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DEPARTMENT OF THE ARMY
HEADQUARTERS, 160TH SIGNAL GROUP
APO San Francisco 96491

SCCVUG-OP

14 NOV 1967

SUBJECT: Operational Report for Quarterly Period Ending 31 October 1967,
from Headquarters, 160th Signal Group (RCS CSFCR-65) (WCLYHB)

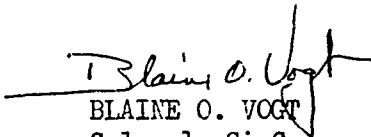
TO: Commanding General
1st Signal Brigade (USASTRATCOM)
ATTN: SCCVOP
APC 96384

1. References:

- a. AR 1-19, dated 26 May 1966.
- b. USARV Regulation Number 1-19, dated 3 November 1967.
- c. 1st Signal Brigade Regulation Number 1-19, dated 20 March 1967, with changes 1 and 2.

2. In accordance with the above references, attached as Inclosure 1 is copy number 10 of the Operational Report for Quarterly Period Ending 31 October 1967, from Headquarters, 160th Signal Group.

1 Incl
as


BLAINE O. VOGT
Colonel, SigC
Commanding

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 160TH SIGNAL GROUP
APO San Francisco 96491

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14 November 1967

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from Headquarters, 160th Signal Group (RCS CSFOR-65)(WCDYHB)

SECTION I: SIGNIFICANT ORGANIZATIONAL ACTIVITIES

1. GENERAL

a. This is the second Operational Report - Lessons Learned submitted by Headquarters, 160th Signal Group since its arrival in the Republic of Vietnam (RVN) on 30 April 1967. During the initial three months in-country, May - July 1967, the activities of the Group Headquarters were directed toward establishing the headquarters cantonment area, and developing plans for assumption, on 15 August 1967, of increased mission responsibilities in connection with the 1st Signal Brigade reorganization. With this reorganization, the Group strength was more than quadrupled.

b. During this reporting period, the Group assumed the responsibility for Communication-Electronics (C-E) support in the Saigon/Cholon and Long Binh areas of RVN. The impact upon Headquarters, 160th Signal Group staff operations will be discussed in more detail later in this report.

c. Although operational activities of the Group were given first priority, work was continued on the cantonment development program at Camp Gerry. Five of the eight programmed enlisted barracks and two of the four additional bachelor officer quarters were completed. The use of tents for administrative, billeting, and storage purposes was discontinued, and all tents were removed. The EM club was rehabilitated, and construction was started on a chapel and a permanent officers club. A commercial type power distribution system, supplied by the Vinnell Corporation, was activated to provide service to mess halls, living quarters, and operational facilities. Approval to construct a third headquarters building, 40' x 160', to house the Telephone Management Office (TMO) and the South East Asia Pictorial Center (SEAPC), was granted by Long Binh Post. A hardened parking area for the Group Headquarters was constructed by Company B, 169th Engineer Battalion (Const), and a self-help constructed drainage system was installed to preclude soil erosion during the monsoon season.

d. On 20 August 1967, the Group was tasked to provide logistical support to the 1st Signal Brigade South East Asia Signal School, Long Binh, for the course being conducted by a New Equipment Introductory Team from Fort Monmouth. Operator and maintenance instruction is being given on the Medium Capacity Subsystem, AN/TRC-110/117, by the team. Logistical support of the instructor team and course students is expected to continue through mid-December 1967.

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e. During the past Quarter, the Group initiated a Civic Action Program under the direction of Headquarters, Saigon Support Command. Two Vietnamese hamlets were assigned to the Group, and initial contact was made with the MACV Sub-Sector Advisor for the III Corps Tactical Zone in order to arrange a meeting with the hamlet chiefs. Plans are presently being formulated to identify specific projects for which American material and technical assistance can be provided.

f. On 27 August 1967, the Joint USASTRATCOM/USACDC Combat Development Team headed by Colonel E.V. Vestal, visited the Group and oriented key personnel on the team's missions and organizational relationships.

g. The 160th Signal Group was fully operational for seventy-seven days during the Quarter ending 31 October 1967; i.e., beginning 15 August 1967.

2. TRAINING AND ORGANIZATION

a. Reorganization of the 160th Signal Group.

(1) On 15 August 1967, the organizational structure of the 160th Signal Group was revised based upon the new operational concept specified in Headquarters, 1st Signal Brigade (USASTRATCOM), General Orders Number 294 and 302. Headquarters, 160th Signal Group, OPORD 2-67 implemented the reorganization. This included reassignment of units from the 2d Signal Group to the 160th Signal Group, and the realignment of mission responsibilities accordingly.

(2) Units affected by the reorganization were as follows:

- (a) 44th Signal Battalion.
- (b) 69th Signal Battalion.
- (c) South East Asia Pictorial Center.
- (d) 221st Signal Company (Pictorial).
- (e) 706th Signal Detachment (Field Army Issuing Office, Vietnam (FAIO-V)).
- (f) 49th Signal Detachment.
- (g) 213th Signal Detachment.
- (h) 446th Signal Detachment.

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- (i) 455th Signal Detachment.
- (j) Crypto Detachment (53rd GS Group).
- (k) Crypto Detachment (80th GS Group).
- (l) Crypto Detachment (972d S&M Battalion).

(3) During the reported period, Modified Tables of Organization and Equipment (MTOE), based upon The Army Authorization Documentation System (TAADS), were prepared and submitted to Headquarters, 1st Signal Brigade. Submitting organizations were:

- (a) HHD, 160th Signal Group.
- (b) 44th Signal Battalion.
- (c) 69th Signal Battalion.
- (d) 706th Signal Detachment (FAIO-V).

(4) The organizational structure of the 160th Signal Group, as of 31 October 1967, is depicted in Inclosure 1.

b. New mission for the 160th Signal Group. As specified in 1st Signal Brigade (USASTRATCOM), Letter of Instruction (LOI) #13-67, dated 23 August 1967, the expanded operational mission and functions of the 160th Signal Group are as follows:

(1) Mission: To provide Command C-E support to Headquarters, MACV, USARV, and Free World Forces as well as other major Army commands and U.S. government agencies in the Saigon/Cholon and Long Binh areas; furnish special signal support on a country-wide basis.

(2) Functions:

- (a) Provide Command C-E support to Headquarters, MACV and Free World Forces.
- (b) Provide Command C-E support to Headquarters, USARV.
- (c) Support Class IV signal construction projects throughout RVN.
- (d) Through the South East Asia Pictorial Center, coordinate photographic and audio-visual activities in SEA.

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(e) Through the COMSEC Logistical Support Center (now FAIO-V), supervise COMSEC logistical functions in support of U.S. Army Forces on a country-wide basis.

(f) Upon order of the Commanding General, 1st Signal Brigade, assume command of SEA Signal School.

c. Long Binh Post, RVN, Ground Defenses. On 4 August 1967, the Commanding Officer, 160th Signal Group, was assigned tactical command responsibility for a portion of the Long Binh Post ground defense perimeter. The 160th Signal Group established, operates, and maintains a Sector Operations Center (SOC) for Long Binh Post. Selected tenant units within the sector that are under OPCON of the Group, operate and maintain Battalion Operations Centers (BOC), reporting to the Group SOC. A communications network of wire and radio, interconnecting these tactical operations centers, has been established to ensure the responsiveness of a continuous, around the clock operation.

d. Training.

(1) On 4 September 1967, the Group submitted its first inventory of functional training requirements to 1st Signal Brigade (USASTRATCOM). This document indicated, by MCS and specific C-E systems and equipment, the Group's requirements for functionally trained replacement personnel in the 3rd and 4th Quarters, FY 68, and for the 1st and 2d Quarters, FY 69. The principal subordinate commands affected by this functional training program are the 40th Signal Battalion (Const), the 44th Signal Battalion, and the 69th Signal Battalion. The major C-E systems and equipment on which functional training is required are: the North Electric Emergency Action Console; Western Electric and Automatic Electric telephone key systems; IBM 360/20 and 1013; General Dynamics Corporation Digital Subscriber Terminal Equipment; Stromberg-Carlson XY Dial Central Office; Lenkurt 26C Channel Modem; and Polyethylene Insulated Conductor (PIC) Cable. For each of these, replacement personnel lack, for the most part, practical training and proficiency. In an attempt to rectify these deficiencies over the short run, the Group has been conducting intensified on-the-job training. This program has been supplemented by participation in various specialized courses which have been organized and supported by 1st Signal Brigade.

(2) On 14 September 1967, Headquarters, 160th Signal Group, published its new Education and Training Regulation 350-1. This regulation clarifies and expands upon the guidance previously given for the conduct of effective Group-wide training programs. Two of the most important aspects of the Group's training activities are:

(a) Coordinating functional training requirements with the various organizations of the Group.

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(b) Insuring that continuous on-the-job (OJT) and cross-training programs are being conducted throughout the command.

3. PERSONNEL

a. The 15 August 1967 reorganization of the Group necessitated the enlargement of the Group personnel section. By 1 September 1967, the number of records maintained at Group Headquarters for HHD, 160th Signal Group, and subordinate units, had increased from 75 to 500. As discussed in the previous reporting period, the Group Commander was designated as the Signal Site Commander, Camp Gerry, Long Binh Post, on 15 June 1967. The additional duties and responsibilities associated with this position required a further expansion of the administrative staff. To accommodate and meet these new needs, the headquarters instituted on 15 September 1967, a three phase program for functionally reorganizing the Group's personnel section. Through inter and intra organizational transfers, justified on a mission essential basis, required personnel were assigned to the section.

b. Authority to requisition personnel based upon the recently submitted MTOE has not been granted. Therefore, the number of personnel needed to effectively operate the Group Headquarters far exceeds the number authorized by the present TOE.

c. During this reporting period, the Group continued its Infusion Program through the transfer of personnel among subordinate units. On 20 October 1967, a study was initiated to determine the most effective method for reaching a goal of 15% (maximum) rotational transfers per month per unit.

4. OPERATIONS In discussing the C-E activities of Headquarters, 160th Signal Group, this section of the report is subdivided into areas of functional responsibilities.

a. Telephone Management Office (TMO).

(1) The TMO was formed on 15 August 1967, by Headquarters, 160th Signal Group, General Order Number 18. The organizational requirements of the TMO were established and included in the HHD, 160th Signal Group, MTOE.

(2) During the past Quarter, TMO planned, engineered, and supervised the relocation and reinstallation of telephones and key systems, and of teletype, sole-user, and other special circuits for major organizations relocating from Saigon to Long Binh; i.e., 1st Aviation Brigade; Headquarters, Special Troops; Saigon Support Command; 1st Signal Brigade; 14th Inventory Control Center (ICC); and the 44th Medical Brigade.

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(3) On 18 August 1967, the Group was tasked to operate and maintain the Emergency Action Console (EAC) at Headquarters, USARV, Long Binh Post, RVN. Wiring at the EAC frame and console was completed, and forty-four of the fifty-eight circuits were installed. The remaining circuits will be installed during the next reporting period.

(4) Headquarters, 1st Signal Brigade (USASTRATCOM), General Order Number 334, dated 30 August 1967, gave the Group complete control of the 40th Signal Battalion (Const). Previously, operational control was exercised by the Communication System Engineering and Management Agency (CSEMA), Headquarters, 1st Signal Brigade.

(5) The amount of multi-pair cable construction throughout Vietnam continued to increase as areas became more secure. In the past Quarter, the following cable projects were initiated or completed:

(a) Tan Son Nhut (TSN) to New MACV Integrated Wideband Communication System (IWCS) cable.

(b) USAID DCO to Tiger DCO trunk cable.

(c) Newport to Ap Tay trunk cable.

(d) New U.S. Embassy DCC to Tiger DCO trunk cable.

(e) Qui Nhon distribution system for DCO cutover.

(f) Can Tho distribution system for DCO cutover.

(g) An Khe distribution system.

(h) Long Binh Post distribution system.

(i) Soc Trang distribution system.

(j) Chu Lai distribution system.

(k) Cam Rahn Bay distribution system.

(l) Phu Bai distribution system.

(m) Phan Rang distribution system.

(6) On 28 August 1967, the Group installed six point-to-point telephone circuits, terminating at MACV Protocol, for the United States Observer Group to the Vietnamese Presidential Elections. On 31 August 1967, one additional point-to-point telephone circuit was installed.

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(7) Throughout the period, August - October 1967, command emphasis was placed on upgrading telephone repair service. Intensified on-the-job training programs were conducted to improve the technical ability of telephone installers and repairmen; the accuracy of cable records was stressed; and the rehabilitation of the entire outside plant system was started in the Long Binh area.

(8) On 8 September 1967, maintenance responsibility for the contractor installed Western Electric key systems in Headquarters, MACV, was assigned to the Group. On 19 September 1967, the Group installed four additional systems, and added additional features to the systems installed by the contractor.

(9) Classes of telephone service were initiated for Tiger DCO and MACV DCO subscribers in accordance with MACV Directive 105-1 and USARV Regulation 105-4. Fifty subscriber telephone numbers at Headquarters, USARV, were changed to relieve critical fills in certain telephone number groups.

(10) On 10 September 1967, the cut-over of Cholon telephone subscribers to the Tiger DCO was completed, and the Cholon DCO was deactivated.

(11) On 30 September 1967, dial service was provided to Plantation DCO subscribers (Headquarters, II Field Force, Vietnam) with the installation of an AN/TTC-28, 600 line dial central office.

(12) In-country communications support was provided for Vice President Humphrey's visit to Vietnam during the period 28 October - 1 November 1967.

(13) On 28 October 1967, the Group was tasked to maintain the Automatic Electric Company key systems installed by the contractor in Headquarters, USARV.

b. Communication Engineering and Analysis Section.

(1) As of 15 August 1967, the Group assumed the responsibility of supervising, operating, and maintaining the following fourteen communications centers and three data facilities throughout the Saigon/Cholon and Long Binh geographical areas:

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(a) Communications Centers.

<u>FACILITY</u>	<u>LOCATION</u>
MACV I Common User (CU)	Saigon
MACV I Combat Operations Center (COC)	Saigon
New MACV CU	Tan Son Nhut
New MACV COC	Tan Son Nhut
MACV J2	Tan Son Nhut
Tactical Air Support Element (TASE)	Tan Son Nhut
Military Intelligence Battalion Aerial Reconnaissance and Surveillance (MIBARS)	Saigon
1st Signal Brigade	Gia Dinh
Combined Intelligence Center-Vietnam (CICV)	Tan Son Nhut
CICV Relay	Tan Son Nhut
USARV Rear	Tan Son Nhut
USARV	Long Binh
Long Binh Army Area	Long Binh
High Frequency Radio Park	Long Binh

(b) Data Terminals.

<u>FACILITY</u>	<u>LOCATION</u>
14th Inventory Control Center (ICC)	Saigon
Aviation Material Management Center (AMMC)	Tan Son Nhut
12th Data Processing Unit (DPU)	Tan Son Nhut

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(2) In addition to assuming responsibility for these relays and terminals, Group was involved in relocating existing resources, changing from tactical to fixed plant configurations, and establishing new facilities as a result of subscriber relocations. Programs that were planned and executed by the Group are discussed below:

(a) In late August 1967, 1st Signal Brigade tasked the Group to coordinate with MACV J-6 in planning the movement of the MACV Common User (CU) and Combat Operations Center (COC) communications centers from MACV I to New MACV Headquarters at Tan Son Nhut. Plans developed by the Group staff were approved by 1st Signal Brigade and MACV J-6 on 28 August 1967. Installation completion dates of 15 September 1967, and 31 October 1967, were projected for the MACV CU and COC communications centers, respectively. USASTRATCOM Pacific Field Office (PACFO) was tasked to perform the site survey, engineering and installation of the COC facility, while relocation of the CU communications center was accomplished from within Group resources. Equipment for the CU communications center was installed by 9 September 1967, and all circuits were reterminated on 11 September 1967. Similarly, the installation of equipment for the MACV COC communications center was completed on schedule, and all circuits were reterminated on 28 October 1967.

(b) As a result of the relocation of major commands and other organizations from Saigon to Long Binh, communications activities for MACV were consolidated, as were those in support of Headquarters, USARV. To provide continued support to those units remaining in Saigon formerly serviced by the USARV Rear communications center, a Saigon Area facility was activated on 30 October 1967. This van mounted communications center currently provides over-the-counter teletype service to approximately fifty customers in the Saigon/Cholon area.

(c) Coincident with the establishment of Headquarters, USARV, a van mounted communications center was configured adjacent to the new USARV Headquarters. For approximately nine weeks, teletype terminal and relay operations were conducted in three expandable vans, pending completion of the fixed station facility. On 26 September 1967, an eleven circuit fixed station facility was activated replacing the six circuit tactical configuration. Concurrent with activation of this fixed plant communications center and the establishment of the SACC, the USARV Rear communications center at Tan Son Nhut was deactivated.

(d) Planning for the relocation of the 14th ICC data terminals began on 13 September 1967. The plan involved moving two IBM 1013 data transceivers from Saigon to Long Binh, while providing continuous data transceiver service to the subscriber, 14th ICC. The first transceiver was displaced on 27 September 1967. The initial plan required service to commence at Long Binh on 1 October 1967, with the relocation to be completed by 3 October 1967. Half Duplex (HDX) service was provided to the 14th ICC on

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1 October 1967. However, because of a delay in the move of the 14th ICC Headquarters, the relocation of the data terminal was not completed until 10 October 1967.

(e) The last major unit to relocate from Saigon to Long Binh during the reporting period was the 1st Signal Brigade. On 10 October 1967, an interim communications center was established at Long Binh for Brigade Headquarters. The relocation was completed on 17 October 1967.

c. Systems Engineering and Control.

(1) During the reporting period, the following eight multi-channel systems were activated:

<u>SYSTEM DESIGNATOR</u>	<u>EQUIPMENT INSTALLED</u>	<u>TERMINAL LOCATIONS</u>
AGH14	AN/TRC-24	Bien Hoa-Long Binh
GAH13	AN/TRC-24	Long Binh-Bien Hoa
CCH35	AN/TRC-24	Intra Tan Son Nhut
CCH37	AN/GRC-10	Gia Dinh-Xom Ba Con
CCR20	AN/TCC-7	Intra Long Binh
CCR21	AN/TCC-7	Intra Long Binh
CCW01	AN/GRC-50	Tan Son Nhut-Nha Be
77UHC6	AN/TRC-24	Long Binh-Bien Hoa

(2) The following eight systems were deactivated during the Quarter:

<u>SYSTEM DESIGNATOR</u>	<u>EQUIPMENT INSTALLED</u>	<u>TERMINAL LOCATIONS</u>
CCR20	AN/TCC-7	Bien Hoa-Long Binh
CAR11	AN/TCC-7	Long Binh-Bien Hoa
CAR22	AN/TRC-24	Long Binh-Tan Son Nhut
CGA23	AN/TRC-24	Long Binh-Tan Son Nhut
CCH35	AN/TRC-24	Intra Tan Son Nhut

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<u>SYSTEM DESIGNATOR</u>	<u>EQUIPMENT INSTALLED</u>	<u>TERMINAL LOCATIONS</u>
CAW64	AN/GRC-50	Long Binh-Long Thanh
CAW77	AN/GRC-50	Long Binh-Long Thanh
77URV9	AN/TCC-7	Long Binh-Bien Hoa

(3) During the period 15 August - 31 October 1967, 637 Defense Communication System (DCS) and 239 Army Area Communication System (AACS) circuit engineering orders were processed.

(4) As of 31 October 1967, twenty-two VHF radio multi-channel systems were being operated and maintained by the 160th Signal Group. A total of 278 voice channels were available on these systems; of which 234, or 84% were in use. Voice frequency telegraph (VFTG) tone packs on these systems had the capability to provide eighty teletype circuits; of which 46, or 57.5% were in use.

d. Photographic Operations.

(1) The in-country elements of the 221st Signal Company (Pictorial) continued their mission of providing photographic and audio-visual support to the U.S. Armed Forces and other U.S. government activities throughout SEA.

(2) Photographic operations during the Quarter included film coverage of the 4th Infantry Division; 9th Infantry Division; Task Force Oregon; 11th Armored Cavalry; Queen's Cobras from Thailand; land clearing operations, and other combat and combat support activities in Vietnam.

(3) Three photographic teams covered Vice President Humphrey's visit in Vietnam during the period 28 October - 1 November 1967.

(4) On 20 August 1967, the 221st Signal Company (Pictorial) commenced field testing of the Beckman and Whitley CM 16mm single-system motion picture camera. Testing was completed on 19 September 1967. Extensive major mechanical problems were encountered during the test, rendering the equipment unacceptable for use in RVN without modification by the manufacturer. An Equipment Improvement Recommendation (EIR) (DA Form 2407) was submitted and a factory representative arrived in-country on 23 October 1967, to begin making the necessary modifications. When this work is completed, the camera will be retested.

5. LOGISTICS

a. The Group S-4 continued to direct and supervise the Group's cantonment development program.

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b. With the reorganization on 15 August 1967, the headquarters responsibility for staff supervision of COMSEC Logistics became a S-4 function. COMSEC Logistical support was expanded with the establishment of a Distribution Authority (DISTRAs) at Can Tho. Plans were also made to establish a DISTRAs at Long Binh by 1 January 1968. This will bring to five the number of DISTRAs controlled by FAIO-V (which is scheduled to be redesignated the COMSEC Logistics Support Center, Vietnam). Construction was completed on the building housing the DISTRAs at Qui Nhon.

c. With the accelerated movement of units from Saigon to Long Binh, the Group was tasked to expedite the acquisition of necessary telephone installation hardware to support interim telephone systems, pending completion of the final installations. Material for these projects was acquired from Group and 1st Signal Brigade assets.

6. SUMMARY

a. During the past Quarter, the 160th Signal Group reorganized, expanded, and assumed responsibility for C-E support of the Saigon/Cholon and Long Binh geographical areas. Communications support is now provided by elements of the Group, to Headquarters, MACV, and Headquarters, USARV. Group support is also provided to other major US military commands, US government agencies and Free World Forces within this area. The Group continued to provide Class IV cable construction support. Photographic support throughout SEA and COMSEC Logistics support in RVN, were provided under this Group's control beginning 15 August 1967.

b. During this period, MTOE's were prepared and submitted for HHD, 160th Signal Group; 44th Signal Battalion; 69th Signal Battalion; and the 706th Signal Detachment. These MTOE's were restricted by the requirement to remain within JCS validated strength figures.

c. On 4 September 1967, the Group submitted its first inventory of MOS functional training requirements, and on 14 September 1967, published its new Education and Training Regulation 350-1. During the period, intensified OJT programs were conducted for all critical MOS's, to include Communication Center Specialist (72B), Lineman (36C), Cable Splicer (36E), Dial Central Office Repairman (36H), and Telephone Switchboard Operator (72C).

d. A reinforced, sand-bagged bunker, complete with radio and telephone communications, was constructed to serve as the Group's Sector Operations Center in support of the Long Binh Post Defense Plan.

e. The personnel section was expanded to meet the increased administrative requirements resulting from the Group's reorganization.

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f. Telephones and telephone key systems, and teletype, sole-user, and other special circuits were relocated for 1st Aviation Brigade; Headquarters, Special Troops; Saigon Support Command; 1st Signal Brigade; 14th ICC; and the 44th Medical Brigade.

g. New cable construction projects were initiated and work progressed rapidly throughout RVN.

h. Special projects included C-E support for the U.S. Observers Group to the Vietnamese Presidential Elections, and for Vice President Humphrey's visit to Vietnam during the period 28 October - 1 November 1967.

i. On 15 August 1967, the Group assumed complete responsibility for fourteen communications centers and three data facilities in the Saigon/Cholon and Long Binh areas. The MACV I CU and COC communications centers were relocated and reterminated at New MACV on 11 September and 28 October 1967, respectively. On 3 October 1967, a van mounted communications center was activated at Tan Son Nhut, providing over-the-counter teletype service to approximately fifty customers remaining in the Saigon/Cholon area. On 26 September 1967, a permanent fixed station communications center facility was activated at Headquarters, USARV, Long Binh.

j. The relocation of 14th ICC data terminals from Tan Son Nhut to Long Binh was completed on 10 October 1967.

k. The relocation of the 1st Signal Brigade communications center was completed on 17 October 1967.

l. The 221st Signal Company (Pictorial) continued to provide photographic and audio-visual support throughout SEA. During the period, 20 August - 19 September 1967, the company field tested the Beckman and Whitley CM 16mm single-system motion picture camera.

m. COMSEC Logistics support activities were expanded with the establishment of a DISTRA in Can Tho during the reporting period; further expansion is imminent.

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SECTION II: COMMANDER'S OBSERVATIONS AND RECOMMENDATIONS

PART I: Observations (Lessons Learned)

1. TRAINING AND ORGANIZATION.

Training Programs

Item: Specialized (functional) equipment training required in Vietnam.

Discussion: The complexity and sophistication of new communications-electronics equipment and systems being employed in Vietnam require specialized training (operator and maintenance) not presently given in the CONUS MOS Service Schools. Replacement personnel being assigned to the command who by MOS have the necessary operator and maintenance capability, lack practical training and knowledge of these new, non-standard commercial items. Examples of equipment and systems in which stateside training deficiencies have been noted are: North Electric Emergency Action Console; Western Electric Telephone Key system (1A1); Stromberg-Carlson XY Dial Central Office; and Lenkurt 26C Channel Modem.

Observation: New C-E support equipment should not be introduced into the command until operating and maintenance personnel are fully trained in CONUS.

2. PERSONNEL

Group Personnel Section

Item: Staffing requirements of a Group Personnel Section.

Discussion: Subsequent to the Group reorganization on 15 August 1967, the work load in the personnel section was increased by the addition of 425 new 201 files. A finance section was established to handle the 500 financial data records folders which had previously been satellited on other units. The number of personnel actions processed per day increased from an average of six to fifty. Prior to 15 August 1967, the personnel section was authorized one personnel sergeant and four clerks. Consequently, the staff was increased to one personnel officer, one personnel sergeant, and nine personnel specialists to provide the following mission essential services: Personnel Records Control; Personnel Management; Finance and Personnel Actions. A MTOE was submitted to reflect

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these actions.

Observation: Adequate staffing should be provided unit personnel sections through MTOE submissions.

Mission Essential Strength Requirements

Item: Mission essential strength requirements as a requisition base.

Discussion: This organization is staffed on a mission-essential basis which exceeds current TOE strength authorization. Requisitioning of replacements is authorized only for TOE vacancies. Therefore, to accomplish the mission, extraordinary manipulation of personnel resources is required. Lack of authority to requisition replacements could reduce mission accomplishment capabilities to an unacceptable level before an MTOE, reflecting mission requirements, is approved and implemented.

Observation: Units operating in a combat zone should be authorized to requisition personnel to meet validated mission essential requirements.

Maintenance Personnel

Item: The majority of personnel arriving in RVN are not adequately trained to maintain items of non-standard commercial equipment.

Discussion: Maintenance of non-standard commercial equipment, such as Western Electric and Automatic Electric telephone key systems, North Electric Emergency Action Consoles, and Stromberg-Carlson XY DCOs is beyond the capability of most maintenance personnel arriving in RVN. In those cases where limited training has been received in CONUS, as on the XY DCO, individuals have had no practical experience with the equipment. Extensive cross-training, on-the-job training, and special training classes have been conducted to alleviate the problem; however, the effectiveness of these programs is limited, since an individual is available for only a short period of time after becoming fully qualified.

Observation: To provide continuity, contract civilian personnel should be used in lieu of military personnel for maintenance of non-standard commercial systems and equipment. As an alternative, longer periods of functional training should be provided in CONUS.

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from Headquarters, 160th Signal Group (RCS CSFOR-65) (WCDYHB)

3. OPERATIONS.

Beckman-Whitley Single System Motion Picture Camera

Item: The Beckman-Whitley CM-16 single system motion picture camera is mechanically unreliable when operated in RVN.

Discussion: Operation of the CM-16 camera in RVN has shown that corrosion of the camera and film will occur within a few hours if the equipment is not maintained properly. Specific steps that the cameraman must take to prevent this are listed below:

- a. Clean all components after every use and daily if not used.
- b. Avoid direct contact of hands with optical surface and all parts which touch the film and sound strip.
- c. Store in temperatures not greater than 70° F at 40-50% relative humidity.
- d. Use film that is cool or that has reached local ambient temperature gradually. Film in metal containers should never be placed in direct sunlight for extended periods. In the event conditions require use of film that has been subjected to high temperatures, clean the camera after each roll or as often as possible.

Observation: All personnel must be made aware of the mandatory special maintenance procedures required for the CM-16 camera, as well as other photo-optical equipment operated in a tropical climate.

Dial to Dial Operation on AN/GRC-50 Systems

Item: Utilization of radio set, AN/GRC-50 with telephone carrier equipment, AN/TCC-7, to provide dial-to-dial service.

Discussion: The introduction of large numbers of commercial type dial central offices into RVN increased the requirement for dial-to-dial trunks. It was not known whether radio set, AN/GRC-50 would provide quality dial-to-dial circuits when used in conjunction with telephone carrier equipment, AN/TCC-7. The only problem encountered in establishing and maintaining such a circuit, was the lack of metering instruments at the carrier equipment. In order to align the single frequency (SF) trunk equipment, it was necessary to adjust the transmit amplifier gain in the dial central office to have a 1000 Hz test tone arrive at the input to the carrier at -4db. Further, it was necessary

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to physically disconnect the leads on the carrier equipment and terminate them on a 600 ohm db meter to make this adjustment. To align the receive side of the circuit, it was necessary to connect a 1000 Hz ohm tone generator with an output of +1 db to the receive pair and make the gain adjustments on the amplifiers in the dial central office. In order to properly maintain the circuit, a tone generator and db meter must be on hand at the carrier site. The carrier equipment operators must be familiar with the alignment procedures.

Observation: With proper instruments and alignment procedures, dial-to-dial trunks using single frequency signaling will pass over an AN/GRC-50 radio system used in conjunction with AN/TCC-7 carrier equipment.

Dial Failure in Dial Central Offices (DCO)

Item: There has been a high rate of failure of the dial return springs on the operator dial of Stromberg-Carlson XY LCOs.

Discussion: The failure of the dial return spring in the Stromberg-Carlson dial has been brought to the attention of Stromberg-Carlson and Gustav-Hirsh organization representatives.

Observation: Operator dials for Stromberg-Carlson switchboards need modification to eliminate breaking dial return springs. Switchboard, SB-249, dials can be used as a substitute.

Dial Central Office Maintenance (CO)

Item: Dirt and dust in the DCO increase equipment failures and maintenance problems.

Discussion: Environmental conditions in RVN make it very difficult to keep dirt and dust out of buildings. This creates problems in maintenance of equipment utilizing a large quantity of relays. Air conditioning eliminates some dust and dirt seepage into buildings. To further reduce undesirable conditions, all personnel are required to remove boots or shoes upon entering the DCO. Slippers are worn by the personnel on duty; cloth covers for boots and shoes are provided for use by visitors.

Observation: Elimination of sources of dirt and dust is greatly advantageous to the DCO preventive maintenance program.

SCC/JUG-OF

SUBJECT: Operational Report for Quarterly Period Ending 31 October 1967,
from Headquarters, 160th Signal Group (ACS CSFCR-65) (CDYHB)

Alignment of Single Frequency (SF) Units

Item: Dial-to-dial trunks using SF units frequently drift out of alignment.

Discussion: Dial-to-dial trunks using SF signaling have three solid state amplifiers as a part of their circuitry. The amplifiers are used to adjust the transmit and receive signals between the carrier and the dial central office. Precise adjustments are required in order to maintain acceptable quality. If either send or receive adjustments are too low, dial pulses will not be transmitted properly or a permanent signal condition will result. If either send or receive adjustments are too high, the voice quality drops rapidly, resulting in trunk "howls" or the subscriber's voice sounding as if he were "talking in a barrel." The amplifiers are relatively unstable, and only through constant testing for gain drifts can trunks be properly maintained.

Observation: Continuous maintenance of dial-to-dial trunks using SF signaling is required to ensure quality service and dependability.

AC Voltage on Cables

Item: AC voltage on certain military cables in the Saigon area has resulted in service degradation of special circuits.

Discussion: Most cables in the Saigon area are installed on joint-user power poles, which are heavily loaded with other cables of various sizes. As a result, most of the military cables have a small amount of induced voltage across the conductors. This runs usually from 0.5 to 4.0 volts, which does not interfere with voice or dial circuits. Broadband secure voice and other circuits requiring special conditioning have more critical induced voltage limits. A dedicated cable used only for selected special circuits was installed for broadband secure voice subscribers. Special emphasis was placed on bonding, grounding, and sheath continuity. The messenger was grounded at every fifth pole; sheath and messenger strand was bonded at each splice. The result was a cable with voltage levels of 0.1 to 0.2 volts AC, which is acceptable.

Observation: Special grounding must be provided and other safeguards taken on cables which are to be used for circuits requiring special conditioning. A more desirable long range solution would be to provide special cable engineered to meet the conditioning requirements of critical circuits; e.g., wideband secure voice circuits.

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SUBJECT: Operational Report for quarterly Period Ending 31 October 1967,
from Headquarters, 160th Signal Group (RCS CSFOR-65) (WCDYHB)

High Precedence Messages

Item: Increased volume of high precedence messages.

Discussion: During the past Quarter, traffic analysis studies have revealed an excessively high percentage of messages of immediate precedence. This is due in part to necessary command emphasis placed on casualty reporting, and to the high perishability of intelligence information. However, misuse of high precedence by message originators has also contributed to the increased volume. Such misuse places less urgent messages in competition with bonafide immediate precedence messages, and increases commcenter handling time for all high precedence traffic. A Message Review Board has been established under the provisions of AR 105-10 at Headquarters, USARV, to improve communications efficiency. An information film on message precedence is being prepared and will be distributed within the command.

Observation: The actions of the Message Review Board, and wide dissemination of the training film should alleviate the problem somewhat. Continued command emphasis will be necessary to discourage misuse of high precedence by message originators.

Card-jamming

Item: Reduced data transmission time due to card-jamming.

Discussion: Data equipment is set by a manufacturer's representative to accept cards of a particular size. When the card size varies beyond the tolerance of the equipment settings, card jams occur and traffic cannot be passed. This has been a chronic problem in data communications in Vietnam. Variation in card size is due to non-standardization among manufacturers. Further, cards often become warped and swollen due to improper packaging for storage in a high humidity environment.

Observation: More rigid specifications are required to standardize card size and improve card quality. Cards should be packaged in sealed plastic containers and stored under controlled conditions when received.

4. INTELLIGENCE. None.

5. LOGISTICS.

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SUBJECT: Operational Report for Quarterly Period Ending 31 October 1967,
from Headquarters, 160th Signal Group (RCS CSFOR-65) (4CDYHB)

Direct Support for Repair Parts

Item: Transfer of the Direct Support Unit (DSU) responsibilities for communications-electronics repair parts.

Discussion: When the Electronic Maintenance Facility of the 69th Signal Battalion was transferred to the 44th Signal Battalion, the DSU for repair parts was shifted from the 79th Maintenance Battalion (GS), Saigon, to the 185th Maintenance Battalion (GS), Long Binh. The DSU in Long Binh did not have an adequate authorized stockage list (ASL) to support the demands of the Electronic Maintenance Facility.

Observation: When a unit transfers from one DSU to another, prior coordination must be effected with the gaining DSU to ensure that necessary action is taken to support the gaining unit from its ASL. Temporary relief can be obtained by having requests filled from the losing DSU on a non-recurring basis, while placing demands against the gaining DSU.

Property Accountability

Item: Redistribution of property resulting from major reorganization of a unit.

Discussion: When the resources of the 69th Signal Battalion and the 44th Signal Battalion were redistributed based on a change in organization and mission of the units concerned, a major problem developed in property accountability. As the reorganization preceded the technical authority to redistribute property, no simple method of property accountability existed. This caused many problems which might otherwise have been avoided.

Observation: Special authorization or exception to policy must be obtained when a major reorganization brings about a transfer of property under circumstances not covered by existing regulations.

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SUBJECT: Operational Report for Quarterly Period Ending 31 October 1967,
from Headquarters, 160th Signal Group (RCS CSFOR-65) (CDYHB)

PART II: Recommendations. It is recommended that:

1. Functional training at CONUS service schools be tailored to the requirement for qualified personnel to operate and maintain non-standard commercial C-E equipment and systems now installed and programmed for use in Southeast Asia.

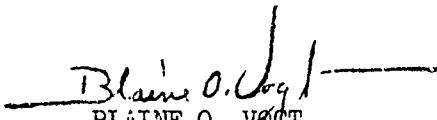
2. Units operating in a combat zone be authorized to requisition personnel to meet validated mission essential requirements pending submission, approval, and **effective** implementation of an adequate MTOE.

3. Contract maintenance be provided for installations in Southeast Asia employing non-standard, commercial C-E equipment and systems. Depending upon requirements of specific installations, such contracts should either provide for maintenance in lieu of, or supplemental to, that provided by military personnel.

4. Cable systems be engineered, developed, and procured to meet the requirements for conditioned circuits to satisfy critical tolerances of certain terminal and switching equipment in use in Vietnam; e.g., the wideband secure voice system.

5. Commanders at all levels effect user-education programs stressing inter alia the importance of assigning proper precedence to message traffic.

6. Action be initiated to ensure standardization of data card size for use in data transmission systems and to improve card quality through more rigidly controlled contract specifications. Improvements should include packaging of cards in hermetically sealed plastic containers.


BLAINE O. VOTT
Colonel, SigC
Commanding

SCOP (14 Nov 67)

1st Ind

SUBJECT: Operational Report for Quarterly Period Ending 31 October 1967,
Headquarters, 160th Signal Group, (ACS CSFR-65) (CDYHE)

DA, HQ, 1st Sig Bde (USASTRATCOM), APO SF 96384 30 NOV 1967

TO: Assistant Chief of Staff for Force Development, Department of the Army,
(ACSFOR-DA) Washington, D.C. 20310

Commanding General, United States Army Vietnam, ATTN: GPOF-OT, APO
96375

Commanding General, United States Army Strategic Communications Command,
ATTN: SCCOP, Fort Huachuca, Arizona, 85613

1. Subject report is forwarded for information.

2. Concur in the Commander's observations with the following comments:

a. Item: Dial Failure in Dial Central Offices (DCO), page 17. The operator dials for the Stromberg-Carlson switchboard need modification. Using units have been instructed to submit EIRs on this equipment.

b. Item: Direct Support for Repair Parts, page 20. This headquarters has emphasized the need for coordination between supporting and supported units. Additionally, units are aware that it is the responsibility of the moving unit to provide the supporting unit with copies of PLL and ASL.

c. Item: Property Accountability, page 20. When the redistribution of equipment was required as the result of major unit reorganizations, this headquarters has approved the transfer in every case. Units involved in equipment transfers have been instructed to include newly acquired equipment on their next submission of MTOEs.

3. Nonconcur in the Commander's observations as follows:

a. Item: Maintenance Personnel, page 15. This observation has merit, however, a program of this magnitude would involve huge expenditures of funds. The Army has an established military training program for training personnel on items of nonstandard commercial equipment. In addition, skilled Foreign Service Representatives from the U.S. Army Electronics Command are available to assist those units in need of on-the-job training.

b. Item: Alignment of Single Frequency (SF) Units, page 18.

(1) The Wescom SF Signaling unit W702-E4B is a solid state unit employing a highly stable 2600-hertz oscillator, and conforms to current commercial telephone standards. The pulse regeneration circuit contained in this unit maintains a reasonably steady percent (%) break on the output over a varying range of input. This unit is used in commercial systems and has proved very reliable. A more probable source of the problem

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SUBJECT: Operational Report for Quarterly Period ending 31 October 1967, Headquarters, 160th Signal Group, (MSG 05F01-05) (..CD..),

is the marginal operating levels of some systems. As a system fades in and out, the dcm level also fluctuates. This type of condition varies the incoming signal level to such a degree that it is outside the plus-or-minus tolerances of the SF units. Such marginal conditions also result from improper level adjustment, which in some cases has been attributed to faulty meters in the terminal facilities. The USARPAC calibration team now in Vietnam has found meters off as much as 25 db. Unstable systems and incorrectly calibrated meters are primary causes of local circuit outages. The Mescom units used on well aligned and stable radio systems have performed satisfactorily.

(2) This headquarters does concur in that portion that states continual alignment of SF units is necessary. The reason, however, is not the instability of SF units, but rather the fluctuation of the levels of the systems on which they ride.

(3) This information has been passed to the 160th Signal Group Commander.

4. Concur in the Commander's recommendations with these additional comments:

a. Recommendation 4, page 21. Special engineering, plus strict observance of good installation practices will provide reliable secure voice service.

b. Recommendation 6, page 21. USARV initiated this action and a command message was sent to all units on this subject. References are as follows:

(1) USARV letter AVHAG-PP 18 July 67.

(2) 1st Signal Brigade message SCCVLG-1, 107160, dtd 8 July 67.

5. Nonconcur in Commander's recommendations as follows: Recommendation 3, page 21. Nonconcur for reasons stated in paragraph 3a above.

FOR THE COMMANDER:

John B. McKinney
JOHN B. MCKINNEY
Colonel, SigC
Deputy Commander

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AVHGC-DST (14 Nov 67) 2d Ind
SUBJECT: Operational Report for Quarterly Period Ending 31 October 1967,
from Headquarters, 160th Signal Group (RCS CSFOR-65) (WCDYHB)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 17 DEC 1967


TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1967 from Headquarters, 160th Signal Group (CDYA) as indorsed.

2. Pertinent comment follows: Reference item concerning direct support for communication-electronic repair parts, page 20; and 1st Indorsement, paragraph 2b: Concur with 1st Indorsement. Prior coordination on unit moves is a requirement and should be understood by all concerned. Failure to do so may be a result of too little advance notice prior to the actual unit move. All headquarters concerned should provide as much time as possible for preparations before ordering moves. Individual commanders should take necessary action to provide for direct support.

3. A copy of this indorsement will be furnished to the reporting unit through channels.

FOR THE COMMANDER:

for  **JOHN V. GETCHELL**
Captain, AGC
Assistant Adjutant General

1 Incl
nc

cc:
HQ, 160th Sig Gp
HQ, 1st Sig Bde

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GPOP-DT (14 Nov 67) 3d Ind
SUBJECT: Operational Report for the Quarterly Period Ending 31 October
1967 from HQ, 160th Signal Group (UIC: WCDYHB) (RCS CSFOR-65)

HQ, US ARMY, PACIFIC, APO San Francisco 96558 11 JAN 1968

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-
ments and concurs in the report as indorsed.

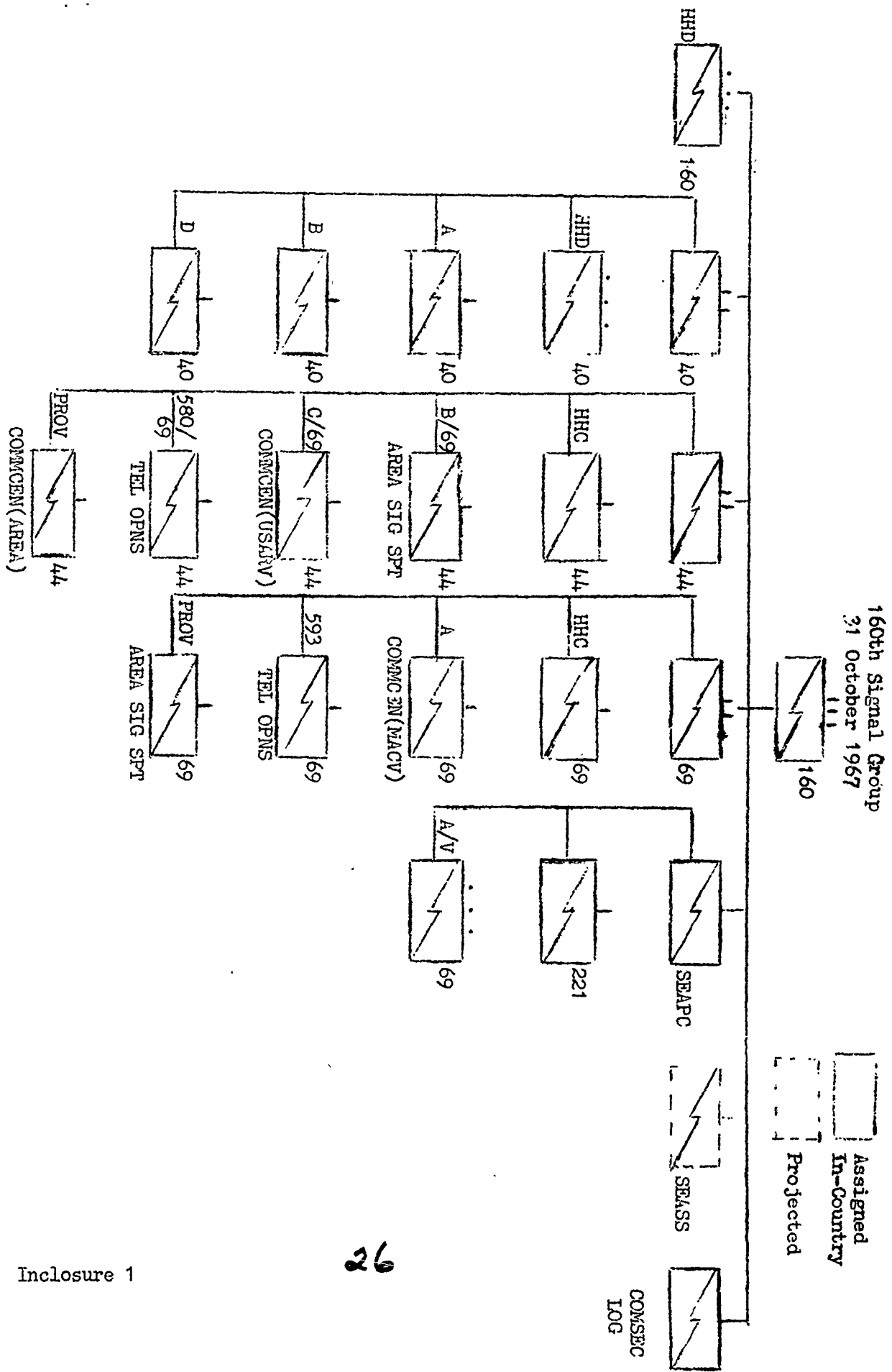
FOR THE COMMANDER IN CHIEF:



HEAVRIN SNYDER
CPT, AGC
Asst AG

1 Incl
nc

25



Inclosure 1

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