Riedel Bolero communications system

A Case Study Presentation for the ASC Future Practices Committee

By Craig Kief, ASC
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**Comms Systems**

vs. conventional walkies

- Intercoms enable natural 2 way conversations because transmissions are duplex (two way)

- There is no need to wait for a channel to clear before speaking

- There’s no need to change channels to speak with different departments. Communication is faster, with less accidental transmissions to the wrong crew

- Information relevant to more than one department is easy to distribute

- The department head leadership structure is preserved since the cinematographer is not broadcasting instructions to an entire department
The Antenna

- E-Ink display is always on
- ‘Tap and go’ configuration of beltpacks via NFC
- Baby stand and 3/8” mounts
- 10 beltpacks per antenna
- 300-600 ft range indoors
- Up to 800 ft range outdoors
- 1.9 GHz frequency range
  - Operates outside the WiFi spectrum, which means no conflicts with wireless video, camera control, and lighting systems
- A quiet digital signal. No hiss or pops
The Antenna

- Configuration is done via a web browser through an ethernet connection. This can even be done from an iPad
- Up to 100 antennas can be networked together through direct or virtual ethernet links to expand the network to multiple stages and buildings
- Up to 100 belt packs can be used on a network
- DC power input
The Antenna

- Can be powered by a standard block battery or an Anton Bauer Dionic so the system never goes down during a move
- Approximate 8 hour runtime on a Dionic. A lunchtime change covers the whole day
- An AC power supply can be used instead
- Pictured here is a Small HD Anton Bauer plate that bolts on perfectly
Beltpacks

- A standard XLR port allows the use of any wired comms headset
- A line input brings a second audio source like a Comtek into the headset (not available over Bluetooth)
- USB C charging is possible if a user doesn’t want to go to the group charger
Beltpacks

- 7 configurable buttons
- 2 configurable rotary dials to control separate volumes
- Reply button automatically replies to the last direct caller
- Walkie talkie mode - an internal speaker and microphone allows use without any headset
- Battery life rated at a 16 hour runtime after 2 years of use
- The slot on the clip allows it to hang from a nail on a wall - or use it as a bottle opener
Beltpacks

- Party Lines (PL’s) = channels
- Up to 6 PL’s or point to point connections can be monitored on a beltpack
- All beltpacks can transmit in full 2 way duplex conversation at any time, on any PL’s or P2P connections
  - HME systems only allow 3-4 duplex transmissions at a time
- Every PL has an individual volume control, and can also be muted when monitoring is not desired
  - This makes communication easier for everyone else when a channel becomes very active, such as when camera operators are on a crane
- Transmit buttons can be push to talk, on/off latching, or both
- Any button can become any PL channel, based on user preference - or a button can become a menu function
- Sunlight readable display
- IP65, dust and water jet proof. Robust construction.
Beltpacks

• 8 color coded covers available for quick identification
  • Black, white, blue, yellow, green, gray, violet, red
  • A user name can be programmed on the display, or a generic OPERATOR 1, GAFFER, and so on.
Bluetooth

• Nearly any earpiece can be used. The crew loves not wearing another wire and/or a bulky headset
• Plantronics Voyager 5200’s have proven to be great
  • Very comfortable
  • Outstanding noise cancellation
  • > 6 hour battery life
  • At lunch, the crew switches to a second earpiece and puts the first in a charging case to be ready for the next day
• AirPods are compatible
  • One ear gets used at a time. When that battery gets low, the crew member switches to the other ear to charge the first
• It’s also possible to connect a cell phone in order to transmit a phone call to partylines
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My Partylines

OPERATORS / DOLLY GRIPS

CAMERA ASSISTANTS

GRIP / ELECTRIC
My Partylines

OPERATORS / DOLLY GRIPS

CAMERA ASSISTANTS

GRIP / ELECTRIC

DP

GAFFER

KEY GRIP

POINT TO POINT CONNECTIONS FOR PRIVATE CONVERSATIONS
Setup

- Done via a web browser
- Profiles can be made for job specific operations (i.e. a camera operator profile) so beltpacks can be easily reconfigured if needed
- Changes are sent to beltpacks immediately over the air. There is no need to bring them back to the antenna
- Beltpacks are highly customizable if desired, but they don’t have to be
- Practically no maintenance after initial setup. Only the occasional change request if a crew member asks for a customization
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Other Black Boxes

- 5 bay charger

- An external audio input box is available to add an audio source like a Comtek to a beltpack channel where it can be turned on/off and the volume controlled locally. Audio outputs can be used to transmit to a voice of god speaker or other devices.

- A walkie interface box can be used to integrate a conventional walkie channel into the system.

- An event trigger box can be used to turn a beltpack button into a trigger for external devices such as lights or even a coffee maker.
For more information contact:

Patti Gunnell
RIEDEL Communications Inc.
2508 North Ontario St.
Burbank, CA 91504
818-559-6900
patti.Gunnell@riedel.net

www.riedel.net

If you have questions about our experiences on set with Riedel or Clear-Com/HME:

info@craigkief.com