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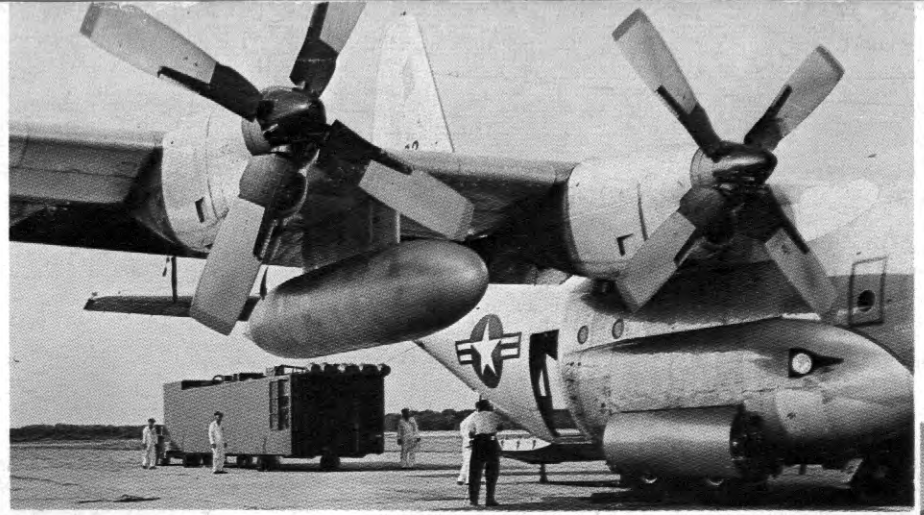
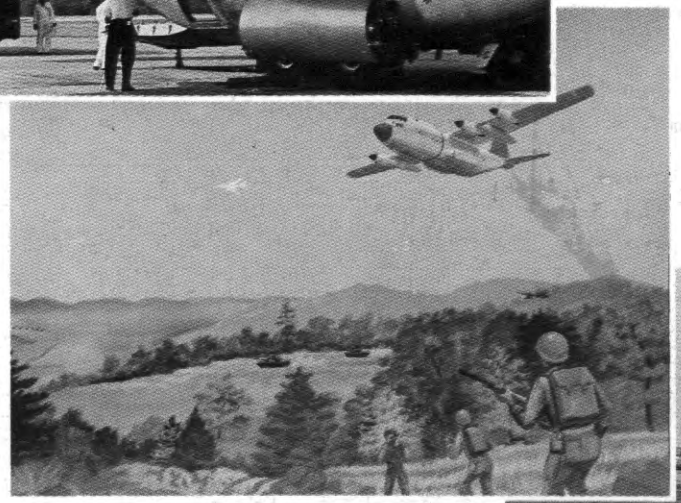
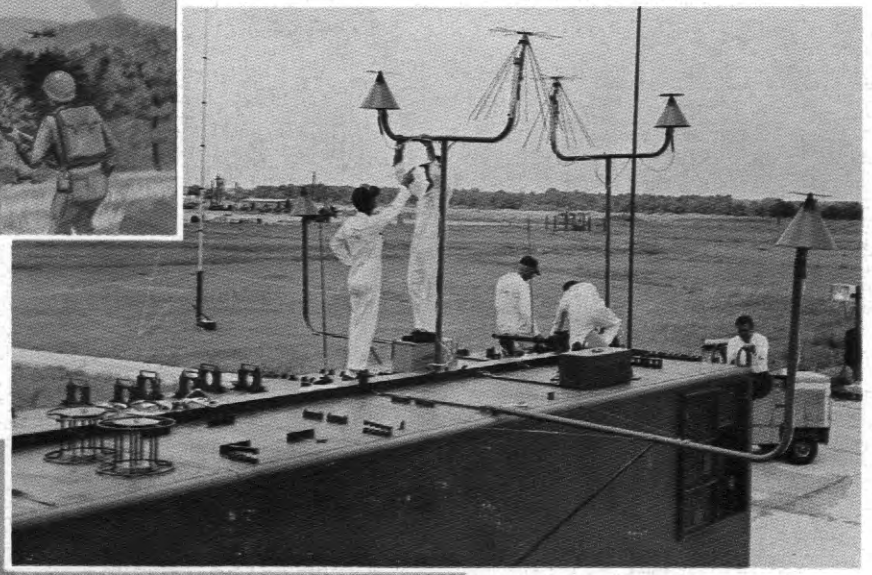
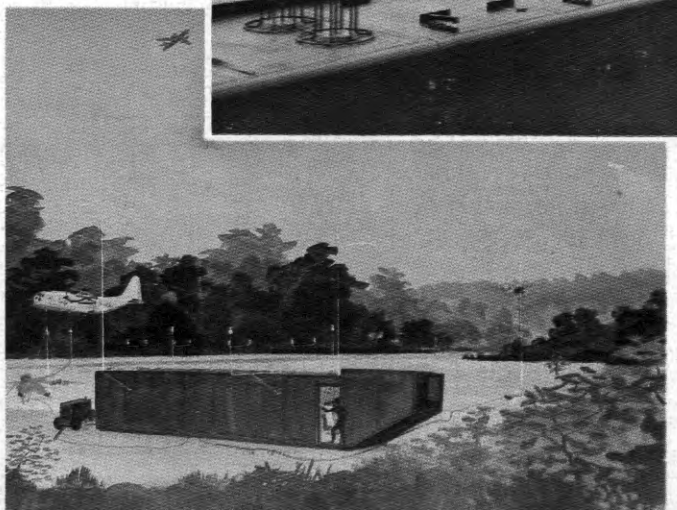




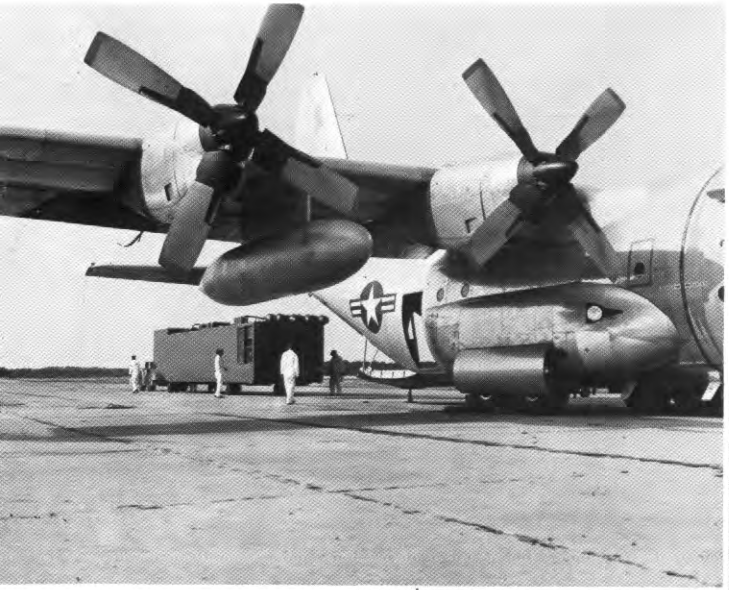
COMPACS

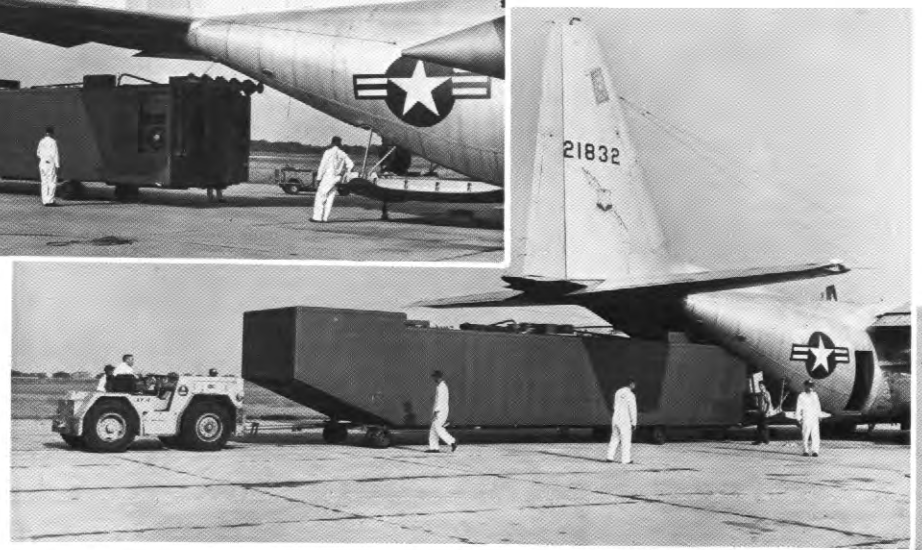


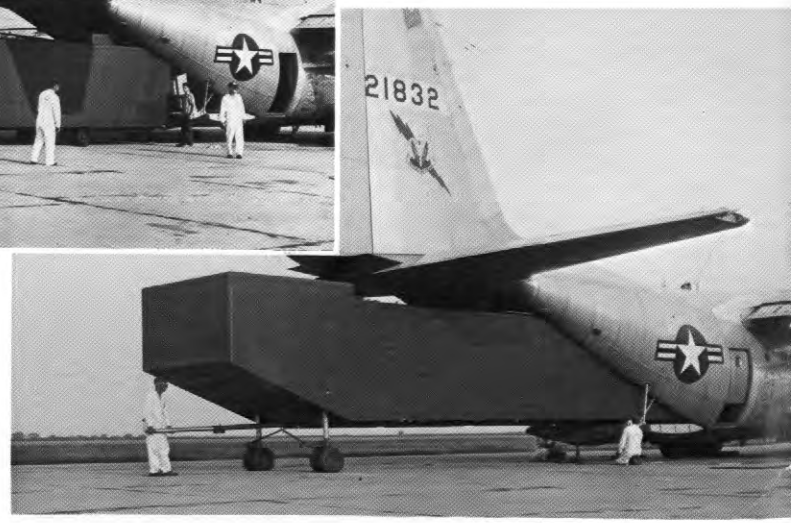
LTV ELECTROSYSTEMS, INC.
GREENVILLE DIVISION



COMpartment PACkaged System



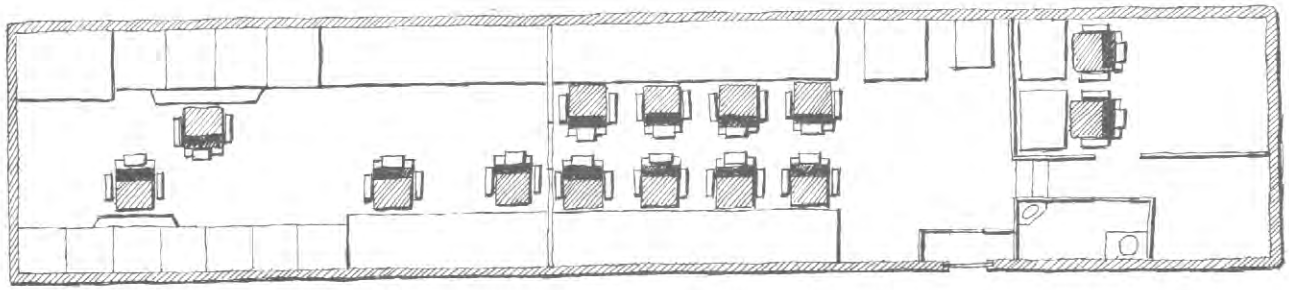




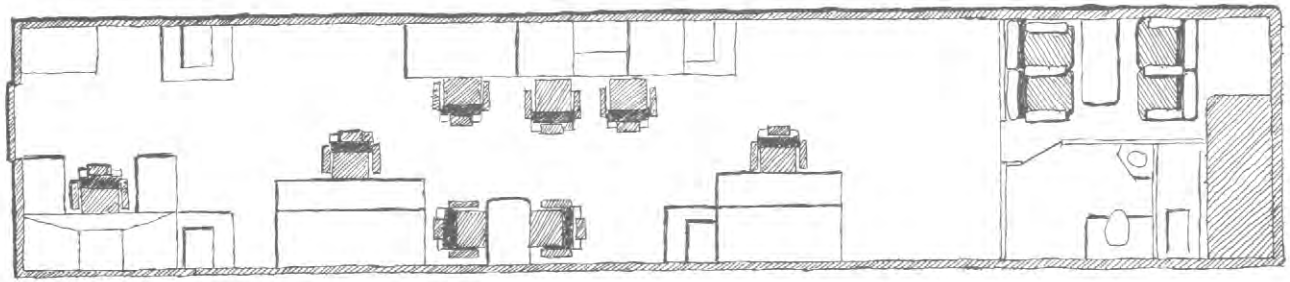
THE CONCEPT

FULLY EQUIPPED COMPARTMENT
SELF-SUSTAINING
MATCHES CARGO VOLUME
AIR TRANSPORTABLE
OPERATIONAL IN FLIGHT
GROUND TRANSPORTABLE
OPERATIONAL ON GROUND
ORIGINAL AIRCRAFT CONFIGURATION RETAINED

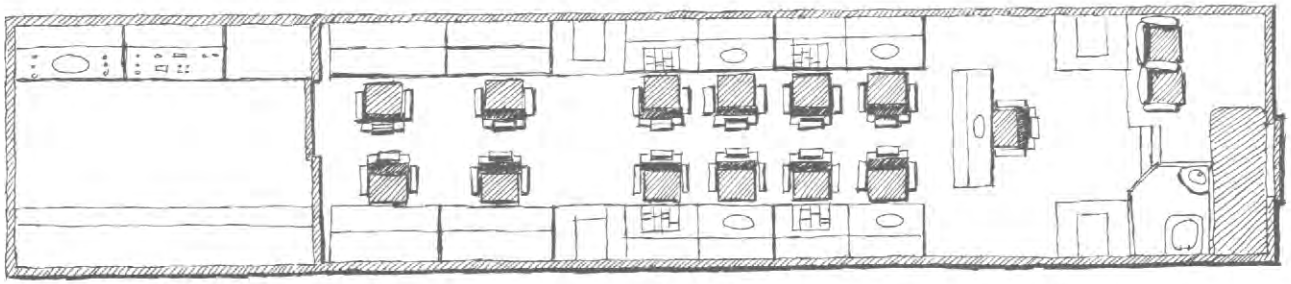
A new concept has been developed by LTV Electrosystems for the deployment of special mission airborne/ground systems without compromising the utility of the associated aircraft. This technique encloses complete systems in a single, self-sustaining package or compartment, specifically designed to match 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.



CONTINGENCY COMMUNICATIONS CENTER



MISSILE RANGE INSTRUMENTATION CENTER



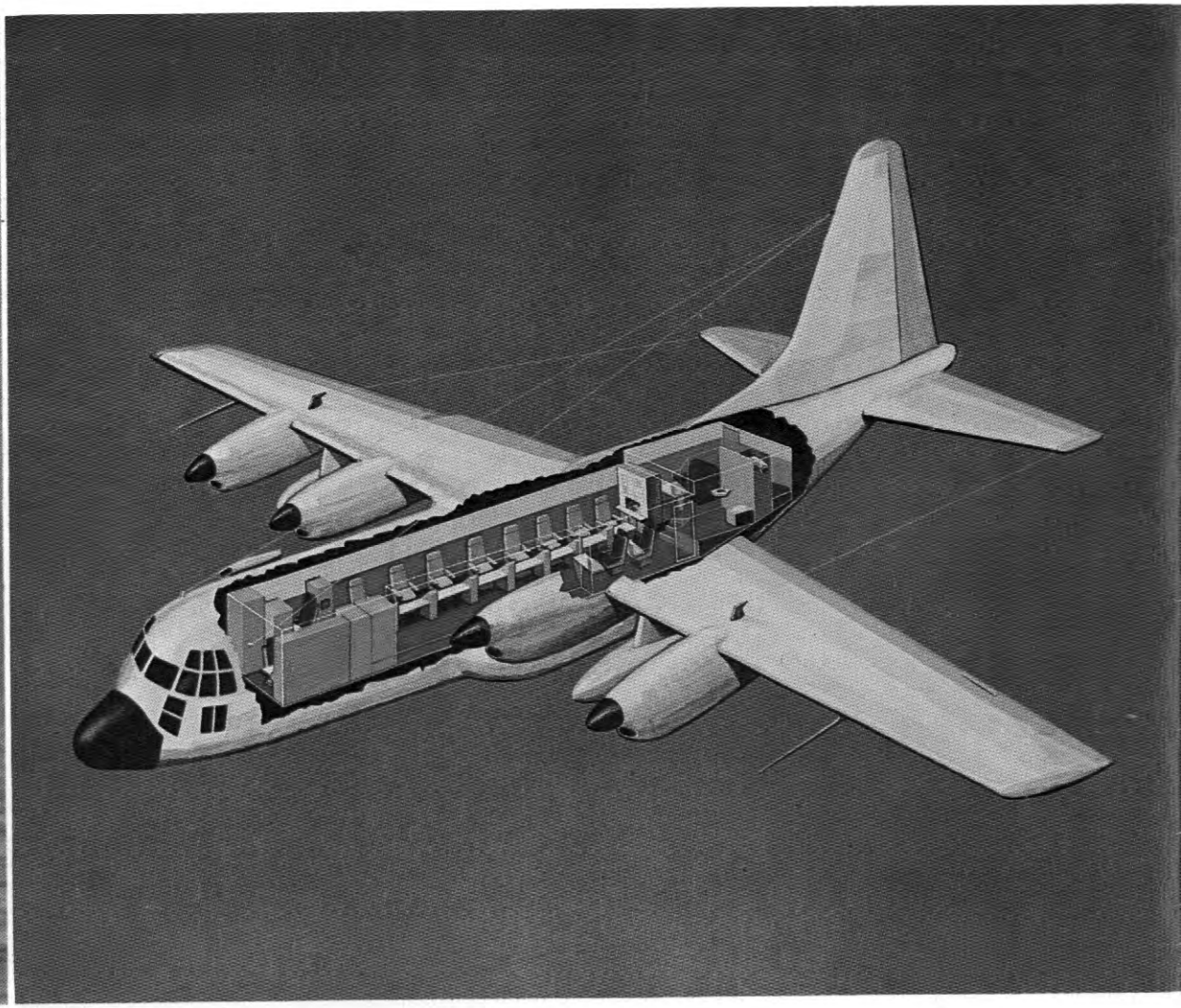
AIR ROUTE TRAFFIC CONTROL CENTER

APPLICATIONS

BATTLEFIELD COMMAND AND CONTROL CENTER
COMMUNICATIONS CENTER
RECONNAISSANCE INTELLIGENCE PROCESSING CENTER
TACTICAL COMPUTER SYSTEMS CENTER
WEATHER OBSERVATION FACILITY
SEISMIC/RADIATION MONITORING FACILITY
MISSILE RANGE INSTRUMENTATION CENTER
AIR ROUTE TRAFFIC CONTROL CENTER
--- AND OTHERS

The COMPACS concept brings to these and other requirements a quick reaction capability, greater system flexibility, higher efficiency, and reduced cost. Since it is a complete, self-contained unit the compartment is a ready-to-go complex available for deployment on short notice. Transported by any available aircraft of the proper type, the unit can be functioning enroute and continue to operate on the ground at its destination. Compact and well integrated, the unit provides maximum capability in a small area. By releasing the aircraft for normal cargo duty, eliminating packing and crating, and minimizing damage to valuable equipments, the mission can be accomplished more quickly and at lower cost.

ABC³ — I



ABC³ — II

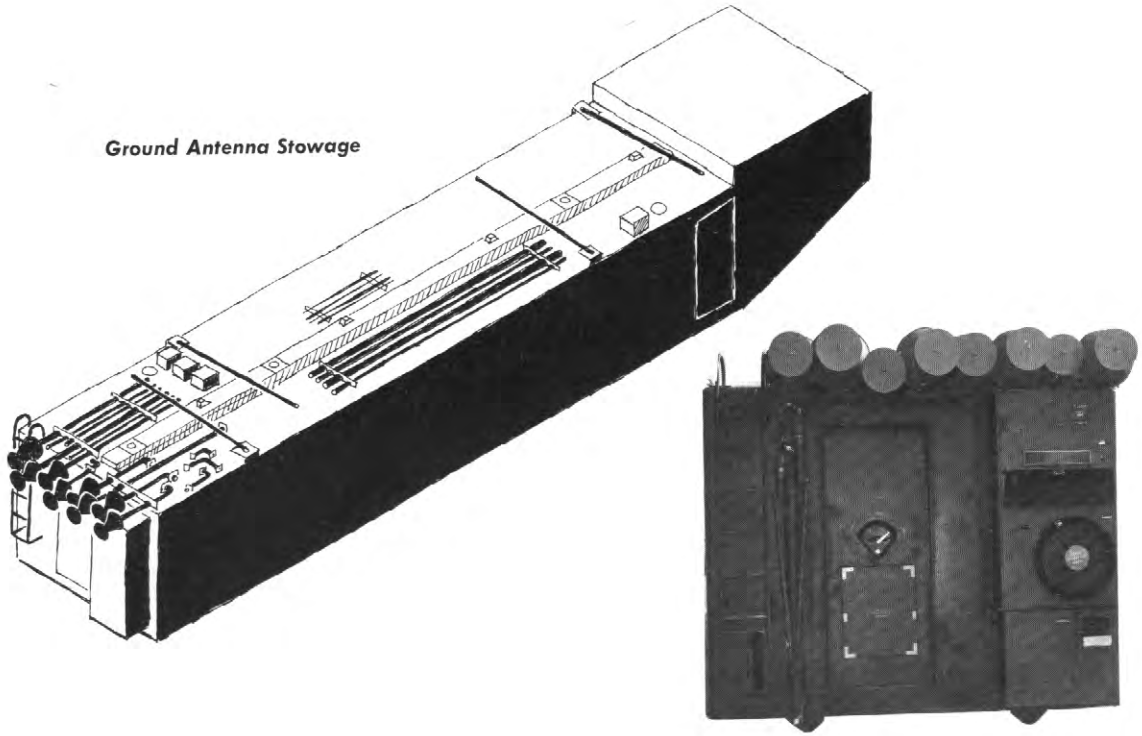
FEASIBILITY

FIRST OPERATIONAL UNIT COMPLETED SEPTEMBER 1964
SIX SECOND-GENERATION UNITS CURRENTLY IN PRODUCTION

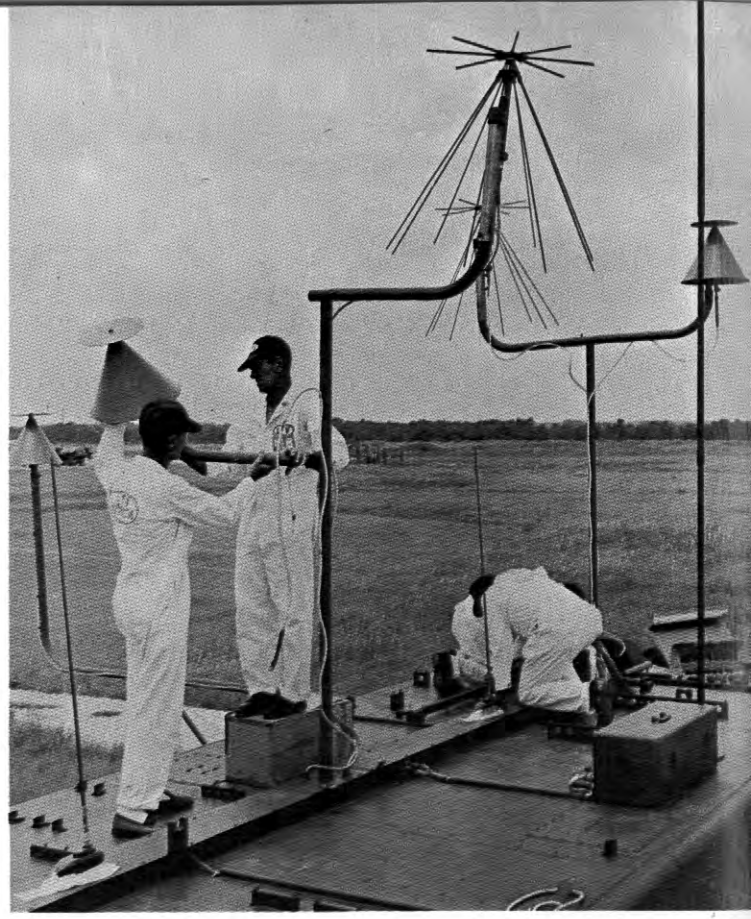
The feasibility of the COMPACS concept has been proven by LTV Electrosystems in two versions of an Airborne Battlefield Command and Control Center (ABC^3) designed for use in C-130 aircraft.

ABC^3-I was designed, built, and delivered under US Air Force contract in just 98 days after go-ahead. It answers the Tactical Air Command's need for an airborne/ground command control center which receives, processes, and displays data gathered by reconnaissance aircraft via television, side-looking radar, infrared sensors, and photographic cameras. Using these data, the Commander can make tactical decisions which are relayed to his forces by HF, VHF, and UHF radios.

The success of ABC^3-I led to a follow-on contract for six second-generation units currently in production. The system configuration for ABC^3-II was changed to enhance communication for direct air support and to increase the operator complement.



Ground Antenna Stowage



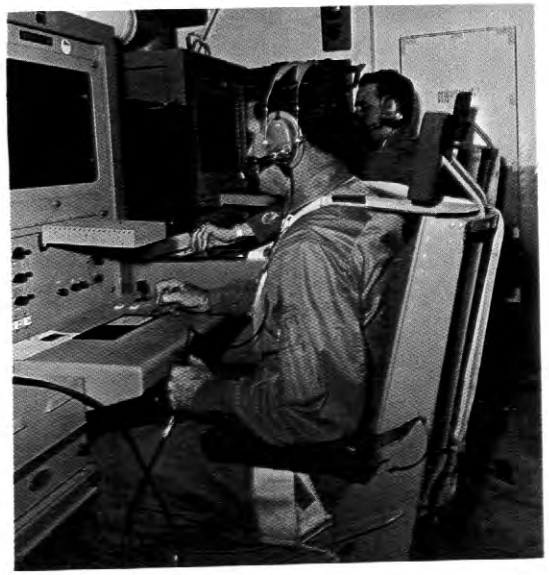
Installation for Ground Operation

ABC^3 PHYSICAL CHARACTERISTICS

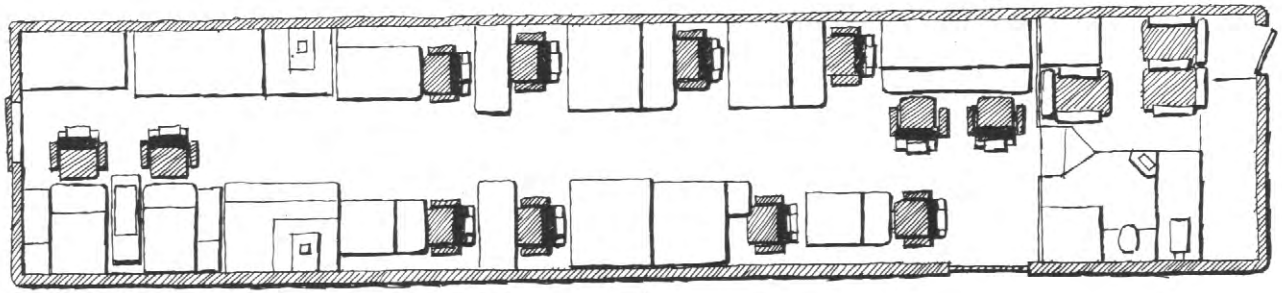
(FOR C-130 AIRCRAFT)

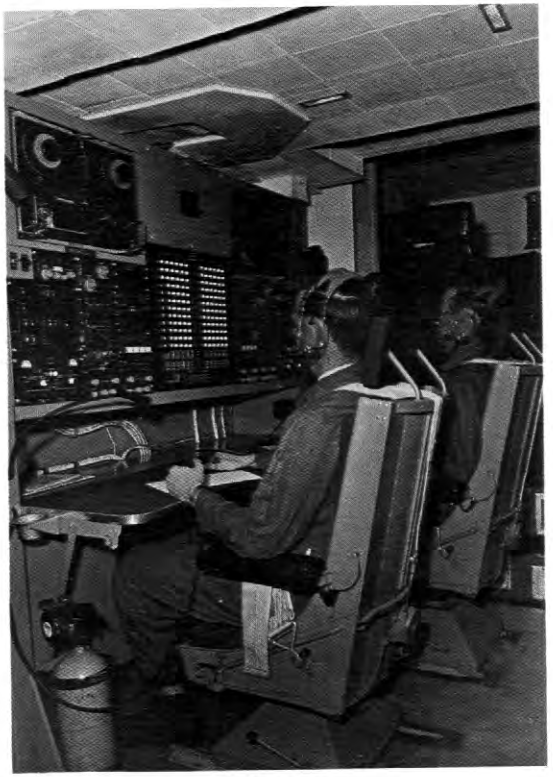
		ABC^3—I	ABC^3—II
SIZE	Outside	47 ft. 0 in. long 9 ft. 6 in. wide 8 ft. 4 in. high	47 ft. 0 in. long 9 ft. 6 in. wide 8 ft. 4 in. high
	Inside	46 ft. 6 in. long 9 ft. 0 in. wide 6 ft. 7 in. high	46 ft. 6 in. long 9 ft. 0 in. wide 6 ft. 7 in. high
WEIGHT	Empty Loaded	8,600 lbs 24,000 lbs	8,600 lbs 19,800 lbs
POWER REQUIRED	Airborne Ground	40 KVA 40 KVA	50.8 KVA 50.8 KVA
AIR CONDITIONING	Cooling Heating	92,000 BTU's/hr 16,000 BTU's/hr	80,800 BTU's/hr 57,200 BTU's/hr
LOADING OR OFF-LOADING	Time	One Hour	One Hour

The compartments are of standard metal sheet-and-stiffener aircraft construction, suitable for all-weather operation. Each is equipped with retractable wheels which can be extended for towing. The units may also be loaded onto standard trailers for over-the-road transportation.



Intelligence/Display/Storage Stations





Radio Station

Command Station

ABC^3-I EQUIPMENT CONFIGURATION

TRANSCEIVERS:

2 HF-SSB (400 Watts)
2 VHF/AM
2 VHF/FM
2 UHF/AM
2 VHF/FM Relay Pods
1 VHF/AM Relay Pod
1 UHF Relay Pod
1 C-Band Data Link (3 Channels)

TELETYPE:

1 Simplex On-Line Protected Teletype Circuit

AUTOMATIC RADIO RELAY:

8 Transceivers Capable of Automatic Retrans-mission

REMOTE SUBSCRIBER SERVICE:

7 Remote Line Terminations

INTERPHONE:

Private (Between All Operators)
Common (With Flight Deck)

RECORDING:

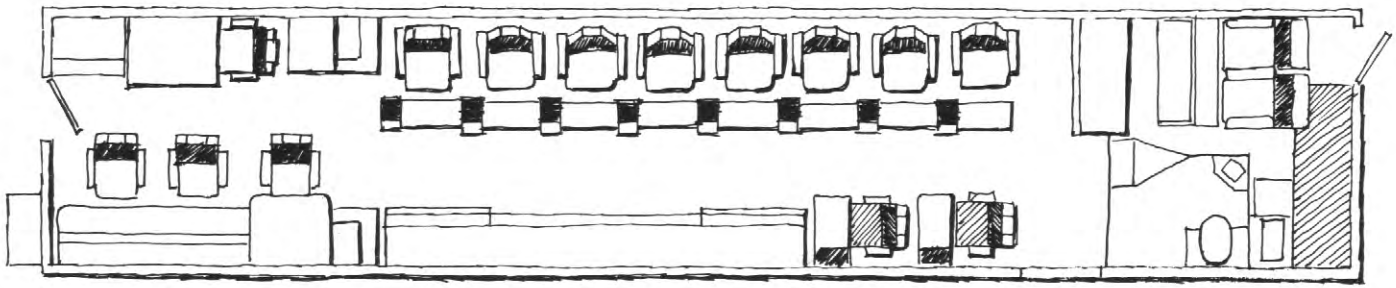
2 Four-Channel Audio Recorders

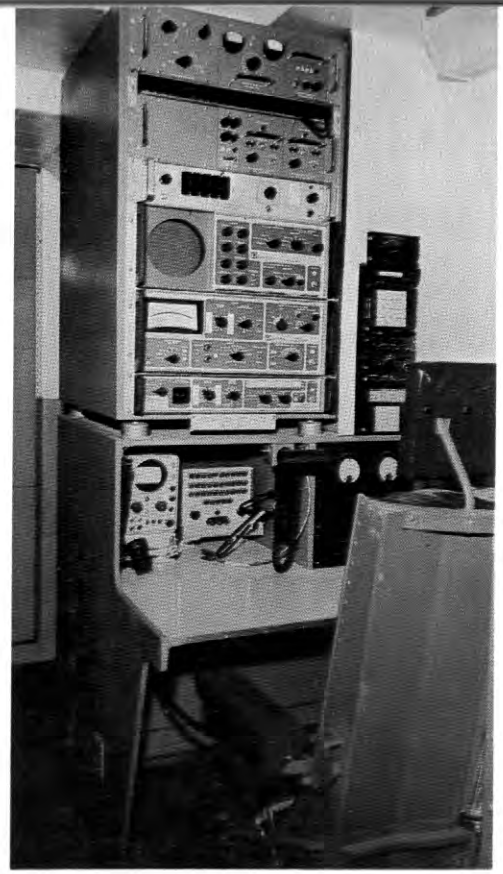
DISPLAY SYSTEM:

2 Command Displays
2 Intelligence Displays
1 Plotter Station

OPERATOR STATIONS:

2 Command
2 Command Staff
2 Intelligence/Display/Storage
1 Infrared Processing
1 SLR/TV Processing
1 Photo Processing
1 Plotter
2 Radio





Quality Monitoring/Command Station

Teletype and Radio Stations

Command Stations

ABC³-II EQUIPMENT CONFIGURATION

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 are Capable of Automatic Retransmission*

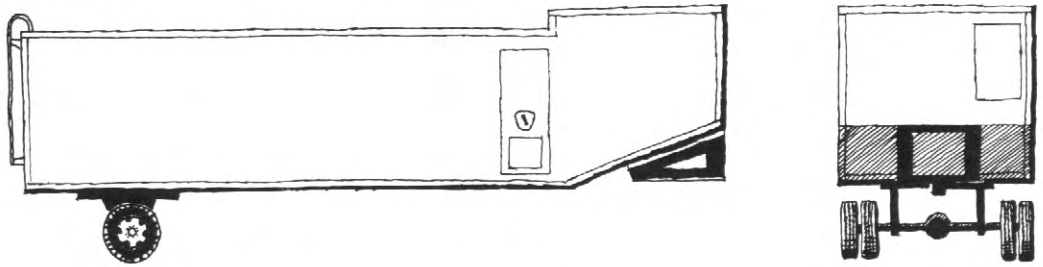
REMOTE SUBSCRIBER SERVICES:
- *4 Telephone Circuits*
- *3 Teletype Circuits*

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*



Optional Long Distance Towing Adaptor Kit

POSSIBLE COMPARTMENT DIMENSIONS FOR VARIOUS TAIL-LOADING AIRCRAFT

(With 6-inch Clearance Through Cargo Door)

	C-123	C-130	C-133	C-141	XC-142	C-5A*
Length W/O Ramp	24 ft. 0 in.	39 ft. 8 in.	96 ft. 3 in.	69 ft. 0 in.	29 ft. 0 in.	120 ft. 1 in.
Length With Ramp		48 ft. 8 in.				143 ft. 6 in.
Height	7 ft. 6 in.	8 ft. 4 in.	11 ft. 5 in.	8 ft. 7 in.	6 ft. 4 in.	13 ft. 0 in.
Width	8 ft. 2 in.	9 ft. 4 in.	11 ft. 0 in.	9 ft. 3 in.	6 ft. 4 in.	18 ft. 0 in.

*Multiple Compartment

POTENTIAL

COMPACS is a flexible concept, readily adaptable to a variety of missions, configurations, types of aircraft, and operational philosophies.

- *Any system which can be housed in the volume of a single, tail-loading cargo aircraft can be efficiently accommodated in a packaged compartment.*
- *Several compartments can be used for very large systems in aircraft such as the C-133 and C-5A. Units making up the complete set can be physically or electrically coupled for complete system operation in the air or on the ground.*
- *If airborne operation is not required, elements of a set can be transported in separate aircraft of a smaller type and linked on the ground.*
- *With aircraft such as the XC-142 V/STOL or the CH-54A cargo helicopter, compartments can be transported to small, unprepared clearings for operations in remote areas.*
- *Mobility on the ground can be enhanced by the addition of removable running gear and a towing adaptor.*