



Evolution Wireless Digital Family

EW-D & EW-DX SYSTEM DESIGN GUIDE



SENNHEISER

EW-D & EW-DX

Click on products for more information.



HAND HELD SOLUTIONS				
CAPSULES	OMNI	CARDIOID	SUPERCARDIOID	TRANSMITTERS
DYNAMIC	MMD 42-1 ITEM #506772	MMD 835-1 ITEM #502575	MMD 845-1 ITEM #502576	EW-D SKM-S ITEM #508792
DYNAMIC BETTER COMPONENTS & VOCAL PRESENCE		MMD 935-1 ITEM #502577	MMD 945-1 ITEM #502579	
CONSENSER	ME 9002 ITEM #502587	ME 9004 ITEM #502588	MME 865-1 ITEM #502581	EW-DX SKM-S ITEM #509412
		NEUMANN KK 204 BK/NI ITEM #008652, 008651	MMK 965-1 BK/NI ITEM #502582, 502584	ME 9005 ITEM #502589
HIGH SPL		MM 435 ITEM #508829	MM 445 ITEM #508830	

BELTPACK SOLUTIONS				
	OMNI	CARDIOD	TRANSMITTERS	
LAVALIER (STANDARD VOCALS)	ME 2 ITEM #508935	MKE ESSENTIAL (HIGHER SPL, NATURAL FREQ RESPONSE) ITEM #508252, 508251, 508250, 508249	ME 4 ITEM #508936	EW-D SK ITEM #508780, 508781, 508782, 508786
MINI LAV (BEST FREQ RESPONSE)	MKE 1 ITEM #502879, 502876, 502046, 502169, 502881, 502168, 502834, 502833, 502167			EW-DX SK (3.5MM) ITEM #509384, 509385, 509394
SUB-MINI LAV (SMALLEST)	MKE 2 ITEM #009832, 009831, 004738, 004735, 004739, 004736	MKE MINI (MKE 2 CAPSULE) ITEM #700179		EW-DX SK 3-PIN (LOCKING 3-PIN) ITEM #509398, 509399, 509408
HEADWORN	SL HEADMIC 1 (MKE 1 CAPSULE) ITEM #506271, 506904, 506906, 506905, 506907, 390004, 390005, 390006		ME 3 EW ITEM #508928	
NECKWORN	HSP 2-EW (MKE PLATINUM) ITEM #009872, 009866, 009863, 009862	HS 2 (MKE 2 CAPSULE) ITEM #508882, 508883, 508884, 508885	HSP 4-EW (MKE PLATINUM) ITEM #009873, 009867, 009865, 009864	

GOOSENECKS W CAPSULE	
3-PIN	MEG 14-40 ITEM #504791
5-PIN	MEG 14-40 L = RED LIGHT MEG 14-40 L-II = GREEN LIGHT ITEM #506398

GOOSENECKS/CAPSULE COMPONENTS		
SINGLE FLEX	MZH 3015 (W) 6" (15 CM) ITEM #005074	MZH 3040 16" (40 CM) ITEM #005076
DUAL FLEX	MZH 3042 - 16" (40 CM) ITEM #009384	MZH 3062 - 23" (60 CM) ITEM #500652
	MZH 3072 - 27" (70 CM) ITEM #500653	
	ME 34/W CARDIOID ITEM #005060, 005061	ME 35/W SUPER-CARDIOD ITEM #005063, 005064
		ME 36 MINI SHOTGUN ITEM #005065

ANTENNAS	
ACTIVE	PASSIVE
A 3700 Active (Incl. AB 3700) Omni Beamwidth No DC = -6dB w/DC = up to 15dB gain (selectable) 470-866 MHz ITEM #502195 AD 3700 Active (Incl. AB 3700) 100° Beamwidth No DC = -6dB w/DC = up to 15dB gain (selectable) 470-866 MHz ITEM #502197 AWM Active 80-110° Apex angle Gain +3.0 - +6.0dBi 470-1805 MHz ITEM #508865, 508866, 508867	A 5000 CP Passive 80° Beamwidth @ -3dB 8dB Gain 450-970 MHz ITEM #500887 ADP UHF Passive 100° Beamwidth 5dB Gain 470-1075 MHz ITEM #508863 A 1031 Passive Omni Beamwidth 0 dB Gain 430-960 MHz ITEM #004645 EW-D HALF WAVE DIPOLE ITEM #508870, 508869, 508868, 508871, 508966, 508872

50 OHM CABLING (GZL RG 58) (GZL RF 58)

ACTIVE ANTENNA DISTRIBUTION - GREATER THAN 7dB OF SIGNAL LOSS REQUIRES AN ANTENNA BOOSTER (click for cable loss calculator)

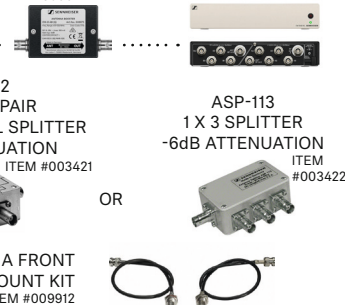
ASP-212
1 PAIR X 2 PAIR
BI-DIRECTIONAL SPLITTER
-4dB ATTENUATION
ITEM #003421

AM 2 ANTENNA FRONT MOUNT KIT
ITEM #009912

EW-D AB
ITEM #508878, 508873, 508877, 508876, 508875, 508874

EW-D ASA UNITY GAIN I/O PROVIDES POWER TO EW-D AB
ITEM #508998, 508881, 508880, 508879

ASP-113
1 X 3 SPLITTER
-6dB ATTENUATION
ITEM #003422



EW-D Product Series Frequency Ranges	
Q1-6	470.2 - 526 MHz
R1-6	520 - 576 MHz
R4-9	552 - 607.8 MHz
S1-7	606.2 - 662 MHz
S4-7	630 - 662 MHz
S7-10	662 - 693.8 MHz
U1/5	823.2 - 831.8 MHz
	863.2 - 864.8 MHz
V3-4	925.2 - 937.3 MHz
Y1-3	1785.2 - 1799.8 MHz

EW-DX Product Series Frequency Ranges	
Q1-9	470.2 - 550 MHz
R1-9	520 - 607.8 MHz
S1-10	606.2 - 693.8 MHz
S2-10	614.2 - 693.8 MHz
S4-10	630 - 693.8 MHz
	823.2 - 831.8 MHz
	863.2 - 864.8 MHz
U1/5	823.2 - 831.8 MHz
	863.2 - 864.8 MHz
V3-4	925.2 - 937.3 MHz
	941.7 - 951.8 MHz
V5-7	953.05 - 956.05 MHz
	956.65 - 959.65 MHz
Y1-3	1785.2 - 1799.8 MHz

RECEIVERS	
EW-D EM 1-CH RECEIVER ITEM #508800, 508802, 508801	
EW-DX EM 2 2-CH RECEIVER ITEM #509342, 509343, 509352	
EW-DX EM 2 DANTE 2-CH RECEIVER W/DANTE ITEM #509356	
EW-DX EM 4 DANTE 4-CH RECEIVER W/DANTE ITEM #509370	

TRANSMITTER
EW-DX TS 3-PIN 5-PIN (FOR LIGHT) QI CHARGER COMPATIBLE ITEM #506610, 506626, 506649, 506639

CHARGERS			
CHG 2W QI CHARGER ITEM #506805	EW-D CHARGING SET ITEM #508862	CHG 70N-C PoE CHARGER ITEM # 700332	CHG 70N-C + PSU KIT ITEM # 700333



Evolution Wireless Digital Family | EW-D & EW-DX

	EW-D	EW-DX
Operating Range (free field)	100m/328 ft	
Dynamic Range (measured)	134dB	
Remote Control	Smart Assist App	
		SCC WSM
Runtime (up to)	12h	
Latency & Digital Audio	1.9 ms	
		DANTE®
Switching Bandwidth (up to)	56 MHz	88 MHz
Form Factor RX	1 ch 9.5"/½ RU	2 ch 9.5"/½ RU 4 ch 19"/1 RU
TX Facts	AF MUTE	E-ink Display Charging Contacts AF MUTE RF MUTE



COMPARISON

Evolution Wireless Digital Family



	EW-D EM 9,5" 1CH	EW-DX EM 2 9,5" 2CHT	EW-DX EM 2 Dante 9,5" 2CH	EW-DX EM 4 Dante 19" 4CH	EW-D SKM-S	EW-DX SKM-S	EW-DX SKM	EW-D SK	EW-DX SK	EW-DX SK 3-PIN	EW-DX TS
Channel spacing (equidistant grid)	600 kHz										
		300 kHz				300 kHz Link Destiny Mode			300 kHz		
Remote management	Smart Assist App	Smart Assist v2.0									
		Sennheiser Control Cockpit									
Ease of use			Dante			Charging Contacts			Charging Contacts		USB/ inductive charging
	LCD Display	OLED Display				e-link display			e-link display		
				Antenna Power & Loop Through	AF Mute			AF Mute			
						RF Mute			RF Mute		
Security/encryption		AES 256				AES 256			AES 256		
Switching bandwidth (up to)	56 kHz	88 kHz			56 kHz	88 kHz		56 kHz	88 kHz		



Evolution Wireless Digital Family | EW-D EM Rack Receiver



½ 19" rack receiver for use with Evolution Wireless Digital handheld and bodypack transmitters.

Versatile and feature-rich digital wireless system for those who sing, speak or play instruments that allows for seamless product pairing and management via the EW-D Smart Assist App. Receive state-of-the-art live sound.

FEATURES

- Digital wireless eliminates noise, interference and static bursts
- UHF transmission greatly enhances range, reliability and scalability
- Mobile App streamlines setup and operation and eliminates complicated menus
- Automated setup creates reliable connections with minimal time and effort
- Up to 2,240 selectable frequencies
- 56 MHz Bandwidth will allow for up to 90 channels
- Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range
- All metal housing

DELIVERY INCLUDES

- EW-D EM rack receiver
- 2 rod antennas
- power supply with country adapters
- rackmount set
- 4 rubber feet
- quick guide
- safety guide
- manufacturer declaration sheet

SPECIFICATIONS

SYSTEM

	Q1-6	470.2 – 526 MHz
	R1-6	520 – 576 MHz
	R4-9	552 – 607.8 MHz
	S1-7	606.2 – 662 MHz
	S4-7	630 – 662 MHz
	S7-10	662 – 693.8 MHz
	U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
	V3-4	925.2 – 937.3 MHz
	Y1-3	1785.2 – 1799.8 MHz
Bluetooth® Low Energy (BLE) frequency range		2402 – 2480 MHz
Audio frequency response		20 Hz – 20 kHz (-3 dB) @-3 dBfs
Audio THD		≤ -60 dB for 1 kHz @ -3 dBfs input level
Dynamic range		134 dB
System latency		1.9 ms
Operating temperature		-10 °C – +55 °C (14 °F – 131 °F)
Relative humidity		5 - 95 % (non-condensing)

EW-D EM (RACK RECEIVER)

Input voltage	11 - 13 V ^{DC}
Input current	≤ 300 mA
Transmit power (radiated)	BLE: max. 10 mW EIRP
Audio output power	18 dBu max.
Dimensions	212 x 44 x 189 mm (8.35" x 1.73" x 7.44")
Weight	approx. 1000 g (2.2 lbs) (without antennas and power supply)



Evolution Wireless Digital Family | EW-DX EM 2 / EM 2 Dante* Rack Receiver



Half-rack (9,5") receiver for use with EW-DX SKM (handheld), SK (bodypack) and TS (tablestand) transmitters.

FEATURES

- 2 channel half rack (9.5")
- PoE IEEE 802.3af Class 3
- Equidistant Channel Spacing: 146 channels in standard mode; 293 channels in Link Density Mode
- Network enabled for control with Sennheiser Control Cockpit/ media control system through a number of 3rd party modules
- Clear and easy focused user interface with OLED display
- Ethernet connectivity (IPv4 and IPv6)
- Secure AES 256 encryption
- External PSU 12V/1A
- All metal housing
- *Flexible network modes: single cable (Control, Dante®, PoE), split mode (Control + PoE and Dante® daisy chain), redundancy mode (Control + PoE, Dante® Prim, Dante® Sec)

DELIVERY INCLUDES

- EW-DX EM 2 / EM 2 Dante rack receiver
- 2 rod antennas
- power supply with country adapters
- GA 3 rackmount set
- 4 rubber feet
- quick guide
- safety guide
- manufacturer declaration sheet

SPECIFICATIONS

SYSTEM

	Q1-6	470.2 – 550 MHz
	R1-9	520 – 607.8 MHz
	S1-10	606.2 – 693.8 MHz
	S2-10	614.2 – 693.8 MHz
	S4-10	630 – 693.8 MHz
Audio link frequency ranges	U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
	V3-4	925.2 – 937.3 MHz
	V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
	Y1-3	1785.2 – 1799.8 MHz
Bluetooth® Low Energy (BLE) frequency range	2402 – 2480 MHz	
Audio frequency response	20 Hz – 20 kHz (-3 dB)	
Audio THD	≤ -60 dB for 1 kHz @ -3 dBfs input level	
Dynamic range	134 dB	
System latency	1.9 ms	
Operating temperature	-10 °C – +55 °C (14 °F – 131 °F)	
Relative humidity	5 - 95 % (non-condensing)	

EW-DX EM 2 (RACK RECEIVER)

Input voltage	11 - 13 V $\overline{\text{DC}}$ or PoE IEEE 802.3af Class 0 (CAT5e or higher)
Input current	≤ 1 A
Transmit power (radiated)	BLE: max. 10 mW EIRP
Audio output power	18 dBu max.
Headphone output	2x 70 mW @ 32 Ω
Ethernet	RJ-45 socket, IEEE802.3 100Base-TX (half+full duplex) 10Base-T (half+full duplex) (CAT5e or higher)
Dimensions	212 x 44 x 189 mm (8.35" x 1.73" x 7.44")
Weight	approx. 1000 g (2.2 lbs) (without antennas and power supply)



Evolution Wireless Digital Family | EM 4 Dante Rack Receiver



Four-channel digital full rack (19") receiver for use with EW-DX SKM (handheld), SK (bodypack) and TS (tablestand) transmitters.

FEATURES

- Four-channel digital full rack (19") receiver with internal PSU and Dante®
- Auto-switching PSU with IEC Connection
- Four assignable network ports
- Integrated antenna splitter with antenna power and loop through to daisy chain up to 16 channels (4x EW-DX EM 4)
- 146 channels in standard mode; 293 channels in Link Density (LD) Mode
- Network enabled for remote control with Sennheiser Control Cockpit, WSM and 3rd party systems
- Ethernet connectivity (IPv4 and IPv6)
- Secure AES 256 encryption
- AutoScan-feature scans environment and deploys frequencies with equidistant channel spacing
- Link Quality Indicator (LQI) shows quality of the links separate to RF levels

DELIVERY INCLUDES

- EW-DX EM 4 Dante rack receiver
- 2 rod antennas
- 2 BNC antenna cables (50 Ω) for daisy-chaining
- IEC mains cable (EU, UK or US plug)
- Quick guide
- Safety guide
- Manufacturer declaration sheet

[SYSTEM BUILDER](#) | [FREQUENCY FINDER](#)

SPECIFICATIONS

SYSTEM

	Q1-6	470.2 – 550 MHz
	R1-9	520 – 607.8 MHz
	S1-10	606.2 – 693.8 MHz
	S2-10	614.2 – 693.8 MHz
	S4-10	630 – 693.8 MHz
Audio link frequency ranges	U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
	V3-4	925.2 – 937.3 MHz
	V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
	Y1-3	1785.2 – 1799.8 MHz
	Bluetooth® Low Energy (BLE) frequency range	2402 – 2480 MHz
	Audio frequency response	20 Hz – 20 kHz (-3 dB)
Audio THD	≤ -60 dB for 1 kHz @ -3 dBfs input level	
Dynamic range	134 dB	
System latency	1.9 ms	
Operating temperature	-10 °C – +55 °C (14 °F – 131 °F)	
Relative humidity	5 - 95 % (non-condensing)	

EW-DX EM 4 (RACK RECEIVER)

Input voltage	90-265 V AC, 47-63Hz
Input current	≤ 1 A
Transmit power (radiated)	BLE: max. 10 mW EIRP
Audio output power	18 dBu max.
Headphone output	2x 70 mW @ 32 Ω
Ethernet	RJ-45 socket, IEEE802.3 100Base-TX (half+full duplex) 10Base-T (half+full duplex) (CAT5e or higher)
Dimensions	483x44x373mm (19"x1.73"x14.66)
Weight	4560g

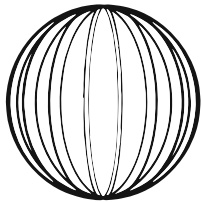


Microphone Pick-Up Patterns

PICK-UP PATTERN

CLARIFICATION

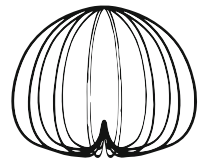
MIC EXAMPLES



OMNIDIRECTIONAL

Generally the best way to pick up sound. Microphone position has practically no effect on how/ what sound is picked up. Due to possibility of feedback creation, omnidirectional microphones are not recommended to be used in sensitive environment with a lot of reflection – rooms with loudspeaker installations, glass walls etc

- ME 9002
- MMD 42-1
- MKE 1
- MKE 2
- SL Headmic 1



CARDIOID

Perfect microphones for feedback sensitive environments (glass walls, loudspeaker installations, noisy environments). Sound quality changes depending on the position of the microphone. Perfect use cases when there are several speakers talking (debates, conversations between several interlocutors etc.) for separation if there are several speakers

- ME 34
- MMD 835
- MM 435
- MMD 935
- ME 9004
- MEB 104
- MEB 114
- MEG 40
- HSP 4



SUPERCARDIOID

Mainly used in gooseneck microphones as only smaller volume adjustments are needed which allows greater freedom of movement towards/from microphone. In comparison to other microphones, super-cardioid mics allow for bigger distance between speaker and mic itself

- ME 35
- MM 445
- MMD 845
- MME 865
- MMD 945



SHOTGUN

Shotgun microphones are the most directed mics, allowing for a great noise reduction from the sides. Shotgun mics are used when the speaker/presenter/educator is relatively far away from/not right in front of the mic.

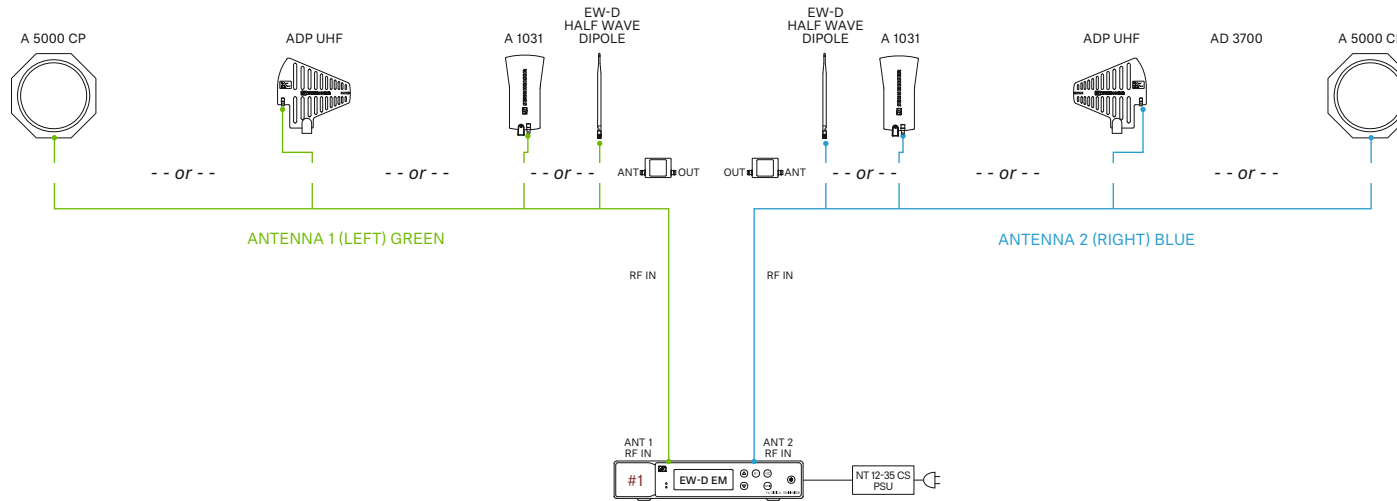
- ME 36



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-D_1 **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** 1-Channel System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

*Available for USA & Canada
shown in blue*

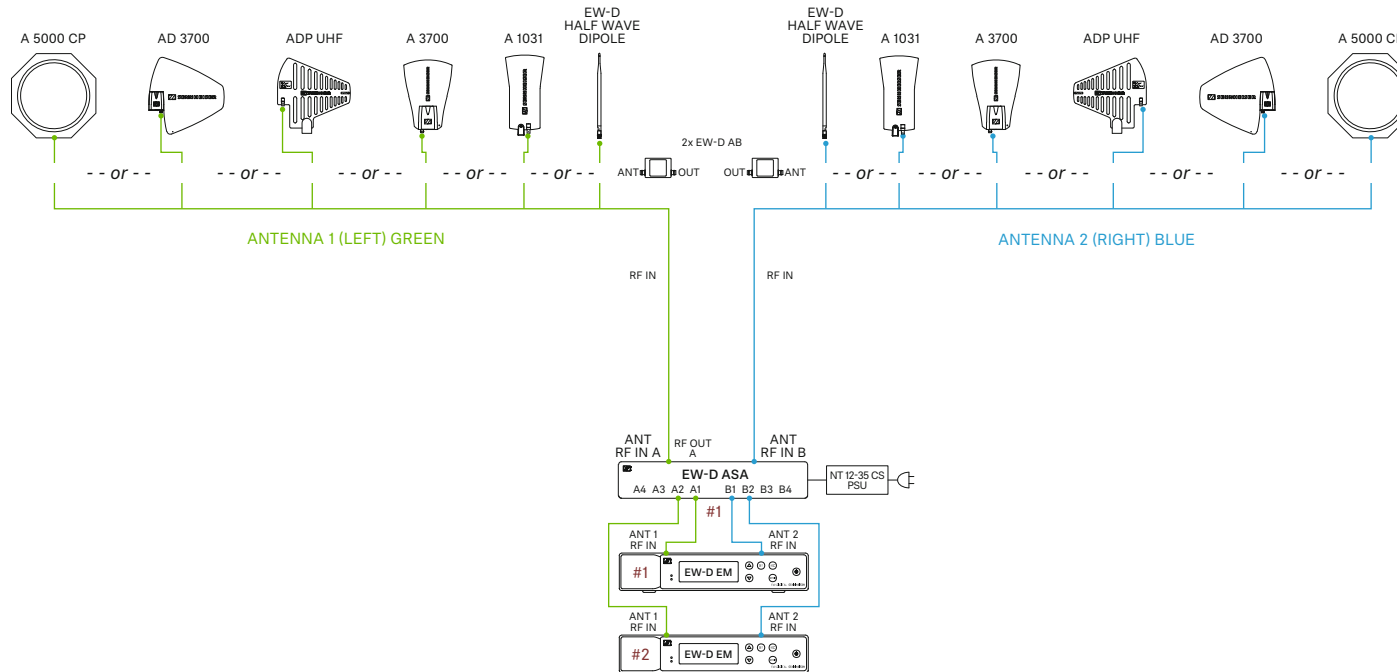
Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME	REVISION	SHEET TITLE	DESCRIPTION
EW-D_2A	1.0	RF Wiring Details	2-Channel System, version A

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

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Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets

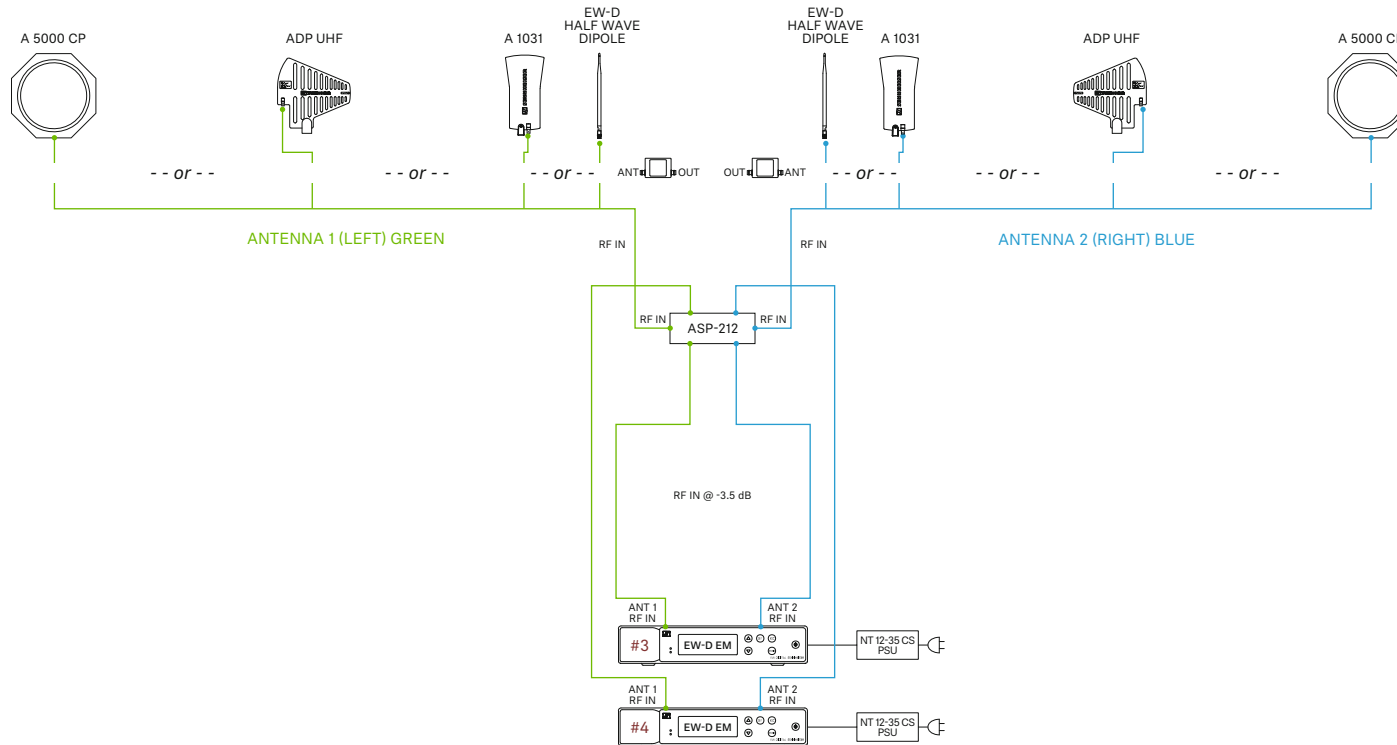
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-D_2P **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** 2-Channel System, version P

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

*Available for USA & Canada
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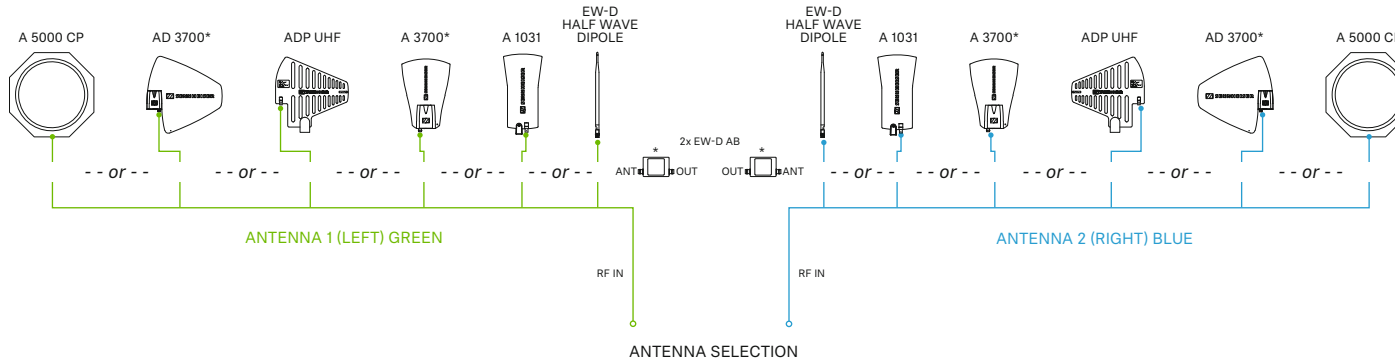
Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets



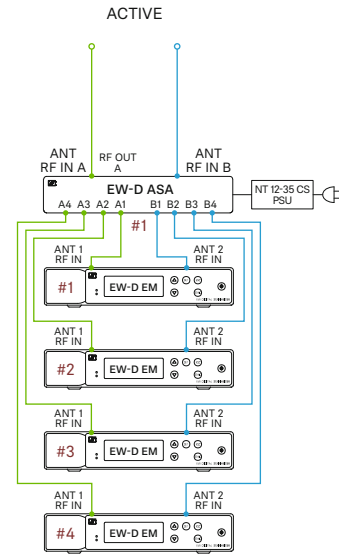
Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-D_4AP **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** 4-Channel System, version A&P

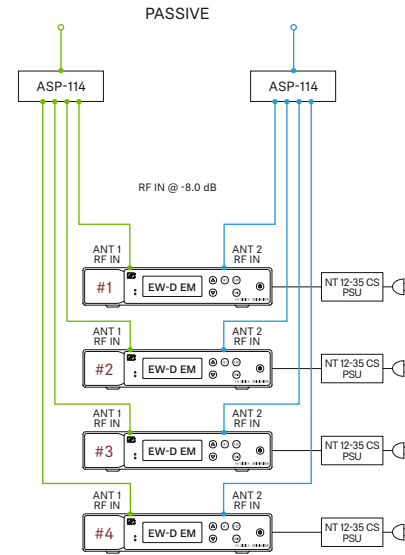
For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz



4-CHANNEL SYSTEM, VERSION A



4-CHANNEL SYSTEM, VERSION P

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

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Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets

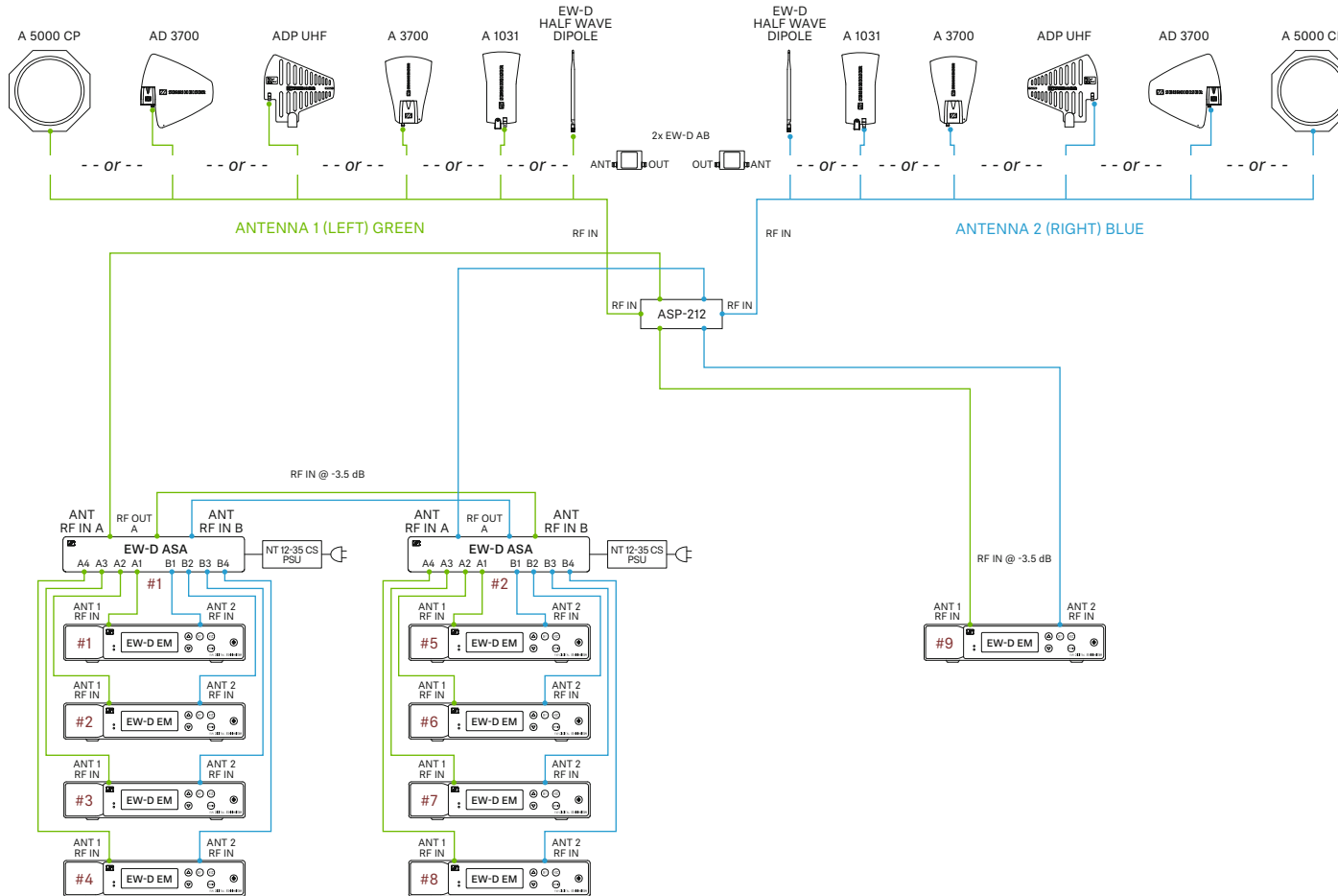
** For A version only, EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables*



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-D_9P1 **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** 9-Channel System, version P1

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

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shown in blue*

Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets

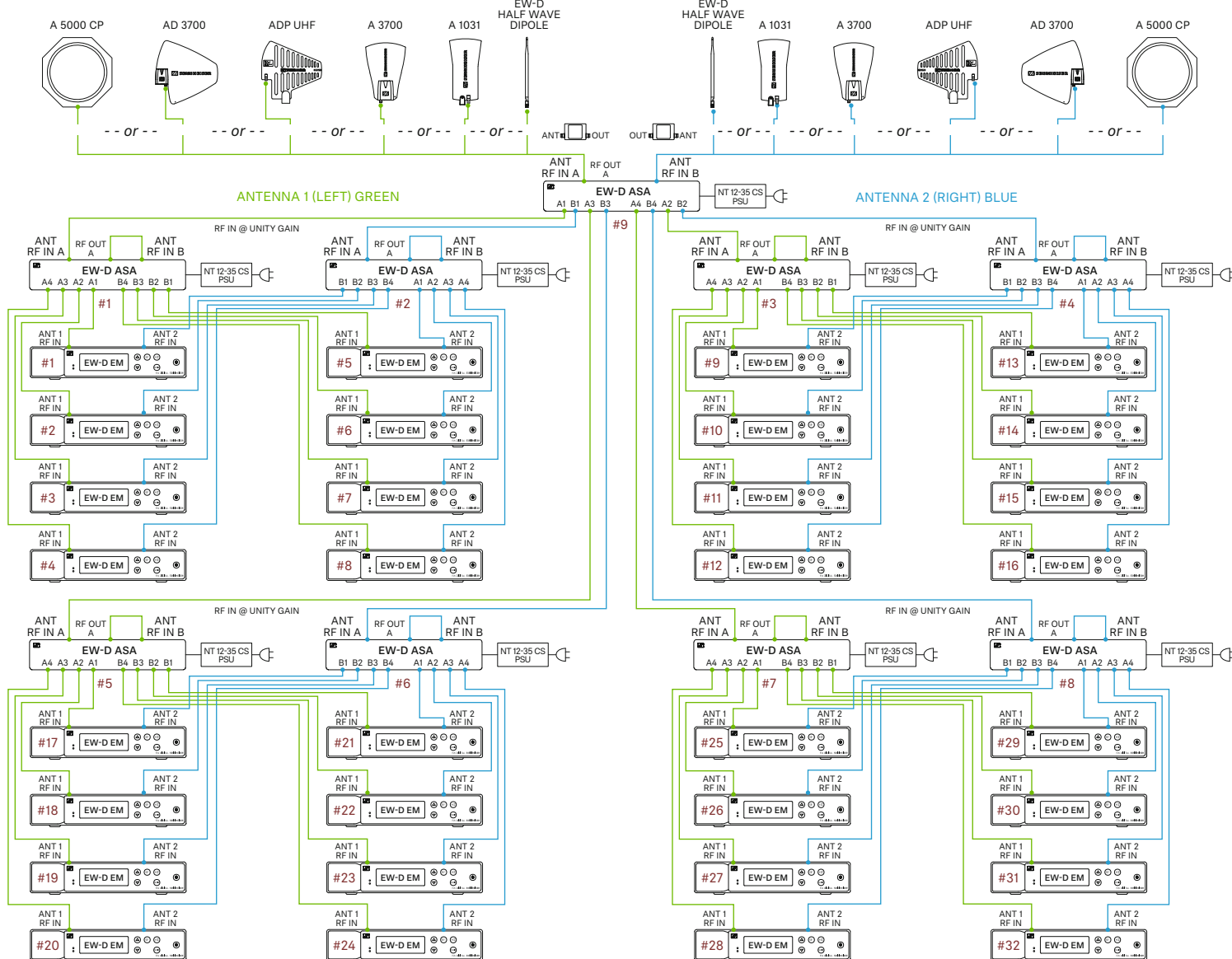
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-D_32B **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** 32-Channel System, version B

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



SYSTEM BUILDER | FREQUENCY FINDER

EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets

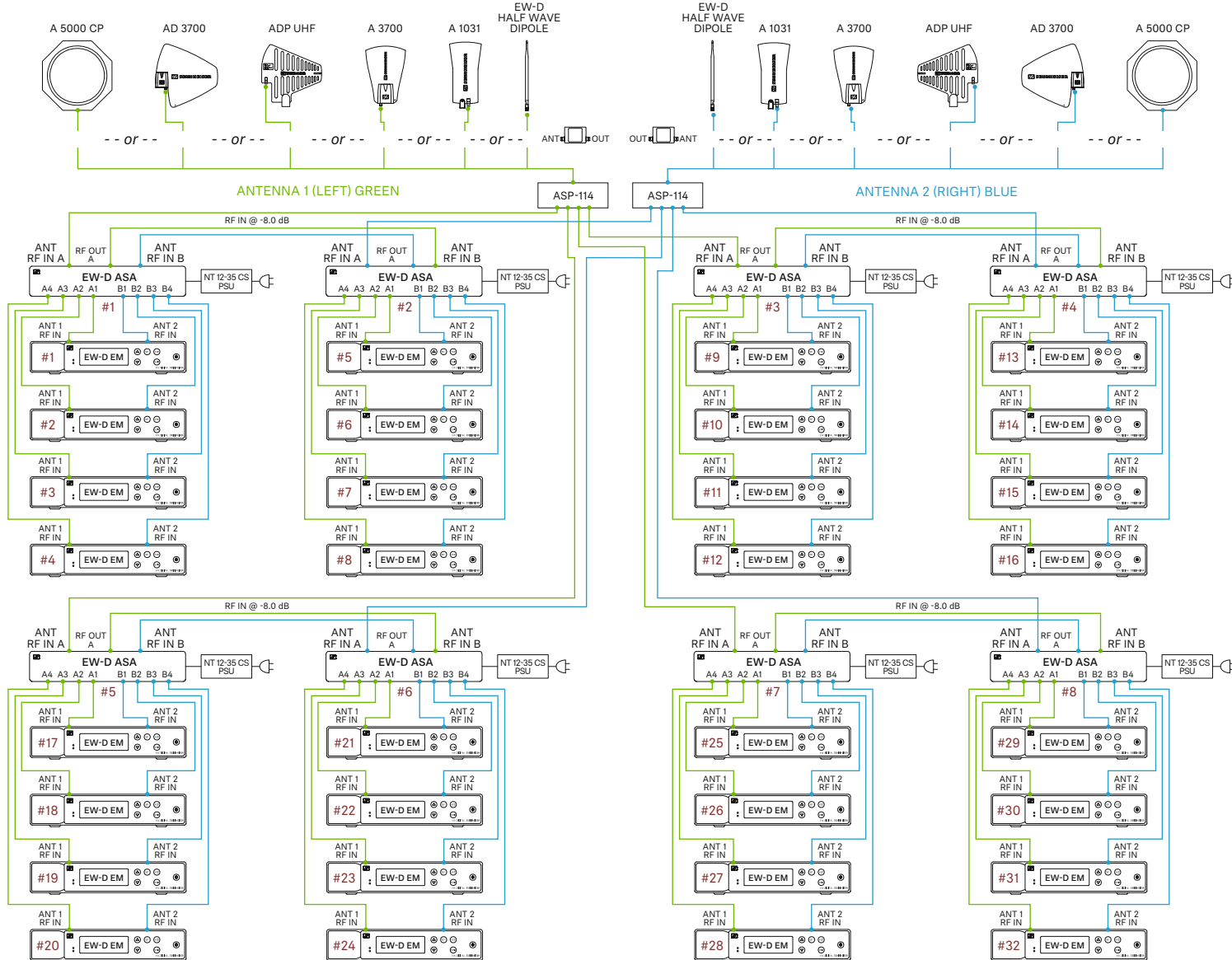
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME	REVISION	SHEET TITLE	DESCRIPTION
EW-D_32P1	1.0	RF Wiring Details	32-Channel System, version P1

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EW-D EM	
Available Frequency Ranges	
Q1-6	470.2 – 526 MHz
R1-6	520 – 576 MHz
R4-9	552 – 607.8 MHz
S1-7	606.2 – 662 MHz
S4-7	630 – 662 MHz
S7-10	662 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V3-4	925.2 – 937.3 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D	
Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	696 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-D frequency ranges in your markets

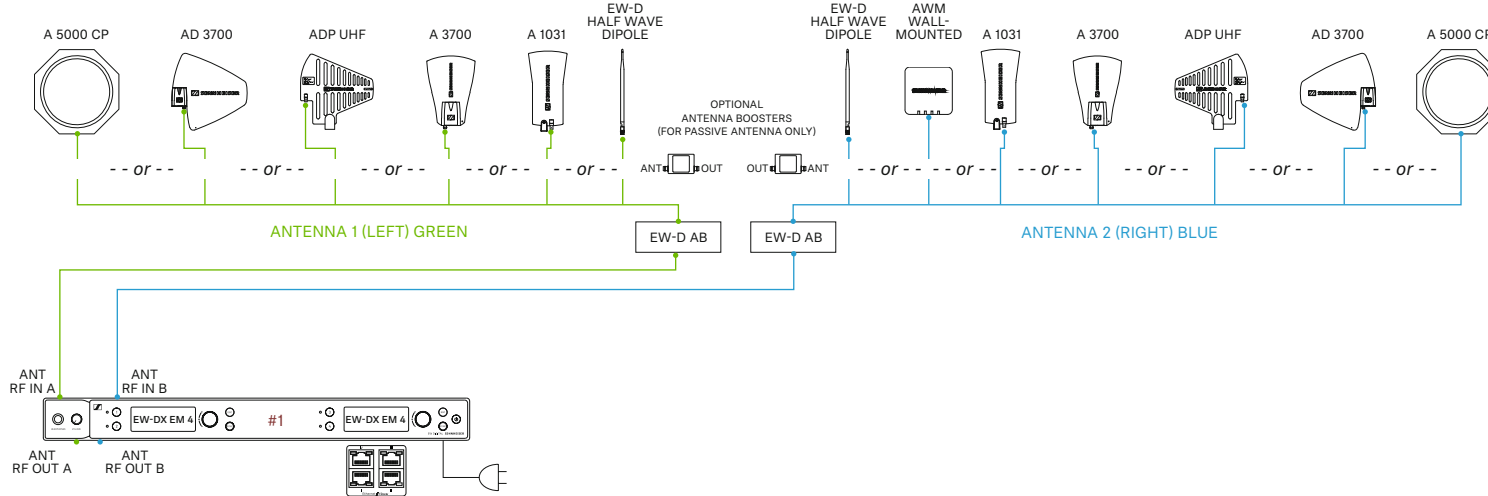
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 4-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 - 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz
AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-DX frequency ranges in your markets

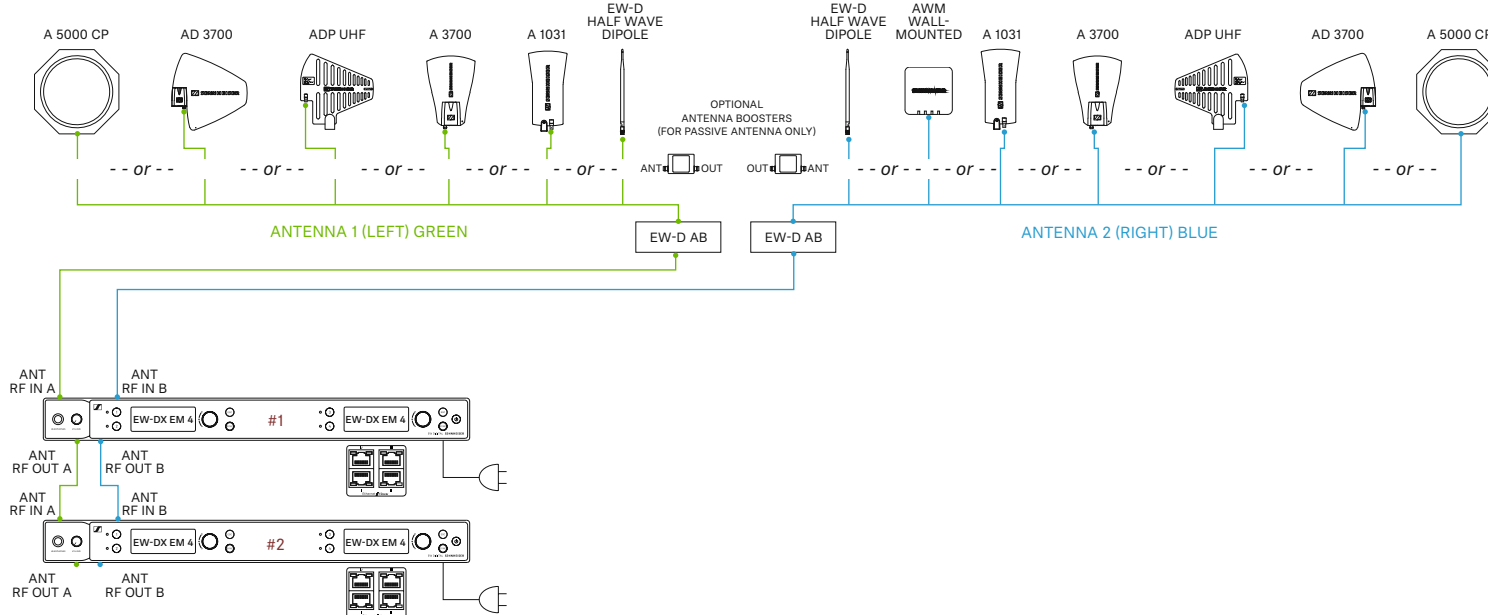
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 8-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz
AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

*Available for USA & Canada
shown in blue*

*Please contact your local Sennheiser
representative for available EW-DX
frequency ranges in your markets*

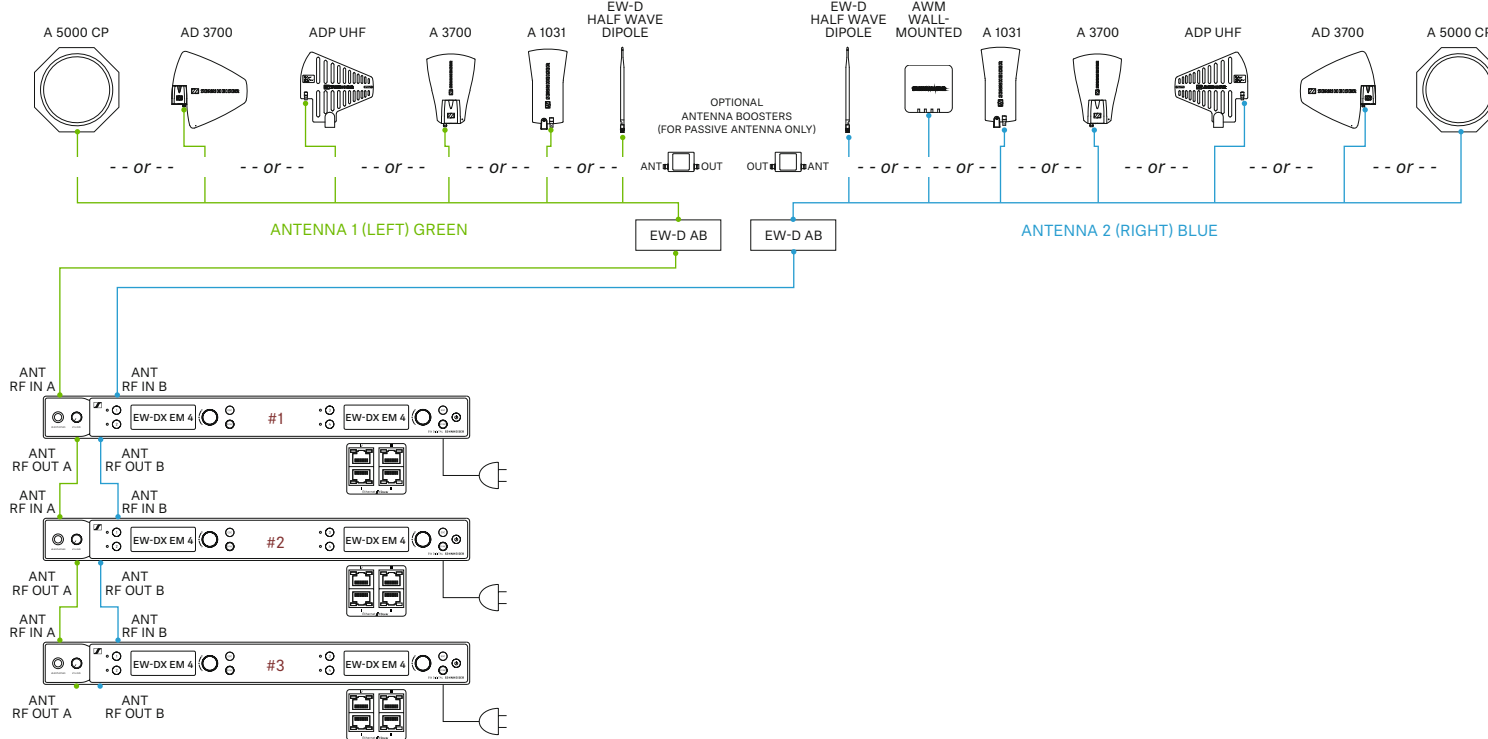
*EW-D AB boosters can be added
next to the receiving antennas to
compensate for the excessive signal
losses in the coax cables*



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 12-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz
AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

*Available for USA & Canada
shown in blue*

*Please contact your local Sennheiser
representative for available EW-DX
frequency ranges in your markets*

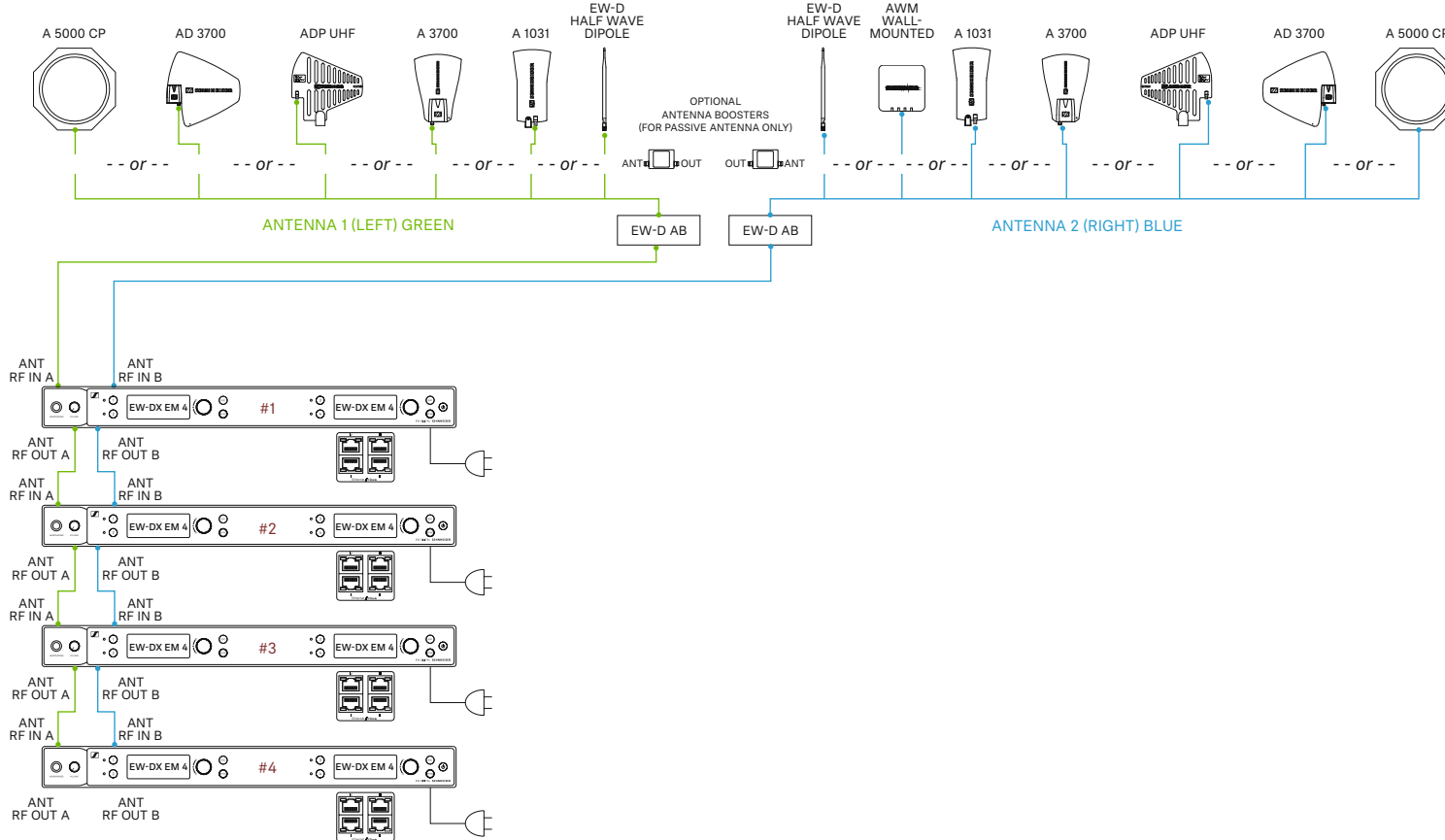
*EW-D AB boosters can be added
next to the receiving antennas to
compensate for the excessive signal
losses in the coax cables*



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 16-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz
AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

*Available for USA & Canada
shown in blue*

*Please contact your local Sennheiser
representative for available EW-DX
frequency ranges in your markets*

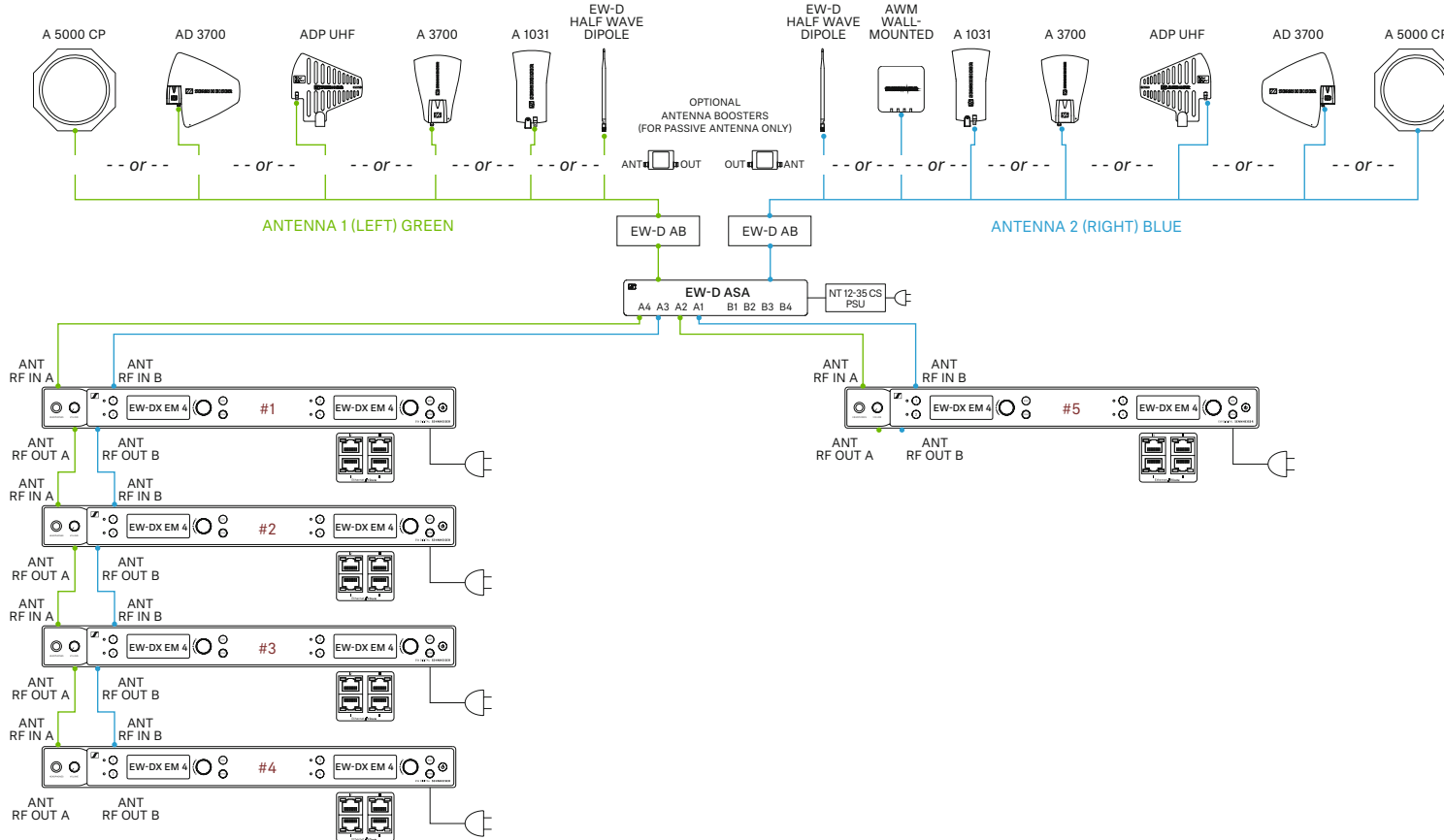
*EW-D AB boosters can be added
next to the receiving antennas to
compensate for the excessive signal
losses in the coax cables*



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 20-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz
AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-DX frequency ranges in your markets

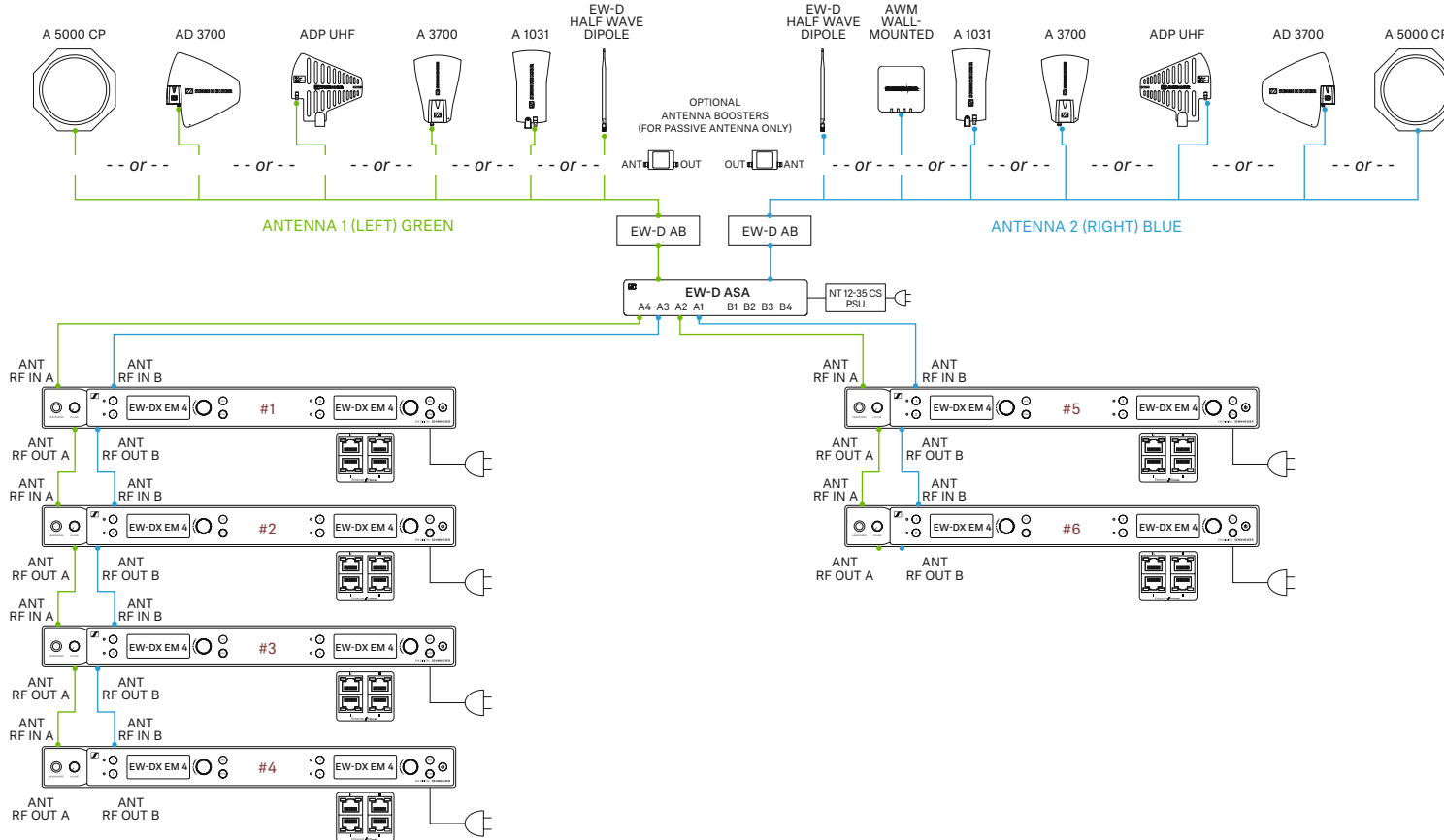
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 24-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-DX frequency ranges in your markets

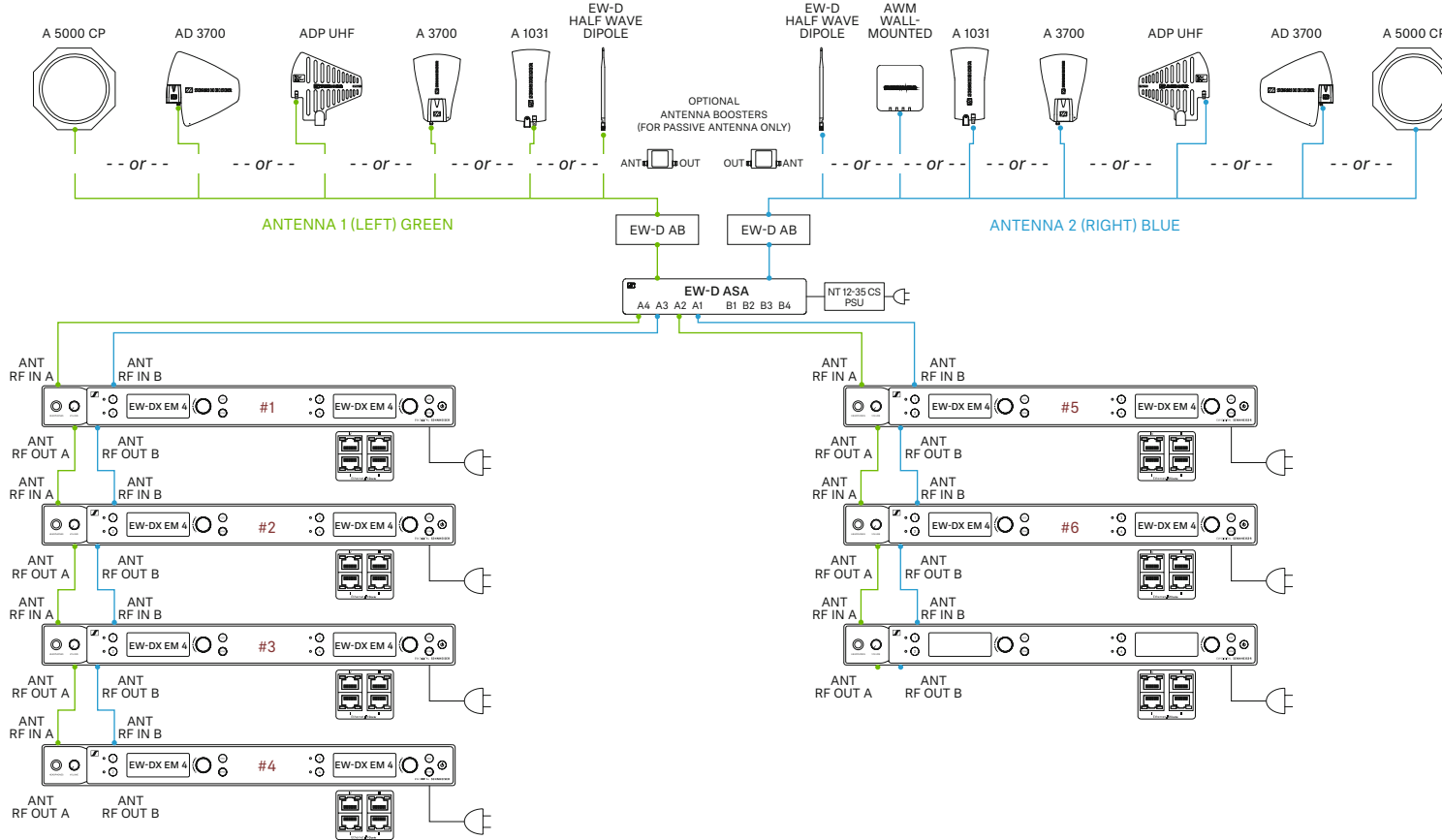
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 28-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-DX frequency ranges in your markets

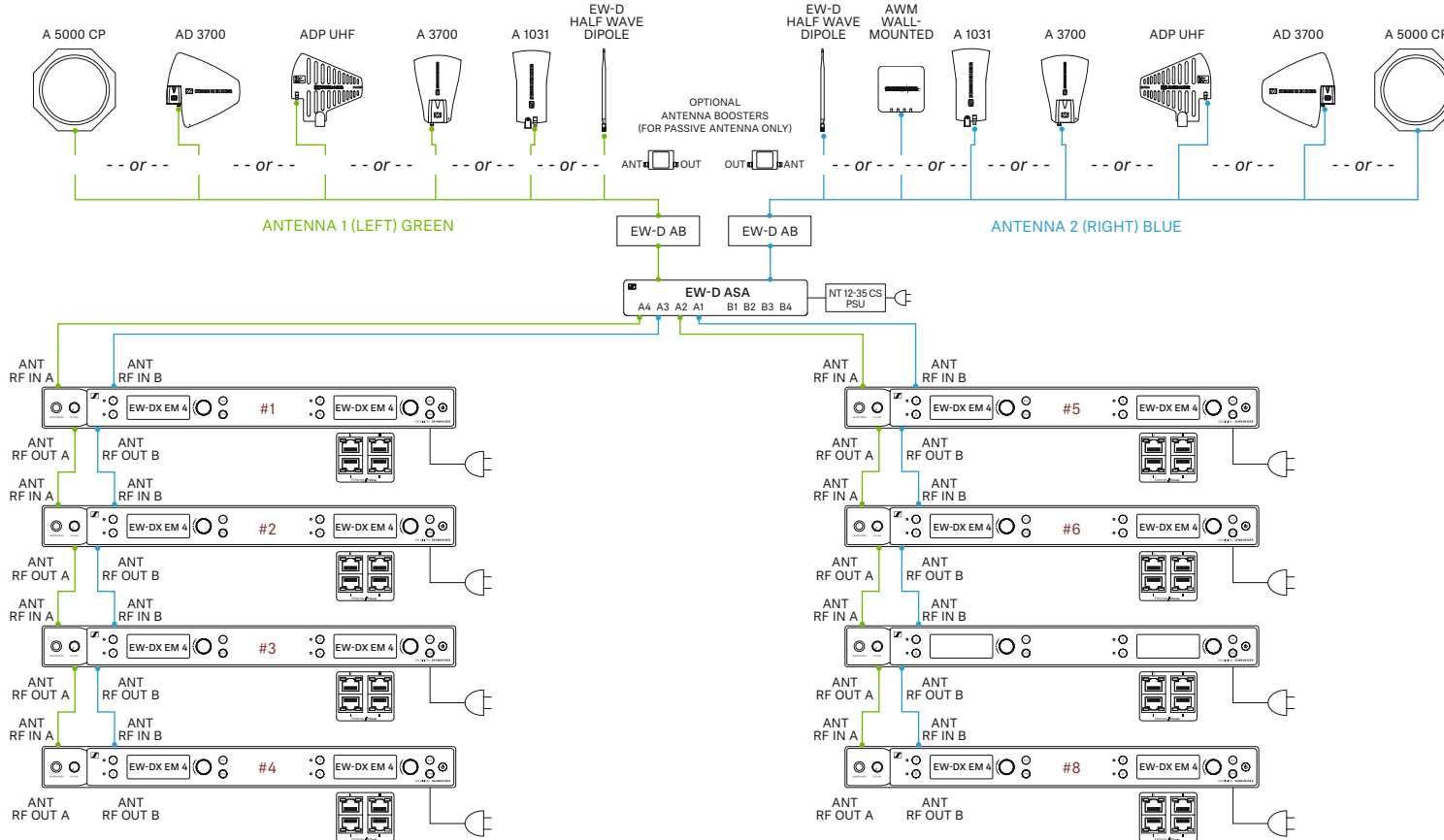
EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables



Evolution Wireless Digital Family | Wireless Microphone System

DRAWING NAME EW-DX System Drawings **REVISION** 1.0 **SHEET TITLE** RF Wiring Details **DESCRIPTION** EM 4 Dante; 32-Ch. System

For optimal diversity operation, it is recommended to use the same antenna model and equal coax cable length on both sides



EM 2 Dante / EM 4 Dante Available Frequency Ranges	
Q1-9	470.2 – 526 MHz
R1-9	520 – 607.8 MHz
S2-10	614.2 – 693.8 MHz
U1/5	823.2 – 831.8 MHz 863.2 – 864.8 MHz
V5-7	941.7 – 951.8 MHz 953.05 – 956.05 MHz 956.65 – 959.65 MHz
Y1-3	1785.2 – 1799.8 MHz

EW-D & EW-DX Accessories Frequency Ranges	
EW-D ASA (Antenna Splitter Active)	
Q-R-S	470 – 694 MHz
T-U-V-W	694 – 1075 MHz
X-Y	1350 – 1805 MHz
EW-D AB & EW-D Half Wave Dipole	
Q	470 – 550 MHz
R	520 – 608 MHz
S	606 – 694 MHz
U	823 – 865 MHz
V	902 – 960 MHz
Y	1785 – 1805 MHz

AWM wall-mount antenna	
UHF I	470 – 694 MHz
UHF II	823 – 1075 MHz
1G8	1785 – 1805 MHz

Available for USA & Canada shown in blue

Please contact your local Sennheiser representative for available EW-DX frequency ranges in your markets

EW-D AB boosters can be added next to the receiving antennas to compensate for the excessive signal losses in the coax cables

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