ABCCC

LTV ELECTROSYSTEMS, INC.
GREENVILLE DIVISION
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214 GLadstone 5-3450

the AIRBORNE BATTLEFIELD COMMAND AND CONTROL CENTER . . .

A new advanced weapons system concept, flexible and readily adaptable to a variety of missions, configurations, types of aircraft, and operational philosophies, has been developed by LTV Electrosystems for the deployment of special-mission airborne/ground systems without compromising the utility of the associated aircraft. With this technique, complete systems are enclosed in a single, self-sustaining compartment, specifically designed to match the cargo volume of a selected aircraft. The resulting compartment packaged system can be operated while airborne or off-loaded in the field and operated on the ground. By essentially divorcing the system from the aircraft, in both airborne and ground environments, complete flexibility in the use of the aircraft and the compartment is retained.

The concept has been employed by LTV Electrosystems in two versions of an Airborne Battlefield Command and Control Center (ABCCC) designed for use in C-130E aircraft. The prototype, ABCCC-I, was designed, developed, fabricated, and tested for the Air Force in 98 days following approval of the design concept. It answered the needs of the Tactical Air Command for an airborne/ground command and control center capable of receiving, processing, and displaying various data gathered by reconnaissance aircraft via low light level television, side looking radar, infrared, and photographic sensor systems. Using these data, a commander can make tactical decisions which can be relayed to his forces by HF, VHF, and UHF radio communications.

The success of ABCCC-I led to a follow-on contract for six second-generation systems. The system configuration for ABCCC-II was modified to enhance communication for direct air support and to increase the operator complement.

The enclosure is of standard aircraft construction, suitable for all-weather operation. Incorporating human engineering concepts, it is sound proofed, air conditioned, and well lighted. Equipped with retractable wheels, the unit can be towed on hard surfaces or can be loaded onto standard trailers for over-the-road transportation. Loading or off-loading time is approximately one hour.

Internally the ABCCC-II contains 20 transceivers, 16 operator and command staff stations, three large-screen plotting boards, a rest area, a galley with hot and cold running water, a flush-type lavatory, and an integral environmental control unit.

In the air, the compartment interfaces with the aircraft for primary power, antenna connections, and intercommunications with the aircraft crew. On the ground, primary power is supplied by external power carts, and ground antennas are set up for use with the transceivers.

ABCCC-II EQUIPMENT COMPLEMENT

TRANSCEIVERS:
- 2 HF-SSB (1000 watts)
- 2 HF-SSB (400 watts)
- 4 VHF-AM
- 4 VHF-FM
- 8 UHF-AM

TELETYPE:
- 1 Full Duplex or 2 Simplex On-Line Protected Teletype Circuits

VOICE:
- 2 Protected Voice Circuits

AUTOMATIC RADIO RELAY:
- All 20 Transceivers Capable of Automatic Retransmission

REMOTE SUBSCRIBER SERVICES:
- 4 Telephone Circuits
- 3 Teletype Circuits

INTERPHONE:
- Common (with flight deck)
- Private (between all operators)
- Select (between individual operators)

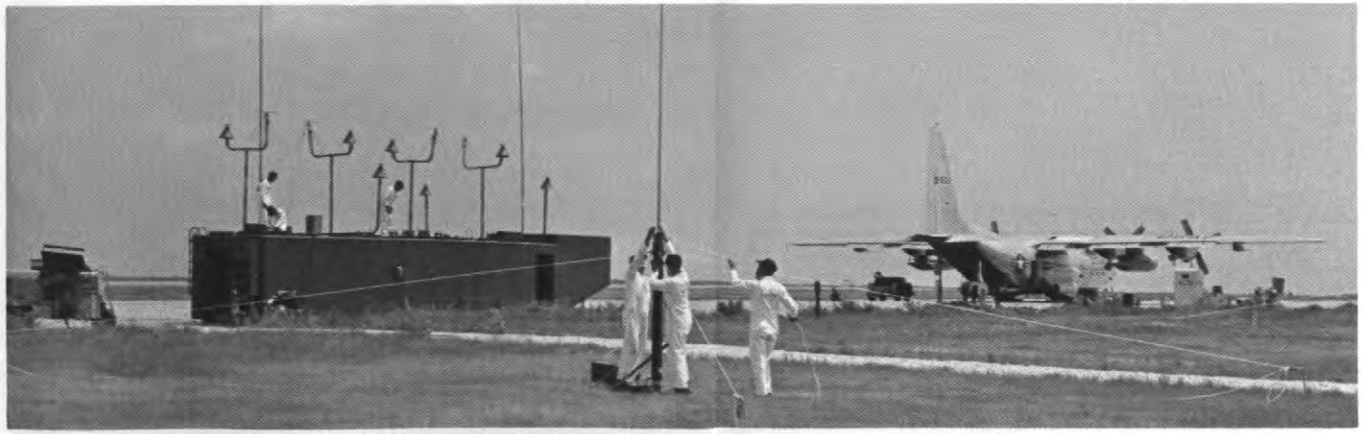
RECORDING:
- 2 Seven-Channel Audio Recorders

PLOTTING:
- 3 Plotting Boards

OPERATOR STATIONS:
- 12 Command
- 2 Radio
- 1 Teletype
- 1 Quality Monitoring/ Command

ABCCC-II PHYSICAL CHARACTERISTICS

OUTSIDE DIMENSIONS:	47 ft. 0 in. long 9 ft. 6 in. wide 8 ft. 4 in. high
INSIDE DIMENSIONS:	46 ft. 6 in. long 9 ft. 0 in. wide 6 ft. 7 in. high
WEIGHT:	8,600 lbs (empty) 19,800 lbs (loaded)
POWER REQUIRED:	50.8 KVA
AIR CONDITIONING	80,800 BTU/hr (cooling) 57,200 BTW/hr (heating)



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