BOLERO WIRELESS INTERCOM
INTEGRATED / STANDALONE LINK / STANDALONE 2110 (AES67)

Bolero – Riedel's state-of-the-art wireless intercom system.
Now with Integrated, Standalone Link & Standalone 2110 (AES67) mode.

As an all-new wireless intercom system capable of supporting up to 250 beltpacks and 100 antennas in a single deployment, Bolero is a true game-changer. Bolero redefines the wireless intercom category with features such as its ADR (Advanced DECT Receiver) with multi-diversity and anti-reflection technology for greater RF robustness, "Touch&Go" NFC beltpack registration, and versatile operation as a wireless beltpack, a wireless keypanel, or — in an industry first — a walkie-talkie.

With the addition of the newest Bolero Standalone 2110 (AES67) mode, there are now three network modes available for Bolero systems – each of them dedicated to specific applications.

Bolero **Integrated** leverages the powerful Artist ecosystem, including SmartPanels and extensive I/O connectivity, and runs over a standards-based SMPTE 2110-30 (AES67) IP network. Decentralized Bolero antennas connect to AES67-capable switches and to Artist frames equipped with AES67 client cards, providing a fully integrated point-to-point seamless handover intercom ecosystem. With each decentralized antenna and beltpack added, coverage and network robustness are increased. Up to 250 beltpacks per Bolero Net are now supported.

Bolero **Standalone Link** provides plug & play simplicity that is ideal for smaller installations, portable deployments, or cases where IP networks are not required. Up to 100 antennas and 100 beltpacks can be quickly and easily set up and configured via a web browser, without the need for an Artist Intercom matrix since audio mixing and all control functions are handled by the antennas. Antennas may be positioned in a redundant ring or daisy chain topology, or deployed individually using CAT5 cabling. With the optional EPS-1005 power supply, up to five antennas can be powered and adding multiple PSUs creates a redundant power ring. Finally, an NSA-002A stream adapter is used to interface Bolero with other intercom systems via analog 4-wire and provide GPIOs for convenient external device handling.

Similarly, Bolero **Standalone 2110 (AES67)** lets users establish IP-based Bolero networks without the need for an Artist matrix. The antennas are distributed over a SMPTE 2110-30 (AES67) IP network and connected via AES67 PoE switches. As in Standalone Link deployments, audio mixing and control functions are handled by the antennas and 100 beltpacks can be accommodated per Bolero Net and configured via a web browser. An optional NSA-002A provides analogue interfacing and GPIOs and fiber-connected switches or switch cascades can be used to cover long distances.

The Bolero high-clarity voice codec provides both higher speech intelligibility and more efficient use of RF spectrum supporting twice the number of beltpacks per antenna for the same radio bandwidth as other DECT-based systems. The Riedel-exclusive ADR technology combines a unique receiver design with multiple diversity elements specifically designed to reduce sensitivity to multipath reflections, making Bolero useable in challenging RF environments where other systems have great difficulty.

The beltpack itself features six intercom channels and a separate "Reply" button for a quick reply to the last caller. Bolero's sunlight readable and dimmable display can be rotated so that it is readable in any orientation. Also, in an industry first, the beltpack can be used without a headset like a walkie-talkie radio utilizing an integrated mic and speaker. Bolero beltpacks support Bluetooth, allowing either a Bluetooth headset or a Smartphone to be connected. When a Smartphone is connected, the beltpack can act like a car's "hands free" setup so the user can receive calls on their phone and talk and listen via their beltpack headset. Users can also inject phone calls directly into the intercom channels, providing new levels of workflow flexibility.

Based on Riedel's extensive rental experience, the beltpack uses a combination of premium materials, including high-impact plastics and rubber overmolds, making it both tough and comfortable to use in any situation.


Meet the growing Bolero Family: Battery Chargers, Rack Mount Kits, Protection Kits , 4-Wire Interfaces and color-coded Beltpack Covers

BOLERO at a Glance

- Simple NFC and Over the Air registration
- Decentralized intelligent antenna network
- Advanced DECT receiver (ADR) for multipath mitigation
- Seamless handover & roaming
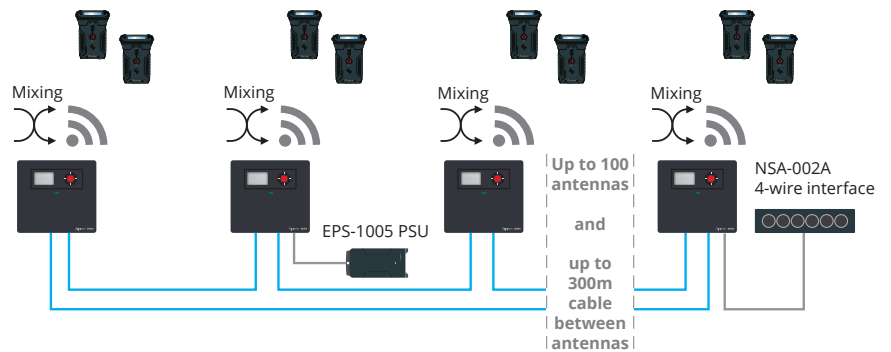- Redundant PoE+ and DC power supply antenna scheme

BOLERO Standalone 2110 (AES67)

- Antenna distribution via SMPTE 2110-30 (AES67) IP network
- Multiple fiber-connected switch cascades for long distances
- Analogue 4-wires and GPIOs via optional NSA-002A throwdown box
- Integrated web browser for configuration (Artist not required)
- 12 partylines and unlimited point-to-point connections
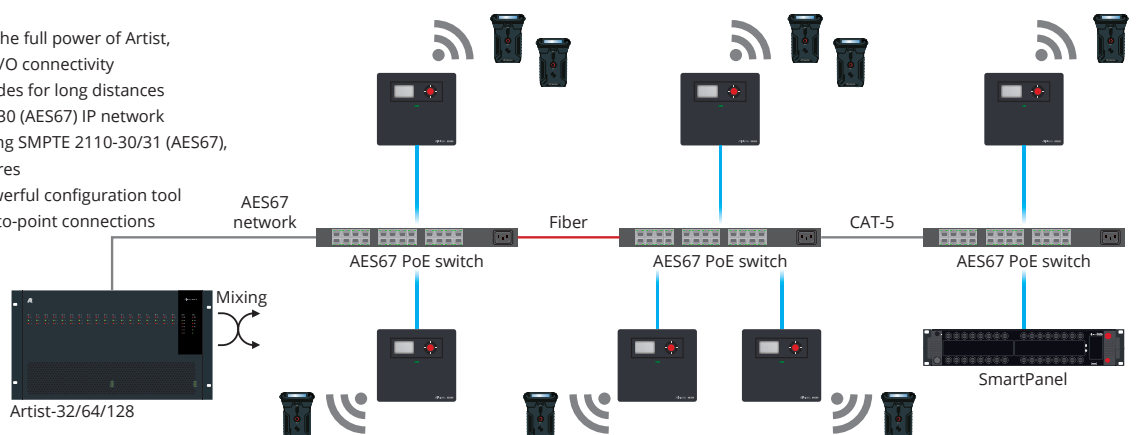- 100 beltpacks, 100 antennas
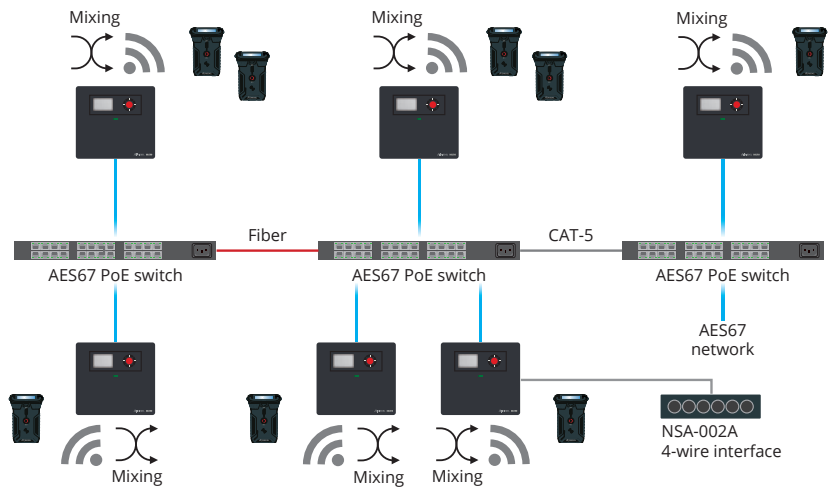
BOLERO Standalone Link

- Daisy chain or redundant ring antenna network
- Plug&Play simplicity
- EPS-1005 PSU powers up to five antennas
- Up to 300m CAT5 cable between antennas
- Analogue 4-wires and GPIOs via optional NSA-002A throwdown box
- Integrated web browser for configuration (Artist not required)
- 12 partylines and unlimited point-to-point connections
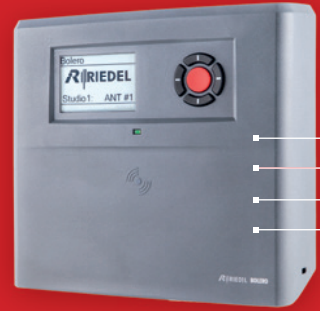- 100 beltpacks, 100 antennas

BOLERO Integrated

- Seamless comms environments with the full power of Artist, including SmartPanels and extensive I/O connectivity
- Multiple fiber-connected switch cascades for long distances
- Antenna distribution via SMPTE 2110-30 (AES67) IP network
- Extensive connectivity options including SMPTE 2110-30/31 (AES67), AES3, MADI, Dante and analogue 4-wires
- Configuration via Director, Artist's powerful configuration tool
- 500 conferences and unlimited point-to-point connections
- 250 beltpacks, 100 antennas

THE TOUGH
MULTI-TALENTED
INTERCOM

Up to 250 beltpacks and 100 antennas per Bolero Net

Intelligent use of bandwidth results in 10 beltpacks per antenna

Decentralized SMPTE 2110-30 (AES67) IP-networked antennas

Up to six full-duplex keys plus convenient REPLY button to last caller

Fully re-programmable FPGA to handle future networks

Riedel-exclusive ADR receiver technology overcomes multipath issues

Modern high-clarity voice codec increases beltpack to antenna density

Integrated mic and speaker for headset-free operation

Fully integrated with Artist for point-to-point comms and ease of use

Can be used as a beltpack, a portable desktop keypanel, or a walkie-talkie

NFC means no registration headaches! Touch the beltpack to the antenna and GO!

Next generation, digital, license free 1.9GHz DECT band

Tough, ergonomic beltpack built to survive

Integrated Bluetooth technology for wireless headsets or phone connection

Bottle opener – just in case!

IP-65 environmental sealing

ANTENNA	Bolero Active Antenna (BL-ANT-1010-19x)
No of beltpacks per antenna	10
Radio frequency range	1.880 - 1.930GHz (region dependent)
Antenna radio coverage (diameter)	Indoor (structure dependent): ~200-400m; outdoor (free line of sight): ~300-500m
Beltpack to antenna range	Indoor (structure dependent): ~100-200m; outdoor (free line of sight): ~150-250m
Beltpack registration	1 touch NFC, over the air, beltpack to antenna and beltpack to beltpack (local NFC) registration
Network connection	SMPTE 2110 (AES67) IP or direct cable connection in standalone mode
Display type	High contrast E-ink display
Programmable transmission power	✔
Support of Layer 3 networks	✔
TTL Settings	Adjustable multicast TTL (1 to 255 / default 16)
DECT Master Priority	Configurable in WebUI
Network monitoring on antenna display	IP / daisy chain / closed ring
Power supply	PoE+ (802.3at, type 2, class 4, 15-30W) or 10 to 57 VDC
Power consumption	17W
Mounting points	Mic stand threaded socket 5/8" & 3/8" inside, spigot adapter with wing screw lock, Kensington lock hole, & screw hole for a safety wire mounting
Environmental	IP-53 environmental sealing; protected against limited dust ingress and water falling as a spray at an angle of up to 60° from vertical
Operational temperature	-10 to 45 °C
Humidity	0-90%, non-condensing Ta=40 °C
Dimensions	210mm (W) x 66mm (D) x 190mm (H); 8.3" (W) x 2.6" (D) x 7.5" (H)
Weight	1380g

BELTPACK	Bolero 6-key beltpack (BL-BPK-1006-19-xx)
Multi-path delay spread protection	Yes, ADR (Advanced DECT receiver)
Audio bandwidth	200 Hz to 7 KHz (-3dB)
Mode of operation	Full-duplex on all routes
Encryption	AES encryption, 256 bit
Line in	3.5mm jack, 20Hz to 20kHz
Talk controls	4 pushbuttons + reply key + 2 walkie-talkie keys (momentary, latching & auto mode)
Volume / Level controls	2x master or slave + menu navigation
Display	High contrast sunlight readable full colour LCD display
Audio prompts	Out of range, Bluetooth connected / disconnected; beltpack registered / deregistered, beltpack unregistered / not registered, beltpack not connected, battery low
No. of full-duplex audio paths	6 with individual level control
Handheld operation	Walkie-talkie mode
Vibrate module	Programmable vibrate indicates incoming calls and other notifications
Internal loudspeaker	Freq. <500Hz to >7kHz 80dB/SPL/0.5W/1m, @ <5% THD.
Remote health monitoring	Battery charge status, via web browser
Battery	Lithium ion removeable battery pack with user removeable clip
USB charging	USB Type C connector for beltpack charging
Operation time	17 hours typical
Headset connector	4-pin male XLR, user replaceable
Microphone type	Electret (ca. 5V bias voltage) or dynamic, user selectable or automatic
Side-tone and microphone gain	Individually adjustable for each beltpack & via remote control
Bluetooth	v4.1 (hands free profile & HSP headset profile) & A2DP advanced audio distribution profile
Bluetooth phone call mix into intercom	✔
Lanyard anchor points	✔
Environmental	IP-65 environmental sealing; protected against dust ingress and water spray from all angles (with XLR connector plugged in)
Storage temperature	-20 to 50 °C long term; -20 to 60 °C short term
Operational temperature	-10 to 55 °C
Humidity	0-90%, non-condensing Ta=40 °C
Dimensions	(W) 86mm, (D) 48mm, (H) 130mm; (W) 3.4" (D) 1.9" (H) 5.1"
Weight	420g inc. battery and clip

BATTERY CHARGER	5-bay drop in charger (BL-CHG-1005-R)
No of beltpack slots	5
Beltpack charge time	up to 3 hours
Charge status LEDs	1 per charge slot
Beltpack display	% charged, charging time remaining, temperature, battery health
USB type A + C	For firmware update and charging a Phone or beltpack via cable
Power socket	1x IEC
Power supply	100-230VAC / 50 - 60 Hz
Mounting	2x wall mounts or 19" rack drawer via optional accessory kit

RIEDEL