



**U.S. COAST GUARD**

**LORAN STATION**

**CON SON**

**General  
Information  
Book**

**1969**

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## CHAPTER I

### GENERAL INFORMATION

A. Geographic location. Con Son Loran Transmitting Station is located on the Island of Con Son in the Republic of Vietnam.  $8^{\circ}43'$  N.  $106^{\circ}38'$  E.

B. Topography. The Isles De Poulo Condore consists of about 12 islands lying about 45 miles from the Delta Area of Mainland South Vietnam. Depths in the vicinity of the group average less than 20 fathoms. The islands are of sufficient height as to be conspicuous in clear weather from a considerable distance. They serve as a useful mark in making a landmark on the mainland coast from the south. The Island of Con Son, the principle and largest of the group, is dominated almost entirely by a ridge of mountains. The summit in the southern part is 1,933 feet high and flat. A rocky peninsula divides the east coast into two bays, Vung Con Son and Vung Dong Bac. Vung Con Son, the southern and largest of the two bays, on the east coast of Con Son. It is formed between two high points of land projecting from the main body of that island. It is open south-eastward, and its use by vessels is only recommended during the Southwest Monsoon. At other times Baie du Sud-Ouest southwest of Con Son Island must be used. The mean high-water interval at Con Son is 1 hour 44 minutes. Springs rise 11 feet, and neaps about 9 feet. H. O. 3147 is the nautical chart of the islands.

C. Weather. The area is tropical and the monsoons, which are general wind currents of seasonal character, govern the large-scale climate of the area. The Northeast Monsoon governs from November through April. Reinforced by the northeast tradewinds, the winds during these winter months are high and persistent. The Southwest Monsoon governs from May through October. The winds are diminished somewhat by the Northeast Trades and so are not so severe during the summer. Generally the climate is hot and humid with rather heavy rainfall during the summer. The winter is hot and generally without rainfall. Temperatures vary from  $70^{\circ}\text{F}$ . to  $90^{\circ}\text{F}$ . throughout the year. The area is subject to typhoons between July and October.

D. Nearby Civilization. Con Son is a small village at the head of Vung Con Son. A penal establishment is located here. There is a pier, which is usable except at low water for small vessels only. There is a small hospital with a doctor in residence. There approximately 6500 persons on the island, 4000 of whom are prisoners. There are 360 troops of the Vietnam Regional Forces with dependents and the remainder are Republic of Vietnam civil servants and their dependents.

The U. S. Forces present are on the Northern half of the island. Besides the Loran Station, there is a U. S. Navy Radar Site with one officer and seven enlisted men. There is also a U. S. Army Decca Station operated by four civilians. There is one Army Sergeant present who is advisor to a Vietnamese signal station.

E. Transportation at Con Son. Transportation to Saigon is by aircraft only. Commander, Southeast Asia Section regularly schedules an aircraft direct from Bangkok once each month. Presently most passengers arrive from Saigon. The Commander, Naval Support Activity, Saigon has scheduled twice weekly market time flights to Con Son. Passengers may be manifested by calling 60969 the day before the flight. IV Corps ATCO has two C-123 flights to Con Son each week. Space is obtained by calling IV Corps ATCO Ar. 4324. Transportation to Con Son will normally be arranged by COMCOGARD RON ONE located at COMNAVFORV, 117 Phan Dinh Phung, Saigon R.V.N. Tel. 4019.

F. Property. The islands are totally owned by the Republic of Vietnam. Occupation by the Coast Guard is authorized by a Land Use Concurrence Agreement on file with MACV in Saigon.

G. Support by and for other agencies. Various agreements whereby the Loran Station is supported by other agencies and, in turn, supports the Navy Radar Site. These are covered in some small detail under Engineering and Comptroller Chapters of this book.

H. Status of Forces. Present agreements in Vietnam give U. S. Forces diplomatic immunity in Vietnam. This means trial cannot take place by Vietnamese authorities but only U. S. authorities.



## CHAPTER II

### OPERATIONS

#### A. Aids to Navigation.

1. The station operates as a Yankee Slave for Rate S-3 paired with Sattahip, Thailand. A continuous monitor is maintained on the S-3 XRAY Slave (Lampang, Thailand.) Operating equipment consists of the AN/FPN-44 transmitter and AN/FPN-46 timers. Brush recorders (AN/GSH-18) are utilized for charts. An AN/VRQ-14 oscillator set is installed and used on standby equipment, to increase stability. The operate equipment utilizes a rubidium standard for its frequency source. All Loran equipment is duplicated with the exception of the rubidium standard, antennas and antenna couplers. The equipment installation differs from a normal Loran "C" in that the transmitters and couplers are located in the signal power building. A coaxial cable connects to the tower. The transmitting antenna is a 625 foot top loaded tower, located 500 feet from the signal power building. The Loran "C" receiving antenna is a 44 foot fiberglass whip. Due to the nearby Decca Station (1.1 miles) special filters and equipment are used to eliminate both Decca interference to the timers and Loran "C" interference to the Decca equipment. All of this special equipment was built in Wildwood, New Jersey. The station and equipment was designed to allow for possible installation of a second Loran "C" Rate. Normal power output is 400 KW.

#### B. Communications.

1. There are two primary communications systems, the first being SSB nets using an SB6F channel crystal controlled transceiver with an RF 101 1000 watt linear amplifier or an RF 301 (AN/VRC-58) which utilizes frequency synthesis to cover a range of 2 to 16 MHz and has a RF 101 linear amplifier. Communications antennas consists of a Granger Log Periodic antenna beamed for Sattahip, Thailand, operating in the 4 to 32 MHz range, and two 66047 aluminum whip antennas with RF-1204 antenna couplers (six channel pretuned.) Portable communications consists of Motorola Handie Talkies (PT-300) operating on FM frequencies of 157.1 and 157.15 MHz. A 100 WPM tone RATT net is installed and can be utilized with all equipment. The second communications system is Loran "C" high speed Comms which utilizes modulation of the Loran signal and is limited to RATT traffic only, but is the most reliable of the communications systems. Time checks and guards on other frequencies than normally used are accomplished with a Hallicrafters HQ 180 receiver which has a separate AN/VRA-6 antenna mounted on the signal power building. Both communications systems are fed to the timer room.

#### C. Law Enforcement and Intelligence.

1. All law enforcement and intelligence is under the authority of the Vietnamese Island Commander.

D. Search and Rescue.

1. No provision for search and rescue were made during station design or outfitting, however, when the station boats arrive, assistance to aircraft ditching in the area could be accomplished on a very limited scale.

E. Vehicles and Boats.

1. The station has four vehicles; one M-37-B1, a 2½ ton International stake truck with a hydraulic tail gate, both vehicles have winches installed. One M-37-B1 without winch and one 1½ ton Dodge stake truck. A Fire Trailer has been provided for the aircraft runway and a JD 300 tractor has been provided for antenna field maintenance.



## CHAPTER III

### PERSONNEL

- A. Complement. The complement of the station is 27 personnel including the Commanding Officer and the CHRELE.
- B. Administration of Personnel Records. All personnel records with the exception of pay records are kept in the station office and are handled by the Hospital Corpsman under the supervision of the Commanding Officer. Pay call is made monthly by the Section Office CHSPCK.
- C. Medical Facilities. The Medical facilities consist of a sick bay aboard the Station and a small hospital located in the town of Con Son with one resident physician. Serious medical cases are air evacuated to Saigon for treatment.
- D. Training and Education. Education facilities are limited to correspondence courses, which may be ordered through the Education Officer, from the following Institutions: USAFI, C. G. Institute, and the Navy Correspondence Center. A lead time of approximately one month for delivery can be expected. The Station Training Program is administered by the Executive Officer and is usually programmed for a six month period. Departmental and safety topics are included as necessary.
- E. Morale and Welfare. The Corpsman acts as Morale and Recreation Officer and is Chairman of the Recreation Committee. Recreational funds are administered by the Section Office on a quarterly basis, and are expended as the desire of the Recreation Committee indicated.

#### 1. Outdoor Recreational Facilities.

The Station is equipped with a combination tennis court and basketball court and volleyball court which may be utilized both day and night. There are two beaches for swimming and skin diving. There are numerous paths that cross through the jungle mountains for hiking. Fishing and limited hunting facilities are available.

#### 2. Indoor Recreational Facilities.

In the day room is a pool table and ping pong table. This room is also equipped with a Stereo Record Player. Movies are shown nightly on the Mess Deck.

#### 3. Mail.

The mail is handled by designated mail orderlies. It is picked up on a daily basis and made ready to be put aboard the next plane for Saigon. There is usually 3 to 4 planes each week depending on the weather. Mail service between Saigon and CONUS is approximately one week. Outgoing personal mail is free of charge.



4. Exchange.

There is a small exchange on the Station that stocks the essentials needed on the island. It is supplied by NAVSUPACT, Saigon, R.V.N.

F. Health and Sanitation. The Station was built in 1966 and the latest sanitation practices were incorporated into the construction of the buildings. The ever present threats of malaria is satisfactorily controlled by monthly spraying of the Station by U.S.A.F. Mosquito Control Planes supplemented by a Station control plan.

1. Potable Water System. See Chapter IV A, 8

2. Sewage System. The system consists of two septic tanks and two cesspools with connecting piping systems to the buildings. All Galley drains lead into a grease trap before entering the septic system. The BEQ and subsistence building sewage drain into a 4000 gallon septic tank and the Signal/Power Building drains into a 2000 gallon septic tank. Both tanks are connected to separate cesspools and terminate in the river bed which flows through the middle of the station.

## CHAPTER IV

### ENGINEERING

#### A. General Engineering

##### 1. Power Plant.

The power for this station is provided by four Diesel Generator units. The Prime Movers are Caterpillar Diesels, Model D - 379, series V.T. 8. The engines themselves are rated at 560 horse power at the rated speed of 1200 revolutions per minute. Each engine has a separate battery starting system, which includes a battery bank, 32 volt starting motors, and a battery charger.

##### 2. Damage Control.

The damage control equipment on the station consists wholly of fire fighting equipment. The main fire pump is a 250 gallon per minute electric motor driven pump, which supplies two hydrants with approximately 100 lbs. P.S.I. nozzle pressure. One hydrant is located between the Barracks Building and the Subsistence Building, and the second hydrant is located next to the Signal Power Building. Each hydrant has a hose box with eight, fifty foot lengths of one and one half inch fire hose, spanner wrench, and a two and one half to one and one half inch duplex reducing gate. The fire pump takes its suction from the stations two 25,000 gallon fresh water tanks. Each tank when full has about an eighty minute supply of water for fire fighting. Each space or room on the station has at least one type of portable extinguisher for protection. We have CO2 for Electrical Fires, Dry Chemical for Oil and Grease Fires, and Water Extinguishers for Class "A" Fires. For added protection we have a permanently mounted CO2 system installed in the Transmitter Room which discharges into the Loran Transmitters themselves. The system has two banks of four 200 lb. bottles, which can be directed into either Transmitter. For Aircraft emergency, we have a 250 lb. Ansul Cart with both dry chemical, and a light water system stationed at the air strip. For a warning system, the station has a built in zoned Smoke and Temperature fire alarm.

##### 3. Electrical System.

The station power is supplied by four 350 KW Caterpillar Generator units. Primary voltage is 480 volts, with step down transformers producing the lower voltages necessary for operating various small motors and lighting circuits. Generator units are operated either in single operation, or when necessary, in parallel operation. Two to four Generators may be in parallel, giving a wide range of conditions necessary for different conditions of operation. Voltage distribution is accomplished by the use of circuit breakers, with primary and secondary distribution panels installed in each building and



rated in accordance with load demand. Distribution cables are buried underground, and are centrally located.

4. Heating System.

Con Son Island has an average yearly temperature of 83 degrees.

5. Ventilation System.

The majority of ventilated spaces on this unit are served by Air Conditioning. We have 8 Trane air conditioning units, and one Worthington Unit. The Trane units are rated at 90,000 BTU per hour, and the Worthington Unit at 26.8 tons. Five of the Trane units are used in the Signal Power Building for cooling of station offices and Loran Equipment, and the remaining three are used in the Subsistence Building for cooling of the Mess Deck, Day Room and Wardroom Area. The large Worthington unit is used for cooling the crews living quarters. We also have roof ventilator fans for exhausting air from the Galley Dry Stores, and heads throughout the station.

6. Fuel Oil System.

The station fuel system consists of a 1,000 gallon day tank, fed from one of four 63,000 gallon bulk tanks. One of these tanks is located on the station adjacent to the Signal Power Building, and the three others are located along the runway approximately two hundred feet from the Southwest Beach Area. The tanks themselves are twenty-one and one half feet in diameter and eighteen feet high. However, due to the high ambient temperatures encountered in the normal climactic conditions of this region, the tanks are only filled to a 60,000 gallon capacity to allow room for the expansion of the fuel. The refueling of the station is accomplished by Barge under contract with the Army Engineering Corps out of Saigon. The normal amount of fuel delivered at one time is 150,000 gallons. Transfer of the bulk fuel from the tank storage on the beach to the storage tank on the station is accomplished by a 1,000 gallon fuel trailer.

7. Refrigeration System.

The main Walk In Refrigerators located in the Galley Dry Stores area are cooled by two Dunn & Busch refrigeration units rated at 26,800 BTU per hour each. The meat box is kept at 0 to 5 degrees, and the vegetable box is kept at 39 to 42 degrees. The two boxes can be set up to be used as freezers or chill boxes.

8. Fresh Water Systems.

The fresh water system consists of two 25,000 gallon storage tanks sixteen and one half feet in diameter and sixteen feet high, and a fifty foot well. The well is eight feet square, with a cribbed bottom and ten



feet of gravel to keep sand out. Water is pumped from the well by one of the pumps located in the pump house. The water flows through a hyperchlorinator, four sand filters, and three activated charcoal filters, before it is placed in a pressure tank for use in the system.

9. Buildings.

There are four main buildings on the station, three are of prefabricated steel construction, and the fourth is of Brick and Cement construction. The prefabricated buildings were manufactured by H. H. Robertson & Co., and erected on site by Chicago Bridge and Iron Construction Company. The Brick and Cement Building was built of local materials by R. M. K. Co., using local labor forces.

CHAPTER V

COMPTROLLER

A. Commissary.

1. The Commanding Officer is responsible for the direction and supervision of the general mess. He is also the Commissary Officer. The Storekeeper is the Assistant Supply Officer and shall be responsible to the Commanding Officer for the health and economic operation of the general mess. This general mess is a Class "D" Mess. Class "D" Messes are authorized a 20% increase over the basic allowance. Units in the category have two commissarymen attached.

2. There is a modern electric galley with a walk-in refrigerator and chill box. The mess deck has a maximum seating capacity of 30. The galley and mess decks are completely air conditioned. General mess provisions are procured mostly from Naval Support Activity, Saigon, and lesser amounts from Bangkok, Thailand.

B. Requisitions.

1. Commander, Fourteenth Coast Guard District allocates funds for each of the four quarters of the fiscal year. The allocations are fund authorizations granted to the unit without a supply officer, to permit them to initiate procurement documents to specific subhead allocations. Forms used mostly are:

- (a) DD FORM 1149 - REQUISITION AND INVOICE/SHIPPING DOCUMENT
- (b) DD FORM 1348 - MILSTRIP

2. When additional supplies are required CG-4248, Request for procurement Form is used. This form is sent to Commander, Southeast Asia Section Office, Bangkok, Thailand. They in-turn, either disapprove the request or approve it and find a source of supply. Major sources of supply are:

- (a) Naval Support Activities, Saigon, South Vietnam
- (b) Coast Guard Supply Depot, Honolulu, Hawaii
- (c) Naval Supply Depot, Subic Bay, Philippines
- (d) General Service Administration, San Francisco, California
- (e) Coast Guard Supply Center, Brooklyn, New York
- (f) Local Suppliers

C. Pay.

1. Pay records are retained at Southeast Asia Section Office in Bangkok, Thailand. Currency can be obtained in:

- (a) Military Payment Certificate (MPC)
- (b) Piaster (South Vietnam)
- (c) Baht (Thailand)

Personnel are paid once each month. United States currency is not used for payments in South Vietnam for any reason. Persons handling U. S. Currency may be subject to trail by courts-marshall. United States currency should be turned in for Baht, Piaster, or MPC as soon as possible after arriving in Southeast Asia.

D. Fuel and Lube Oil.

1. Diesel fuel is delivered to Con Son via barge by the U. S. Army in minimum shipments of 150,000 gallons. The barge is secured on the beach at high water and the product off loaded into three 64,000 gallon storage tanks, located adjacent to the beach at the west end of the Con Son Airstrip. Fuel is transported from the beach storage area to the station by a 1,000 gallon fuel trailer.

2. Lube oil is delivered through normal supply channels from either Saigon or Bangkok, in drums by aircraft.

E. Transportation to Island.

1. U. S. Army, Navy and Air Force planes (C-47, C-129, C-130) arriving mostly from Saigon, South Vietnam and Bangkok, Thailand bring personnel, supplies and mail.

2. Arrangement for travel to Con Son are made by either COMSEASTASEC 300 Silom Rd., Bangkok, Thailand, Telephone 31080 or COMCOGARDRON ONE, 117 Dinh Phung, Saigon, R.V.N. Telephone: Tiger 4019 as necessary.

3. Transportation about the island is by station vehicle or bicycle.



## CHAPTER VI

### ADMINISTRATION

#### A. Reports and Logs:

1. With but few exceptions all administrative reports are forwarded through COMSEASEC, Bangkok, Thailand. The basic instruction for the forwarding of these reports is contained in CCGD14INST 5216.1A of 6 October 1965, which has been supplemented by COMSEASEC listing all required reports by their District Division. A station tickler file is maintained to ensure timely submission of all required reports. All log books required by various regulations, including the station log, are checked daily for accuracy by the responsible department head and presented to the Commanding Officer for final approval and signature if required. Details of the above are covered in the Administration and Operation Bill Par. 2007 of the Station's Organization Manual.

#### B. Official Correspondence:

1. All official station correspondence is prepared in rough draft by the originator and submitted to the Commanding Officer for approval and delivery to the station office for typing. Correspondence involving Classified material or registered mail is finalized by the Commanding Officer. All official incoming mail is delivered to the Commanding Officer for action and routing as necessary. Mail is handled by designated mail orderlies.

#### C. Delegation of Authority:

1. Collateral Duty Assignments are outlined in the Station Organization Manual as per paragraphs 1006 and 2017. All collateral duties are designated in writing by letter to the individual concerned and a copy to the Station's Assignment To Duties File. Collateral duties not expressly covered in the Station Organization Manual may be found by examination of this file.

#### D. Station Bill:

1. The following evolutions are covered by the Watch, Quarter and Station Bill: Fire Stations, Heavy Weather, Nuclear, Biological and Chemical Defense, Rescue Survivors, Destruction and Battle Stations. The remaining Bills such as Watchstanders Bill, Vehicle Bill, etc., are covered in detail in the Organization Manual commencing with paragraph 2002.

#### E. Safety:

1. The Chief Radio Electrician acts as Safety Officer for the Station and is President of the Safety Board. The Board consists of a member from each Department and meets once a month to discuss safety topics and correct any unsafe practices that may be found to exist. Details of the Safety program

aboard the Station are covered in the Safety Bill paragraph 2009 of the Organization Manual.

F. Flags:

1. This station flies two national Ensigns from the yard of the flag pole; United States of America and Republic of Vietnam.

## CHAPTER VII

### A. Mailing Addresses:

Commanding Officer  
Loran Station (36)  
APO San Francisco 96314

Commander (oan)  
14th Coast Guard District  
677 Ala Moana  
Honolulu, Hawaii 96813  
Tel: 546 5863

COMSEASEC  
Bangkok Bank Building  
300 Silom Rd.  
Bangkok, Thailand  
Tel: 31080

Mailing Address: Commander  
Southeast Asia Section  
APO San Francisco 96346

COMCOGARDRON ONE  
117 Phan Ding Phung  
Saigon, R.V.N.  
Tel: Tiger 4019

Mailing Address: Commander  
U. S. Coast Guard  
Squadron One  
COMNAVFORV HQ  
Box 12  
APO San Francisco 96214

### B. Postage Requirements:

1. No stamps or postage is required for personal outgoing letters from this station. Incoming personal mail with five cent postage sent in a plain envelope without airmail markings will be processed as airmail.

### C. Dependents:

1. No U. S. Military personnel are presently allowed to have dependents in the Republic of Vietnam. The probability of this unit ever becoming a family station is remote.

### D. Things To Do After Receiving Orders:

1. The following is a random listing of suggested items to complete prior to departing for Southeast Asia. A complete overseas physical is required, including the completion of all dental work and shots prior to departing CONUS. Arrangements are to be made for a United States Passport (OFFICIAL) through your nearest U. S. Passport Agency. When packing, emphasis should be placed on work clothing and tropical uniforms and a suit of light weight civilian clothing. Heavy clothing of any description is not recommended. Dog Tags should be checked. If a family type allotment is in order, it should be completed prior to departing CONUS. Personal firearms are not recommended. A general reminder to leave your "house" in order before departing the United States.



E. Things For New Commanding Officer:

1. Check your seabag for the following minimum uniforms: Dress Khaki (one), Tropical Wash Khaki long (five), and Tropical White long (two). Suffice to say that heavier or dressier type uniforms and your sword will not be a necessity for this tour of duty. Upon reporting to COMCOGARDRON ONE, Saigon, R.V.N. an issues of tropical green uniforms with boots is recommended and may be obtained from the U. S. Navy Field Issue Room.

2. A one week indoctrination period is scheduled by the Commander, 14th Coast Guard District (oan) and during this period it is suggested that you examine the station file to assist you in becoming familiar with the Con Son Loran Station. A final briefing will be made available to you by COMSEASEC, Bangkok, Thailand prior to departure for Con Son.

F. Travel To Con Son, R.V.N.:

L. Upon completion of your briefing by COMSEASEC you will report to COMCOGARDRON ONE, Saigon, R.V.N., for final transportation to Con Son. Travel to Con Son is via MAC on scheduled service which is subject to change without notice.

