UNCLASSIFIED

HISTORY OF DETACHMENT 2
6994TH SECURITY SQUADRON

July - December
1971

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THE HISTORY OF

DETACHMENT 2, 6994TH SECURITY SQUADRON

1 JULY 1971 - 31 DECEMBER 1971

RCS: USS-D3

FREEDOM THROUGH VIGILANCE

USAF SECURITY SERVICE

[redacted]

1 JANUARY 1972

[redacted]

Detachment 2, 6994th Security Squadron, APO San Francisco 96337

[redacted]

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THE HISTORY OF

DETACHMENT TWO, 6994TH SECURITY SQUADRON

1 JULY 1971 - 31 DECEMBER 1971

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Prepared by

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Approved By:

John V. Thompson

JOHN V. THOMPSON, Major, USAF
Commander

FOREWORD

This operational history of Detachment 2, 6994th Security Squadron is a narrative depicting the significant detachment accomplishments during the historical period 1 July 1971 thru 31 December 1971.

This history was prepared by Master Sergeant Carl A. Miller. All comments and suggestions are welcomed and should be directed to the Operations Officer, Detachment 2, 6994th Security Squadron, APO San Francisco 96337

[redacted]

ROSTER OF KEY PERSONNEL

1 July 1971	Position	31 December 1971
Lt Col E. E. Blackwell	Commander	Maj E. J. Ledet
Capt C. A. Chapelle	Operations Officer	Capt K. J. Wagner
Capt J. E. Baxa	Material Officer	Capt P. Loos
TSgt J. M. Stroud	First Sergeant	TSgt R. L. Murdock
SMSgt R. J. Naylor	NCOIC Operations	SMSgt W. E. McCollough
MSgt W. G. Tucker	Communications	MSgt D. T. Burns
TSgt W. M. Etherton	Mission Management	MSgt C. L. Turner
MSgt J. A. Chiovitti	Exploitation	MSgt J. E. Glenn
TSgt R. L. Murdock	Flight Operations	MSgt B. Lockett
MSgt D. F. Nelson	Administration	TSgt J. J. Nolan
TSgt E. Koskiniemi	Personnel	Sgt C. L. Robinson
SSgt J. B. Brewer	Security	MSgt E. Jones
MSgt N. M. Fritz	Maintenance	MSgt N. M. Fritz
SMSgt H. G. Johnson	Supply	SMSgt C. K. Meeks
SSgt D. R. Boston	Plans	MSgt K. N. Owens
TSgt W. E. Christian	SEFE	TSgt W. E. Christian

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NOTE: To reduce file size, Supporting Documents have been extracted and processed as a separate file.

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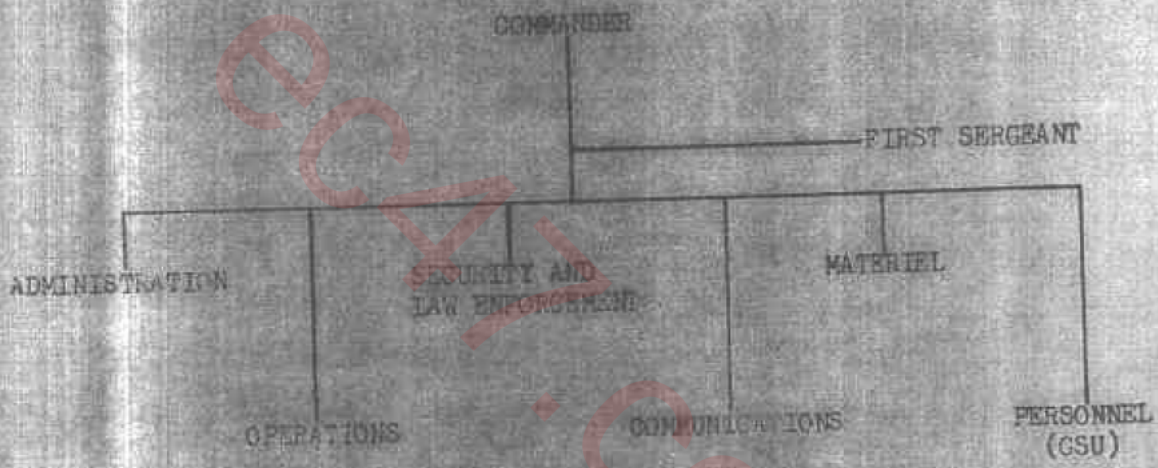
ORGANIZATIONAL CHART



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LIST OF ILLUSTRATIONS

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CHRONOLOGY

5 July 1971	Major E. J. Ledet assumed command of Det 2, 6994 SS.
5 July 1971	Initial test of Project Cumbersome began.
5 July 1971	Rocket attack on DaNang Airfield, resulting in 5 killed and 37 injured.
15 July 1971	Rocket Belt Program implemented at DaNang Airfield
20 July 1971	Det 2 requested maintenance manning assistance.
31 July 1971	Project Cumbersome test halted due to breakdown of KY-8 cypher equipment.
2 August 1971	Det 2 normally tasked to participate in FIX/FAC, Black Bear program.
14 August 1971	Det 2 received authority to reconfigure voice processing positions.
15 August 1971	Det 2 received tasking for Project Abundant.
20 August 1971	First Project Abundant success.
25 August 1971	Rocket attack on DaNang Airfield, no damage.
25 August 1971	Det 2 received new reporting format for Project Abundant.
30 August 1971	Det 2 representive attended GDRS conference at Wheeler AFB, Hawaii.
2-3 September 1971	7AF team visits DaNang to survey available facilities for Det 2/362 TEWS to obsorb Det 1/361 TEWS assets.
23 September 1971	Det 2 representative attended Base Budget meeting.

[redacted]

[redacted]

[redacted]

29 September 1971	Det 2 met with 554 CES (Red Horse) and 362 TEWS to finalize construction plans.
2 October 1971	Brown Beaver Program implemented.
4 October 1971	Rocket attack on DaNang Airfield, no damage.
5 October 1971	7th Air Force queries impact of move of Det 1 to DaNang without new construction.
6 October 1971	Eight aircraft evacuated to NKP, due to severe weather associated with Typhoon Elaine.
8 October 1971	366 TFW issued, LAD 72-7-2, tasking wing organizations on support of move of Det 1 to DaNang.
10 October 1971	The eight aircraft returned from NKP.
16 October 1971	PACAF issues Programs Action Directive (PAD) 71-300.
22 October 1971	Det 2 submitted first input to PAD 71-300.
22 October 1971	All operationally capable aircraft were evacuated to NKP, due to severe weather associated with Typhoon Hester.
25 October 1971	Project Cumbersome resumed.
28 October 1971	Aircraft returned from NKP.
3 November 1971	First personnel from Det 1 arrived at DaNang.
10 November 1971	Aircraft (9009) accident at NKP.
11 November 1971	Red Horse begun assembly of modulars for SI operations area.
12 November 1971	Det 2 personnel moved into lower floor of barracks 1631.
4 December 1971	Det 2 assigned strength peaked at 220.
8 December 1971	Project Left Twist implemented.

[redacted]

[redacted]

20 December 1971	Brown Beaver Program received favorable review by 7AF and was made a part of the TACAIR program in Laos.
29 December 1971	Det 2 requested authorization to take sanitized identification aids aboard mission aircraft.

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CHAPTER I

MISSION AND ORGANIZATION

MISSION

[redacted] Detachment 2, 6994 Security Squadron was an element of the United States Air Force Security Service (USAFSS) stationed at DaNang Airfield, Republic of Viet Nam (RVN) conducting Airborne Radio Direction Finding (ARDF) and Airborne Communications Intelligence (ACI) collection in support of the intelligence requirements of commanders responsible for tactical operations in Southeast Asia (SEA), and providing cryptologic operations with supplementary data to enhance the value and depth of their technical and analytical development.[1] This support was rendered by locating and maintaining surveillance of enemy radio transmitters and providing ACI of those targets which could not be adequately covered by ground-based intercept.[2] Special targets of interest were selected by the tactical commanders and tasked through the ARDF Coordination Center (ACC). ACC subsequently tasked the detachment, with technical support provided by the three Collection Management Authorities (CMA).[3] Each of these CMAs was responsible for specific areas as

[redacted]

follows: Seventh Radio Research Field Station (RRFS), Udorn, Thailand, for part of SEA Areas ten and eleven; Eighth Radio Research Field Station (RRFS), Phu Bai, RVN, for part of SEA Area ten and SEA Areas eight and nine; 330th Radio Research Company at Nha Trang, RVN for SEA Area seven and the other part of SEA Area ten.[4]

ORGANIZATION

(U) The detachment was subordinate to the Commander, 6994 Security Squadron, Tan Son Nhut Airfield, RVN.[5] The detachment had an integral support element consisting of administration, personnel, supply, airborne equipment maintenance, communications, and security and law enforcement. Personnel requirements in support of the mission were provided by a geographically separated unit (GSU) while personnel records were maintained at the consolidated base personnel office (CBPO), 6902 Support Squadron, Wheeler AFB, Hawaii. This structure is shown on the organizational chart.

Operations:

[redacted] The Operations Branch, located in the southwest corner of Da Nang Airfield, was the keystone for mission accomplishment and performed the vital functions of directing, coordinating and controlling resources to accomplish the mission.[6]

[redacted]

A complete discussion of the organization and functions of each section of the Operations Branch is contained in the detachment's USS D3 Report for 1 January thru 30 June 1971. Close coordination was maintained between the detachment and the 362d Tactical Electronic Warfare Squadron (TEWS), which operated and maintained the Pacific Air Force (PACAF) EC-47 aircraft based at DaNang.

Operational Relationships:

[redacted] The operational relationship of the detachment with other units in the ARDF program is shown in Appendix VI figure 3. ACC was the hub on which the ARDF program revolved, performing the coordinating function between the intelligence community, the consumer, and the supporting agencies. A simplification of these relationships would be to say that the consumer stated the intelligence he desired, the intelligence community provided technical support necessary to gather the information, and the supporting agencies provided the necessary equipment and personnel to perform the mission. In this sense the detachment was both a member of the intelligence community and also a supporting agency, providing technical knowledge and expertise as well as the personnel and equipment to perform the actual ARDF and collection functions. The 362d TEWS role was primarily one of a supporting agency, providing the airframes, maintenance, pilots and navigators to support the mission.

[redacted]

[redacted]

CHAPTER II

SIGINT TASKING AND COLLECTION

[redacted] Formal SIGINT tasking was received in Control Messages (CONMSG) for each absolute area from the appropriate CMA. These CONMSGs reflected the tasking generated at the weekly meeting of tactical commanders and other agencies at the ACC. The CMA generated Technical Data Lists (TDL) for those priority targets on which they held sufficient technical data to reasonably predict a schedule. The CMA tasked the airborne collection positions with only those specific communications entities which could not be effectively assigned to other SIGINT units.

TARGET PRODUCTIVITY

[redacted] ARDF target productivity is depicted on six charts in Appendix VIII. The first chart shows overall productivity while the next five show trends in each of the SEA areas flown. The decrease in overall productivity during October was caused by weather evacuations. The increase in the number of targets during November was attributed to the increased number of missions flown. The number of targets did not increase in proportion to the number of hours flown due to the advent of the monsoon season.

[redacted]

[redacted]

atmospheric interference caused by the adverse weather, a decline in tactical activity, and a greater number missions tasked to fly in the less productive areas. The low productivity in SEA Area 11 was due in part to the emphasis placed on multi-channel targets in that area. Most multi-channel subscribers were units well protected by Anti-Aircraft Artillery (AAA). These guns prohibited the aircraft from flying close enough to the emitter to fix it in a reasonable period of time. Another problem caused by the long stand-off range was that the aircraft could not fly far enough to get the required LOB spread to resolve a fix.

AIRBORNE COMMUNICATIONS INTELLIGENCE

[redacted] ACI was separated into two sections; Radiotelephone (RT) shown on charts in Appendix IX, and Manual Morse in Appendix X. Both are shown by overall effectiveness and by SEA Areas. ACI productivity increased in all areas except SEA Areas 8 and 11.

Radiotelephone Productivity:

[redacted] All the SEA Areas except SEA Area 8 show an increase in productivity. SEA Area 8 produced a steady decrease starting in September. This decrease was caused by the low level of tactical activity in this previously productive area.

Manual Morse Productivity:

[redacted] Manual Morse percentages are shown on charts 1

[redacted]

thru 6 in Appendix X. Productivity remained relatively stable except SEA Area 11 where only 13.2 hours were flown during December. The stability of Manual Morse Productivity was less affected by distance, atmospheric conditions, and low level of tactical activity than other modes of communication.

POSITION STATUS REPORTS

[redacted] Position Status Reports (PSR) were required when a mission resource was lost in excess of 24 hours in accordance with TECHINS 1056. The 90 PSR's issued reflected an average of 5.2 aircraft lost per day due to supply (NORS) or maintenance (IRAN), BAM, or Corrosion Control) during the 184 day period from 1 July to 31 December.

COLLECTION MANNING

[redacted] The CMA's were authorized to designate the manning of the collection positions aboard the mission aircraft flown in their areas. Normal collection manning was one linguist for the Radiotelephone position and one Morse Systems Operator for the Manual Morse position. This could be changed to either two linguists or two Morse Systems Operators, depending on the best configuration for the area flown. This option may be the reason for the increases in productivity, however, on some occasions the manning was detrimental!

[redacted]

AIRCRAFT EXCHANGE

(U) In October, Detachment 2 assumed the responsibility to provide EC-47Qs (ALR-35/38 equipped) to Detachment 3, 6994 Security Squadron Nakhon Phanom RTAB, Thailand. Several radio operators from Detachment 3 were trained on the ALR-38 System as they flew missions with Detachment 2 crews. Since NKP did not have the maintenance facilities to perform phase maintenance on the EC-47Qs the aircraft were rotated back to DaNang for phase and other maintenance.[2]

(U) Detachment 2 received additional aircraft to compensate for the aircraft that would be TDY to NKP. These aircraft were EC-47 N/Ps and this caused a training situation for TEWS as their pilots were qualified only in the EC-47Qs with the R2000 engine. Several missions had to be cancelled to provide aircraft for this transition training.[3]

[redacted]

CHAPTER III

PROCESSING AND REPORTING

[redacted] The processing and reporting functions improved in quality although they were hampered by inadequate support from the CMA's. The data base maintained by this unit was refined with increased emphasis placed on completeness and accuracy.

PROCESSING

[redacted] Processing of General Directorate of Rear Services (GDRS) communications necessiated review and action to reconfigure the two voice processing positions.[1] This change enabled scanning of [redacted] for identification of ARDF targets and recognition of significant intelligence items.[2] Many lowgrade messages could be transcribed and quickly forwarded to CMAs for decrypting, translating and reporting. Plaintext messages could be flagged for priority transcription at the processing CMA, thus greatly increasing the timeliness of the intelligence gained from these facilities. In addition, the Master Program was also changed to authorize an additional voice processing position effective 1 January 1972.[3]

[redacted]

[redacted]

The position was not configured to include the demodulator necessary to process [redacted]; rather, it was intended to be used to process low-echelon tactical voice communications.

GDRS Conference:

[redacted] The detachment was represented by Sergeant Todd M. Melton, [redacted] at a GDRS conference conducted at Wheeler AFB, Hawaii, between 30 August and 4 September. Information concerning the equipment capabilities, structure of the GDRS organization, and a better understanding of GDRS functions was gathered as a result of this conference.

REPORTING

Abundant Reporting:

[redacted] Reporting requirement for Project Abundant changed several times [redacted]

Separate reports were established for each system;[5] then, on 25 August the format for both reports was simplified.[6] This unit had issued 78 [redacted] and 13 [redacted] reports as of 31 December. Since feedback was not provided on the intelligence gleaned from these messages the significance of this intercept was unknown.

[redacted]

[redacted]

ARDF Recovery Report:

[redacted] Although the ARDF Recovery Report (ARR) did not change, a message was received on 13 November notifying the detachment of a proposed change to the ARR format within a 30 to 90 day period; as of 31 December no change had been made.

IDENTIFICATION RATE

[redacted] On 15 July, Pacific Security Region (PSR) requested the reason for a continued decline in the identification rate at this unit. Specifically, PSR inquired about the period 26 June thru 2 July when a 28 percent identification rate was obtained. PSR apparently based its figure on ARDF targets only and not on total intercept. (Many ARDF targets do not have callsigns to aid in identification.) Of the 248 ARDF targets reported during the cited period only three additional targets were identified in feedback provided this unit. The identification rate for total intercept was approximately 49 percent.

[redacted] The identification rate was adversely affected by the almost continuous communications changes employed by the enemy since August. Continuity was lost on many Reference Designators (RD) and recoveries were further complicated by the advent of the

[redacted]

[redacted]

monsoon season and the resulting decrease in activity.

TECHNICAL SUPPORT

[redacted] Both the collection and reporting functions were hampered by inadequate technical support from the CMA's and in particular by the 8th RRFS. Several factors could have caused this degradation; the seasonal rotation of experienced personnel, reduction in manning factors caused by the withdrawl of Army elements from Viet Nam, and the increased area of responsibility assumed by the 8th RRFS.

Technical Data Lists:

[redacted] The Technical Data Lists (TDL) received from all three CMA's which supported the detachment were evaluated for the tasking periods 21 August thru 3 September.[9] The three items noted were: (1) Very few UHF targets were provided for the AIR-38 system. (2) Multiple targets, located in widely separated areas were being placed on TDLs. (3) There was limited tasking of the VHF capability.[10]

[redacted] During November many TDL's were not received or were not received in time to be placed on the mission aircraft.[11]

[redacted]

[redacted]

High-Speed Run:

[redacted] More effective utilization of airborne resources was possible when identification was made aboard the aircraft. The NSA produced High-Speed Ident Aid was one of the few documents authorized aboard mission aircraft for identification of AMDF targets. This Identification Aid was not received regularly despite repeated attempts to procure it from the CMA's.

Identification Change Report:

[redacted] Changes in enemy communications required that the data base maintained by the detachment be constantly updated. Several technical means of identifing enemy communications were extracted from the Identification Change Report (ICR). In this way the data base was kept abreast of the latest developments recovered by the CMA's. Several times, however, the identifications made by the CMA's could not be explained and queries were sent requesting clarification. The information received in the replies proved very beneficial and was requested on all identifications made based on newly-recovered technical data. The 8th RRFS requested and received authorization to place a comments section in the ICR to explain the identifications as requested. Not one ICR received

[redacted]

thru 31 December contained this information, even after repeated requests were made.

NSA Technical Summary (SRATS) Re-Ident:

[redacted] Another of the technical messages used to maintain the data base the SRATS Re-idents was also found to contain inaccurate data.[16] In response to a query sent from this unit, NSA replied: Idents cited in reference resulted from an internal machine process that attemps "last-resort" ident of contacts by degarbling receiver callsigns.[17]

DATA BASE

[redacted] The data base was refined and procedures were implemented to use all possible sources of technical data to maintain as accurate and complete a base as possible. A card file was generated to supplement NSA published Technical SIGINT Reports. Changes were made to the card file based on data received in the technical feedback reports such as the ICR and SRATS Re-ident Report.

AIRBORNE IDENTIFICATION

[redacted] When the NSA produced high-speed runs were not received or they were inaccurate because of communications changes: working

[redacted]

[redacted]

aids that could be taken aboard the mission aircraft were developed. After several ideas were investigated it was decided that a listing of transmitters callsigns (fixed), a callsign book (PRC), a listing of basics, and data to support the collection of low-level communications would provide a reasonable identification capability aboard the aircraft. Authorization to take sanitized working aids containing this data aboard the mission aircraft was requested.[18] The proposed aids represented more complete and accurate identification capability than even the high-speed run provided and were reduced to approximately the same total volume. As of 31 December authorization had not been received.

TDY TO CMAs

[redacted] Several analysts were sent on TDY to the various CMAs for the purpose of establishing an exchange of ideas and data.[19] The subjects of TDLs, High-Speed Runs, technical data on low-level exploitable message passers, and the communications changes and their effects were discussed. In particular, was discussed, ST coverage on the TDLs and the unit was offered the task of compiling TDLs for the detachment from data provided by the CMAs (in this case the 8th [redacted]). There was an apparent misunderstanding as the CMA requested the detachment to prepare all TDL data for both MM

[redacted]

[redacted]

and RT. [redacted] This detachment did not have the expertise, manning, or necessary logs to compile TDLs for the missions supported by that CMA. Many of the problems discussed during the TDYs had not been resolved as of 31 December, however, valuable technical data was obtained and a better understanding of each unit's function was developed.

[redacted]

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[redacted]

CHAPTER IV

LOGISTICS

(U) Logistics implemented new procedures and controls which reduced NORS outage rates and necessary forms were submitted to establish new supply levels and requirements. While several problem areas improved, they were not completely resolved. One area in particular, the maintenance manning situation, was not changed despite HQ USAFSS monitoring.[1]

MAINTENANCE

Manning:

(U) Manning continued to plague the maintenance section. Manning assistance was required from other units as assigned manning dropped as low as 44 percent of authorized strength.[2] The highest manning factor attained was 63 percent. This required maintenance personnel to work a 72 to 84 hour work week during the entire last half of 1971. In August, two personnel from the 6994 Security Squadron were provided to assist; again in October three personnel were provided by the 6988 Security Squadron for

[redacted]

three weeks. Pacific Security Region provided another man for 15 days in October. With the merger of Detachments 1 and 2, manning authorizations increased and more maintenance personnel were assigned; however, the manning percentage of authorized versus assigned did not change.

Vibration Problems:

(U) The high failure rate of preamps and antennas continued to cause a burdon on supply. An improved checkout procedure was developed by Captain John E. Baxa, [redacted] and SSgt Dan L. Loomis, [redacted] which decreased the rate of preamps being returned to the manufacturer. There were 232 items returned through supply for repair as they were not repairable at this station; 86 of these items were preamps (compared to 106 for the first half of 1971) and 11 were AN/ARR-38 antennas (compared to 24 for the first half of 1971). More durable replacement parts also reduced the turn-around frequency of these items, and the number of Emergency Unsatisfactory Maintenance Reports (EUMR) issued on this subject.[3]

SUPPLY

(U) The detachment had 43 NORS items from 1 July thru 31 December, 19 for pre-amps and 5 for antenna assemblies. Requests

[redacted]

for supply assistance were submitted and AF Form 1996 (Request for Special Level) accomplished to establish or increase supply levels for these items. NORS caused an outage of 363.5 days, roughly equivalent to the loss of two and one half aircraft per day during the last half of 1971. The most serious shortages were pre-amps and memory modules of which depot did not have sufficient assets on hand to meet demands.[4] Approximately 50 AF Forms 1996 were submitted after a review in December to determine the spares required to support the ALR-35/38 systems. The NORS rate was further reduced through closer controls of the repair cycle items. Additional space was requested to store the added number of spares resulting from the increase in assigned aircraft.[5]

(U) At a base budget meeting on 23 September the detachment representative pointed out that additional funds would be required to support the increase of personnel and aircraft programed for this unit.

[redacted]

CHAPTER V

SUPPORT

(U) Training, Flight Operations, Standardization/Evaluation Flight Examiner (SEFE) Section, Communications, and Security Police all continued to support the mission within their specific areas. These functions were greatly affected by the merger of Detachment 1 in November as discussed in Chapter VIII.

TRAINING

(U) Training continued to receive special emphasis during the last half of 1971. Three steps were taken to improve the effectiveness of the Training Section: (1) The Training Section was added to the in/out processing clearance sheet for more effective control of training records. (2) A central library was established for COCDC, ECI, and WAPS study references. COCDC tests were administered to personnel assigned to OLAA, 6924 Security Squadron, because testing facilities were not available at Monkey Mountain. The number of personnel on UGT increased from 1 in July to 14 by December 31 and would have been higher if the 20351 AFSC had not been dropped.[1]

[redacted]

(U) Records maintenance continued to be a problem. Approximately one-third of the Consolidated Training Records needed documentation of local job proficiency training.

[redacted] The Training Section conducted a ground training class for all airborne AFSCs, covering common training areas such as aircraft emergency procedures, local operational policies, and common equipment. The Voice Processing and ARDF Reporting Sections trained their personnel in their respective functions. Both sections' training programs were monitored by the Training Section. These programs guided the student through the ground functions and only after they were mastered did the student proceed to the airborne aspects.

FLIGHT OPERATIONS

(U) The problem of scheduling crews more than 24 hours in advance continued to complicate flight scheduling. In November, Flight Operations instituted a four-flight concept in an effort to better control and manage the assigned personnel.

STANDARDIZATION AND EVALUATION

(U) The SEFE Section reviewed all aircrew members' Flight Records (AF Form 846) and alleviated most of the discrepancies. The influx Detachment 1 personnel and the ALR-34 system required checkrides as Detachment 1 operators checked out in the ALR-35 and ALR-38 systems while Detachment 2 operators checked out with

[redacted]

[redacted]

the ALR-34 System.

(U) In October a TDY was conducted by TSgt William E. Christian, FR[redacted], and SSgt Arthur Silvin, FR[redacted], to Phu Cat Air Base, RVN, for the purpose of coordinating procedures and gathering material for checklists so that little degradation occured during the merger.

(U) The 6994 Security Squadron SEFEs visited the detachment in August and again in November. The areas of crew proficiency, operating procedures, training programs, SEFE administration, and effectiveness were rated outstanding.[2]

COMMUNICATIONS

(U) The merger of Detachment 1 and Detachment 2 assured 100 percent manning of the communications center. The permanent communications center that was being held in abyance was cancelled when it was determined that the present H-1 communications van would suffice for the rest of the time the unit remained at DaNang.[3] This cancellation made communications equipment available for shipment to other units.

(U) Three tape cutting positions (UGC-54) were located in the operations area during July. This enabled more timely dispatch of the various technical reports sent by the detachment.

[redacted]

[redacted] During Typhoon Hester and on several other occasions during circuit outages the working agreement with the U.S. Naval Facility, DaNang, insured timely delivery of ARDF results to consumers.

SECURITY POLICE

(U) Special emphasis was placed on combat preparedness and physical security. The bonker positions around the operations area were reconstructed to provide better protection. Field phones were installed in each bunker with the master phone located in the entry control gate, thus allowing communications between these positions during an emergency.

PLANS AND PROGRAMS

(U) The Plans and Programs Section reviewed Emergency Actions Plan and prepared drafts to provide for the additional personnel absorbed from Detachment 1. The Commander's Disaster Control Center Checklists were also updated and reviewed.

Typhoon Evacuations:

(U) There were two typhoon evacuations between 1 July and 31 December. The first occured on 6 October when eight aircraft evacuated to Nakhon Phanom RTAB, Thailand due to severe weather associated with Typhoon Elaine. The aircraft returned to DaNang on 10 October. The second evacuation took place on 22 October when all operationally capable aircraft were again deployed to [redacted]

the safe haven site at NKP.[4] The eye of this storm, Typhoon Hester passed approximately 35 miles southwest of DaNang. The storm did not cause any major damage to detachment resources; minor damage consisted of water seepage and debris scattered throughout the area. With the return of the aircraft on 28 October normal operations resumed. The Emergency Actions Plans facilitated reactions to these emergencies and insured minimum impact on mission effectiveness.

Rocket Attacks:

(U) There were 3 rocket attacks on DaNang Airfield during the last half of 1971, compared to 12 during the first half. The first attack was on 5 July with one 122MM rocket impacting on the roof of a barracks, resulting in 5 killed, 37 injured, one barracks destroyed, one severely damaged and one slightly damaged. The other two rocket attacks were on 25 August and 4 October and resulted in only minor damage. While much of this decline was attributed to the monsoon season and some allied sweeps through treditional rocket launching areas, it was believed that the Rocket Belt program was also a deterrent factor.

[redacted]

[redacted]

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CHAPTER VI

SPECIAL INTEREST ITEMS

Project Abundant:

[redacted] Project Abundant was a covername for the use of [redacted] to gain intelligence from intercepted communications.[1] Detachment 2 was a source of systems [redacted] used by Front 4 and its associates. On 15 August the detachment was directed to participate in another aspect of this project. Front 4 planned a high point of tactical activity during the period 15-25 August and certain events made it necessary that last minute directives be sent from the headquarters to its subordinates. A message instructed the cryptographers to stand by the radios so these instructions could be decrypted and answered immediately. [redacted]

[redacted] The most lucrative targets for this operation were selected based on their echelon, frequency of AFDF fixes, and location.[redacted] The First Battalion of the 46th Infantry would assault

[redacted]

as soon as possible after a fix was passed by the mission aircraft. Complete co-operation was obtained from the 362d TEWS and the most highly skilled crews were scheduled to fly. Due to certain political complications the fix had to meet certain requirements before the assault force could be launched. On 17 August the operational elements of the assault force were in place and ready to react. Success came on 20 August at 0447Z when a heliborne assault was made on the Detached Element Front 4. Fourteen enemy were killed, two were captured, and a CHICOM K63 radio and six tactical code charts, eight sheets of cover designators/numbers, and 13 signal operating instructions were seized with no friendly casualities.[3] On 23 August after two less successful assaults the three company force was disbanded. While the desired [redacted] was not obtained the operation was very pleasing to the XXIV Corps.[4] Additional assaults were made, based on studies of ARDF fix clusters, resulting in several cave complexes being located and destroyed.[5]

Project Cumbersome:

[redacted] Project Cumbersome, plagued with problems ranging from poor weather to equipment malfunctions, resumed on 5 July.[6] ARDF aircraft were instructed to contact the ground station at

[redacted]

[redacted]

Ubon RTAB, Thailand, 45 minutes past the hour in order to maximize effectiveness and insure optimum measurement and evaluation. On 31 July a KY-8 cypher switch problem caused another suspension of the project. During this suspension a discone antenna was installed. The antenna and other equipment was satisfactorily tested on 18 October. The second 30 day test begun on 25 October and results showed that ARDF aircraft operating in Southern Laos could be provided tip-offs to enemy communications activity. Programming action was initiated to permanently establish a station for this purpose. The success of this test was attributed to the outstanding support and expertise displayed by all participating units.

Project Left Twist:

[redacted] On 8 December a devise which enables [redacted] communications to be exploited was positioned in the vicinity of YB308765. This unit was tasked to provide a sample of the intelligence being passed over the [redacted]. In addition an ARDF fix was requested to more accurately determine the exact position of the device. Tasking was received placing the transmitter on east iron coverage.

[redacted]

[redacted]

Due to the short range of the transmitter (approximately 20 Kilometers) the primary mission was ACI with ARDF as secondary. Tasking for this project was terminated on 16 December with coverage being assigned to another airborne platform.

Black Bear/Brown Beaver Program:

[redacted] On 2 August, a new aspect of the FIX/FAC concept was formally tasked to this unit. The program was nicknamed Black Bear and provided for the relay of ARDF fix information to Forward Air Controllers (FAC) in the RVN, specifically SBA Areas 8 and 9. By 13 September it was noted that while the number of fixes being passed was consistent the number that were visually reconnoitred decreased. When fixes were not passed while the mission was airborne they were passed over secure ground communications after the aircraft had recovered. As done in Project Abundant, studies were made to isolate clusters of fixes. The 3rd NVA Battalion was relocated and several cave complexes were destroyed as a result of these studies. On 2 October the program was expanded to Laos under the name Brown Beaver. On 20 December

[redacted]

[redacted]

the Brown Beaver program received favorable review by 7th Air Force and made a part of the TACAIR program in Laos. [redacted] While the program enjoyed some success the number of fix locations checked by the FACs remained low and feedback is limited due to lack of accurate BDA.

Rocket Belt Program:

[redacted] During the middle of July the Director of Intelligence 366th Tactical Fighter Wing and Detachment 2 personnel began an informal program designed to protect DaNang Air Field from standoff rocket attacks. All targets fixed within a 20 kilometer radius of the Air Field were passed to the DI who inturn co-ordinated with other intelligence sources and evaluated the threat to the Airfield. He then selected fix locations to be passed to artillery units for targeting. November saw a further development an an even larger area was brought into the program. When targets were fixed in this new area artillery was targeted as soon as possible. While other factors such as the monsoon season, Typhoon Hester and allied sweeps have helped keep DaNang relatively free of rocket attacks it was felt this program contributed to the safety of DaNang Air Field. [redacted]

AIR-38 System to SEA Area Twenty:

[redacted] During October Detachment 2 was tasked to fly

[redacted]

several ALR-38 missions in SEA Area 20 to search for and locate any multichannel targets in the suspect area. Several problems were encountered such as poor weather, equipment problems and lack of proper repair facilities. MACV commended the unit for their determined effort to fullfill this special ARDF request.[22]

Unlocated Enemy Units:

[redacted] MACV expressed concern over insufficient ARDF results on certain tactical units in SEA Areas 9, 10, and 11.[23] These units were believed to have moved since last being located and it was requested special efforts be made to locate them. All technical data available to this unit was compiled and ever effort made to locate these units. However, continunity on these specific units was lost when a communications change occured and they were not located.[24]

EC-47Q Accident:

(U) One incident occurred which required Airborne Incident Report (AIR) reporting in accordance with USAFSS Regularion 55-18. This incident happened on 10 November when an EC-47Q (Aircraft 8009) left the runway at Nakhon Phanom RTAB, Thailand, four times during takeoff roll and finally came to stop approximately 2500 feet from

[redacted]

[redacted]

[redacted]

the starting point.[25] Damage was sustained to both wingtips and one horizontal stabilizer. No damage was suffered by USAFSS equipment or any personnel aboard the aircraft.[26] The aircraft had not returned to operational status as of 31 December.

[redacted]

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[redacted]

CHAPTER VII

EQUIPMENT

[redacted] Detachment 2 had three different ARDF systems assigned: The AIR-34, AIR-35, and AIR-36. The basic was the AIR-34[1]. The AIR-35[2] could be referred to as a computerized version of the AIR-34. The AIR-36[3] was a more refined system with an extended frequency range of 2-190 MHz vice 2-16 MHz for the AIR-34 and AIR-35. The concept of operation of the three systems was basically the same: Locate a desired target signal, tune the equipment in order to obtain sufficient signal strength to enable the system to determine a line of bearing (LOB), and maneuver the airborne platform to gather sufficient data to locate the emitter. These functions were accomplished by two men, the navigator and a radio operator assigned to the "A" console. At the same time a radio operator assigned to the "B" position was collecting intelligence for the purpose of identifying the unit. This three man team formed the basic ARDF crew.

[redacted]

[redacted]

[redacted]

The ALR-34, ARDF System:

[redacted] Since the ALR-34 did not have a computer to resolve the fix location and RADIUS, the navigator was required to hand plot. He was also required to use a different procedure to update the DOPPLER. Since the navigator was frequently busy, manually converting and computing fix data, the radio operator on the "X" console had the capability to take prints on a target, thus gathering the data for the navigator. (The "X" console was the same as on the ALR-35 with the exception of the print capability and the requirement that the print-enable switch at the "X" console be on while the navigator was making his doppler updates.)

The ALR-35, ARDF System:

[redacted] The computer utilized with the ALR-35 system had a memory core for 99 targets and could process as many as 20 LOB's to determine a fix location. While this system freed the navigator of the requirement to manually convert and compute fix data, it required him to monitor and edit the data used by the computer. The use of the system for working targets and navigation allowed the navigator to process target data quickly and accurately. Doppler updates were also simplified and more time was available to work targets.

The ALR-38, ARDF System:

[redacted] The computer utilized with the ALR-38 system also had a memory core for 99 targets. It could use 15 LOB's to

[redacted]

[redacted]

determin a fix location, however up to three targets could be combined to resolve one fix position. The refinement in the AIR-38 system changed the appearance of the "X"[5] console and removed the True Bearing Indicator (TBI), but the operation was still similiar. The programming of the data processor and the antenna system for the AIR-38 was different[6]. While the main DF antennas were three dipoles, as in the AIR-34 and AIR-35 systems[7], there were ten monopoles that were used to provide additional data for the computer. The most significient difference of the AIR-38 was the extended frequency range that enabled the General Directorate of Rear Services (GDRS) multi-channel communications facilities to be located.

[redacted] All systems had a self test that was conducted three times during the mission; before take-off, shortly after take-off and shortly before landing. These self tests differed between the 34/35 and 38 systems and required the "X" operator to be able to properly conduct them and determine if the equipment was fully operational. The difference between the systems made it necessary for the radio operator at the "X" console to be proficient in recognizing discrepancies in equipment setups, power requirements, malfunctions and the necessary procedures to correct them. His ability to correct a malfunction often determined the success of the mission, if it could continue or would return to base.

[redacted]

[redacted]

[redacted]

CHAPTER VIII

MERGER OF DETACHMENT 1 AND DETACHMENT 2

(U) Rephasing an old military axiom "Wait and Hurry up," probably provides the best description of the closure of Detachment 1, 6994 Security Squadron at Phu Cat Air Base and its subsequent assimilation by this unit. Being at the bottom of the Totem Pole and recognizing that all things run downward, it is not the intent of this chapter of history to cover those higher-level actions and ramifications which occurred during the "talk-and-plan" stages in June, July, August, September and October. Rather, the reader at this point should review Part II of the Detachment 1, 6994 Security Squadron USS-D3 History where he will find a vivid and well-described sequence of events leading up to the actual "go" decision and implementation. This unit was kept abreast of developments relative to the situation, thanks to the close coordination between it and Detachment 1, and their parent unit at Tan Son Nhut Airfield RVN, but until the actual visit by 7th Air Force representatives to DaNang on 2 and 3 September, it had been a position of waiting but not getting involved.

7th Air Force Team Visits DaNang to Discuss Resettlement of 361 TEWS/Detachment 1, 6994 SS Assets:

(U) During the afternoon and evening of 2 September and again on 3 September, representatives from 7th Air Force, headed by Lt Col Clark, met with representatives of the 366 TFW, 362 TEWS and Detachment 2, 6994 SS.* It had been initially briefed by Lt Col Clark that General Lavelle (Commander, 7th AF) had sent the team to review the impact of the move to DaNang along with the following ground rules: no new buildings, no significant money expenditures, no impact on the VIM Program, consider drawdown of the 9th Special Operations Squadron (AC-119 "Stinger" Gunships based at DaNang), consider the move to DaNang of the 12 TFS, plan for an in-place date of 1 November. The team then explained the 7th AF position, reviewed the 366 TFW/DaNang position, and those comments put forth by the tenant units concerned--362 TEWS and Detachment 2, 6994 SS. In addition, existing facilities were toured, with the exception of Detachment 2 operations area for which none of the team held proper SI clearance. In response to the team's request, Detachment 2 compiled and submitted the following requirements for satisfying the merger:

1. Construction of an airconditioned ten-foot addition to the existing Bravo Maintenance Quonset building.

2. An additional 2000 square feet of floor space made available

* Offices Represented at This Meeting Were; 366 TFW: CC, CV, DM, SCE and DOX. 362 TEWS: CC, DO. Detachment 2, 6994 SS: CC.

to the SI Operations. Considering the ground rules, it was decided from the onset that portable or modular buildings would best suit the need, particularly since they could be installed with little or no disruption to the existing SI Operation. (This proved later to be an exceptionally wise decision.) The existing facility was already overcrowded and, as will be seen later, assumption of a mission triple--fold pressed the facility to a point of being rediculous until the new spaces were occupied. Short-lived consideration had been given to the possibility of attaching H-1 vans to the existing facility but the feasibility of doing such with its consequential disruption to everday operations could not be tolerated. Of course, construction of a duplecate facility was aganist the grain of the ground rules forbidding new construction and excessive money spending.

3. With the vehicle situation on DaNang already critical, including that of Detachment 2, a minimum of three vehicles was requested; one multi-stop van for operations flight crew transport and two multi-stop vans for Bravo flight line maintenance.

4. Billeting spaces were the subject of considerable discussion because at the time planning was also in progress to gain an additional F-4 unit on DaNang while an Army Retrofit unit was also pressing for billeting about 300 people on DaNang. Detachment 2 plans for increased billeting were based on a 100 projection, the majority being aircrew members requiring air-conditioned quarters. Resolution of the billeting problem best

suited Detachment 2 when it was given the selection of 22 unoccupied and run-down Quonset huts previously occupied by U.S. Marine aircrews. This selection at least put the billets adjacent to the existing detachment cantonment. Extensive rehabiliation of the buildings and two latrine facilities was envisioned. The Quonset huts had once been airconditioned (therefore wiring and installation of units would have been minimal); they were divided into four, confortably; two-men rooms each with an outside entrance. It must be pointed out here that the detachment had an average of 135 assigned personnel at the time, with facilities for 165 (three 40 man airconditioned barracks, one 40 man barracks and a 5 man BOQ). Obviously, an additional 100 people could not be housed without extra space--Although as seen later, it was in fact done for a short period of time.

5. Detrimental to the Quonset hut billeting was a huge drainage canel and fence which separated the detachment canonment and the Quonsets. Of necessity, a bridge was required to preclude a half mile trip to circumvent the obstacle when traveling between locations.

6. Foreseeing only a nominal increase in workload, no requirements were stated for activities such as, administration, communications, personnel, security police, and supply. It was felt that their facilities were adequate to sustain the increase.

12 TFS Does Not Move to DaNang:

(U) What may seem insignificant or irrelevant to the reader

at this time was the JCS decision to deactivate the 12 TFS rather than relocate it to DaNang. This played an important role in the billeting of Detachment 2 personnel following the destruction caused by Typhoon Hester late in October.

Planning at DaNang for Expansion:

(U) Once requirements had been stated things still were up-in-the-air but civil engineers developed construction plans which were finalized on 29 September in a meeting with base civil engineering, 554 CES (Red Horse), 362 TEWS, and Detachment 2, 6994 SS representatives. Plans for that construction portion to Detachment 2 facilities were exactly as stated to the 7th AF team earlier in the month.

7th Air Force Queries Impact on Move Without Construction:

(U) On 5 October the 366 TFW/DOX contacted 362 TEWS and Detachment 2, 6994 SS regarding a 7th AF query into the impact of effecting the move to DaNang without the construction requirements being fulfilled. This was adamonthly opposed by both tenants but there was evidence of such action because Red Horse had been instructed to cease all construction, which in fact they did.

366 TFW Logistics Action Directive (LAD) is Issued:

(U) On 8 October the 366 TFW/LG issued LAD 72-7-2 under authority of 7th AF PAD 72-7-2. This LAD tasked the various wing organizations in support of the move.

Pacific Security Region Programmed Action Directive (PAD) is Issued:

(U) The 6994 SS had issued a sample PAD for control of actions but it was cancelled when PSR on 16 October issued PAD 71-300. This PAD provided programmed actions for the entire 6994 SS complex, and beginning 22 October the first input was submitted by Detachment 2.

Developments in Specific Areas of Interest:

(U) At this point it is considered impractical to discuss all developments in chronological order. Rather, each specific area will be addressed in chronological order as events moved toward completion. These will be billeting, transportation, logistics, the personnel increase, the mission increase, and an overall look at the detachment itself.

Billeting:

(U) Plans and progress were well underway toward meeting Y-Day: the quonsets were being rehabilitated by Philco Ford and Civil Engineering and it seemed that the billets would be ready by the end of October. Than Mother Nature stepped in and with a sweep of her hand (namily, Typhoon Hester) laid to waste the best laid plans of man. The typhoon viciously ripped through the DaNang area on 22 and 23 October and caused extensive damage to the air-field, particularly to barracks and hootches (SEA huts). Specially hard hit was the 366 Security Police Squadron, its personnel having huts blown out from under them with others losing roofs and walls. Emergency billeting requirements caused the 22 Quonset huts

(previously destined for Detachment 2 expansion use) to be allocated to house the security policement. In a fast reshuffle, the detachment was offered a modular barracks which had once been occupied by the 6924 Security Squadron when it was located at DaNang. The condition of that building was deplorable--two-story, open-bay, deteriorated, filthy and obviously unfit for occupancy. One thing was in the detachment's favor: The build- was at the start of a project which was to convert it into a 24 room, two-man per room, airconditioned barracks to house officers of the F-4 Squadron scheduled to relocate to DaNang. With that relocation cancelled, at least funding and planning were in-being. Actual construction, though, was another story. Emergency repairs undertaken throughout the base as a result of Typhoon Hester had caused diversion of all material and workcrews to priority projects. With "Y" date fast approaching it was obvious that no billets would be available for the Detachment 1 people. At that point the Detachment 2 Commander, assembled the unit personnel at two sessions and explained the housing situation and enormous problem developing. It was agreed that rather than subject the Detachment 1 people to the impossible conditions in the run-down barracks, all Detachment 2 personnel would double-up as necessary to house the influx. This meant as many as four people in a small two-man room, double-bunked, sharing furniture and even personal items since there was no room to move in lockers, personal equipment, and the like for

new people. At least, it made assimilation of the Detachment 1 force smoother and people couldn't help but get to know each other; it also provided a more decent place to live for a short period of time. Meanwhile, beds and bedding were obtained from base supply. Wall lockers were not available, and it was only after weeks of pressing the issue that 77 new steel wall lockers were air shipped from the States to Detachment 2; they were received on 10 December.

(U) From 3 November through 10 November, the influx began. The detachment saw its daily strength increase by 7, 4, 2, 14, 18, 14, and 7 people. This brought strength to 200 on 10 November, and by 12 November it was decided to move 24 people into the lower floor of the barracks being rehabbed (building 1631). The first floor had been subdivided into 12 rooms without doors or double walls, but it had to do for the time. So, people moved in--each with a bed, no locker, no desk, no table, no lamp, not even a waste basket. But here was where ingenuity, resourcefulness, and togetherness common to the "GI" came into play--they put up with it and made it do. (Keep in mind that not once was there a letup in mission flying requirements').

(U) When it seemed that work crews could get back to normal operations, 366 TFW P&D 72-5-1 was issued to shape up the base in preparation for a visit by General Ryan, CSAF.

(U) On 6 December, carpenters once again began to work on the barracks and by the end of December all major construction was completed and the second floor was occupied. Only air

conditioners remained to be installed.

Transportation:

(U) Probably one of the most depressing situations on DaNang was that of the vehicle fleet--a run-down, aged fleet of over 1,000 of which about 300 were general purpose vehicles. With the VIN program in full swing scores of new and young vehicles were being turned over to VNAF with the older ones being retained for U.S. use. Throughout this six-month period, the average vehicle-out-of-commission rate was ten percent. Detachment 2 was never at 100 percent assigned vehicular strength and gloomy days were evident when a step-van and a six-passenger crew truck were lost for turn over to VNAF. Also, a van was turned in for repairs and ended up being salvaged.

(U) Actually, the Detachment 1 merger improved the situation because 7th AF directed transfer of its authorization to Detachment 2, six vehicles to add to Detachment 2's authorized five. Two pick-up trucks, a step-van, a carryall van, a six-passenger crew truck, and a 1.5 ton state bed were "inherited" from Phu Cat. Although the condition of the vehicles was no better than the DaNang Fleet, the number made outages more palatable. Breakdowns were continually experienced and it was only through many self-help hours expended by detachment personnel that its small fleet could be kept running. Most of the time eight vehicles were assigned to the detachment, but at least one was out of

commission for repairs or parts.

Logistics:

(U) Supply: Once it became apparent that the move would in fact terminate at DaNang it became necessary for Detachment 2 to place supply requisitions into the base system. After some difficulty in establishing procedures for transfer of materiel between Phu Cat and DaNang base supply systems, Detachment 2 submitted requisitions for all items it felt would be needed to handle the increase. These items included weapons, beds, mattresses, desks, chairs, lockers, filing cabinets, etc. Detachment 2 coordinated with Detachment 1 to obtain a list of items available for transfer thru the system. In addition, maintenance supply levels had to be upgraded and adjusted with the introduction of the AIR-34 and more AIR-35 systems. Most of the transfer of electronic gear bench stock was made by mission aircraft with the paperwork being followed up. In some cases the demand data had been loaded into the supply computer but levels were not sufficient to hold the quantities of some items being shipped. In these cases, rather than ship excess to NKAPA the items were reviewed and reverse posted to hold the property. In general, the supply system was able to adequately provide those items requested. The major critical item turned out to be lack of available wall lockers for the barracks, but this was eventually solved by air shipment discussed in the paragraph on "Billeting."

(U) Maintenance: Of all entities, maintenance seemed to take care of itself best. Although the ALR-34 was being introduced along with an increased number of ALR-35 systems, the changeover between Phu Cat, Tan Son Nhut, and DaNang went exceptionally well. Test and calibration equipment was transferred via mission aircraft while the supply function took care of establishing new levels of stock.

The Personnel Increase:

(U) Appendix XII presents a most impressive graph which shows the "warm body" strength of Detachment 2 during the period. The increase in personnel from Detachment 1 is evident beginning from "Y" date until it peaked at 220 on 4 December. The crews began arriving as they completed their missions, groups of two, three and four people at various intervals. In addition, normal airlift also brought in groups of people from both Phu Cat and Tan Son Nhut. From arrival, each man had to be processed in, billeted, oriented and prepared to fly missions without delay. The commander held special commander's calls for the new arrivals to welcome them, to explain the housing situation in perticular, and to ascertain that all was being done to make the unit continue without mission degradation. The huge increase was a shock to the detachments' system, but preparations had at least alleviated many areas which could have alienated the newcomers.

The Mission Increase:

(U) From an average of 6 missions a day to an average of 16 with as many as 18 per day - this was as great an impact on the unit's system as was the large personnel increase. The existing operations facility, a 1900 square foot Quonset building, was already crowded before the move and with the planning it was decided to go for complete floor space requirements stated in USAFSS Manual 86-2. Granted the operations functions basically remained unchanged except for an increased workload, but space storage had always been a problem and here was an out. From the onset, as was stated earlier, the best way to expand the SI facility was to install modular buildings adjacent to the Quonset. This permitted unintrupted SI operations during construction. Of the requested 2000 square feet, the offer to install three 30 by 50 foot modular buildings was accepted as this would nearly double the existing space. Modular units were shipped from Saigon on 5 October and arrived at the DaNang deep water port on 14 October. When finally delivered around 1 November, having been lost for almost 2 weeks, their condition was depressing. It had been obvious the space would not be available in time for "T" day; now it was doubtful if it would ever be available. A "last-ditch" effort to obtain two new modulars on DaNang (still packed) failed since the units belonged to the University of Maryland Program. On 11 November, Red Horse construction crews began assembly of the units, an effort

which certainly took determination to come up with buildings from that junk. Parts were useless, floors and walls had to be refabricated, doors had to be rebuilt - all in all, it probably cost more to reconstruct the buildings than new ones would have cost. By then "Y" date had passed, the press was on, and the SI facility was bulging. Out of the materials on hand, Red Horse was able to construct two 20 by 30 feet and one 20 by 20 foot buildings, which was entirely satisfactory to the sardines in operations. Fortunately, during most of the time from "Y" day, the weather was favorable and crews were kept in the air rather than being held in operations. By the end of December it seemed that the three units would be occupied within two weeks. The 20 by 20 foot building was equipped for aircrew briefings while the other two would be used for SIFE, Training, Scheduling and a lounge/hold area. Indeed, it was time to expand from 1900 to3500 square feet.

General:

(U) From 3 November thru 31 December the detachment increased from 135 to 216 personnel with its mission rate increasing in average from 6 to 16 missions a day. Quarters for 100 extra people were requested by "Y" date but 200 people at one time were crowded into the existing barracks. Vehicles were requested but it turned out that for a time following "Y" day, the detachment had less vehicles than it had before "Y" day. Space in operations was requested, but

by the end of December that space was not yet available. Barracks furniture and air conditioning was requested, but by the end of December people were living in rooms without doors, only beds for furniture, and no air conditioning, yet they were flying Combat Missions daily. The entire move was one of "wait and hurry up," but the attitude of every member of the detachment was a constant recognition to get the job done, the mission accomplished, and the self-satisfaction realized.

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GLOSSARY

AAA	Anti-Aircraft Arterilly
ACC	Airborne Radio Direction Finding Coordination Center
ACI	Airborne Communication Intelligence
AFB	Air Force Base
AFSC	Air Force Specialty Code
AIR	Airborne Incident Report
AIR-34	ARDF System, Frequency Range 02-16 MHZ
AIR-35	Computerized ARDF System, Frequency Range 02-16 MHZ
AIR-38	Computerized ARDF System, Frequency Range 02-190 MHZ
AMS	Airborne Mission Supervisor
ARDF	Airborne Radio Direction Finding
ARR	Airborne Radio Direction Finding Recovery Report
CBPO	Consolidated Base Personnel Office
C&D	Continuity and Development
CC	Combat Cross
CMA	Collection Management Authority
COCDC	Consolidated Operational Career Development Course
COMMSG	Control Message
CUT	The point at which two LOBs intersect
DF	Direction Finding
DI	Director of Intelligence
DSU	Direct Support Unit
DURMIS	Daily Unit Resource Management Information Summary
EUMR	Emergency Unsatisfactory Materiel Report
FAC	Forward Air Controller
FIX	A point determined by the intersection of three or more LOBs
GDRS	General Directorate Rear Services
GSU	Geographically Separated Unit
ICR	Identification Change Report
IRAN	Inspect and Repair as Necessary
IRO	Instructor Radio Operator
LOB	Line of Bearing

[redacted]

[redacted]

MACV	Military Assistance Command Vietnam
MM	Manual Morse
NKP	Nakhon Phanom, Thailand
NORS	Not Operationally Ready-Supply
NSA	National Security Agency
OPINS	Operating Instructions
PACAF	Pacific Air Force
PRC	Rage Row Column
PSR	Pacific Security Region
RD	Reference Designator
RO	Radio Operator
RRFS	Radio Research Field Station
RT	Radio Telephone
RTAFB	Royal Thai Air Force Base
RVN	Republic of Vietnam
SEA	Southeast Asia
SEATS	Southeast Asia Technical Summary
SEFE	Standardization Evaluation Flight Examiner
SIGINT	Signals Intelligence
TDL	Technical Data List
TDY	Temporary Duty
TEWS	Tactical Electronic Warfare Squadron
TECHINS	Technical Instructions
TFW	Tactical Fighter Wing
TOT	Time on Target
USAFSS	United States Air Force Security Service
WAPS	Weighted Airman Promotion System
X	An ARDF position that locates and tunes the signal
Y	An ARDF position that provides intelligence data to identify the signal being worked by X
Z1	An Airborne Radio Telephone Collection Position
Z2	An Airborne Manual Morse Collection Position

[redacted]

[redacted]

APPENDIX I

BIOGRAPHICAL SKETCH OF COMMANDER

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APPENDIX I

BIOGRAPHICAL SKETCH

Major E. J. Ledet was born in Larose, Louiana. He enlisted in the United States Air Force in November 1952. After completing basic training and radio operator school he was assigned to the 37th Radio Squadron Mobile, a United States Air Force Security Service unit at Kirknewton, Scotland. After a one year tour in Scotland he was assigned to the 34th Radio Squadron Mobile at Wheelus Air Base, Libya, where he was selected as a member of the Pakistan site survey team. Returning to the United States in December 1955, he attended the Radio Traffic Analysis Course at the 6983 Radio Squadron Mobile at March Air Force Base, California. Subsequently he was assigned to the Air Force Special Communications Center at Kelly Air Force Base, Texas. After a two-month separation from the service he again returned to the Air Force and the AFSCC for the next twelve months.

After graduating from Officer Candidate School in September 1958 he was assigned to the 6987 Radio Squadron Mobile at Shu Lin Kou, Taiwan where he served as a flight commander. Leaving Taiwan in 1960 he returned to the AFSCC until 1962 when he was selected as one of the initial cadre of AN/GLR-1 officers to be assigned to the 6915 Security Squadron at Hof, Germany. In July 1965 he was assigned as an instructor in the Signals Intelligence Officer

Course (OBK 8031) at Goodfellow AFB, Texas. In 1967 he traveled to Okinawa where he was assigned a staff position to the Chief, Joint Sobe Processing Center. Back to Goodfellow in 1969, he was Chief of the Managerial Training Division, responsible for the USAFSS NCO Academy, the OBK 8031 course, and the USAFSS Mission Improvement Conference.

Effective 5 July 1971, Major Ledet assumed command of Detachment 2, 6994 Security Squadron at DaNang Airfield, Republic of Vietnam. His keen interest in operations and active participation as an aircrew member in the capacity of radio operator established a rapport with the men of his command.

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APPENDIX II

AWARDS AND DECORATIONS

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APPENDIX II

AWARDS AND DECORATIONS

(U) The Awards and Decoration Section was responsible for maintaining a current file on all personnel assigned to the unit to verify award qualifications. The section also typed and coordinated all requests for awards and decorations to ensure timely submission to higher headquarters. In addition, the section processed the approved awards to ensure prompt presentation to each receipient. The chart displays the number of awards processed and the status as of 31 December 1971.

Award	Submitted	Approved	Disapproved	Pending
Distinguished Flying Cross	29	0	0	29
Bronze Star Medal	11	2	0	8*
Air Force Commendation Medal	17	7	1	9
Air Medal	244	216	0	28

* One Bronze Star Medal was changed to an Air Force Commendation Medal by 7th Air Force.

APPENDIX III

AIRCRAFT ASSIGNED

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APPENDIX III

AIRCRAFT ASSIGNED

Aircraft Number	Type	Equipment
43-15668	EC-47N	ALR-34
43-15980	EC-47N	ALR-34
44-76668	EC-47P	ALR-34
42-93161	EC-47N	ALR-34
43-49865	EC-47P	ALR-34
42-93166	EC-47N	ALR-34
45-50925	EC-47P	ALR-34
43-16029	EC-47Q	ALR-35/Z1, Z2
43-49570	EC-47Q	ALR-35/Z1, Z2
42-93704	EC-47Q	ALR-35/Z1, Z2
40-48072	EC-47N	ALR-35
40-49260	EC-47P	ALR-35
40-24300	EC-47N	ALR-35
40-24313	EC-47N	ALR-35/Z1, Z2
40-93814	EC-47N	ALR-35/Z1, Z2
42-23882	EC-47N	ALR-35/Z1, Z2
43-77254	EC-47P	ALR-35/Z1, Z2
45-01102	EC-47P	ALR-35/Z1, Z2
43-48153	EC-47N	ALR-35/Z1, Z2

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Aircraft Number	Type	Equipment
42-49491	EC-47P	ALR-35/Z1, Z2
43-48702	EC-47P	ALR-35/Z1, Z2
42-00665	EC-47N	ALR-35/Z1, Z2
45-00937	EC-47P	ALR-35/Z1, Z2
43-48009	EC-47Q	ALR-38/Z1, Z2
43-48087	EC-47Q	ALR-38/Z1, Z2
43-51131	EC-47Q	ALR-38/Z1, Z2
43-15204	EC-47Q	ALR-38/Z1, Z2
43-49208	EC-47Q	ALR-38/Z1, Z2
43-48636	EC-47Q	ALR-38/Z1, Z2
43-15681	EC-47Q	ALR-38/Z1, Z2
43-30730	EC-47Q	ALR-38/Z1, Z2
43-39771	EC-47Q	ALR-38/Z1, Z2

Prior to the merger of Det 1 and Det 2 only EC-47Q type aircraft were assigned to DaNang, three ALR-35 and nine ALR-38 equipped aircraft.

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APPENDIX IV

MANNING

APPENDIX IV

MANNING

	1 July 1971		31 December 1971	
AESC	Authorized	Assigned	Authorized	Assigned
E4044	1	1	1	1
E8035	1	2	1	1
G8035	1	1	1	1
202X0	14	14	32	23
203X1	27	20	40	29
291X0	12	8	12	9
292X1	73	67	140	107
29292	1	1	1	1
301X3	15	13	34	23
304X4	4	3	4	3
645X0	3	3	5	3
702X0	8	10	10	9
732X0	2	2	2	2
811X0	10	6	11	9
Total	172	140	294	221

[redacted]

[redacted]

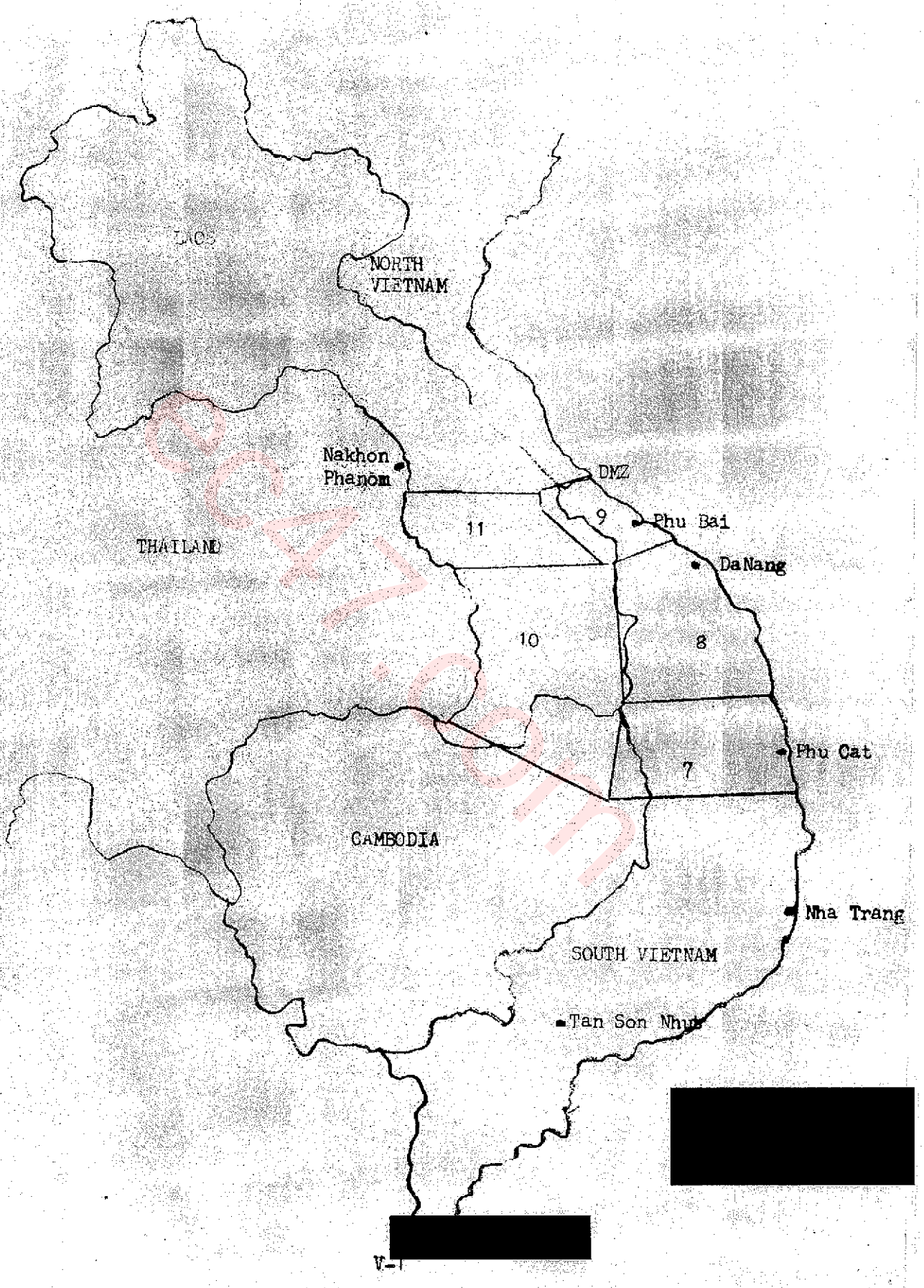
ec47.com

APPENDIX V

SEA ARDF AREAS

ec4z1.com

[redacted]



[redacted]

[redacted]

APPENDIX VI

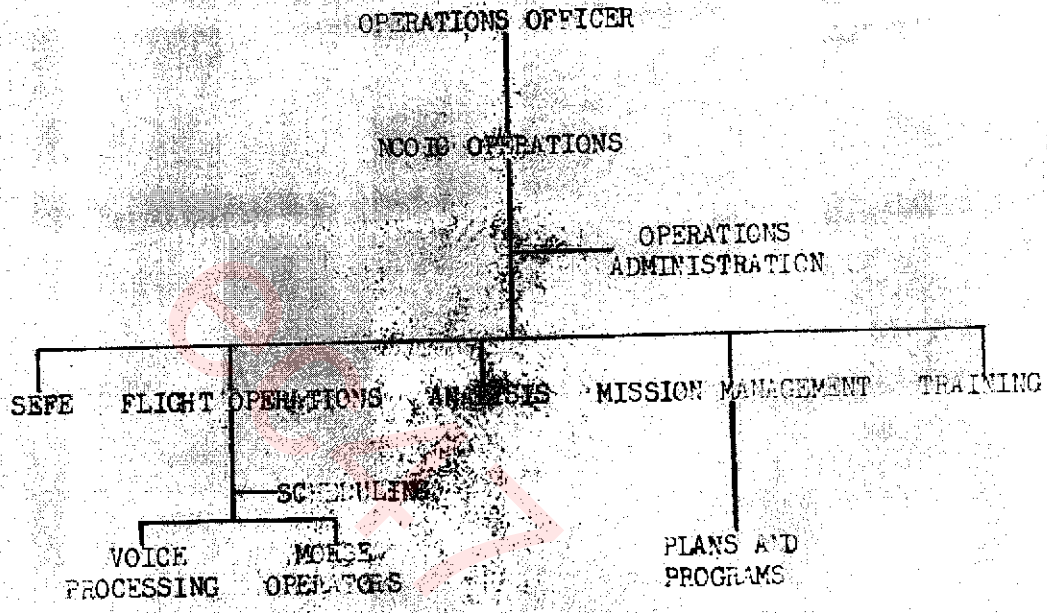
ORGANIZATIONAL CHARTS

ec47.com

USS-D3

[redacted]

DETACHMENT 2 OPERATIONS



CHAIN OF COMMAND

HEADQUARTERS, UNITED STATES AIR FORCE SECURITY SERVICE

HEADQUARTERS, PACIFIC SECURITY REGION

6994TH SECURITY SQUADRON

DETACHMENT 2, 6994TH SECURITY SQUADRON

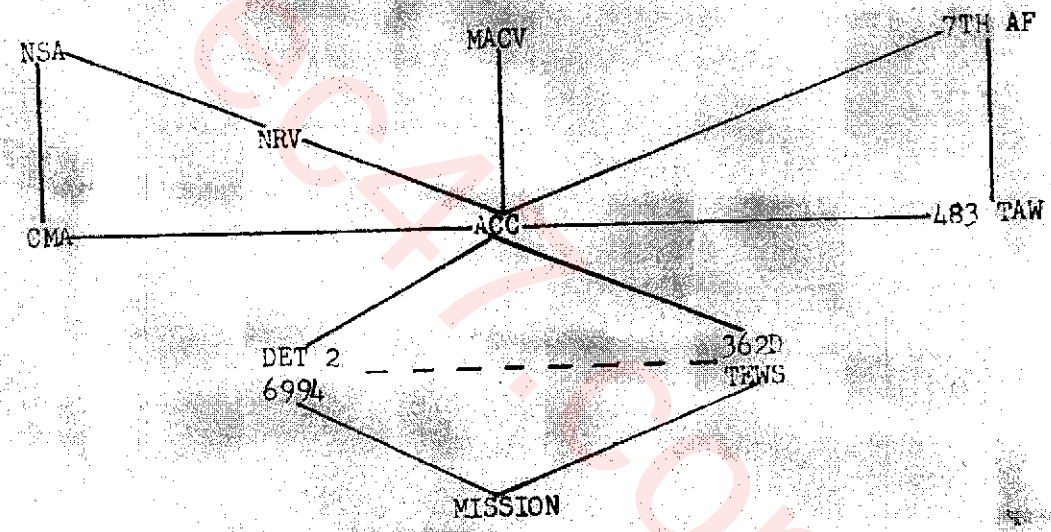
[redacted]

[redacted]

USS-D3

[redacted]

OPERATIONAL CHAIN OF COMMAND



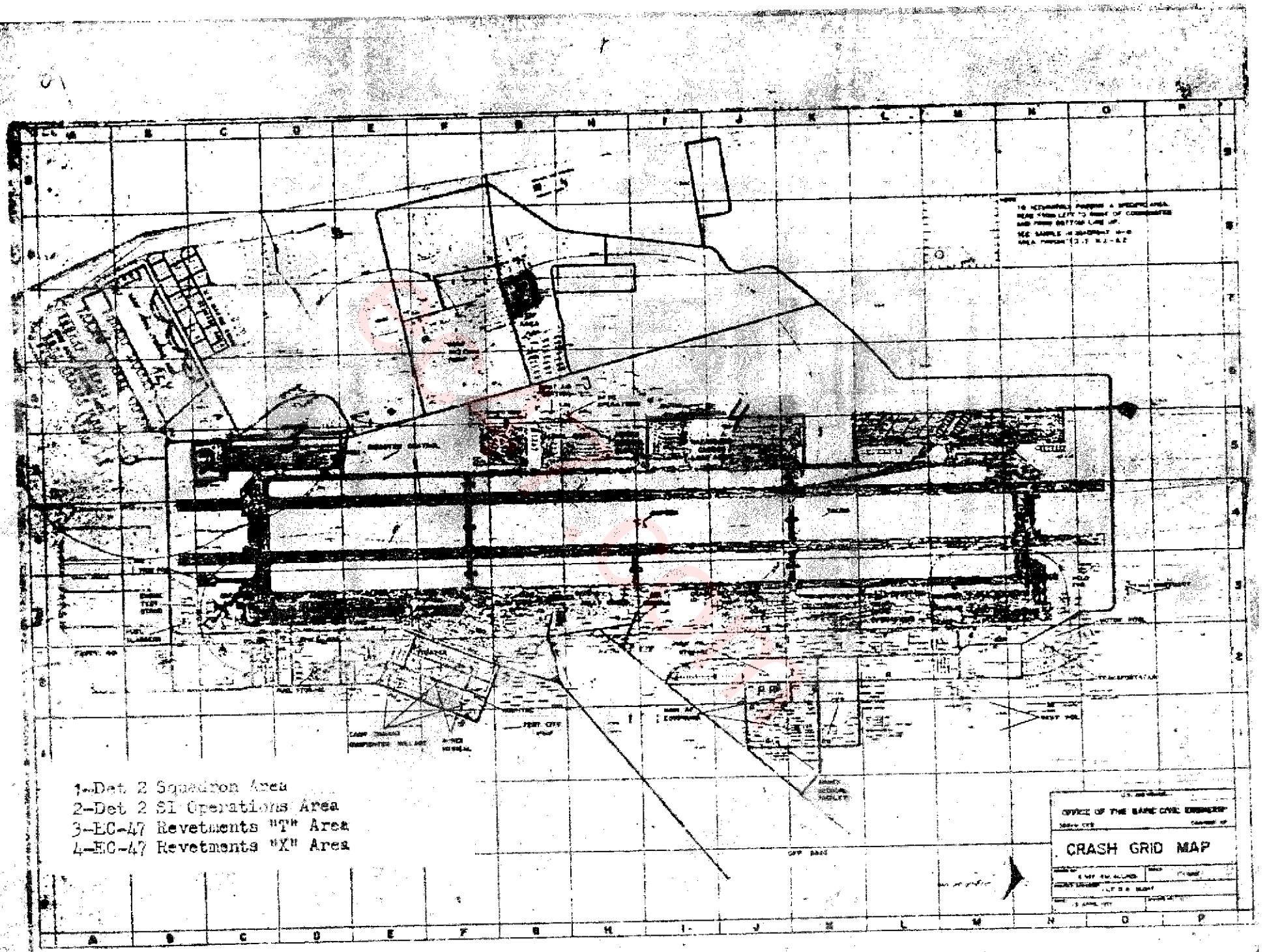
[redacted]

[redacted]

APPENDIX VII

MAPE OF BASE

ec4z.com


1-Det 2 Squadron Area
2-Det 2 SI Operations Area
3-EC-47 Revetments "T" Area
4-EC-47 Revetments "X" Area
OFFICE OF THE BASE CIVIL ENGINEER
CRASH GRID MAP

[redacted]

APPENDIX VIII

ARDF TARGET PRODUCTIVITY

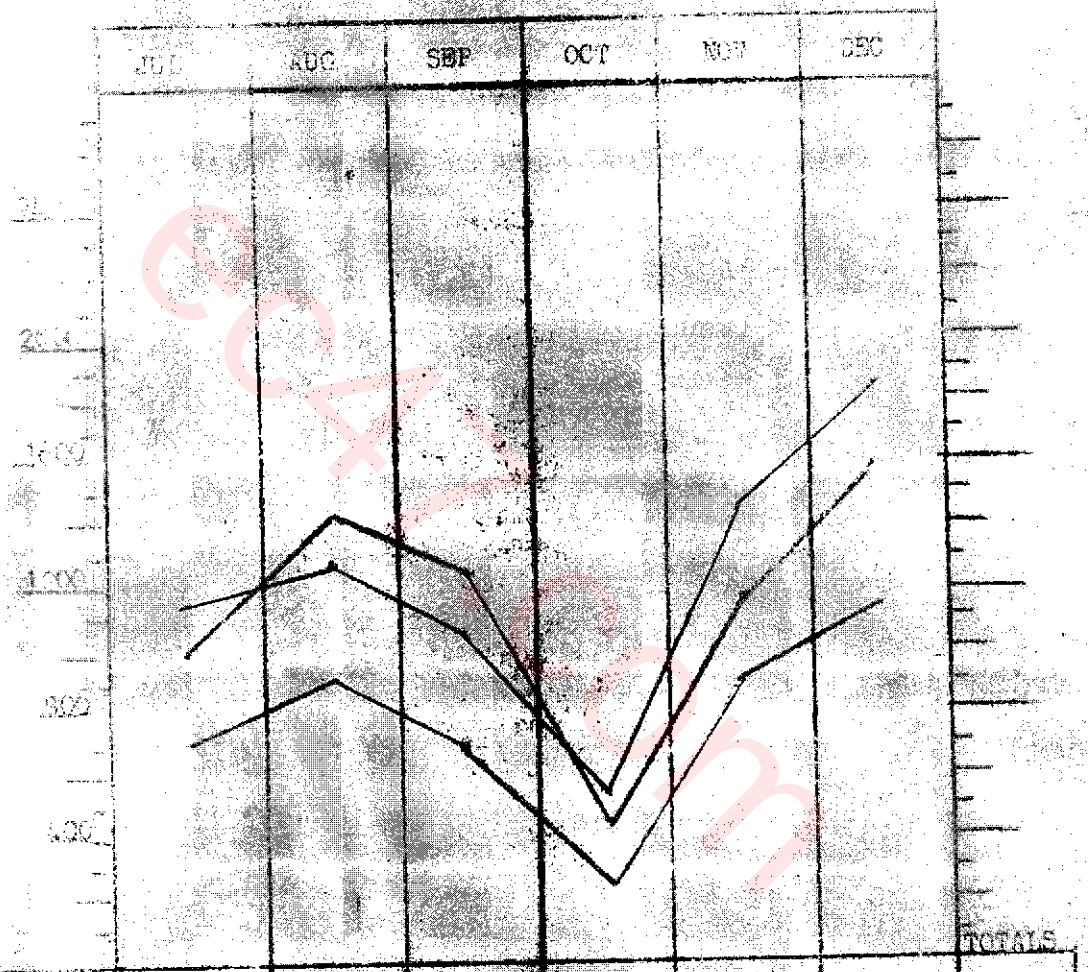
ec47.com

[redacted]

[redacted]

[redacted]

...OF PLANT PRODUCTIVITY ALL ...

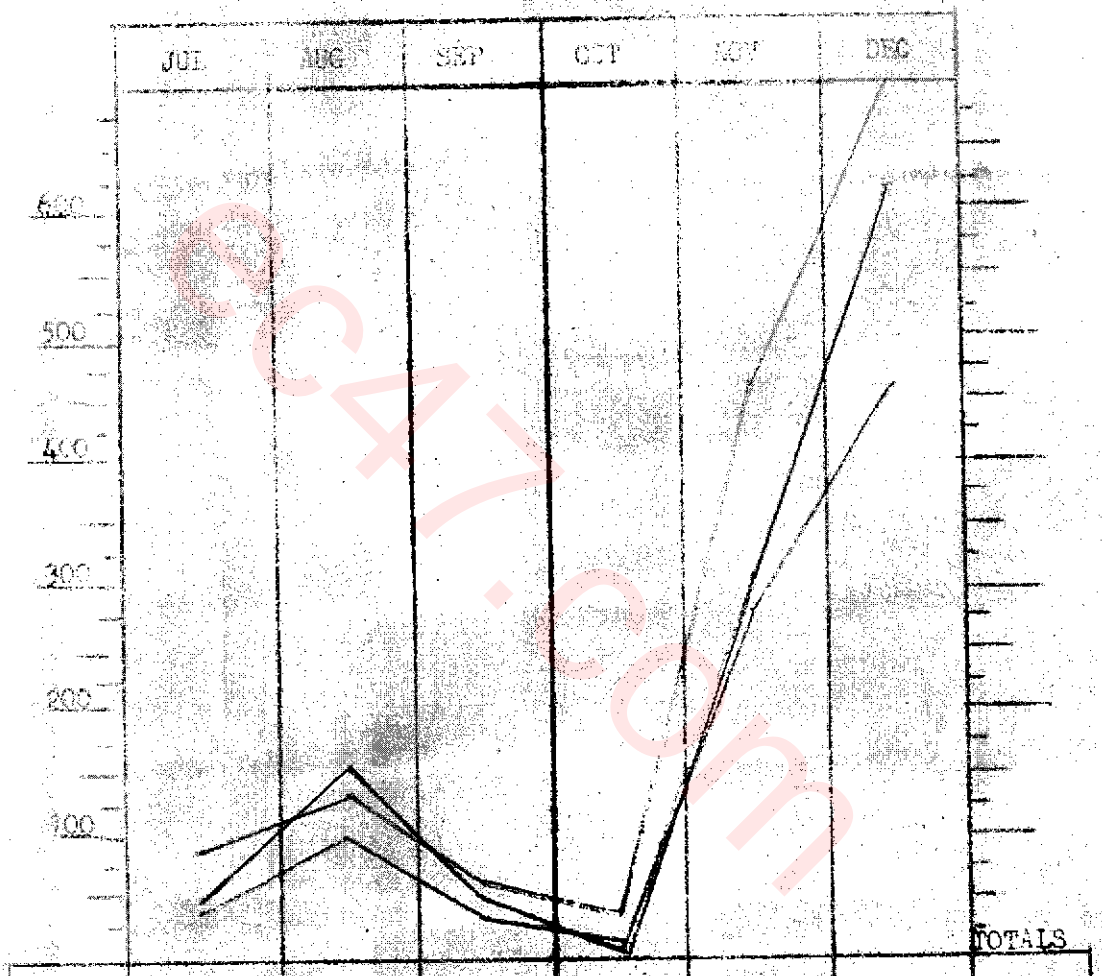


DOT-A PLA	1000	1435	1225	458	1168	1590	6796
TI-A OTH	703.6	877.3	699.4	351.3	892.5	1113.6	4637.7
[illegible]	1136.6	1288.6	1056.2	572.8	1445.2	1848.2	6999.6

[redacted]

[redacted]

[redacted]



TOTAL FLX	50	159	40	12	312	621	1194
TIME OVER TARGET	43.7	98.5	30.8	14.8	279.1	459.3	1026.2
HOURS FLOWN	83.7	136.9	51.4	33.2	468.2	752.9	1526.3

[redacted]

[redacted]

[redacted]

CROP DAMAGE PRODUCTIVITY [illegible] AREA FLIGHT

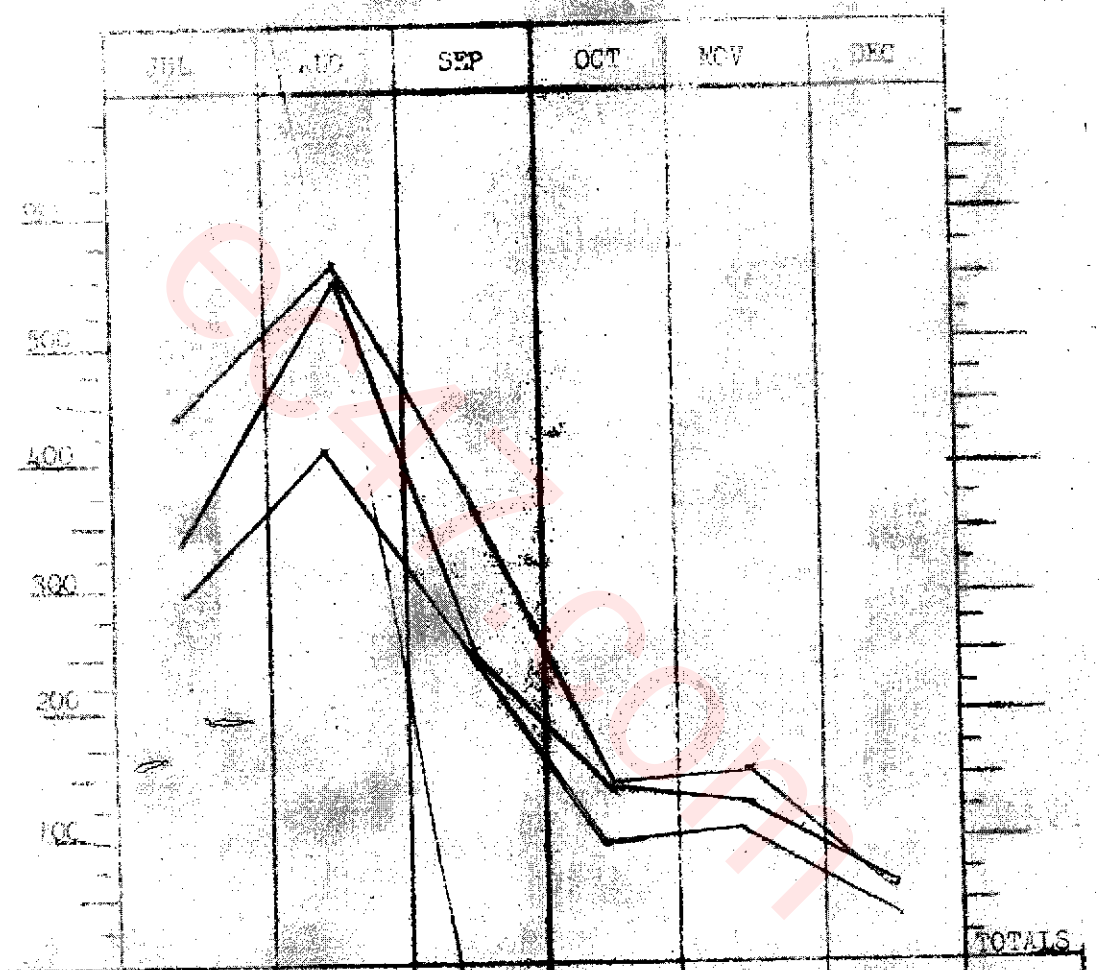
							TOTALS
TOTAL FIX	450	509	692	216	448	539	2854
TIME OVER TARGET	204.6	308.4	281.4	144.0	313.9	354.6	1506.9
HOURS FLOWN	266.2	247.4	326.7	193.6	400.3	481.6	1915.8

[redacted]

[redacted]

[redacted]

[illegible] PRODUCTIVITY [illegible]

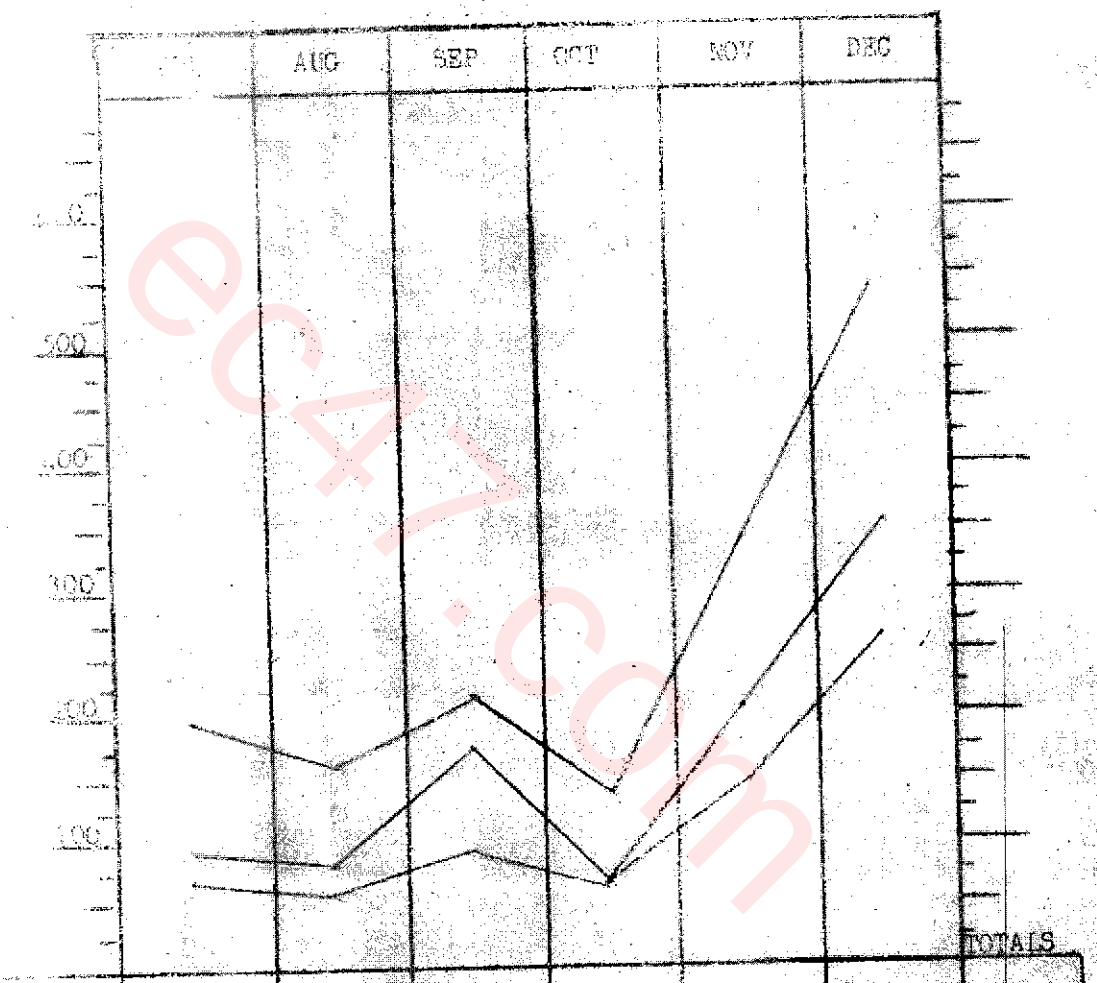


[illegible]	346	549	251	134	129	69	1478
[illegible]	295.5	414.6	254.3	98.2	110.1	36.7	1200.4
[illegible]	438.5	563.8	365.8	140.4	157.7	67.1	1733.3

[redacted]

[redacted]

[redacted]



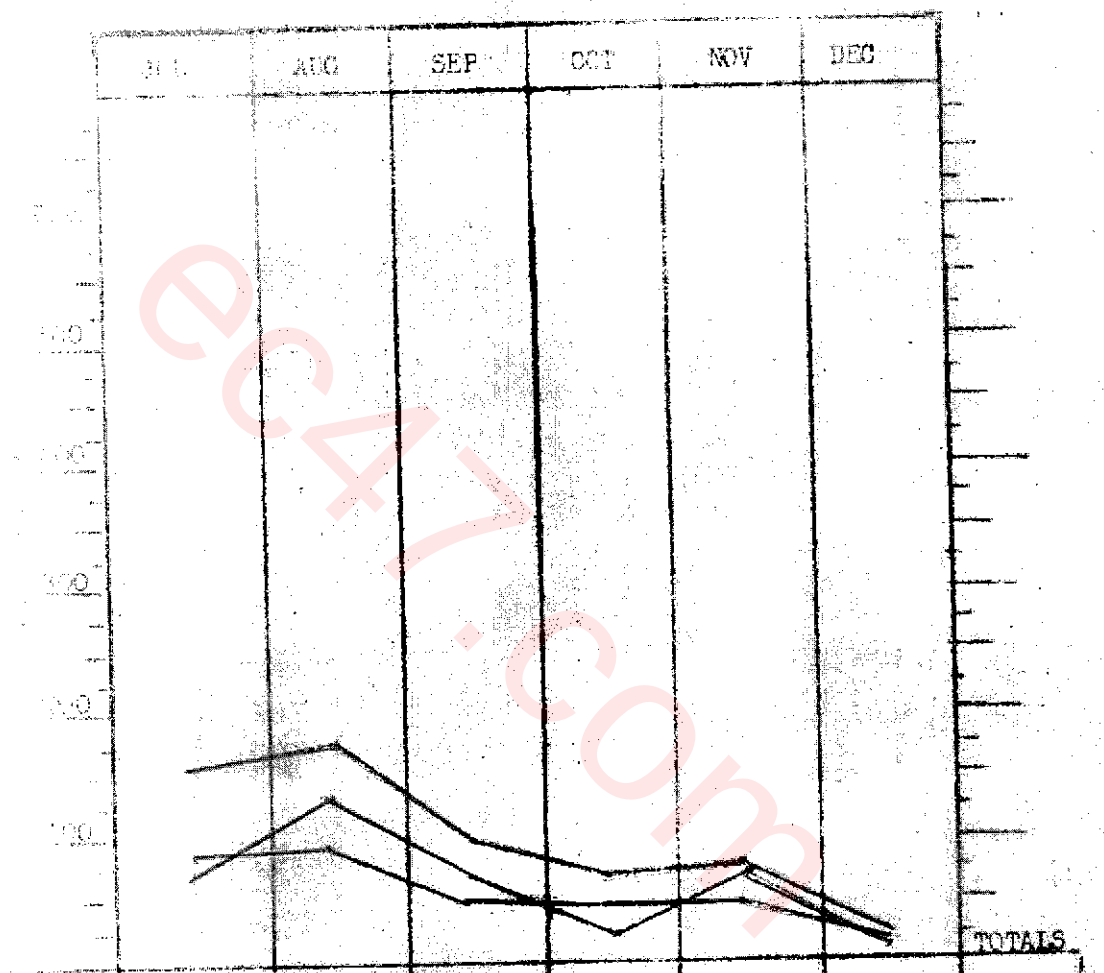
[illegible] FIX	92	86	173	68	205	351	971
[illegible] UTER BUDGET	72.2	58.4	85.2	61.9	149.5	257.0	690.2
[illegible]	194.0	160.6	217.9	134.7	339.7	533.4	1580.3

[redacted]

[redacted]

[redacted]

[illegible] PRODUCTIVITY [illegible] AREA PLUVEN



							TOTALS
ACTUAL YIELD	73	132	69	28	74	10	386
TIME AVAIL. TARGET	81.6	97.4	47.7	41.4	39.9	6.0	314.0
[illegible] PLOWN	154.2	179.9	94.4	70.9	79.3	13.2	591.9

[redacted]

[redacted]

[redacted]

APPENDIX IX

RADIOTELEPHONE ACI PRODUCTIVITY

ec47.com

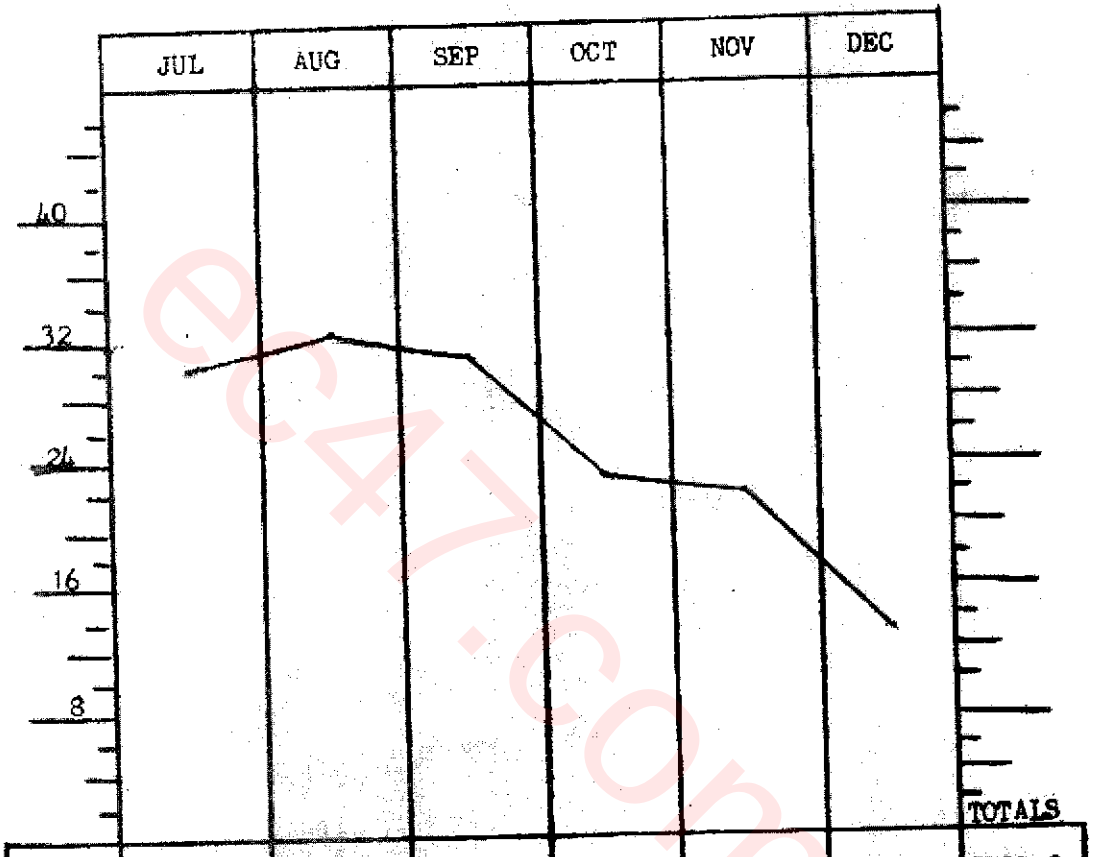
[redacted]

[redacted]

[redacted]

USS-D3

RADIOTELEPHONE ACI PRODUCTIVITY ALL SEA AREAS FLOWN



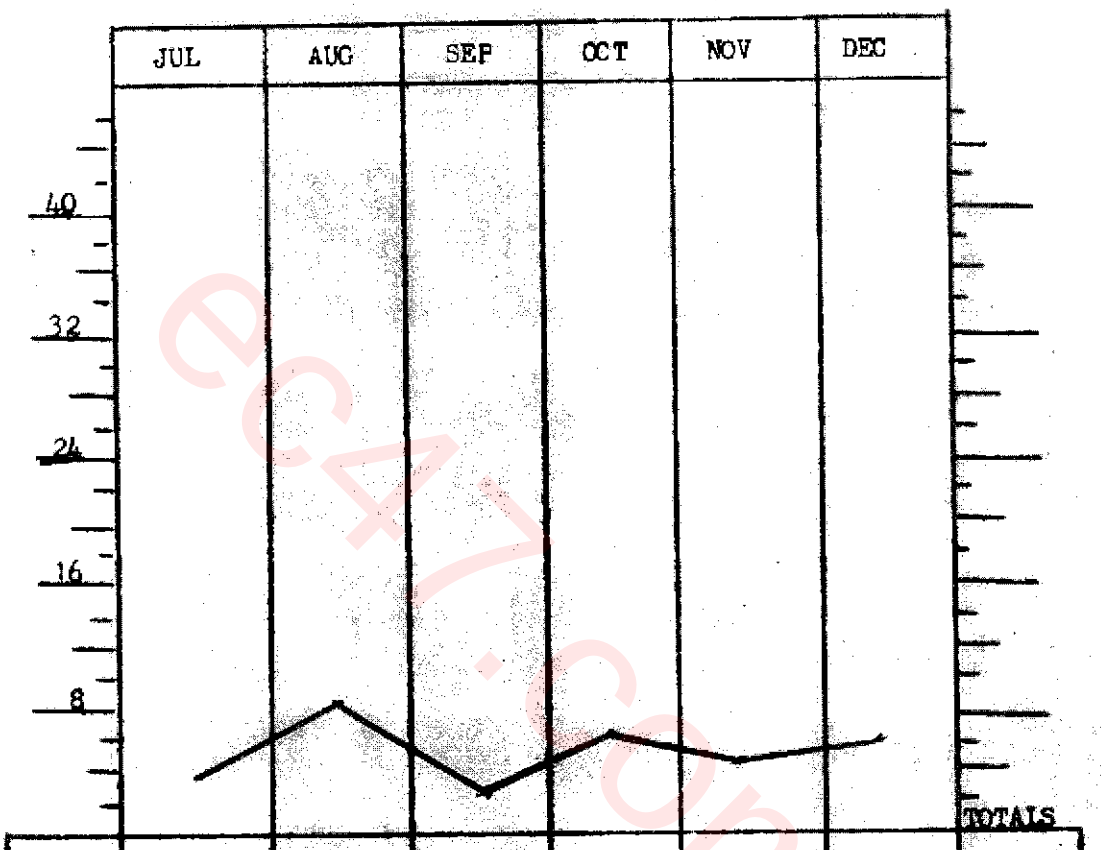
	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	1136.6	1288.6	1056.2	572.8	649.8	890.9	5794.9
AMOC	42315	52783	42430	21798	25596	32630	217552
MIN. COPY	12692	17232	13528	5083	5710	4280	58525
%	30.0	32.6	31.9	23.3	22.3	13.1	

ec47.com

[redacted]

[redacted]

RADIOTELEPHONE ACI PRODUCTIVITY SEA AREA SEVEN



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	83.7	136.9	51.4	33.2	91.4	96.9	493.5
AMOC	2635	5920	1855	919	3600	2899	17828
MIN. COPY	104	500	47	58	166	179	1054
%	3.9	8.4	2.5	6.3	4.6	6.2	

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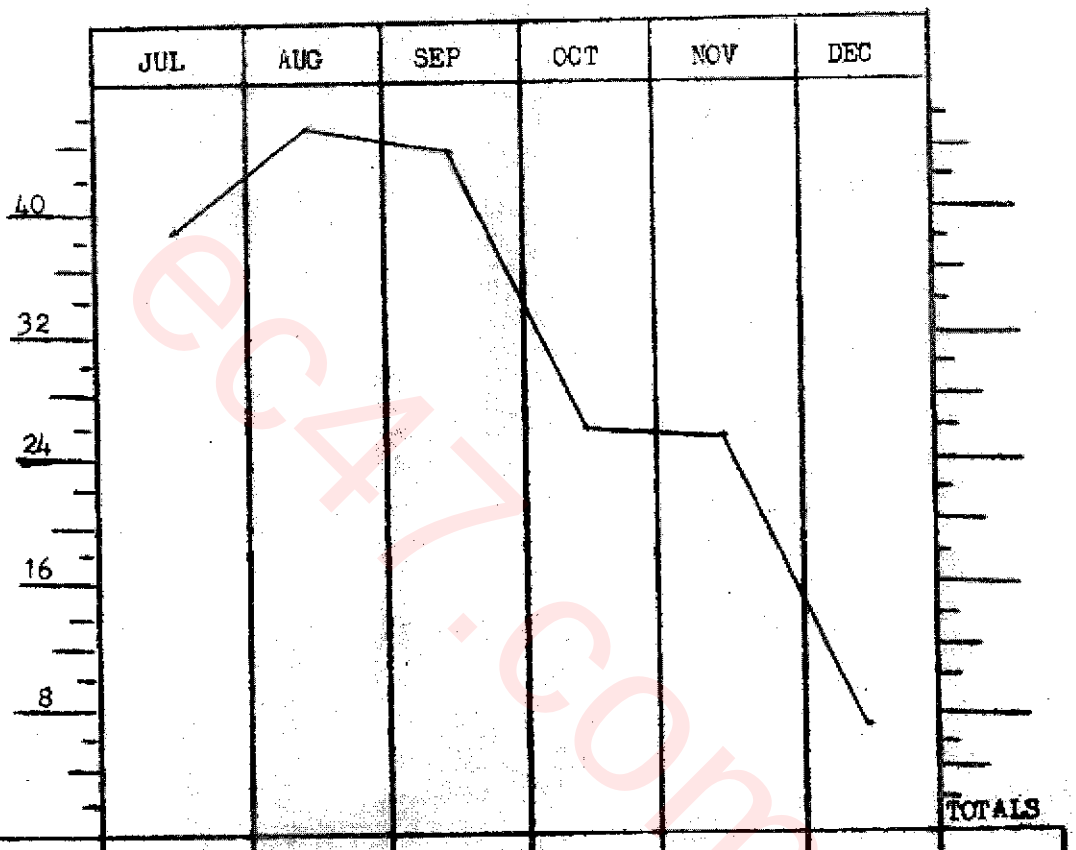
[redacted]

[redacted]

UCS-03

RADIOTELEPHONE ACI PRODUCTIVITY SEA AREA EIGHT



							TOTALS
HOURS FLOWN	266.2	247.4	326.7	193.6	184.4	444.0	1662.3
AMDC	12184	12515	16900	8583	9183	19221	78586
MIN. COPY	4695	5692	7297	2223	2322	1423	23652
%	38.5	45.5	43.2	25.9	25.3	7.4	

[redacted]

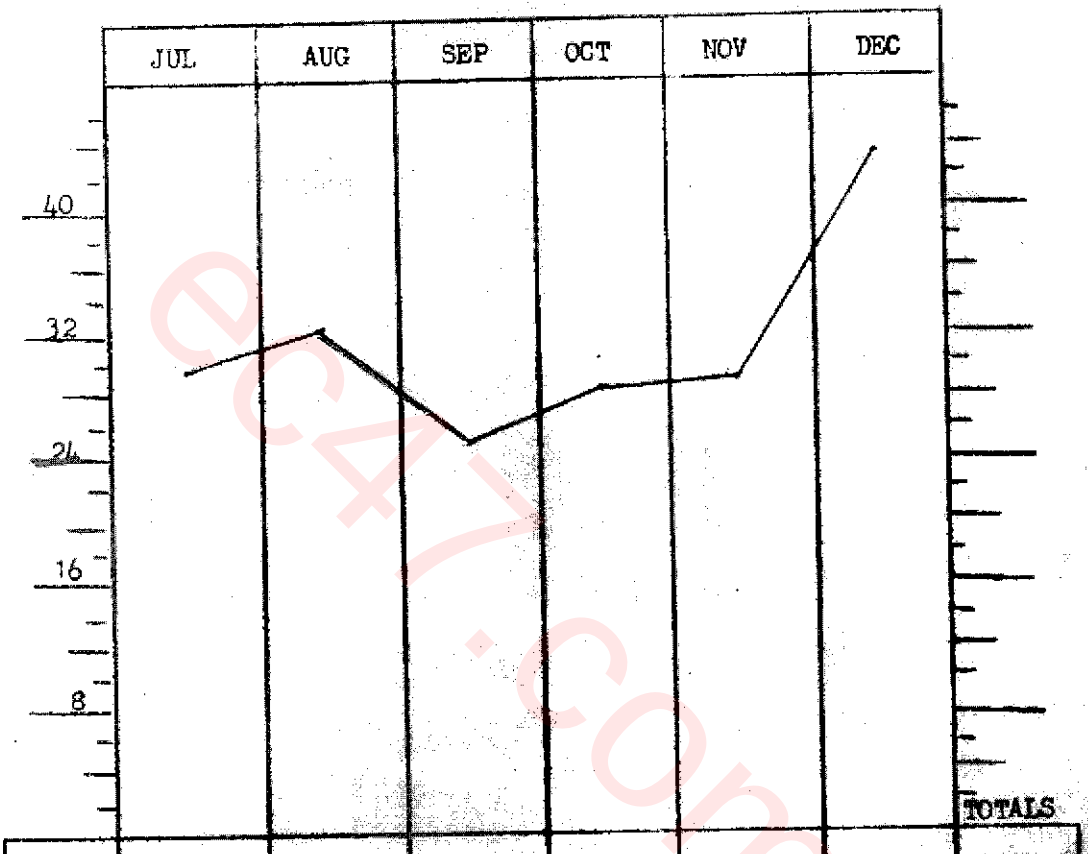
[redacted]

ec47.com

USS-D3

[redacted]

RADIOTELEPHONE ACI PRODUCTIVITY SEA AREA NINE



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	438.5	563.8	365.8	140.4	152.7	67.1	1726.3
AMOC	17840	24914	15310	5883	6282	2247	77476
MIN. COPY	4895	8013	3780	1651	1817	985	21141
%	27.4	32.2	24.7	28.1	28.9	43.8	

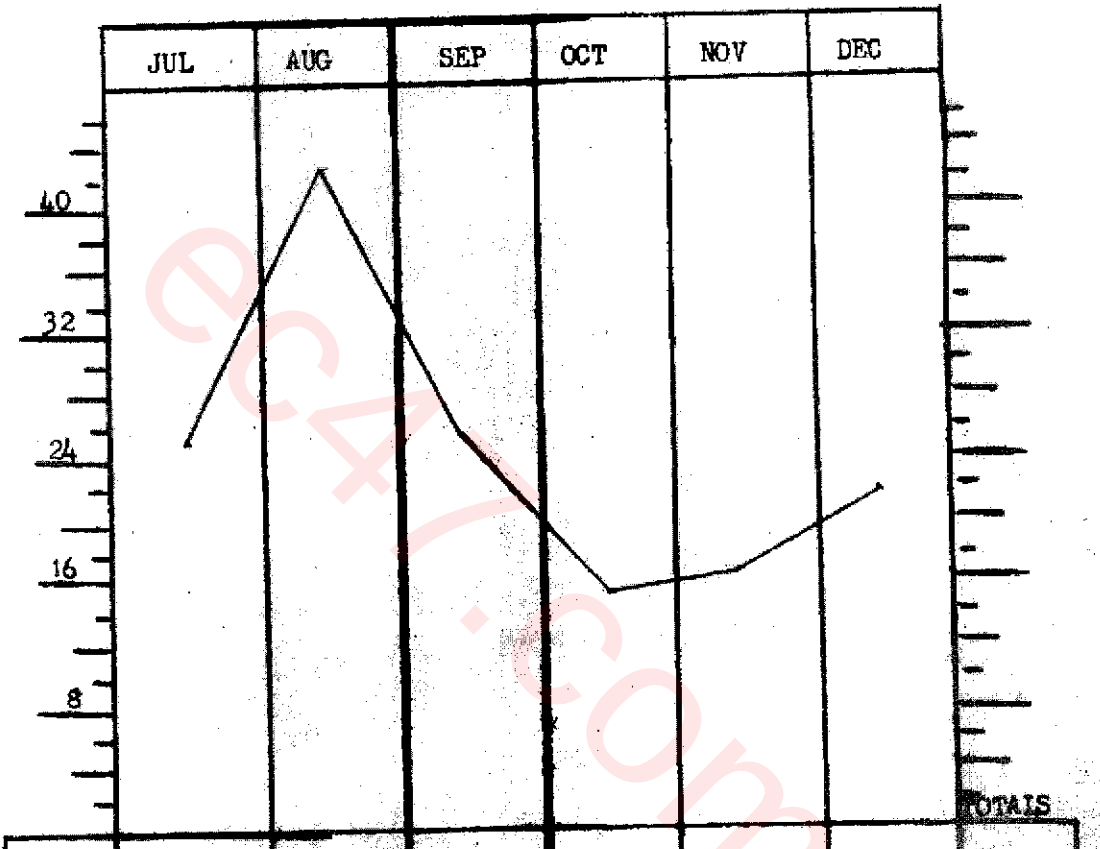
[redacted]

[redacted]

[redacted]

USS-D3

RADIOTELEPHONE ACI PRODUCTIVITY SEA AREA TEN



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	194.0	160.6	217.9	134.7	142.0	289.7	1138.9
AMOC	4711	3564	5265	3919	3995	7903	29354
MIN. COPY	1181	1515	1331	600	650	1682	6959
%	25.1	42.5	25.3	15.3	16.3	21.3	

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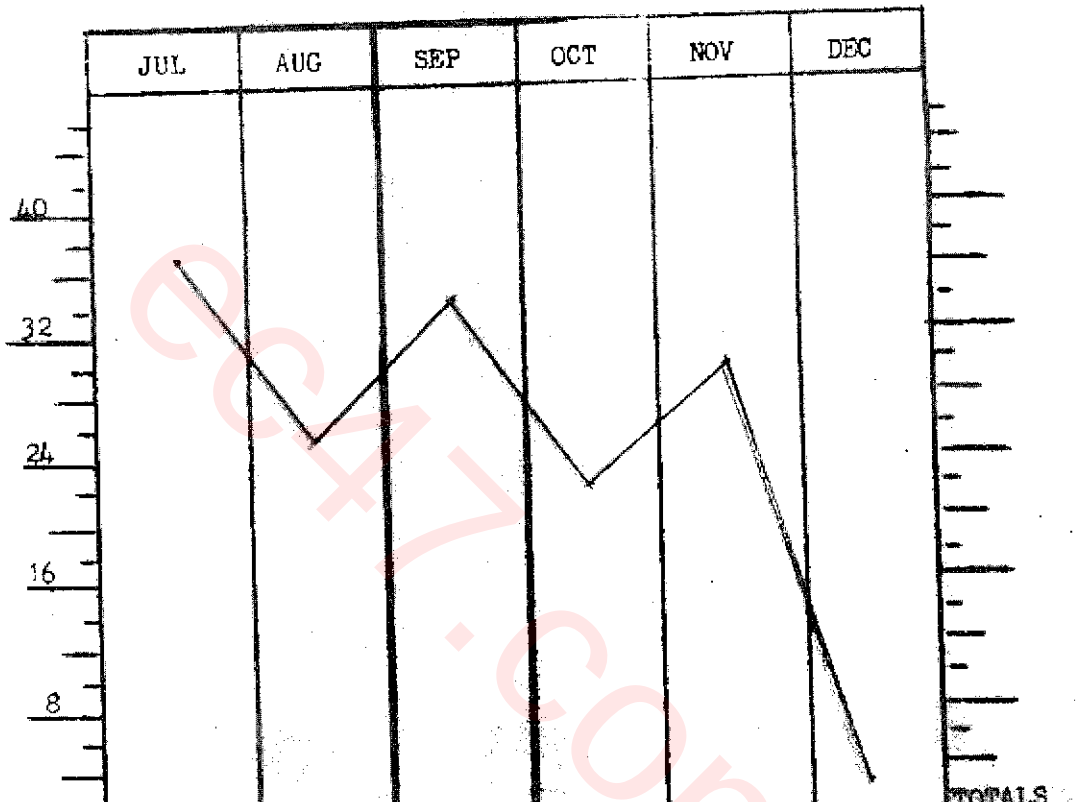
[redacted]

USS-D3

[redacted]

RADIOTELEPHONE ACI PRODUCTIVITY SEA AREA ELEVEN



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	154.2	179.9	94.4	70.9	79.3	13.2	591.9
AMCO	4945	5870	3100	2485	2536	360	19296
MIN. COPY	1817	1512	1073	551	755	11	5719
%	36.7	25.6	34.6	22.2	29.8	3.1	

[redacted]

[redacted]

CG47.com

[redacted]

APPENDIX X

MANUAL MORSE ACI PRODUCTIVITY

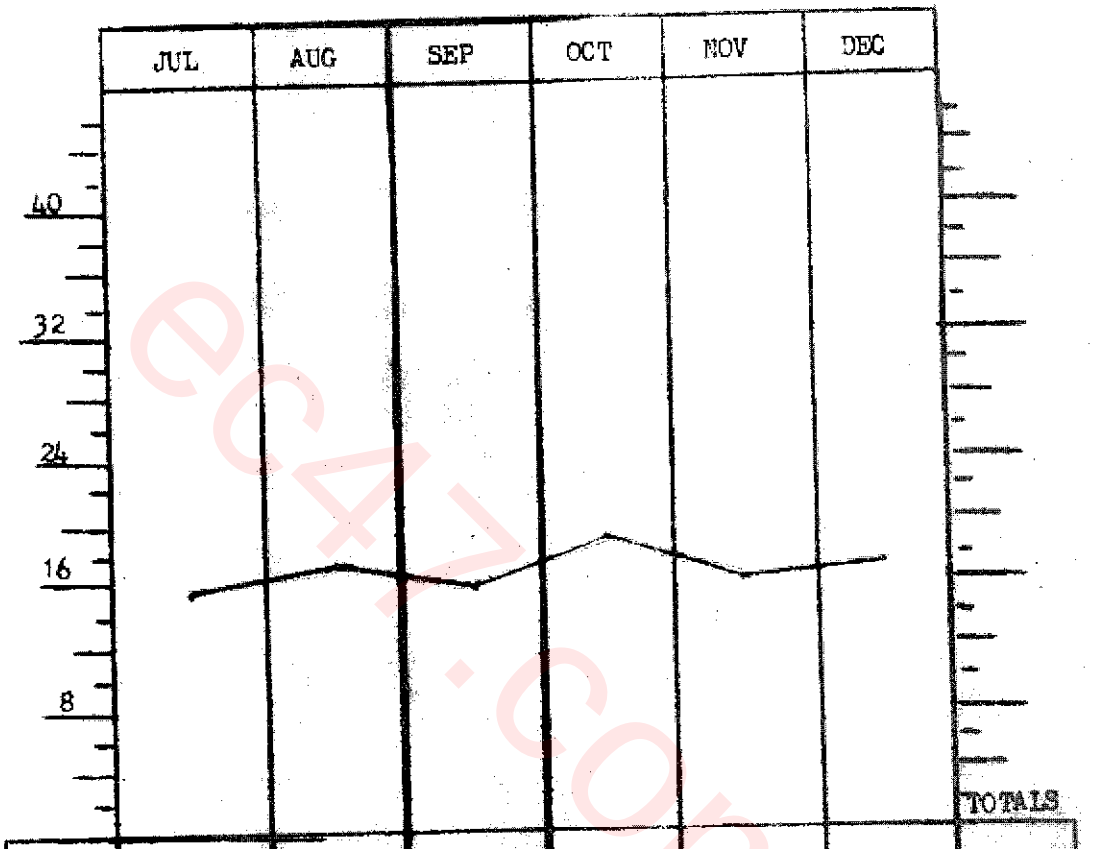
ec47.com

[redacted]

[redacted]

[redacted]

MANUAL MORSE ACI PRODUCTIVITY ALL SEA AREAS FLOWN



HOURS FLOWN	1136.6	1288.6	1056.2	572.8	1445.2	1848.2	7947.6
AMOC	85030	105572	84774	43815	79577	99150	492918
MIN. COPY	13234	17943	13429	8303	12799	17078	82786
%	15.6	17.0	15.8	18.9	16.1	17.2	

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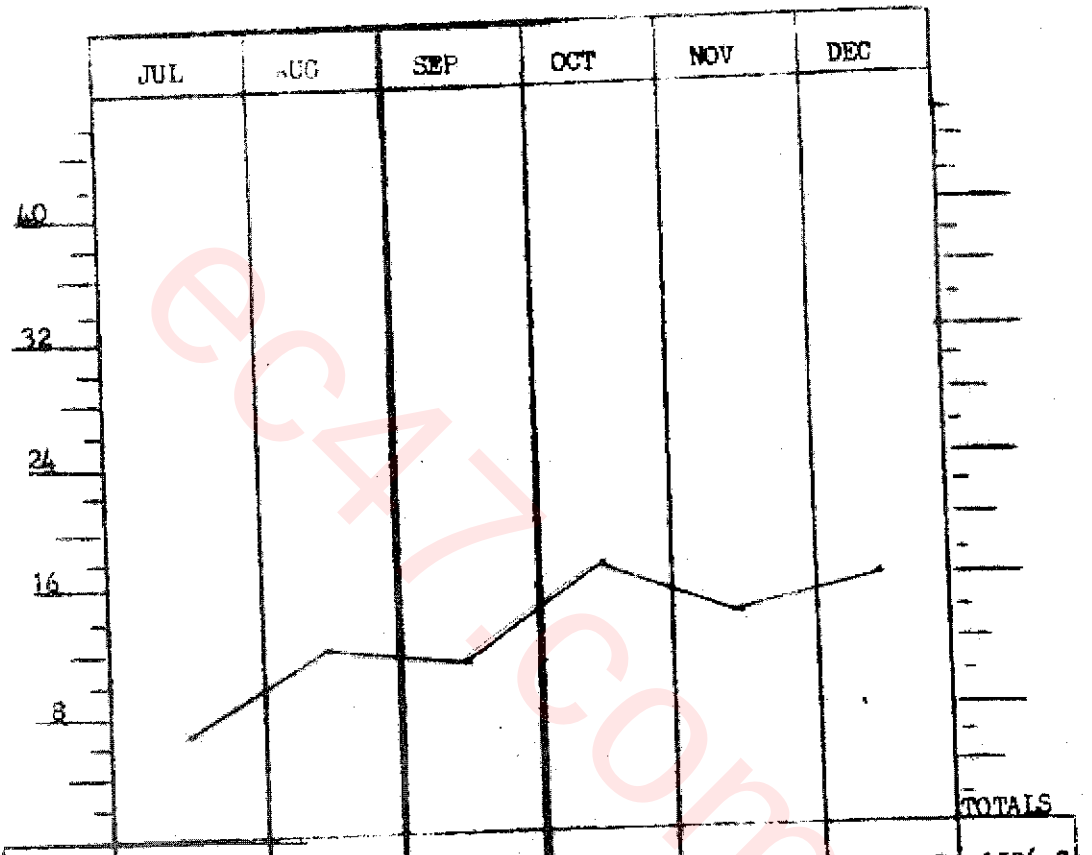
[redacted]

USS-D3

[redacted]

MANUAL MORSE ACI PRODUCTIVITY SEA A' EA SEVEN



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	83.7	136.9	51.4	33.2	468.2	752.9	1526.3
AMOC	5270	11840	3710	1844	20846	30720	74230
MIN. COPY	354	1430	426	318	2943	4928	10399
%	6.7	12.1	11.5	17.2	14.1	16.0	

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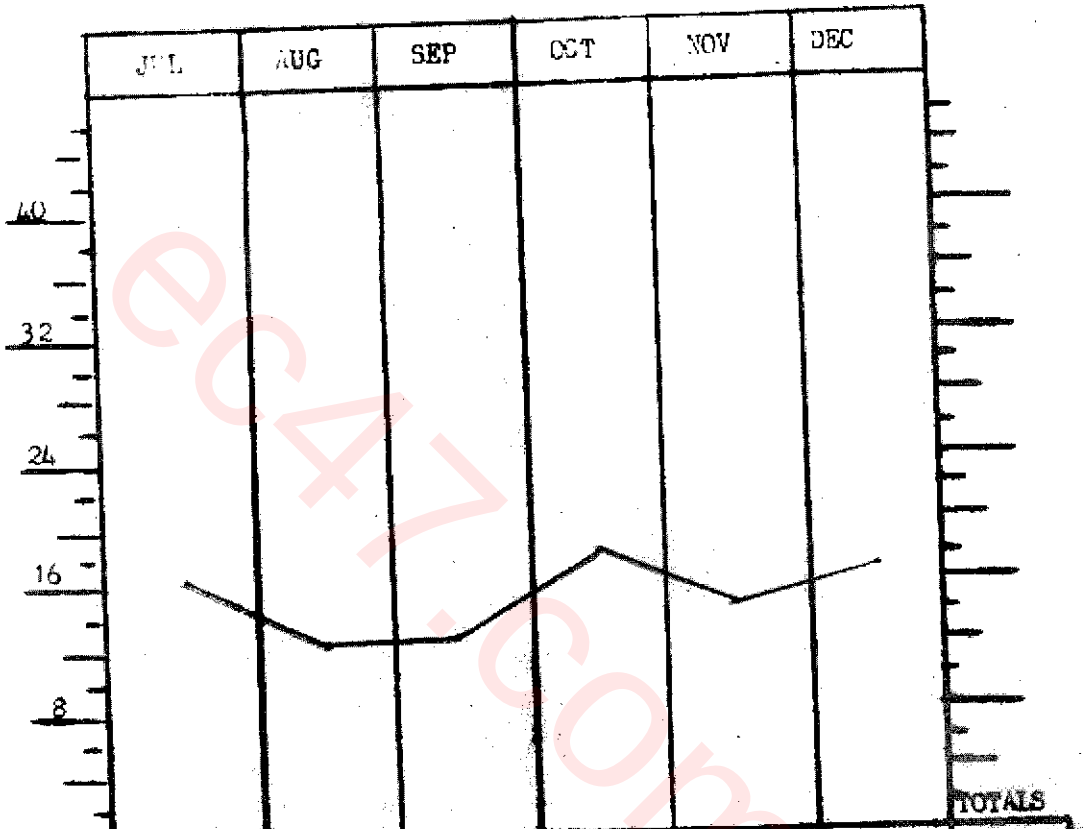
ec47.com

[redacted]

MONTHLY HOUSE ACI PRODUCTIVITY - SANTA RIGHT



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS FLOWN	266.2	247.4	326.7	193.6	400.3	481.6	1915.8
AMOC	24768	25030	33700	17352	28233	40625	169708
MIN. COPY	4016	3050	4185	3215	4100	6804	25370
%	16.2	12.2	12.4	18.5	14.5	16.7	

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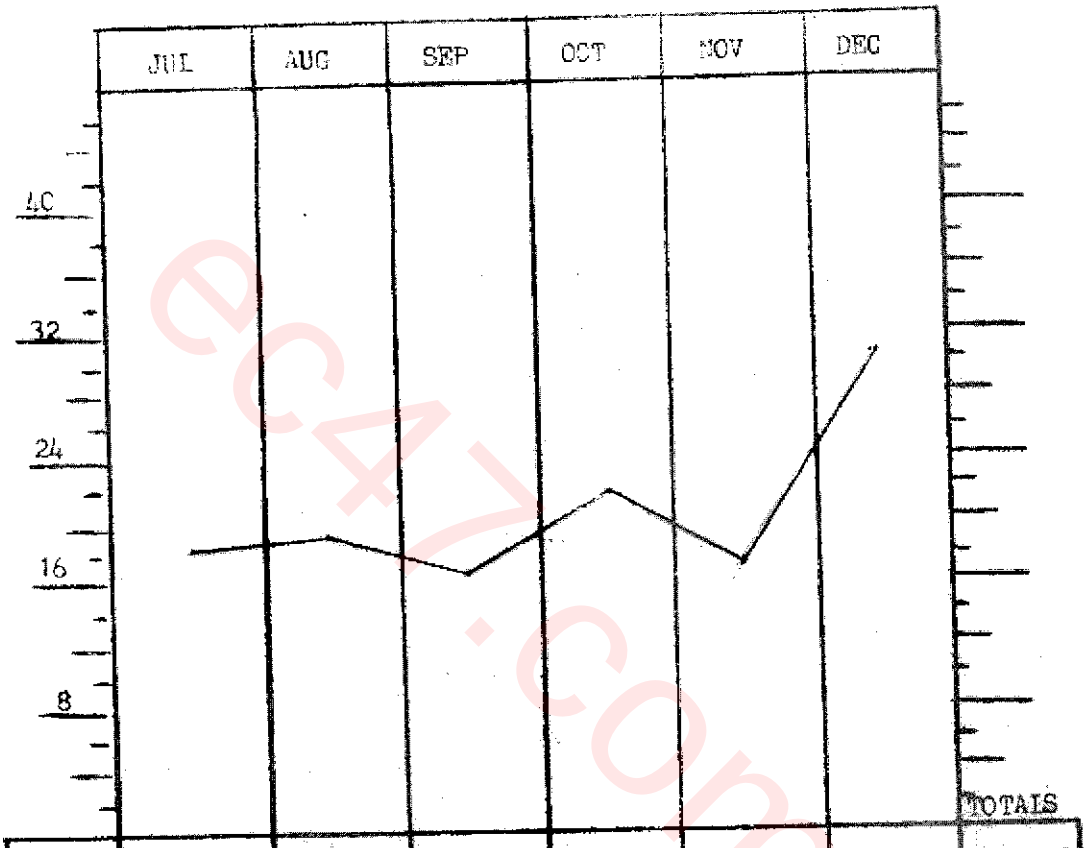
[redacted]

USS-D3

[redacted]

MANUAL HORSE ACI PRODUCTIVITY .SA AREA MINE



							TOTALS
HOURS FLOWN	438.5	563.8	365.8	140.4	157.7	67.1	1753.3
AVOC	35680	49828	30620	11774	12815	4454	145171
MIN. COPY	6555	9781	5151	2569	2208	1261	27535
%	18.4	19.6	16.8	21.8	17.2	28.3	

[redacted]

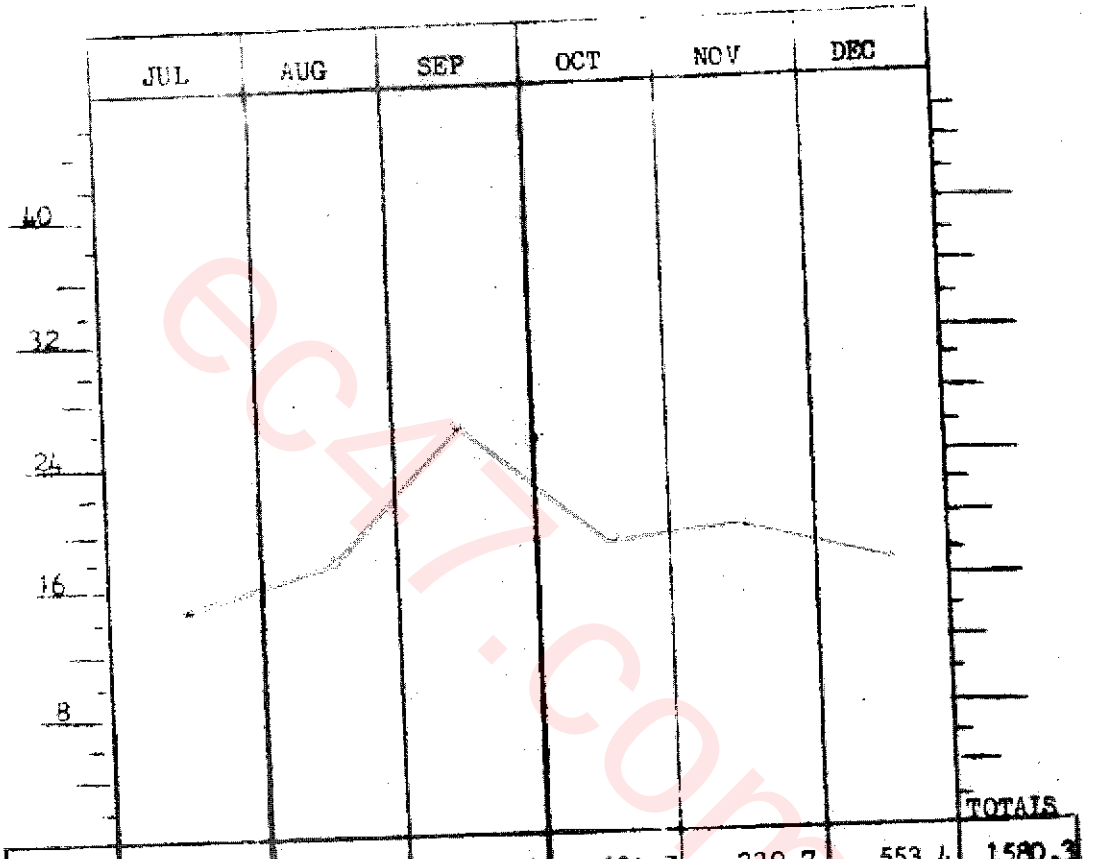
X-4

[redacted]

ec47.com

USS-03 [redacted]

MANUAL MORSE ACI PRODUCTIVITY - [illegible] ATION -



							TOTALS
HOURS FLOWN	194.0	160.6	217.9	134.7	339.7	553.4	1580.3
AMOC	9422	7134	10544	7834	12751	22604	70289
MIN. COPY	1341	1293	2648	1449	2400	4009	13138
%	14.2	18.1	25.1	18.5	18.8	17.7	

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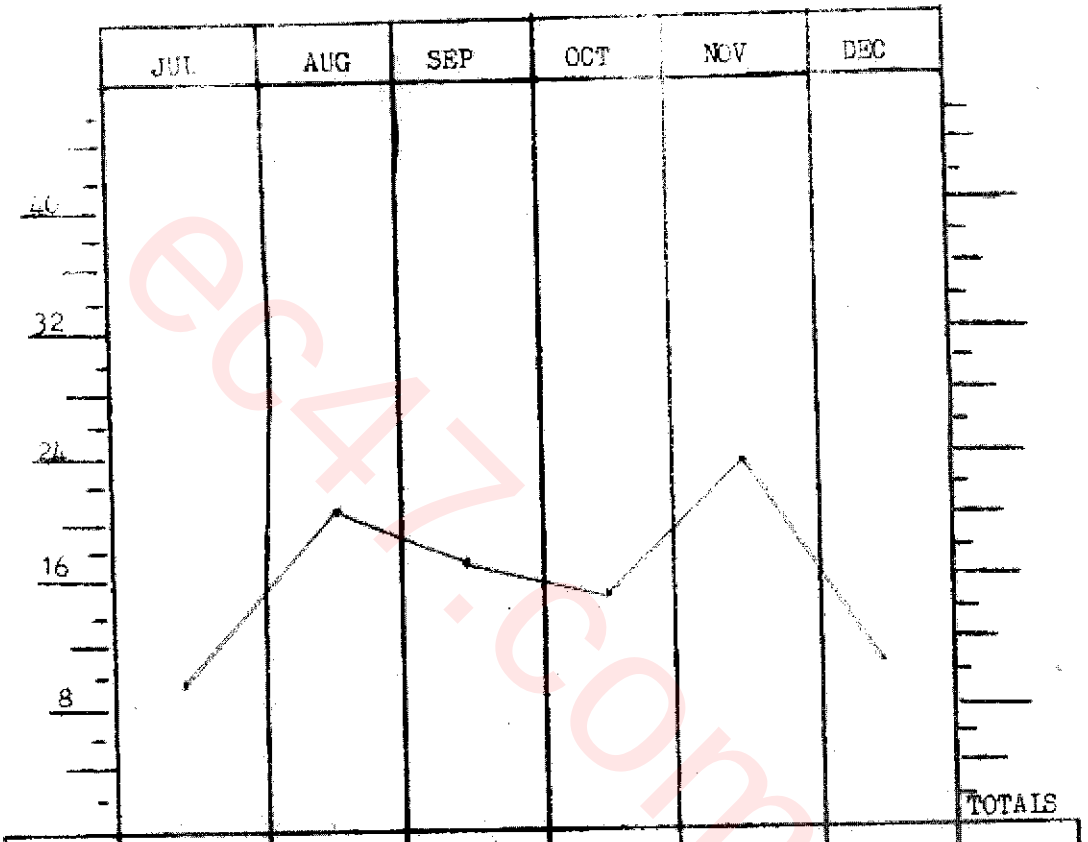
[redacted]

ec47.com

[redacted]

[illegible]-03

[illegible] NURSE ACI PRODUCTIVITY [illegible]



	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
HOURS PLANN	154.2	179.9	94.4	70.9	79.3	13.2	591.9
AMOC	9890	11740	6200	5011	4932	720	38593
MIN. COPY	968	2398	1019	752	1148	76	6361
%	9.8	20.3	16.4	15.0	23.3	10.6	

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[redacted]

ec47.com

APPENDIX XI

PHOTOGRAPHS

ec471.com

PORTRAIT OF UNIT COMMANDER

ec47.com


U.S.

DET 2 SI OPERATIONS AREA

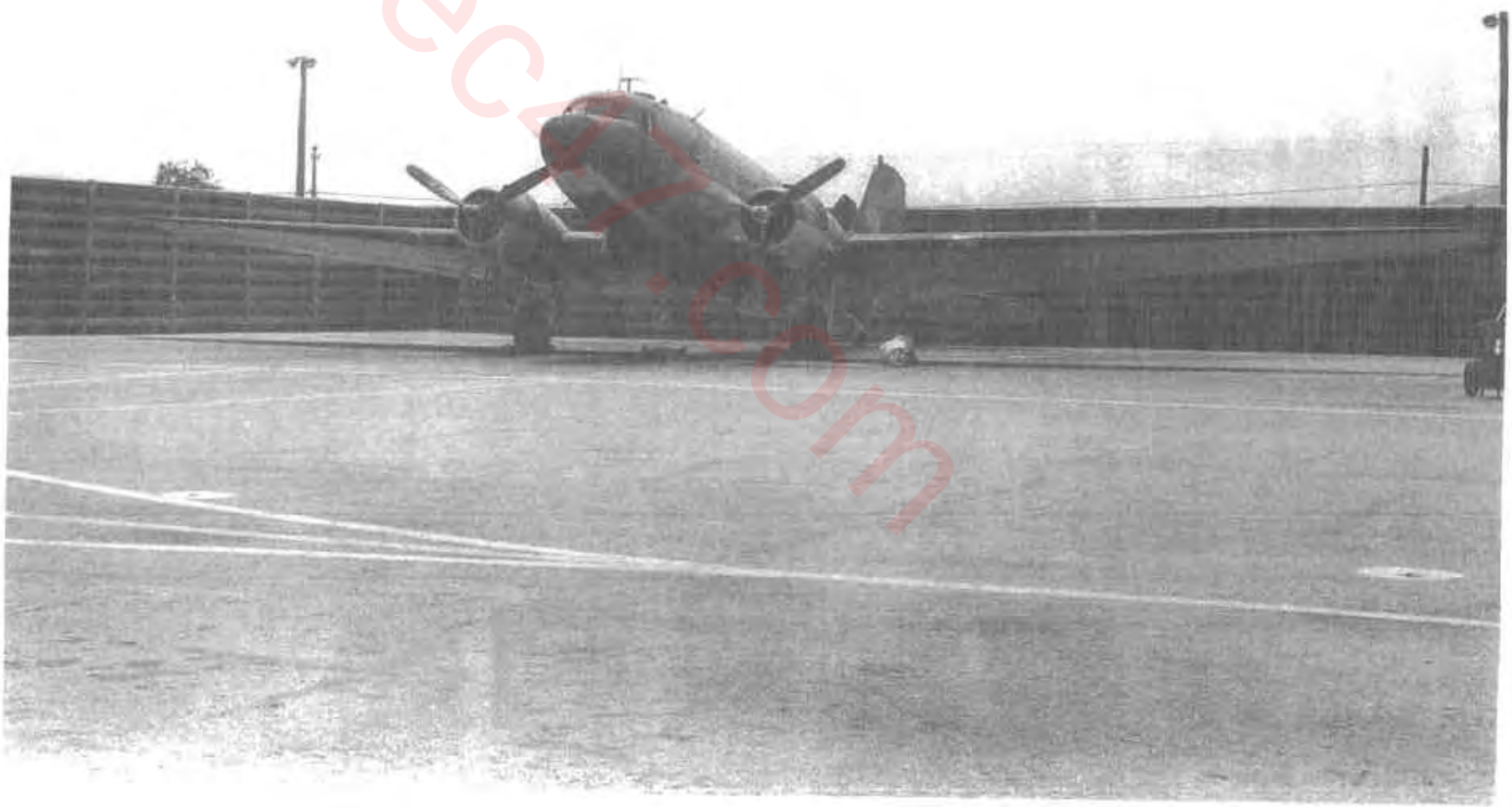
ec47.com

EC-47/AIR-34 OUTSIDE

ec47.com

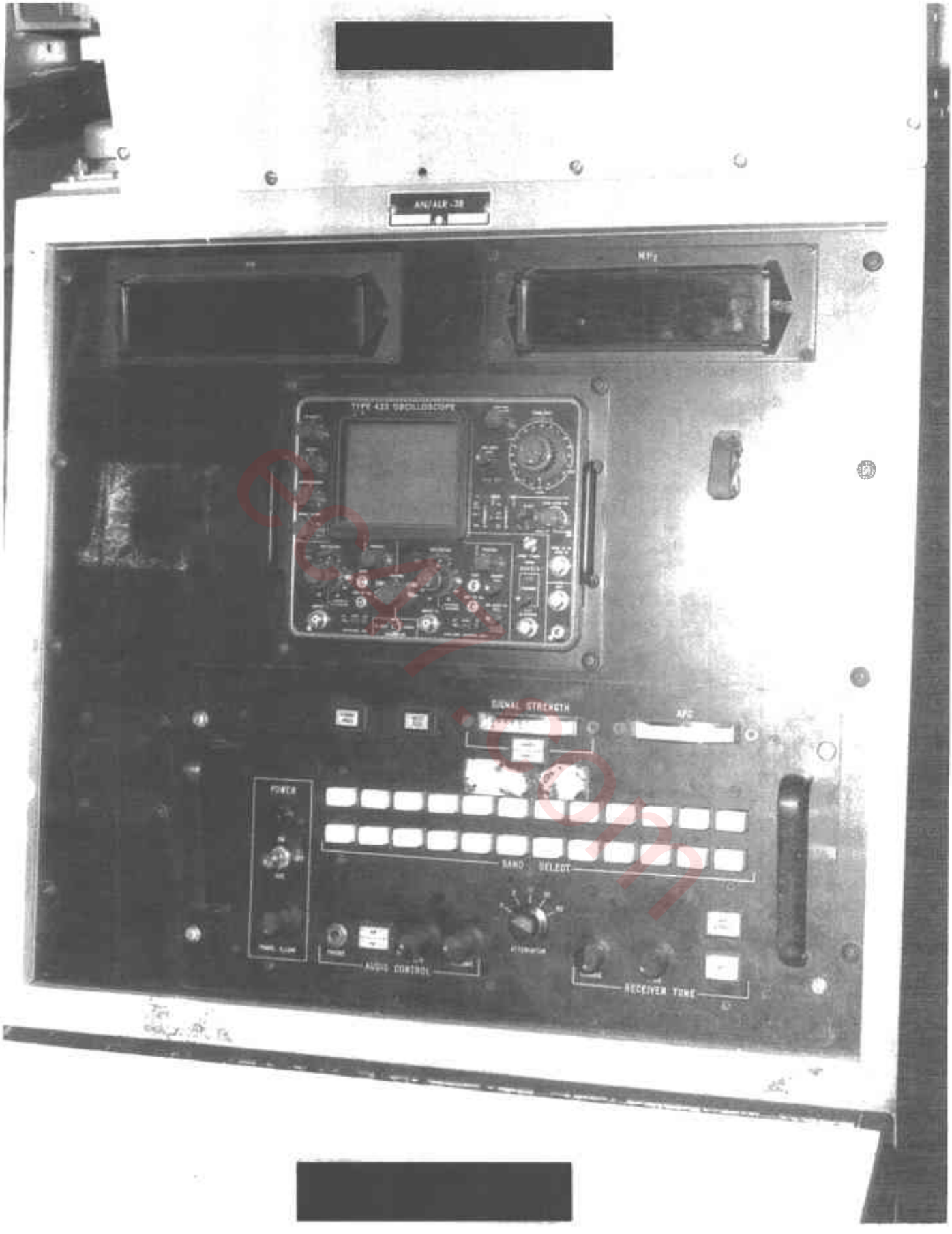
EC-47/ALR-36 OUTSIDE

ec47.com



X CONSOLE AIR-38

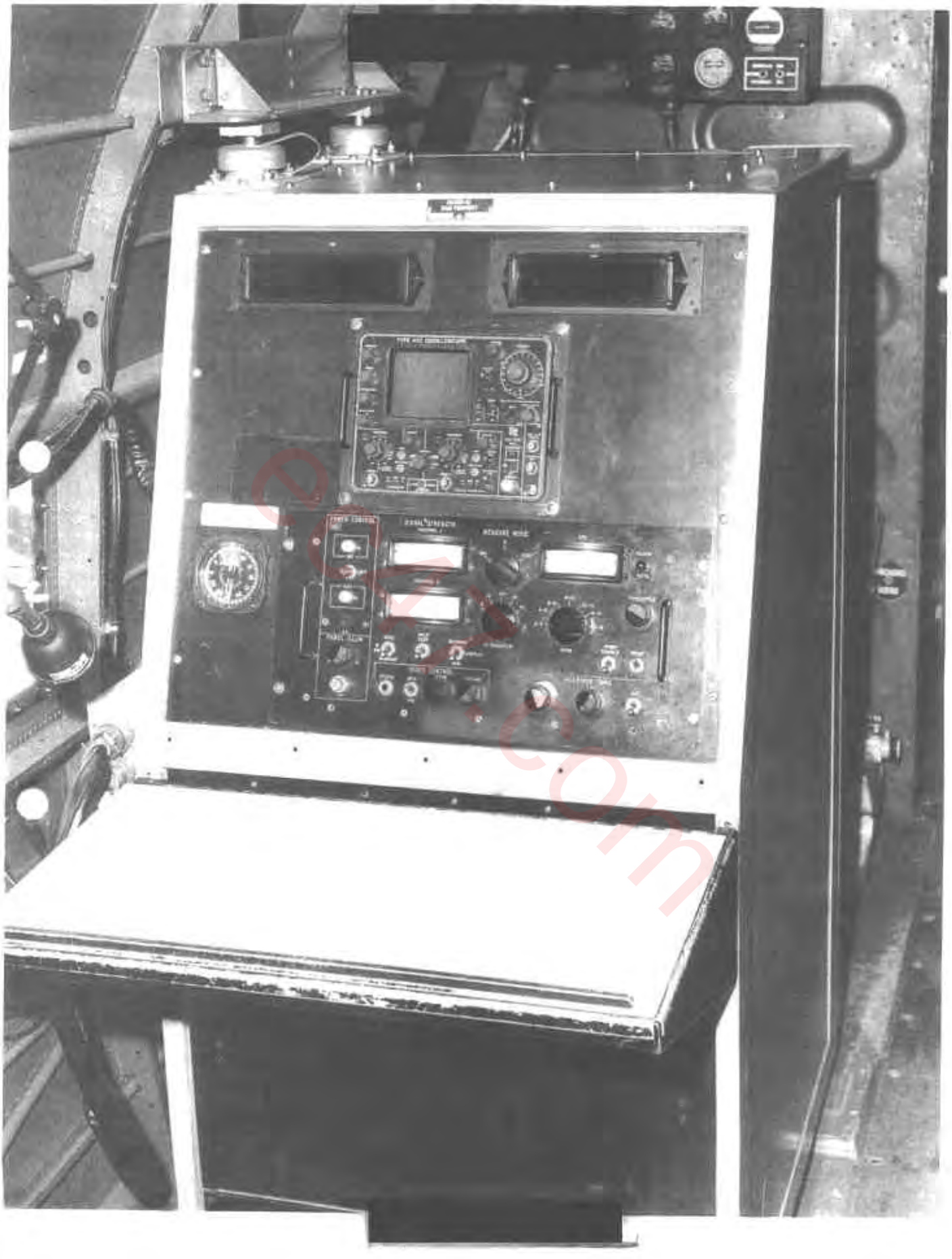
ec47.com


AN/ALR-28
MHz
TYPE 422 OSCILLOSCOPE
SIGNAL STRENGTH
AFC
POWER
BAND SELECT
AUDIO CONTROL
RECEIVER TUNE

[redacted]

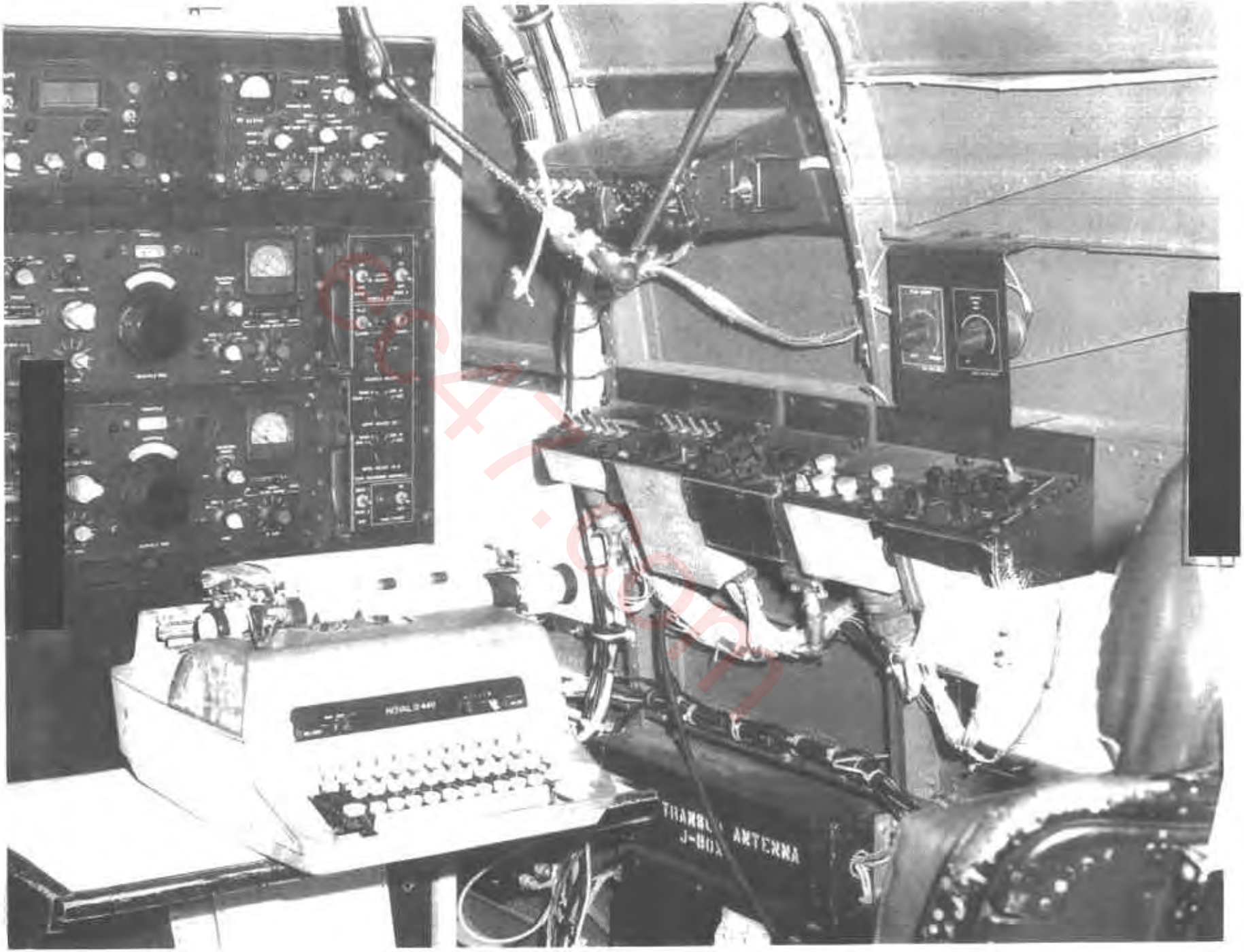
X CONSOLE ALR-35

ec47.com



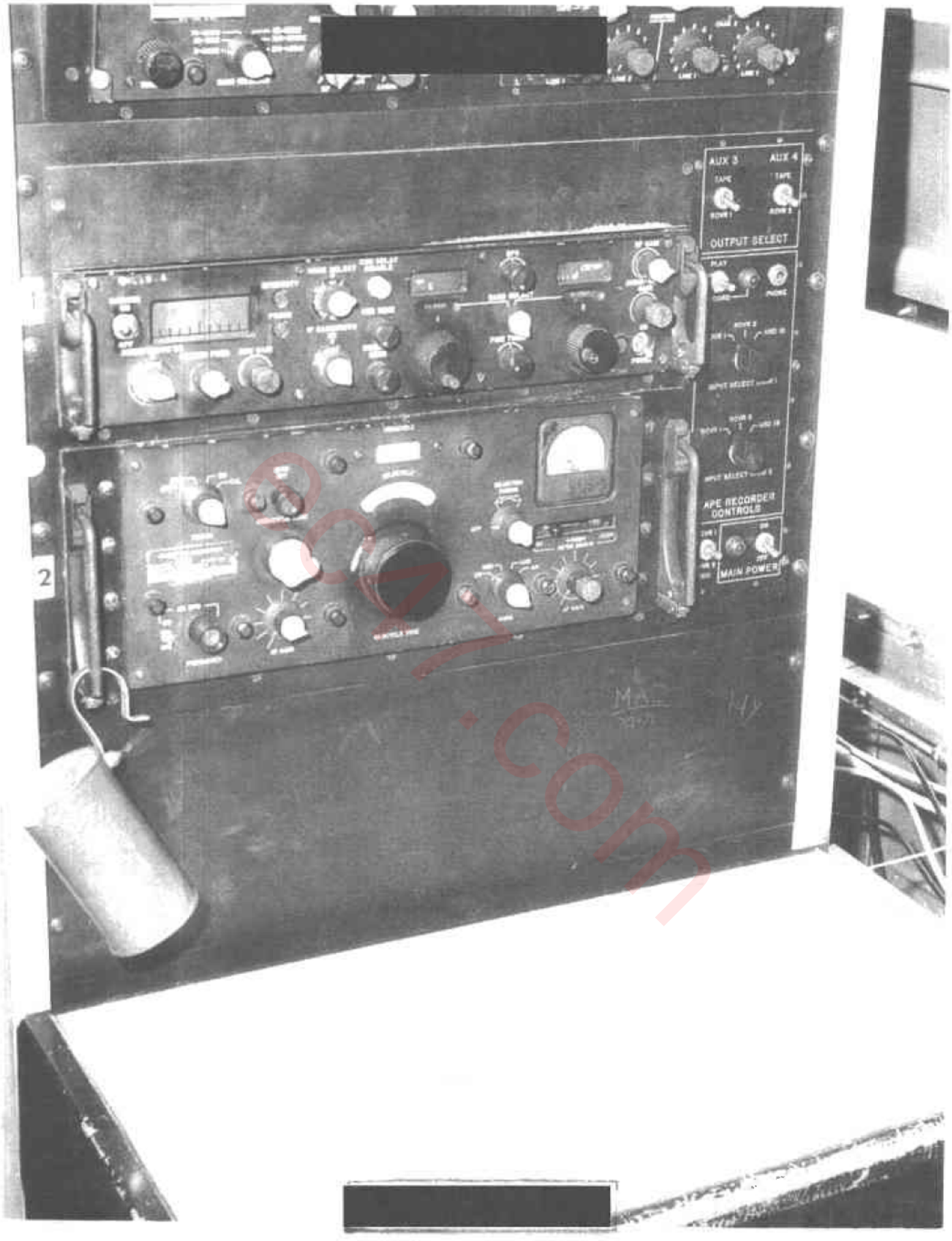
Y CONSOLE

ec47.com


ANTENNA

21 CONSOLE

ec47.com


AUX 3
AUX 4
OUTPUT SELECT
APE RECORDER CONTROLS
MAIN POWER

Z2 COMBAT

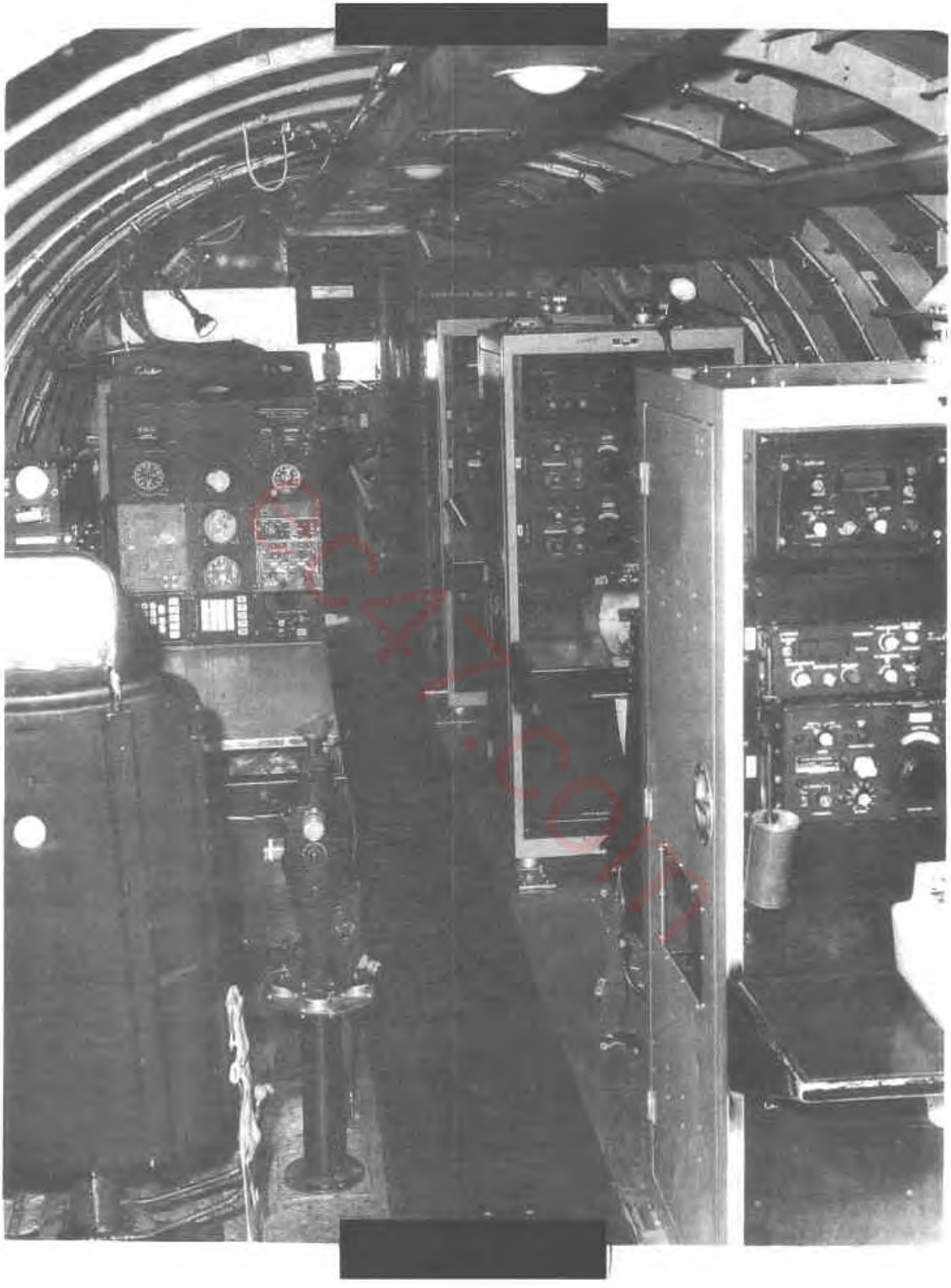
ec47.com

EC-47/CC "TWO SEATER" INSIDE

ec47.com

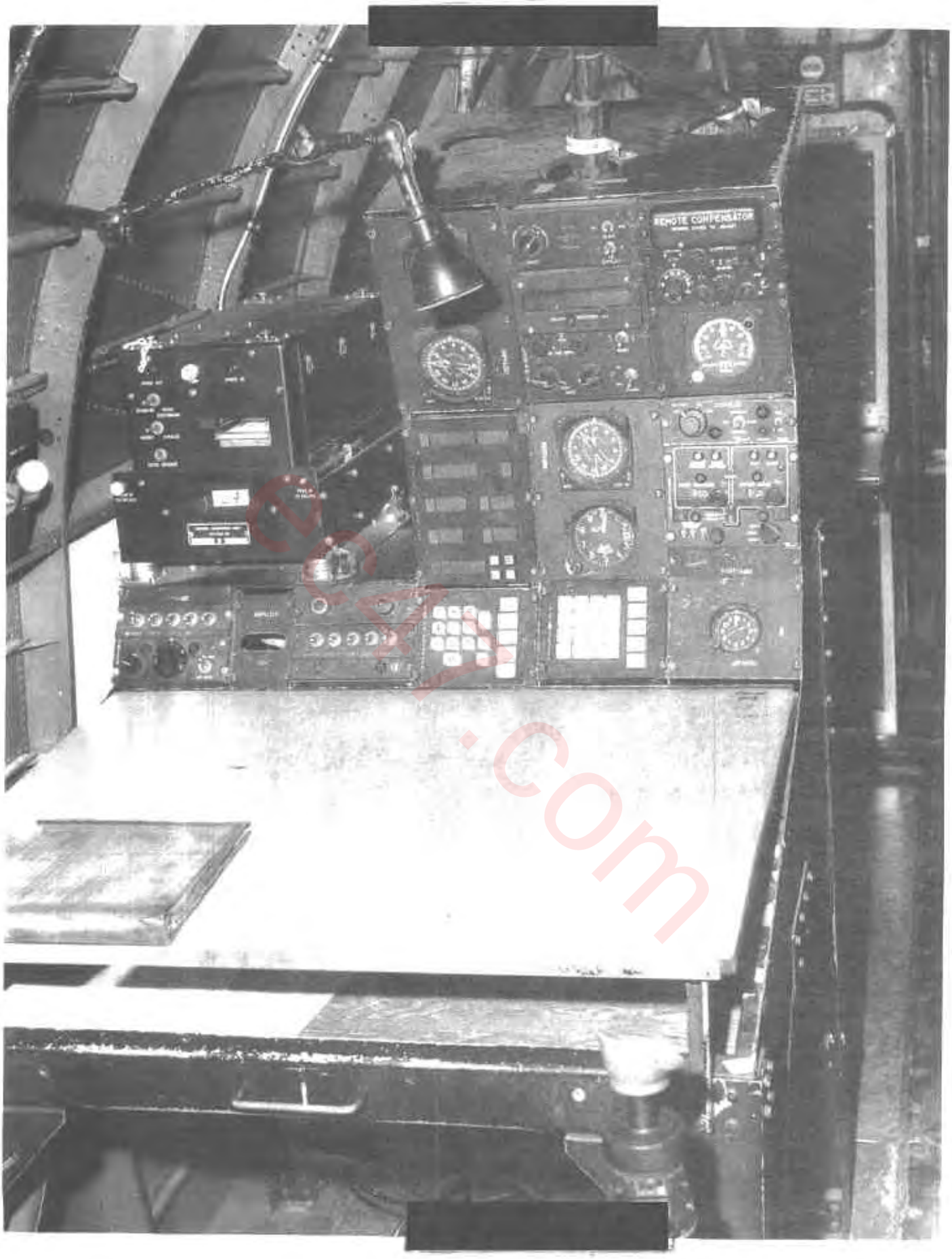
EC/47CC2 "FOUR SEATER" INSIDE

ec47.com



ALR-35 NAVIGATOR POSITION

ec47.com


REMOTE COMPENSATOR

AIR-38 NAVIGATOR POSITION

ec47.com

[redacted]

APPENDIX XLI

PERSONNEL STATUS (PFD) CHART

ec4x.com

USS-D3

WEEKLY PERSONNEL STATUS (PFD)