HISTORY OF THE 244TH RADIO RELAY SQUADRON

1 SEPTEMBER 1965-31 AUGUST 1966

Prepared by
Major Benjamin W. Faber
Information Officer
and
Captain Louis A. Bulletset Jr.
244th Radio Relay Squadron

Approved By:

Albert E. Garvin

ALBERT E. GARVIN
Lt Col, OreANG
1 October 1966

OREGON AIR NATIONAL GUARD

TABLE OF CONTENTS

I. MISSION AND RESOURCES 1.

A. Mission - Provide point-to-point duplex communication by radio relay systems, through line of sight and/or tropospheric scatter techniques.

1. Peacetime - To provide a trained and equipped unit to assist state authorities in protection of life and property and the preservation of peace and public safety.

2. Mobilization - To provide a trained unit with qualified persons to augment the USAF whenever needed in the event of war, national emergency and at such other times as the national security requires.

B. Organization.

1. Past - The 244th AACS E&I Squadron was organized on 7 July 1956 under authority contained in General Order 46, The Adjutant General, Oregon, dated 24 May 1956 as outlined in UMD 1-2221, dated 1 June 1955. The unit was redesignated from 244th AACS E&I Squadron to 244th GEEIA Squadron effective 1 January 1959 under authority contained in General Order 24, The Adjutant General, Oregon, dated 20 February 1959.

2. Present - The unit was redesignated and reorganized from 244th GEEIA Squadron to 244th Radio Relay Squadron effective 1 October 1960 under authority contained in General Order 63, The Adjutant General, Oregon, dated 23 September 1960. See Appendix 2, unit organizational chart.

3. Lt Col Albert E. Garvin, FG437725 has been in Command since organization of the 244th AACS E&I Squadron on 7 July 1956.

C. Personnel -

1. Strength:	AUTHORIZED	PROGRAMMED	ASSIGNED
Officers	10	*7	5
Airmen	181	144	140
	191	151	145

*The position of Medical Officer is authorized in addition to number of officers programmed.

2. Attendance: Average percentage of attendance at Unit Training Assemblies was 93% and at Annual Summer Field Training in August 1966, 98%.

3. Air Technicians Authorized and Assigned:

NAME	RANK	TECHNICIAN POSITION	UNIT POSITION	PAFSC	DAFSC
Bulletset, L.A.	Capt	Comm Unit Supv	Pers Off	7324	7324
Dragousky, R.W.	SMSgt	Eq Mgmt Tech	Inv Mgmt Spcl	64590	64590
Sorenson, D.E.	TSgt	Rad Maint Tech-Gnd	Rad Rel Eq Tech	X30470	30470
Luft, A.W.	MSgt	Mtr Veh/Gnd Eq Tech	Mtr Veh Maint Tech	47170	47170
Masic, T.L.	MSgt	Admin Supvr	Pers Supvr	73291	73291
Mill, R.S.	TSgt	Mtr Veh/Gnd Eq Spcl	Elec Pwr Prod Spcl	54370	54370
Mitchell, B.J.	CMSgt	Sr Rad Maint Tech-Gnd	Gnd Rad Maint Supt	30490	30490
Engelking, G.T.	AlC	Mtr Veh/Gnd Eq Spcl	Mtr Veh Maint Tech	47151	47151
Doering, R.A.	SSgt	Pers Tech	Pers Tech	73270	73270
DeMars, R.P.	AlC	Rad Maint Tech-Gnd	Rad Rel Eq Tech	30430	30450
Kirkham, R.S.	SMSgt	Education Spcl	Ed & Tng Supvr	75190	75190
(Not Filled)		Radio Mech-Gnd	--	--	--
(Not Filled)		Admin Spec	--	--	--

4. Number of enlistments and discharges for period of this report:

Enlistments: Prior Service: 9
Non-Prior Service: 16

Discharged: 27

D. Major Equipment -

NOMENCLATURE	AUTHORIZED	ON HAND
Tropospheric Scatter Gear AN/TRC-97A	2	0
Radio Relay Terminal sets, AN/TRC-61	5	5
Radio Relay sets, AN/TRC-36	10	10
2½ ton 6X6 truck	15	15

½ ton 4X4 6-passenger pickup	15	0
Substitute: ½ ton 4X2 6-pass pickup	0	2
Econoline pickup	0	4
Station Wagon	1	1
Wrecker	1	0
Snow Cat	1	0
M-109 shop van	1	0
Trailer, tank, gas, 600 gal cap.	2	1
Trailer, tank, water, 400 gal cap.	2	2
Trailer, cargo, 1½ ton	15	15
EMU-10 generator	30	6
Substitute: PU-286/U, 5KW generator	0	30
GGC-10AC, 10KW generator	0	2

E. Facilities -

1. The unit headquarters and administrative and personnel activities located in Bldg T-1217, Portland International Airport, Oregon.

2. The communications and materiel control activities are located in Bldg P-1333, PIA, Ore.

3. The motor vehicle and ground power activities and associated equipment are located in the Oregon Air National Guard Motor Pool, PIA, Ore.

4. The Medical section jointly utilized the 142d USAF Dispensary (OreANG) facilities, PIA, Ore

5. The Food Service Section jointly utilizes the OreANG Dining Hall, PIA, Ore.

II. OPERATIONS AND TRAINING

A. Operational Readiness - compiled from Operational Readiness Reports RCS 1-ANG-VI. Authority: ANGM 178-1.

QUARTER ENDING	COMMANDERS ESTIMATE OF OVER-ALL UNIT READINESS	COMMANDERS FORECAST OF OVER-ALL UNIT READINESS	PERSONNEL	MOBILITY EQUIPMENT
30 Sep 65	7	8/8/7	8/63.8%	9/9
31 Dec 65	7	8/8/8	8/62.7%	9/9
31 Mar 66	7	8/8/8	7/63.1%	9/9
30 Jun 66	7	7/7/7	7/60.3%	9/9

B. Training Program -

1. Skill Knowledge Testing (1 Sep 65 - 31 Aug 66):

SKT LEVEL	QUALIFIED	UNQUALIFIED	PERCENTAGE QUALIFIED
3	*11	4	73.3%
5	*15	6	71.4%
7	3	4	42.9%
	29	14	67.4%

* Six (6) "3" levels and One (1) "5" level received maximum scores of 95 percentile.

2. This unit received from the National Guard Bureau the On-The-Job Training Unit Achievement Award for calendar year 1965. Of 50 airmen tested 42 qualified for a 84 percentile.

3. Student flow through training schools:

COURSE	NO.	OUTSTANDING GRADUATES
Basic Only 00010	6	-
ABR 30430 (tech school only)	2	-
ABR 30430 (split phase)	7	2
ABR 47131 (split phase)	2	-
ABR 54330 (split phase)	3	-
ABR 70230 (split phase)	1	-

ABR 64530 (split phase)	1	1
AAR 73270 (tech school only)	1	-
AJF 75000	1	-
ARR 75100	2	-
TOTAL	26	3

4. CDC and ECI courses completed:

COURSE	NO.
ECI 00028	1
ECI 0006	6
ECI 5520	1
ECI 3030	1
CDC 30000	15
CDC 30450	5
CDC 64000	2
CDC 64550	3
CDC 70000	5
CDC 73250	1
	40

C. Special Training Exercises:

1. Exercise "Gummed Label", August 1966 Summer Field Training Exercise. Purpose to increase the mobilization and operational effectiveness of the Air Reserve Forces for which AFCS is the gaining command by providing them with realistic training.

a. General Objectives:

(1) To realize the maximum benefit to the Air Force and to the overall defense posture in the exercise of each ARF unit in the Western Communications Region area of responsibility.

(2) To exercise each unit in a situation similar to that which would be encountered were the unit to actually be called into active service during

(3) To provide each individual with adequate training and supervision in his particular specialty that will insure a reasonable degree of job performance, without further training, in an emergency.

b. Specific objectives: The 252nd Communications Group (Mobile) which comprises of a Group Headquarters, 142d Communications Squadron (Relay Center), 143d Communications Squadron (Tributary Teams), 244th Radio Relay Squadron, 262d Communications Squadron (Tributary Teams), and attached 242nd Flight Facilities Flight, established a communications net in the Northwestern U.S. (Washington and Oregon) with tributaries serving selected active Air Force installations and Reserve Forces installations. This net was established to utilize to the fullest extent all possessed communications equipment. See Appendixes 3 through 5.

c. The above objectives were met with enthusiasm and the entire exercise was considered successful. The units FM system which operated between Camp Riles, Oregon and Yakima Firing Center, Washington, met all channel service requirements and experienced only minor outages.

2. Exercise "Hot Ashes II". Special exercise established by Western Communications Region during August 1966 Summer Field Training. Purpose was to test WESTCOMMRGN instructions for performing under simulated emergency conditions. Problems and/or incidents were injected into the system by pre-selected Trusted Agents.

a. The "Hot Ashes II" exercise added considerable interest to the entire "Gummed Label" exercise. This three day alert exercise demanded tight security and the close cooperation of all sections. See Appendix 5, report of exercise "Hot Ashes II".

3. A second special exercise was directed by Hq 252nd Communications Group (Mobile) Command Post deploying additional equipment into the FM system. It was executed for the purpose of observing performance of selected squadron personnel,

acting without the guidance of experienced leaders. This project revealed the potential of middle managers to plan, organize and implement a successful operation in the absence of directed supervision.

4. 244 Radio Relay Squadron Communications-Electronics relay systems exercises during unit training assemblies from home station to designated radio relay and terminal locations. Purpose is to attain and maintain an optimum effective radio relay capability to carry out roles and tasks assigned in gaining command plans for utilization in national emergency or local disaster. The following are exercises performed:

a. Exercise on 20 and 21 November 1965, unit training assembly weekend. Established an emergency radio relay system with terminal locations at Madras Airport, Oregon, and Portland Intl Aprt, Oregon. No relays were used. This was a training exercise to provide OJT in the installation of a radio relay system under disaster conditions. It was assumed that normal communications between the Madras area and the Portland area have been disabled. This was also an exercise in the use of AN/TRC-24 radio relay sets over extended distance (120 miles). High gain antennas and preamplifiers were utilized at each location. Also an additional system was established between Salem, Oregon and PortlandIntl Aprt, Oregon with relays at the following Oregon locations: Skyline Blvd; Aurora Airport and Prospect Hill. Thirty (30) airmen were utilized at the sites in the two (2) exercises and 15 vehicles and associated equipment.

b. Exercise on 18 and 19 December 1965, unit training assembly weekend. Established an emergency training exercise consisting of two FM radio relay systems with terminal locations at The Dalles, Portland Intl Aprt, and Salem Civil Defense Command Post, Oregon. The terminal facilities at PIA were connected back-to-back providing maximum of multiplex circuits. Ten relay stations were used in the two relay systems. This was a training exercise to provide OJT and proficiency training for radio relay personnel (304X0) in a simulated flood disaster

situation for the purpose of upgrade training and to improve their proficiency in the installation and maintenance of multichannel FM radio relay systems (mobile). Forty-six (46) airmen were utilized at the sites and 25 vehicles and associated equipment.

c. Exercise on 19 and 20 February 1966, unit training assembly weekend. This was a training exercise to establish an FM radio relay remote receiver consisting of two terminals to support the 142nd Communications Squadron (RC). One terminal to be located at Rocky Butte (in the city of Portland) and one at PIA, Oregon which will provide three (3) teletype channels and one (1) voice channel. The purpose of the FM relay system was to provide the 142nd Comm Sq (RC) a means of remoting their HF radio receivers with enough seperation so that mutual interference can be reduced and make possible operation of receiver equipment in an area where there is less electrical and electromagnetic interference. Fifteen (15) airmen were utilized at the sites and three (3) vehicles with associated equipment.

d. Exercise on 21 and 22 May 1966, unit training assembly weekend. Established a radio relay system with terminals located at Camp Bonneville, Washington, and Crown Point and Skyline Gardens, Ore. Relays were located on Larch Mt, and Livingston Mt, Washington. The purpose of this operation was to simulate the 1966 summer field training radio system. Thirty-three (33) airmen were utilized at these locations along with thirteen (13) vehicles and associated equipment.

e. Exercise on 16 and 17 July 1966, unit training assembly weekend. Established a radio relay system with terminals located at PIA, Oregon, Larch Mt and Livingston Mt, Washington. The purpose was to further simulate the 1966 summer field training radio system in order to get the systems alarms worked out. Thirty (30) airmen were utilized at these locations along with eight (8) vehicles and associated equipment.

III. MAINTENANCE AND SUPPLY

A. During the period of this report, this unit continued functioning under the AFM 66-1 & AFCSM 66-1 maintenance concept. Maintenance personnel started data processing on 1 Jan 1966. On 1 Aug 1966 maintenance personnel started using the new 210D pre-punched IBM cards for preventive maintenance.

B. Also, during the period of this report, this unit assumed the responsibility of the annual overhaul of all communications equipment. This is eliminated the need for a special depot maintenance team that normally performed this function, resulting in a considerable saving in money and man-hours.

C. On 30 July 1966 installation of air conditioners in all 15 communications vans was completed. This project was completed by maintenance personnel of this unit in cooperation with the machine shop section of the Air Technician Base Detachment.

IV. SPECIAL PROBLEMS

A. Summer Field Training -

1. The summer field training period, which has been in August since 1962, is too late in the year and it has presented this unit with many problems, such as retention of personnel and the breaking up of the summer for students who work. Fire danger in forest areas is also much greater in August for which there have been several occasions where our radio system was in jeopardy of shut down.

2. Field training at home station in August 1966 is not recommended in the future. A unit that is supposed to be mobile should constantly practice mobility. Field training is not only an exercise for setting up a radio network but is also an exercise for the unit's mobility capabilities, which should include the entire squadron. It has also been noted that morale has been higher when not at home station and that a military atmosphere is more prevalent away from home station.

B. Upgrade qualification on SKT's. With the advent of CDC this unit has experienced a considerable drop in qualifications on SKT's. This is not the fault

of CDC itself but the problem of transition, motivation, and erroneous information given out by the unit on CDC completions. Also with the new program in effect for the majority of the career fields in the unit, there is a considerable amount of adjustment and delay in testing. It is believed however, that for the remainder of Calendar year 1966 and from then on that personnel will be upgraded much more rapidly and the program will be a success. The units operational readiness has also been affected temporarily.

C. Major Equipment Problems -

1. Motor vehicles. This unit has, since its existence, had to borrow or rent support vehicles for field training exercises. It is hoped that the 6 passenger pickups recently authorized will be available to this unit prior to the next field training exercise.

2. Ground power generators. The 5KW generators presently possessed by this unit are inadequate to carry the load required. The six (6) of thirty (30) authorized EMU-10's now in possession of the unit have been troublesome and much effort has been expended to work out the problems and procure modification kits and make necessary changes and adjustments. This generator is the answer to our needs if it proves to be able to operate over extended periods of time with little or no maintenance. Tests are being conducted and it is believed that the EMU-10 will serve our needs quite adequately.

3. Communications equipment. Problems encountered are not with the present equipment on hand but with not having all equipment authorized such as the tropospheric scatter gear sets (AN/TRC 97A's). The tropo equipment has been in the buy program for several years, yet nothing has happened on delivery dates, only conjectures. This equipment is sorely needed to increase our mission capabilities as well as utilizing the training received by airmen attending the tech school. Communications personnel are anxious to start operating this equipment which would enhance our training program and morale.

D. Facilities. A problem exists for C&E maintenance because of the storage of all mobile communications equipment in the OreANG motor pool for security purposes. Because of the separation of the C&E maintenance and motor vehicle maintenance facilities much time is required by the C&E maintenance technicians to procure this equipment from the motor pool and bring it to the C&E shop every time maintenance work is required, then returning it at the end of each work day or when the maintenance is completed. The electronics equipment is also required to have power applied for extended periods of time during maintenance actions, and because of the limited time the equipment can be on before it has to be returned to the motor pool daily, interrupts the warmup periods particularly during the winter months. This unit annually, since CY 1962, requested the installation of a cyclone fence compound for the storage of this equipment adjacent to the communications maintenance facilities in Bldg P-1333. This would partially solve the problem, however, a complete solution would be to consolidate the motor vehicle, ground power, and communications maintenance technicians in a common maintenance area where they could utilize the same compound.

V. MISCELLANEOUS

A. Awards received in addition to those already mentioned in this report.

1. TSgt Douglas E. Sorenson was named the Outstanding Oregon Air National Guardsman for calendar year 1965.

2. During this report period two (2) unit airmen received the Air Force Commendation Medal. The citation reads as follows: "Staff Sergeant George L. Coulsey and Airman First Class Ralph L. Merrill distinguished themselves by outstanding achievement near Bend, Oregon, on 14 August 1965. On that date, Sergeant Coulsey and Airman Merrill were present at the scene of an automobile accident which critically injured the driver of one of the vehicles. Without hesitation and with complete disregard for their own safety, Sergeant Coulsey and Airman Merrill, despite the hazard of gasoline that had spread over the area and a shorted battery cable,

went to the aid of the injured victim pinned in the vehicle, administered first aid and remained with him until the arrival of professional assistance. By their prompt action and humanitarian regard for their fellow man, Sergeant Coulsey and Airman Merrill have reflected credit upon themselves and the United States Air Force". Major General Donald N. Anderson, The Adjutant General of Oregon, presented the award.

B. Social functions -

1. On 15 April 1966 the NCO's of this unit held a Dining-In with the officers as guests. The State Adjutant General, Maj Gen Donald N. Anderson and the Ass't Adjutant General for Air, Brig Gen Staryl C. Austin were present. Brig Gen Gordon L. Doolittle was the speaker for the evening. This event was attended by approximately 60 personnel and was held at Ford's Restaurant in Portland, Oregon.

2. On the next to last day of Annual Field Training, 26 Aug 1966, this unit held a squadron party at Jack-and-Jills restaurant in Portland. This event was a semi-formal dinner-dance and was attended by about 125 people.

AACS E&I	Airways and Air Communications Service Engineering and Installations.
AFCS	Air Force Communications Service
AN/TRC-8	230-250 megacycle FM relay equipment, low power (obsolete)
AN/TRC-36	FM Radio Relay sets designed to provide multichannel communications from point-to-point. Approximately 30-50 mile separation.
AN/TRC-61	FM Radio Relay Terminal sets designed to provide terminal facilities for radio relay systems.
AN/TRC-97A	Tropospheric Scatter Radio set designed to provide multichannel telephone and telegraph communications without the use of relays.
ARF	Air Reserve Force
CDC	Career Development Course
Complex Emission	High frequency sideband multiplex communications.
CP	Command Post
EMU-10	10 kilowatt ground power generator designed to provide power to operate radio equipment and associated facilities.
FM System	Very high frequency/ultra high frequency (VHF/UHF) radio relay system. Operating from 200-400 megacycle region of radio frequency spectrum. Requires line-of-sight operation.
GEEIA	Ground Electronics Engineering Installation Agency
GGC-10AC	10 kilowatt ground power generator designed to provide power to operate radio equipment and associated facilities.
HF	High frequency.
Multiplex	Mixing of several voice and teletype channels over a common wire or system and demultiplex at far terminal end.
NCS	Net Control Station.
Plan 55	High speed switching center. Automatic tape relay.

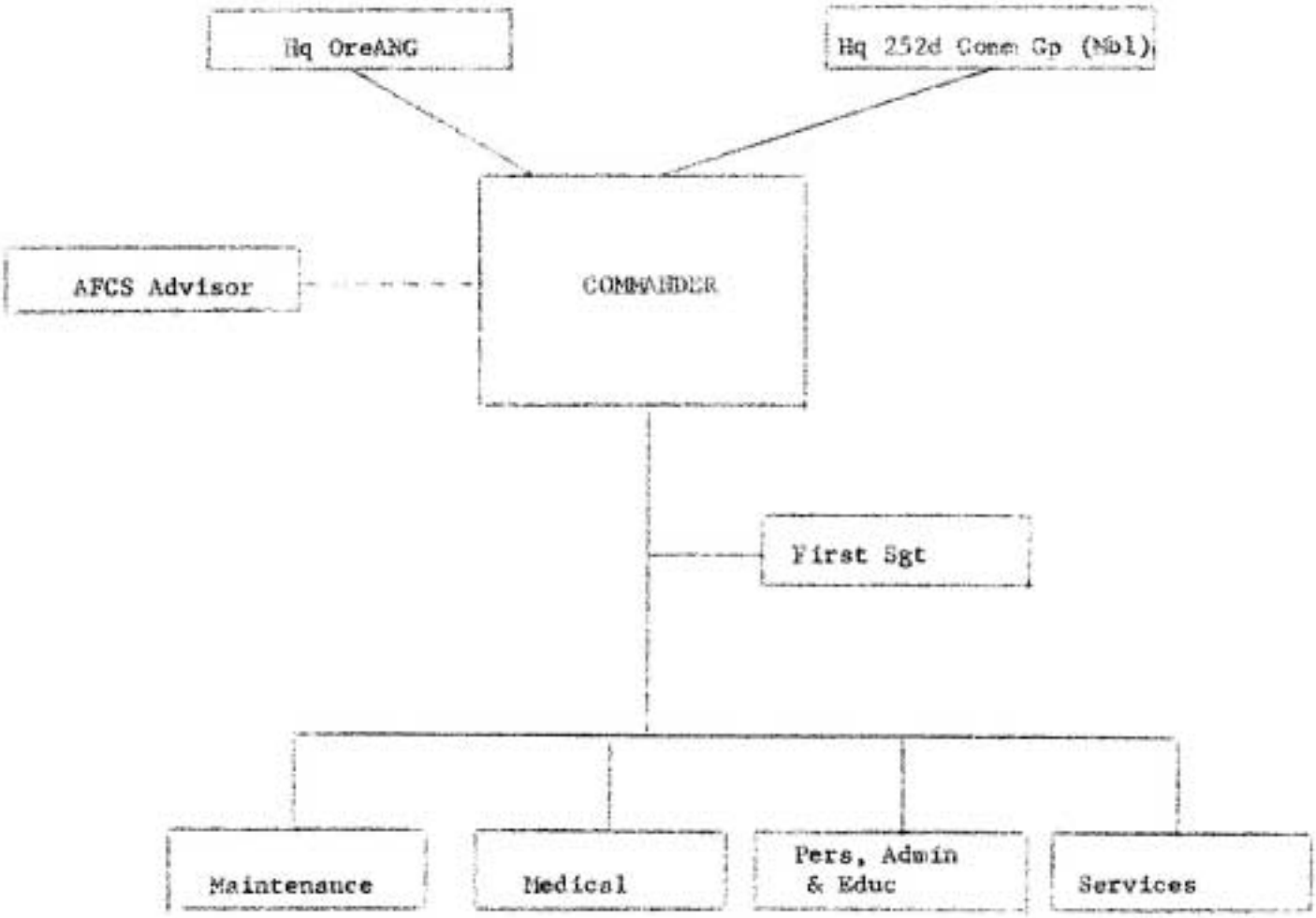
PU-286/U	5 kilowatt ground power generator designed to provide power to operate radio equipment and associated facilities.
RC	Relay Center. Communications switching center.
Secure Landline	Leased telephone company circuit.
SKT	Skill Knowledge test
SSB	Single sideband high frequency base communications facility.
Trib	High frequency medium and long haul communications system.
TSC-28	Trans Comm. High powered independent sideband.
TT	Trib teams.
WCR	Western Communications Region.

ROSTER OF KEY PERSONNEL

GRADE	NAME	SERIAL NO.	PAFSC	UNIT POSITION
Lt Col	Albert E. Garvin	FG437725	3016	Commander, 3016
Major	Benjamin W. Faber	FG2229081	3034	Supply Officer, 6421
Major	Richard O. Hoyt	FG1852734	3034	C&E Staff Officer, 3011
Capt	Louis A. Bulletset Jr.	FG3139607	7324	Pers Officer, 7324
Capt	Donald E. Moore	FR76205	3034	AF Advisor
1st Lt	James G. Miller	FG3127841	3034	Comm Officer, 3034
CMSgt	Ronald M.CDixon	AF23567191	30490	Gnd Radio Comm Supt, 30490
CMSgt	Bob J. Mitchell	AF19015584	30490	Gnd Radio Comm Supt, 30490
SMSgt	Raymond W. Dragowsky	AF38789885	64590	Inv Mgmt Supt, 64590
SMSgt	Roy S. Kirkham	AF28772845	75190	Educ & Tng Supv, 75190
SMSgt	Ralph L. Mesick	AF19537143	30490	Rad Rel Eq Tech, 30490
MSgt	Joseph P. Hellberg	AF19047920	01090	1st Sgt, 01090
MSgt	Arthur W. Luft	AF28770528	47170	Veh Maint Tech, 47170
MSgt	Tom L. Masic	AF28788690	73290	Pers Supt, 73290
MSgt	Lewis M. Storms	AF18254899	30470	AF Tech Advisor
TSgt	Richard S. Mill	AF28790707	54370	Elec Pwr Prod Tech, 54370

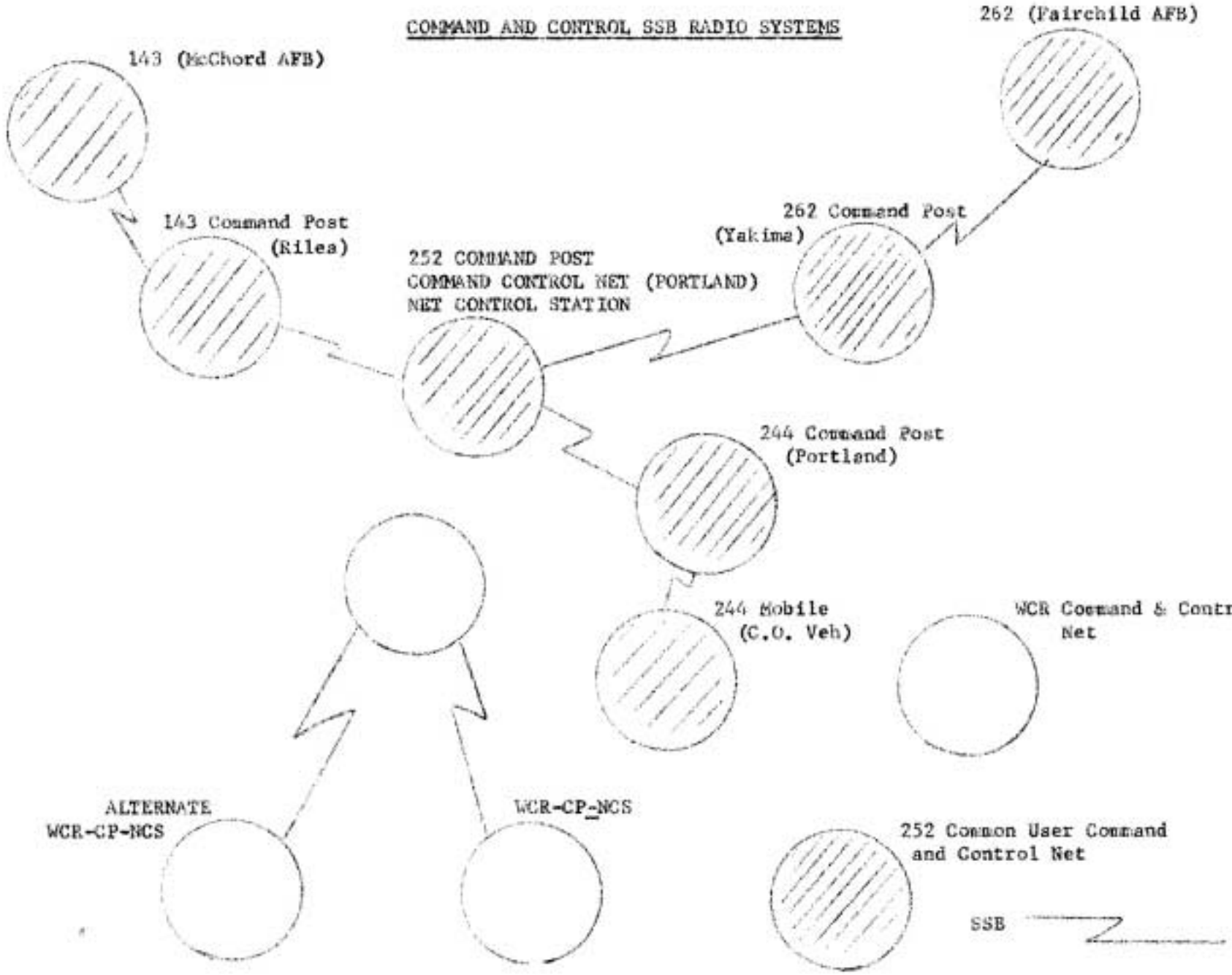
ORGANIZATIONAL CHART

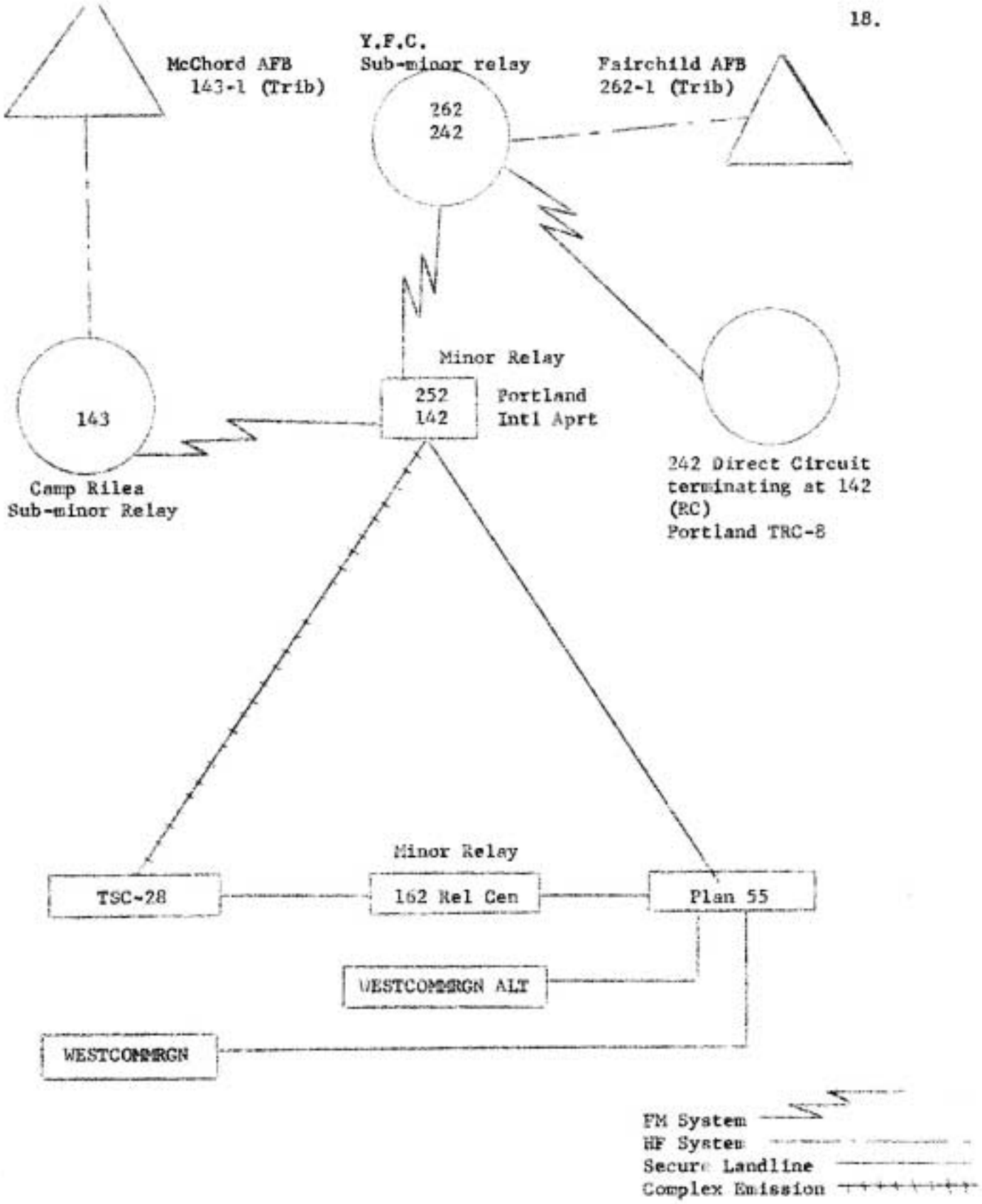
244TH RADIO RELAY SQUADRON



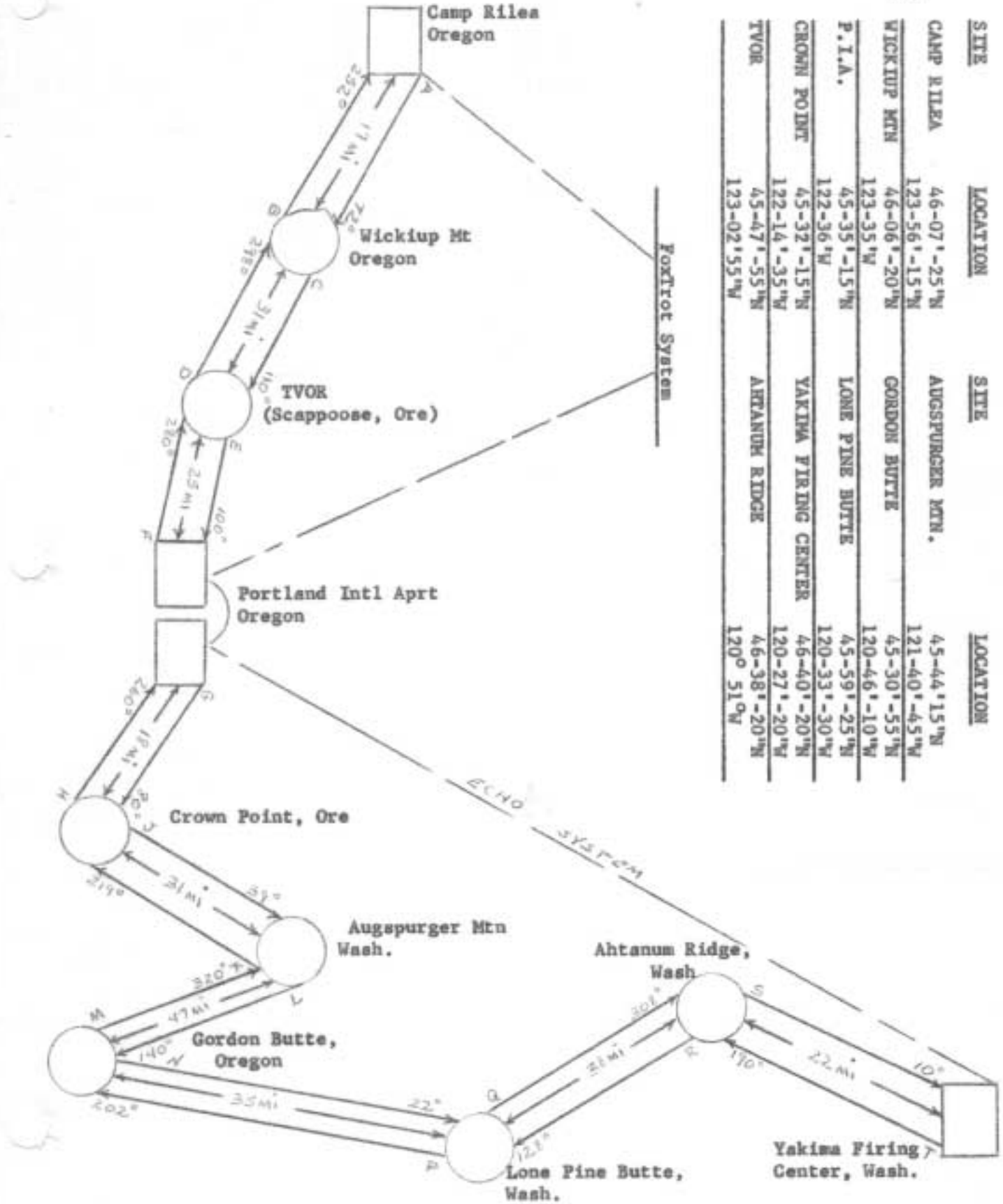
APPENDIX 2

COMMAND AND CONTROL SSB RADIO SYSTEMS




McChord AFB
143-1 (Trib)
Y.F.C.
Sub-minor relay
262
242
Fairchild AFB
262-1 (Trib)
Minor Relay
252
142
Portland
Intl Aprt
143
Camp Rilea
Sub-minor Relay
242 Direct Circuit
terminating at 142
(RC)
Portland TRC-8
Minor Relay
TSC-28
162 Rel Cen
Plan 55
WESTCOMMRGN ALT
WESTCOMMRGN
FM System
HF System
Secure Landline
Complex Emission

SITE	LOCATION	SITE	LOCATION
CAMP RILEA	46-07'-25"N 123-56'-15"W	AUGSPURGER MTN.	45-44'15"N 121-40'-45"W
WICKIUP MTN	46-06'-20"N 123-35"W	GORDON BUTTE	45-30'-55"N 120-46'-10"W
P.I.A.	45-35'-15"N 122-36"W	LONE PINE BUTTE	45-59'-25"N 120-33'-30"W
CROWN POINT	45-32'-15"N 122-14'-35"W	YAKIMA FIRING CENTER	46-40'-20"N 120-27'-20"W
TVOR	45-47'-55"N 123-02'55"W	AHTANUM RIDGE	46-38'-20"N 120° 51°W



APPENDIX 5