

Trailer-mounted stations · split between stage, FOH and broadcast

CONCERTS · FESTIVALS · STADIUM EVENTS

Event power: sizing that avoids a blackout

A site loses schedule when the power fails; a show loses the audience and the broadcast. Load profile, transfer speed and noise decide it.

A 5,000-capacity outdoor show lands at 350–500 kW — two 250 kW in parallel or one 500 kW, plus a UPS on the mixing desk, radio mics, timing and broadcast. Never add up nameplate wattages: lighting runs at 60–70% simultaneity while triac dimmers pull power factor below 0.7.

LOAD BY VENUE TYPE

Venue	Lighting	Audio + LED	Design load
Club / atrium 500	60–100 kW	30–50 kW	120–180 kW · 1 × 200
Festival 5,000	200–300 kW	80–120 kW	350–500 kW · 2 × 250
Stadium 30,000	500–800 kW	200–300 kW	800–1,200 kW · 2 × 630
Broadcast	+100–150 kW	+80 kW	reserve 200 · own bus + UPS

WHAT DECIDES THE PROJECT

- **Three factors.** Simultaneity 0.6–0.7, power factor 0.7, margin 1.15 — up to 40% away from the nameplate sum.
- **Transfer.** Audio ≤10 ms on UPS, lighting ≤0.5 s, LED walls 1–2 s. Two independent buses, never paralleled with mains.
- **Noise.** Boundaries are typically 55 dB(A) at night: 50 m plus a 2 m barrier, not thicker canopy panels.
- **Cable.** 185 mm² drops 1.8% per 100 m at 200 kW; beyond 150 m step up or split the generation.

350–500 kW
design load for a 5,000-capacity show

≤10 ms
audio transfer on UPS

50 m
minimum vehicle-to-audience distance

Set and controls

Engine and alternator for mobile duty, deep-sea controller, full-load test before shipment.

On-board electrical

Switchgear, cable reel, quick connectors, earthing kit, outriggers.

Documents

English manual, wiring diagram, load-test report, spare parts list.

TALK TO AN ENGINEER, NOT A CALL CENTRE

+86 135 1772 8899

QL8899@hotmail.com · WhatsApp / WeChat: same number

Liuzhou, Guangxi, China · FOB Qinzhou / Fangchenggang / Shenzhen
50 / 60 Hz · CE configurations on request · English manuals and load-test report

Full page & specs

Load figures assume a conventional lighting rig; confirm against the lighting plot and LED area. Prices on request, FOB China, valid 30 days, excluding freight, duties and local permits.