Squire Tech Solutions pCom® Communications Trailer vs. "Custom" Coms Trailer with Added Generator

✓ = Included in original manufacturer Design ✘ = Typically NOT intended in original design

Structure Engineering and General Trailer System

Feature	Modified Trailers	pCom®	Significance
Inventory and manufacturing line assembly. ZERO assembly line structural modification	✘	✓	Whether purchasing 1 unit, 15 units, or 200 units.. The assemble "build" process needs consistency for long term success (and maintainability). Field replacement ability is critical.
Original trailer manufacturer properly design, blueprint, and create assembly process for communications trailer	✘	✓	Maintenance and Warrantee issues (long term) are problematic with trailers not manufactured for the purpose. Retrofit requires drilling / cutting holes, adding structures, custom wiring, structural reinforcement of core trailer, wiring, sound attenuation, etc. All areas of potential
Trailer structure designed for standard manufactured Components (Diesel Generator, Communications, Mast, A/C, Heat and other)	✘	✓	Consistency of design in manufacturing creates reliability and insures proper interoperability
Multi-stage paint process with rust / moisture protection treatment including zinc dip	✘	✓	Natural disasters often involve extreme conditions including moisture, salt air, extreme heat, or extreme cold. Exterior treatment prior to paint and prime protects from rust, corrosion, and other harmful elements.
Axle and trailer structure rated 6500lb weight standard with improved suspension for electronics ride.	✘	✓	Important that the trailer is designed for proper load requirements. Typical generator trailer or utility trailers ride is too rough for electronics equipment.
Internal 100 gallon diesel fuel tank with dual wall construction	✘	✓	Generator run time of multiple days (7-10) under 50% power load without refueling
Security features including standardized keys, secure (unexposed) undercarriage wiring.	✘	✓	Security of the communications system is vital. Securing core systems and wiring, reduces risk of field operation outage due to tempering.
Replaceable Stabilization Jacks for leveling and stability isolation	✓	✓	Stabilization jacks secure the unit and keep it level in extreme emergency environments. Jack on the tongue secures the front while manually adjusting the unit.
Spare tire rack with a matching trailer tire and lug wrench	✓	✓	Spare tire is minimum requirement for response vehicle of any sort
Fueled weight less than 4500 lbs	✓	✓	Assigned drivers / vehicles are not always available during emergency. System should be transportable by any standard pickup truck or tow vehicle

Power Management, Control, and Generation Systems

Feature	Modified Trailers	pCom®	Significance
Integrated A/C and DC Power Breaker and Fuse Panel	✘	✓	Protecting the Core electrical components is critical. Often the value of electronics in a communications trailer far exceed the trailer itself.
Standard Equipped with 10kw Perkins diesel power generation with added sound attenuated achieving ULTRA LOW noise specification	✘	✓	Diesel fuel is readily available in an emergency operation. Having a proper sized generator improves efficiency and avoids damaging generator due to insufficient load .
Integrated digital power control panel for generator.	✘	✓	Power conditioning, alarms, and measurements give the user the access to critical power related data. Will auto shut down if fault is detected
Standard shore power with "smart switch" for system operation without generator	✘	✓	All destinations will not require power via generator
Generator Air Ride with easy access air fill for vibration reduction	✘	✓	Vibration during transport. Video operations need little vibration, air-ride reduces "shake".
Integrated Battery "trickle" Charge System	✘	✓	Maintaining power and charging under shore power operations ensures "readiness." Critical for first responder preparedness/maintenance
Multiple externally accessible utility power connections with GFI protection	✘	✓	Power System should output "clean" power to receptacles for base camp communications. These receptacles will be core to using the system for running field operations beyond the trailers communications gear.
Auto Start Generator Function	✘	✓	System automatically starts or stops the generator when shore power is available (if activated).

Electronics Enclosure and Rack Environment

Feature	Modified Trailers	pCom®	Significance
Dedicated heating and cooling system (with air recirculation) providing humidity and temperature controls for extreme conditions.	✘	✓	Temperature control systems required to meet the critical communications component specs. (Radios, Monitors, Drivers, Radar Control)
Electronics bay meets NEMA4X environment standard protection.	✘	✓	Extreme environmental controls protect core equipment from moisture, heat, dust, debris, and other extreme environmental conditions.
Electronic rack enclosure with 40 Rack Units and Cable Conduit	✘	✓	System should be designed to be added to over time. The segmented Rack System should allow for customer field equipment to be added by customers Information Technology Department or field operations staff.
Rack and Enclosure has independent air-bag suspension for all IT/Coms equipment	✘	✓	Vibration during transport can impact equipment that may not be designed for a response application but is important to your operational needs.
Two Internal compressors and two internal tanks for equipment rack air bags, generator, pneumatic mast system , and front/rear pneumatic tool quick release valves	✘	✓	Air pump, tank, and hose system will allow for an integrated pneumatic mast system, air ride system, and other anti vibration air packs.

Communications and Scene Equipment

Feature	Modified Trailers	pCom®	Significance
Air Extension / Retracting (pneumatic) 31' Tower Mast	✘	✓	Single button pneumatic mast enables the deployment tower in seconds. Ideal for lighting and accessories including antennas, radar and scene camera banks. Includes internal cable set with pneumatics kit and control panel. "Nycoil" Mount point standard
Mast Top High Power LED Scene Light Kit with "single button" on/off	✘	✓	System should allow for enough light to convert a large dark space into an operationally lighted environment.
One-button Fully Automatic Satellite Dish.	✓	✓	Communications antenna system should be rugged and withstand extreme environments. Designed for emergency response applications.
Satellite Modem with Rack mount kit *	✓	✓	Core Satcom Control Unit with Routing , QoS, TOS, Bandwidth Allocation functions compliant with network hub controller. Rack Mount standard accessory for secure kit deployment
Voice over IP Gateway Router with integrated trunking, secure voice, and QoS management *	✘	✓	Management and control rack mount appliance for multiple SIP, FXO, and PBX interfaces that interoperate with the QOS and Type of Service triggers of the network / site modem
Outdoor Multipurpose Access Point *	✘	✓	1/2 mile capable range on outdoor wireless network. Ruggedized for extreme conditions and outdoor use.
Rack Power Management. 12 NEMA5-15R outlets (6 front / 6 rear) with 15amp circuit breaker. Upgradable with breaker changes within existing wire specifications.	✘	✓	Proper rated / rack mount / fused power receptacle appliance
Enterprise Power over Ethernet Smart Switch *	✘	✓	Multi-layer Switch with PoE and QoS functions compliant with the other kit components (Voice, Video, Data, Hubs, Wi-Fi)
Uninterruptable Power System (UPS) with internal battery, inverter, power management system and diagnostic panel *	✘	✓	System should be able to be sustained for at least 20 minutes without power for proper shut down procedures. Power "head room" beyond the supplied integrated components should be developed based on potential voltage/wattage power draw.

* NOT Included on pCom® "L" Models