

Tripoli Central California Sound System

Rev 1, 2019-10-15

Tripoli Central California uses two 1 KW active speakers and six re-entrant paging horns (70.7V, 30W University Sound on steel posts). Figure 1 shows all speakers place along the flight line. An additional 7th paging horn can point toward high-power / away cells. From the existing PA unit, all speakers are in monaural. The combination of paging horns and active speakers along the flight line provides safe communication for large venues. The new 1 KW active speakers can deliver over 30 times higher SPL than all paging horns and can be located up to 100 feet from the LCO table (up to 200' apart). The 30W re-entrant paging horns provide vocal frequency response (500 Hz to 3 kHz). Strong winds or spectators (desiring to reduce the classic rock volume) occasionally re-position these horns. Each Behringer B112D dual Class D amplifiers provide 50 Hz to 20 kHz response and 700W bass + 300W treble from each speaker enclosure. The active speakers greatly improve overall sound quality beyond the paging horns alone and a Behringer mixer at the LCO table allows separate adjustment of active speaker volumes. The existing TCC Honda generator powers all equipment and provides over 300 feet of sound coverage.

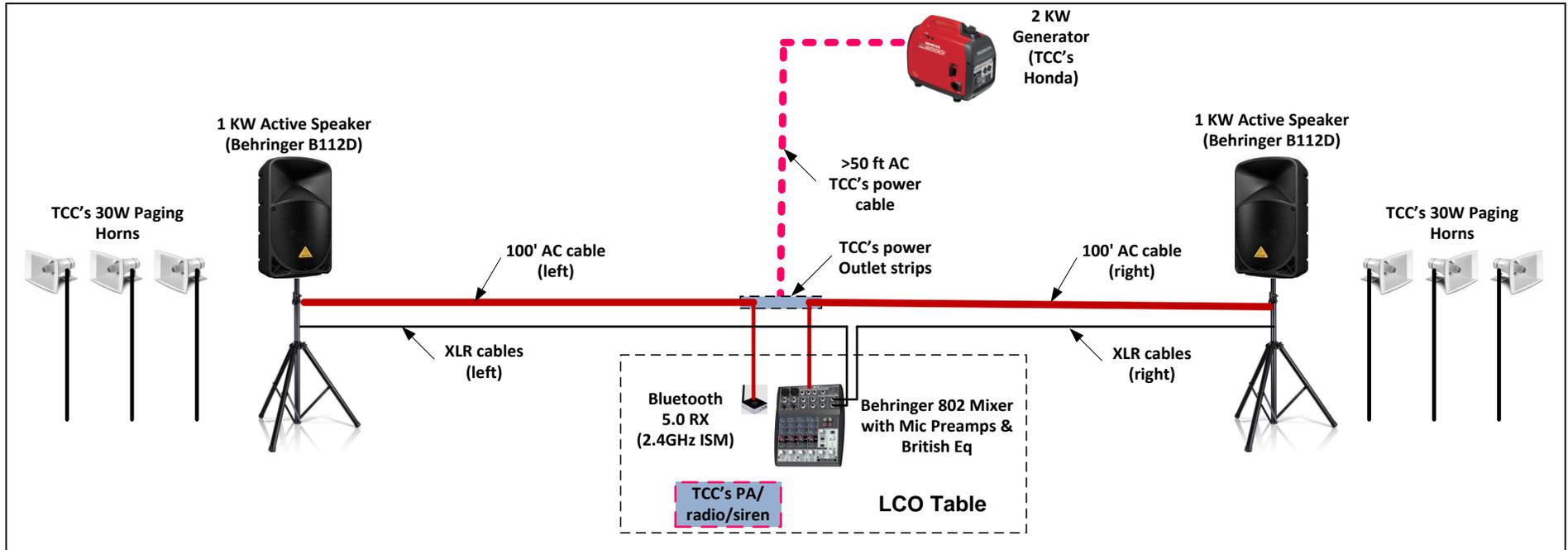
Setup:

1. Refer to Figure 1 and Table 1. Take Boxes #1, #2, #3, and the carrying bag along the flight line. Locate Box #1 and its Jamstand ~100' to the left of the LCO. Locate Box #2 and its Jamstand ~100' to the left of the LCO. We can unbox and mount the speakers later once we have determined the desired location for each from the LCO table.
2. Setup the desired number of TCC paging horns as usual. The addition of a 7th paging horn can point toward the high-power / away cells and was typically routed via the TCC 400 ft CAT-5 cable spool.
3. Take Box #4 to the LCO table and set items on the table.
4. Unroll each cable from its speaker location and walk down the other end of each cable to the LCO table (100'). At the other end of the cable (LCO table), connect the ¼" audio phone cable to the left or right **MAIN OUT** of the Behringer XENYX Q802 Mixer. We will power up the LCO equipment later.
5. Walk back to each speaker's desired location. At the rear of each speaker, connect the XLR male to **INPUT #1** and the AC power to **Input Power**.
6. Take each 100' AC power cable and plug its female AC socket into the respective speaker's power cord. At the opposite end (near LCO table), plug its male AC plug into the TCC junction box (leading from the Honda generator).
7. Connect TCC's existing PA/receiver/siren **LINE OUT** to the Behringer 802 **LINE IN 3/4 (L)**. Connect the Bluetooth Receiver to **LINE IN 5/6 (L)**. The Bluetooth is in RX mode allowing any music, our National Anthem, or sound bytes to be mixed using the Behringer 802 **LEVEL 5/6**.
8. Adjust mixer volumes and settings as shown in Figure 2 (LATER)
9. Once the Honda generator is powered, press and hold the POWER for 3 seconds and verify the Bluetooth light comes ON. Pairing with **GA-BA100** can be done by pressing the Bluetooth power twice.

Shutdown:

10. At the end of each launch, power down the Honda generator and make certain to press and hold the POWER for 3 seconds. Verify the light goes OUT (**this prevents the internal battery from going dead during storage**).

Figure 1



**Figure 2
(LATER)**

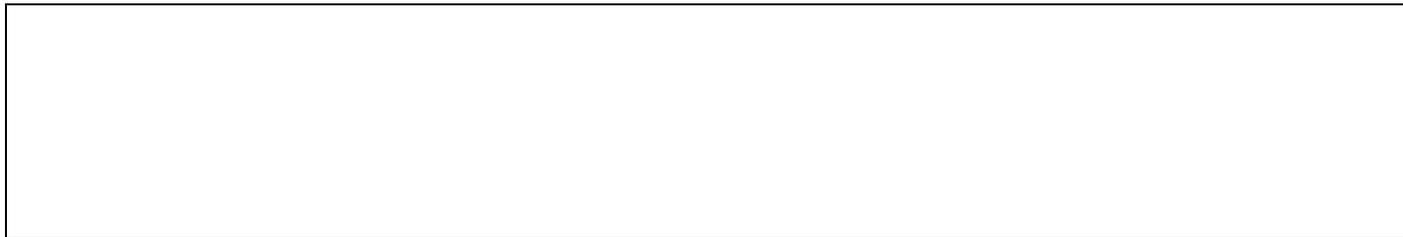


Table 1 - Items on flight line (left and right up to 100 feet from LCO table)

Qty	Photos	Description	Location
2		Behringer B112D 2-Way 12" Active PA Speakers 1000W	Boxes #1 and #2
2		JamStands JS-TS50 Tripod-Style Speaker Stands 6'	Carrying Bag
4 Cable Sets		<ul style="list-style-type: none"> • 2 sets of 100' XLR Microphone Cables (on wire hangers) • 2 sets of 100' AC power cables 	Box #3

Table 2 - Items at LCO table

Qty	Photos	Description	Location
1		Mixer (Behringer XENYX Q802 & Power Supply)	Box #4
1		Bluetooth (5.0 ISM band with 50 meter range) This Bluetooth device is in RX mode (at LCO table)	Box #4
1		Adapter (RCA Phono Plugs to 1/4 inch Mono Plug), Converts Bluetooth stereo to monaural input of mixer. Extension (1/4 inch Phone to 1/4 inch Phone Plug) PA LINE OUT to Mixer LINE IN 3/4 (L) .	Box #4
1		USB Charging Cube Maintains battery for above 2.4 GHz WiFi	Box #4

Future Punch List:

Consider the following for planning:

- 1) Add walk-over mats to prevent tripping over cables near launch access lanes.
- 2) Evaluate adequacy of existing packaging (may need to ruggedize for transport and setup - perhaps also a foam-lined cart with wheels).
- 3) Determine if canopy is needed to cover speakers to protect in the event of rain.
- 4) Determine if alternate storage location is needed for better summer electronics environment (perhaps even stored separately).
- 5) Determine potential spare parts to support failures.
- 6) Evaluate long-term adequacy of existing PA amp for FM, Mic, siren, and 70.7V.