-compressed, conference)
- S/N Ratio: 109 dB (typical 'A' weighted)
- Total Harmonic Distortion: <0.03% @ 1kHz
- Latency:
 - Stage..... 3ms
 - Conference, non-compressed..... 4ms
 - Conference, compressed..... 9-10ms
- Stability: <5ppm

- Operation Temperature Range: 0 - 50 degrees Celsius ambient temperature

Receiver (Base Station)

- Channels per receiver: 4-channels (WS840), 8 channels (WS880)
- Power Requirements: 100-240 VAC 50-60 Hz, 15 Watts
- Display: OLED
- External Antennas: Support up to six pairs per system
- Antenna Distribution: Attach up to 32 channels to one pair of antennas
- Analog Audio Outputs: Phoenix terminal blocks or with XLR adapters
- Output Impedance: 100 Ohm
- Headphone out (mixed): Balanced 1/4 inch TRS mixed line out for recorders or powered speakers; or headphone out
- Interface: USB, RS232 & Ethernet (dual port 10/100 Mbps)
- Dante™ Audio channels: Eight (8) digital outputs @ 48 KHz.
- Dante Ports: Primary & secondary, RJ45 ports, 100/1000 Mbps, 328 ft.
- GPIO Interface: 22 programmable pins
- Gain Adjustment Range: -20dB to +31 dB
- Dimension: 1-U rack-mount, 19 x 1.75 x 6.5 inches
- Weight: 4.7 lbs (2.14 kg) for 8-channel receiver; 4.5 lbs (2.04 kg) for 4-channel receiver



Note: Receivers with -X option come with Euroblock-to-XLR adapters.

PRODUCT SPECIFICATIONS

Charging Station (Docking Station)

- **Housing:** ABS
- **Capacity:** Charges 8 microphones simultaneously (mix and match any type of the supplied microphones)
- **Power:** 5.6V DC / 4 A
- **Dimension:** 13.25 x 5.75 inches
- **Weight:** 1.30 lbs (.58 kg)



Part Number | 910-6000-800 (comes free with Receiver)

Extension Antennas

- **Mount:** Wall mount, ceiling or mic-stand mount
- **Connectors:** Straight connectors
- **Reception Pattern:** 130-degree reception pattern
- **Gain:** Provides 15dB of RF gain (915MHz)
- **Power:** Phantom-powered from the receiver
- **Dimensions:** 5.8"(dia) x 1.125"(d) (14.8cm x 2.9cm)
- **Weight:** .55 lbs (.24 kg)



Category	Part Numbers	RF Range
Extension Antenna Kit (with 25 ft plenum cable)	910-6005-001	M915 (902-928 MHz)
	910-6005-002	M715 (712-737 MHz)
	910-6005-003	M610 (605-631 MHz)
	910-6005-004	M500 (486-512 MHz)
	910-6005-008	M550 (537-563 MHz)
	910-6005-005	M586 (573-599 MHz)
	910-6005-006	M800 (793-819 MHz)
	910-6005-007	M930 (917-943 MHz)
Extension Antenna Kit (with 50 ft plenum cable)	910-6005-011	M915 (902-928 MHz)
	910-6005-012	M715 (712-737 MHz)
	910-6005-013	M610 (605-631 MHz)
	910-6005-014	M500 (486-512 MHz)
	910-6005-018	M550 (537-563 MHz)
	910-6005-015	M586 (573-599 MHz)
	910-6005-016	M800 (793-819 MHz)
	910-6005-017	M930 (917-943 MHz)
Extension Antenna Combiner	910-6005-200 (2way)	
	910-6005-300 (3way)	
	910-6005-400 (4way)	

Transmitters (Microphones)

- **Mic Polar Pattern :** Cardioid, omni
- **RF Output:** 1, 10, 25 or 50mW, user selectable
- **Power:** USB or AA rechargeable (included) or AA disposal
- **Antenna:** Internal
- **LED Indicators:** Battery status, mute status
- **Button:** Press to talk, press to mute (or logic mute), toggle on/off
- **Programmable Switch:** Talk, mute, logic mute, on / off
- **Frequency Response:** 60 - 20kHz (Omni version); 60 - 15kHz (Cardioid version)
- **Signal-to-Noise Ratio:** 80dB Typ. at 1kHz (1Pa) 'A' weighted (Omni version); 74dB Typ. at 1kHz (1Pa) 'A' weighted (Cardioid version)
- **Battery:** Two rechargeable NiMH included, standard AA size
- **Battery Charge Time:** 4 hrs
- **Battery Talk Time:** Up to 8 hrs continuous usage per charge, typical @ 1mW
- **Dimension:** 3.9 L x 2.8 W x .69 H inches
- **Weight:** 0.25lbs (.12 Kg) including batteries



Model	Part Numbers	RF Range	Available Options*
Cardioid version	910-6001-001	M915 (902-928 MHz)	-C : Audio Compression
	910-6001-002	M715 (712-737 MHz)	
	910-6001-003	M610 (605-631 MHz)	
	910-6001-004-C	M500 (486-512 MHz)	
	910-6001-008-C	M550 (537-563 MHz)	
	910-6001-005-C	M586 (573-599 MHz)	
	910-6001-006-C	M800 (793-819 MHz)	
	910-6001-007-C	M930 (917-943 MHz)	
Omni version	910-6001-011	M915 (902-928 MHz)	
	910-6001-012	M715 (712-737 MHz)	
	910-6001-013	M610 (605-631 MHz)	
	910-6001-014-C	M500 (486-512 MHz)	
	910-6001-018-C	M550 (537-563 MHz)	
	910-6001-015-C	M586 (573-599 MHz)	
	910-6001-016-C	M800 (793-819 MHz)	
	910-6001-017-C	M930 (917-943 MHz)	

* For systems with audio compression, -C must be added to the transmitter part number

Gooseneck Microphone

- **Mic Polar Pattern:** Cardioid, Super-Cardioid
- **Gooseneck Lengths:** 6, 12 or 18 inch, with double bend
- **RF Output:** 1, 10, 25 or 50mW, user-selectable
- **Frequency Response:** 60 - 15kHz
- **Signal-to-Noise Ratio:** 74dB Typ. at 1kHz (1Pa) 'A' weighted
- **Antenna:** Internal
- **Power:** USB or AA rechargeable (included) or AA disposal
- **Button:** Press-to-talk, press-to-mute (or logic mute), toggle on/off
- **LED Indicators:** Battery status, mute status
- **Programmable Switch:** Talk, mute, logic mute, on / off
- **Battery:** Four rechargeable NiMH included, standard AA size
- **Battery Charge Time:** 4 hrs
- **Battery Talk Time:** Up to 16 hrs continuous usage per charge, typical @ 1mW
- **Dimension:** 6.1 L x 4.6 W x 1.4 H inches
- **Weight:** 1.60lbs (.72 Kg) including batteries



Model	Part Numbers	RF Range	Available Options*
6-inch neck	910-6002-061	M915 (902-928 MHz)	-C : Audio Compression
	910-6002-062	M715 (712-737 MHz)	
	910-6002-063	M610 (605-631 MHz)	
	910-6002-064-C	M500 (486-512 MHz)	
	910-6002-068-C	M550 (537-563 MHz)	
	910-6002-065-C	M586 (573-599 MHz)	
	910-6002-066-C	M800 (793-819 MHz)	
	910-6002-067-C	M930 (917-943 MHz)	
12-inch neck	910-6002-121	M915 (902-928 MHz)	
	910-6002-122	M715 (712-737 MHz)	
	910-6002-123	M610 (605-631 MHz)	
	910-6002-124-C	M500 (486-512 MHz)	
	910-6002-128-C	M550 (537-563 MHz)	
	910-6002-125-C	M586 (573-599 MHz)	
	910-6002-126-C	M800 (793-819 MHz)	
	910-6002-127-C	M930 (917-943 MHz)	
18-inch neck	910-6002-181	M915 (902-928 MHz)	
	910-6002-182	M715 (712-737 MHz)	
	910-6002-183	M610 (605-631 MHz)	
	910-6002-184-C	M500 (486-512 MHz)	
	910-6002-188-C	M550 (537-563 MHz)	
	910-6002-185-C	M586 (573-599 MHz)	
	910-6002-186-C	M800 (793-819 MHz)	
	910-6002-187-C	M930 (917-943 MHz)	

* For systems with audio compression, -C must be added to the transmitter part number

PRODUCT SPECIFICATIONS

Handheld Microphone

- Mic Polar Pattern: Cardioid, Super-Cardioid, or Hyper-Cardioid
- RF Output: 1, 10, 25 or 50mW, user-selectable
- Frequency Response: 60 - 15kHz
- Signal-to-Noise Ratio: 74dB Typ. at 1kHz (1Pa) 'A' weighted
- Antenna: Internal
- Display: OLED
- Power: USB or AA rechargeable (included) or AA disposal
- Indicators: Battery status, mute status
- Programmable Switch: Talk, mute, logic mute, on / off
- Battery: Two rechargeable NiMH included, standard AA size
- Battery Charge Time: 4 hrs
- Battery Talk Time: Up to 8 hrs continuous usage per charge, typical @ 1mW
- Dimension: 10.2 L x 1.4 W x 1.4 H inches
- Weight: 0.75lbs (.34 Kg) including batteries



Model	Part Numbers	RF Range	Available Options*
Handheld mic	910-6003-001	M915 (902-928 MHz)	-C : Audio Compression
	910-6003-002	M715 (712-737 MHz)	
	910-6003-003	M610 (605-631 MHz)	
	910-6003-004-C	M500 (486-512 MHz)	
	910-6003-008-C	M550 (537-563 MHz)	
	910-6003-005-C	M586 (573-599 MHz)	
	910-6003-006-C	M800 (793-819 MHz)	
	910-6003-007-C	M930 (917-943 MHz)	

Model	Part Numbers	RF Range
OM5	910-6003-021	M915 (902-928 MHz)
	910-6003-022	M715 (712-737 MHz)
	910-6003-023	M610 (605-631 MHz)
	910-6003-024-C	M500 (486-512 MHz)
	910-6003-028-C	M550 (537-563 MHz)
	910-6003-025-C	M586 (573-599 MHz)
	910-6003-026-C	M800 (793-819 MHz)
	910-6003-027-C	M930 (917-943 MHz)

Model	Part Numbers	RF Range
OM3	910-6003-011	M915 (902-928 MHz)
	910-6003-012	M715 (712-737 MHz)
	910-6003-013	M610 (605-631 MHz)
	910-6003-014-C	M500 (486-512 MHz)
	910-6003-018-C	M550 (537-563 MHz)
	910-6003-015-C	M586 (573-599 MHz)
	910-6003-016-C	M800 (793-819 MHz)
	910-6003-017-C	M930 (917-943 MHz)

* For systems with audio compression, -C must be added to the transmitter part number

Beltpack Transmitter

- RF Output: 1, 10, 25 or 50mW, user-selectable
- Antenna: External, field-replaceable
- Display: OLED
- Power: USB, AA rechargeable (included), or AA disposable
- Indicators: Battery status, mute status
- Programmable Switch: Talk, mute, logic mute, on / off
- Mic Input Impedance: 47 K Ohms
- Mic Bias: 3V
- Mic Connector: TA4
- Battery: Two rechargeable NiMH included, standard AA size
- Battery Charge Time: 4 hrs
- Battery Talk Time: Up to 8 hrs continuous usage per charge, typical @ 1 mW
- Dimension: 2.8 L x 2.4 W x .66 H inches
- Weight: 0.35 lbs (.16 Kg) including batteries



Beltpack Transmitter



Headset Mic



Lavalier Mic

Model	Part Numbers	RF Range	Available Options*
Beltpack Transmitter	910-6004-001	M915 (902-928 MHz)	-C : Audio Compression
	910-6004-002	M715 (712-737 MHz)	
	910-6004-003	M610 (605-631 MHz)	
	910-6004-004-C	M500 (486-512 MHz)	
	910-6004-008-C	M550 (537-563 MHz)	
	910-6004-005-C	M586 (573-599 MHz)	
	910-6004-006-C	M800 (793-819 MHz)	
	910-6004-007-C	M930 (917-943 MHz)	

* M500, M586, M800, M930 (MHz) systems are only available with audio compression

* For systems with audio compression, -C must be added to the transmitter part number

Lavalier Mic for Beltpack Transmitter

- Mic Polar Pattern: Omni
- Frequency Response: 20 - 20kHz
- Signal-to-Noise Ratio: Above 56dB at 1kHz (1Pa) 'A' weighted

Headset Mic for Beltpack Transmitter

- Mic Polar Pattern: Omni
- Frequency Response: 50 - 18kHz
- Signal-to-Noise Ratio: Above 56dB at 1kHz (1Pa) 'A' weighted
- Headset: Single-ear headset

Lavalier Mic	910-6004-010	Lavalier Mic for Beltpack transmitter
Headset Mic	910-6004-020	Headset Mic for Beltpack transmitter

SALES AND INQUIRIES

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