HISTORICAL REPORT

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DETECTARE ET DESPOLIARE

34th AIR DIVISION

DEFENSE

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MEMORANDUM FOR THE RECORD

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HISTORICAL REPORT

34TH AIR DIVISION (DEFENSE)

Col. W. W. Bowman, Commander

PERIOD

31 DECEMBER THROUGH 30 JUNE 1953

APPROVED:

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M I S S I O N and C O M M A N D

The mission of the 34th Air Division (Defense) remained substantially unchanged during the reporting period, 31 December through 30 June 1953.[1,2,3] This mission fundamentally is:

(1) To provide air defense for the Albuquerque ADIZ and contiguous area assigned, including Atomic Energy Commission installations at Los Alamos and Sandia;

(2) To conduct such training, both air and ground, as required properly to accomplish the air defense mission.

Two major changes occurred within the staff family during the six-month period, Col. WILLIAM A. MATHENY,[4] Commander, assigned to command the 31st Air Division (Defense), being temporarily replaced by his Deputy,[5] Col. HARVEY P. HUGLIN, pending the arrival of the new Commander, Col. WENDELL W. BOWMAN, and Lt. Col. W. E. SACKETT[6] assuming the duties of Adjutant General vice Maj. JAMES F. MARTIN, transferred. Organizationally, the Division remained basically unchanged from the previous reporting period.[7]

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1. 34th AD(D) Regs Series, 20-1 through 20-10.
2. ADC OPS Plan 3-52.
3. CADF Ops Plan 2-53.
4. TWX, HQ CADF to 34th AD(D), Mil Pers-0A6914, 10/1634Z June 53
5. 34th AD(D) G. O. NO. 9, dtd, 16 Jun 53
6. 34th AD(D) G. O. No. 10, dtd, 10 Jul 53
7. Org. Chart, 34th AD(D), (Sup. Doc. No. 1)

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There were two air defense exercises conducted during the six months, CSX"Moonlight" on 26-27 March and ADX "April Showers" on 6 April. Analysis of both tests pointed up a need for improvement of the air surveillance activity, which currently is under study by personnel of the Deputy for Operations and the Combat Operations Center. It is anticipated that ADX"Tailwind" scheduled for early July, will demonstrate a considerable improvement of performance in the surveillance field. Otherwise, "Moonlight" and "April Showers" went off smoothly and according to plan, barring, as always, an overloading of communications facilities during periods of faker saturation. This problem, too, is being given Command attention. The matter of adequate and prompt cross-telling between adjacent Divisions (27th, 29th and 33rd, specifically) also was considered basically unsatisfactory, although programmed installation of teletype cross-telling lines is expected to materially alleviate, or completely eliminate, this lack.

Major Command problem encountered during the period involved losses of personnel in highly critical areas through levies to overseas assignments and normal attrition. Particularly hard-hit were the scanner/plotter and director/controller fields.

Constant resurvey and surveillance of available manpower, plus a high pressure On-the-Job Training[7] program and intramural transfers as dictated by the situation, maintained the Division at a high peak of operational efficiency despite the heavy drain on personnel resources.

Of signifant importance, both morale and efficiency-wise, was the inauguration, between January and June, of a series of monthly Command inspections[8] designed to promote a friendly competitive spirit among the subordinate Fighter-Interceptor and AC&W Squadrons. The inspection, conducted by the Command Staff, is based on 100 points and covers the gamut of personal appearance to operational efficiency. A "Totem" pole" trophy was designed to be awarded to the highest Squadron and the program developed a high degree of achievement among the subordinate units. It is deemed significant that by the end of the reporting period, less than four percentage points separated the highest and lowest Squadrons.[9]

In the words of Colonel HUGLIN,[10] "we have the best Division in the business, and our morale is improving by the minute.

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7. 34th ADDR 50-23, dtd 15 May 53,
8. Ltr. 34th AD(D) CC333 Subj: Quarterly Command Inspection, 15 May 53
9. Ltr. 34th AD(D) CC333 Subj: Quarterly Command Inspection, 29 Jun 53.
10. Pers. Int. w/Col Huglin by Cmd Hist, 15 Jul 53.

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We intend to leave nothing undone to raise our operational efficiency to a peak that will be the envy and emulation of Air Defense Command. We feel that we are well on toward that goal."

OPERATIONS ANALYSIS

*(THREE-MONTH PERIOD ENDING 31 MARCH 1953)

Definitions and abbreviations as used in this report:

Initial Pickup (I/P) That time at which a radar scanner determines a plot to be real and not just a transient echo.

Identified as Unknown (X) All authorized identification criteria have been applied and the track is still unknown. (This item has nothing to do with identification as Friendly, a quantity which doesn't effect Air Defense one way or another.

Scramble (S/C) That instant at which a scramble order is given.

Diversion (D) That instant at which GCI takes over an Airborne Flight for the purpose of attempting an intercept.

Airborne (A/B) That instant at which a fighter leader's wheels leave the ground.

Interception (I) That instant at which the first fighter is in position, ready to attack. (Defined sometimes as Pounce; however, practically all summaries deal with times to interception, hence the definition in this report).

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A. AC&W OPERATIONS DATA:	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
Phase I I/P to "X"	S/C 1.92	S/C 2.78	S/C 2.57	S/C 2.06	S/C 3.02	S/C 2.27
	D 1.66	D 2.25	D 2.04	D 2.26	D 2.94	D 2.23
Phase II "X" to S/C	S/C .38	S/C .33	S/C .55	S/C .68	S/C .78	S/C .47
"X" to D	D .45	D .66	D 1.11	D .77	D .64	D .57
Phase III S/C to A/B	S/C 4.07	S/C 3.86	S/C 3.75	S/C 3.50	S/C 3.52	S/C 3.58
Totals Of Phases I/P to A/B I,II,III,	S/C 6.37	S/C 6.97	S/C 6.87	S/C 6.24	S/C 7.32	S/C 6.32
I/P to D	D 2.11	D 2.91	D 3.15	D 3.03	D 3.58	D 2.80
A/B to I Phase IV *	S/C 8.89 36.5/66	S/C 12.76 36.5/66	S/C 10.61 29.5/62/5	S/C 8.19 32/49	S/C 12.58 48/73	S/C 15.89 46/72
D to I	D 10.28 37.5/72	D 16.77 43.5/84.5	D 12.31 37.5/59	D 6.29 28.38	D 9.39 46/47	D 11.30 36/61
MPH.A/B to I ** Phase IVa. From	S/C 250/465	S/C 171/310	S/C 182/342	S/C 336/486	S/C 228/348	S/C 157/230
MPH. D to I	D 214/400	D 182/273	D 161/305	D 438/600	D 294/301	D 220/323
TOTALS I/P to I of Phases from S/C I, II,III,	15.26	19.73	17.48	14.43	19.90	22.21
and IV I/P to I from D	12.39	19.68	15.46	9.32	12.97	14.10
Number of Unknown Tracks	413	334	343	111	126	82
Number of Scrambles or Diversions	192	163	160	84	74	60

*Explanation of Phase IV
X (minutes avera e time for A/B to I for (miles avera e intercept dis ance from KAFB - Sandia for?) (miles averag intercept distance from Los Alamos for ?)

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(*The compilation of statistics for the three months ending 30 June 1953 are not yet complete.)

REMARKS: Phases I through IV

The value of Initial Pickup to Identification Unknown (I/P to X) has varied from a low in January, 1952 to a high in February, 1953. It is obvious that corrective action taken during March produced results. This division through tests has determined that the most efficient figure for this value is 2.50 minutes. This allows the Identification Technician sufficient time to determine if he has information available for identification. More time than this does not result in identification of more tracks.

Phase II. Unknown to Scramble is moving in the right direction but a great deal of work is still necessary.

Phase III. Showed a quick improvement in November and December of 1952 and since then the figure has varied very little. A cursory examination of this quantity indicates that it is possible to become airborne from scramble in 3.50 minutes.

Phase IV. Does not show the improvement which was possible. Obviously to increase the miles while decreasing the the time is the goal in this phase. To provide a quick check

to determine whether any change has occurred Phase IVa has been provided. Dividing the miles by the time for a miles per hour figure of course does not mean that the aircraft made good a speed over the ground of this miles per hour. It does show quickly and accurately however, the trend.

The sharp decrease in unknown tracks during all periods, but particularly during March 1953, is the most gratifying figure presented. It is the result of changing and modifying identification procedures, and providing mechanical aids.

The decrease in unknown tracks results naturally in a reduction in the number of scrambles and diversions. It is felt that because there were fewer scrambles and diversions that more care could have been exercised in executing each thus providing more miles and less time. Since no increase was realized a great deal of effort must be expended in this area.

	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
B. IDENTIFICATION DATA:						
1. Of All Inbound Tracks Plotted:	5486	4585	4709	5427	4622	5531
Identified	96.09%	97.25%	96.75%	99.81%	98.03%	99.34%
Not Identified	3.91%	2.75%	3.25%	.19%	1.97%	.66%
2. Of All Inbound Tracks Identified:	5272	4459	4556	5417	4531	5495
By Flight Plan (within one minute)	67.7%	80.00%	82.9%	79.89%	85.12%	85.78%
Late Flight Plan	1.2%	1.30%	1.4%	17%	.01%	.20%
Altitude	20.9%	9.90%	7.4%	5.94%	6.62%	4.60%
Speed	1.3%	1.80%	1.4%	.66%	.70%	1.16%
Radio Contact	1.1%	2.10%	3.5%	10.77%	1.67%	3.55%
Friendly Fighter	1.9%	3.50%	2.2%	1.16%	.66%	1.89%
Late Position Report	--	--	--	--	.26%	.13%
Successful Intercepts	5.9%	1.40%	1.2%	1.22%	1.25%	.67%
LIZ	--	--	--	--	1.36%	.62%
ADIZ	**	--	--	--	1.56%	1.22%
Others	--	--	--	--	.79%	.18%
3. Of all Inbound Flight Plans Received:	5245	4340	5693	5493	5114	6731
Correlated	66.82%	69.20%	67.9%	78.79%	75.36%	70.19%
Not Correlated	30.17%	25.20%	29.6%	21.24%	24.64%	29.81%
ID log Incomplete	3.0%	5.20%	2.5%	--	--	--
C. INTERCEPT DATA:						
1. Of All Tracks not Identified:	214	126	153	10	91	36
a. Intercept Attempted but Incomplete	35.9%	33.30%	22.8%	32.14%	39.18%	38.33%
b. Contact Lost	30.3%	28.80%	13.7%	16.66%	22.97%	26.67%
c. Other reasons	5.6%	4.50%	9.1%	15.47%	16.11%	11.66%
d. Intercepts not Attempted	64.0%	58.90%	77.2%	64.00%	41.26%	26.82%
e. No A/W fighters	44.39%	41.10%	60.2%	44.40%	12.69%	9.78%
f. Others	5.61%	--	17.0%	19.60%	--	--
NAIF	--	--	--	--	25.39%	15.83%
NFA	--	--	--	--	2.38%	--
CA	--	--	--	--	.79%	--
Trks C.L. before action taken	14.%	--	--	--	--	1.2.%

REMARKS: Identification and Intercept Data

The increase in the number of inbound tracks identified during January 1953, continues through March. It is obvious that little improvement is now possible. Monitoring is necessary to insure that the figure remains the same.

The most important conclusion to be drawn from inbound tracks identified information is that perhaps we have reached a leveling off point. It will be noted that there has been very little change in the percentage identified by flight plan during recent months. A continued study of this data will be made to improve the figure if possible.

At first glance the percentage of Flight Plans Correlated with radar tracks seems very disappointing. During the month of March an additional ADDC was activated within the division. Figures presented for all months previous to March 1953, are for one direction center only. To clarify this the following figures are provided for March 1953: (The percentage is for both ADDCs.

	M-94	P-8
Correlated	75.30%	41.96%
Not Correlated	23.51%	55.92%

Thus the ADDC for which all other figures were collected has remained very nearly the same in effectiveness. It now remains for the second ADDC to bring their percentage of correlations up.

With the very high percentage of identification of radar tracks it is obvious that the total tracks not identified must be very low. It will be noted that tracks not identified due to Contact Lost before completion of the intercept is nearly the highest reason for tracks not being identified. The percentage of intercepts not attempted continues to decrease and the continued decline in the number of intercept actions required should still further decrease this percentage in the future.

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	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
2. Of All Intercepts Attempted:	192	163	160	84	74	60
From Scramble	46.8%	58.9%	59.7%	58.3%	75.6%	71.67%

D. IG PHOTO, MAILMAN, ETC:

Missions	19	61	49	38	58	24
Percentage Intercepted	67.6%	27.8%	38.8%	87.8%	66.7%	79.17%
Percentage Not Intercepted	32.4%	72.2%	61.2%	12.2%	33.3%	20.83%
NSDX (No Scramble due to Darkness)	17.0%	37.0%	12.0%	8.0%	4.8%	--
NFA (No Airborne Intercept equipped Fighter for Big Photo type missions)	10.4%	30.0%	55.0%	4.16%	4.8%	4.17%
NSWX (No Scramble due to Weather)	5.0%	5.2%	6.0%	--	23.8%	16.66%
Average Number of Passes per Successful Mission	18	28	25	20	21	24

E. RADAR OPERATIONAL TIME:

The formula used for computation of Radar Operational time is as follows:

$$\frac{2{,}850.51 \text{ (Total hours of operation)}}{\text{(Number of hours in any month) minus Allowable PM}} = \frac{394}{} = 96.57\% \text{ Percent Oper}$$

SITE	JAN. 52	FEB. 52	MAR. 52	JAN. 53	FEB. 53	MAR. 53
M-94	73.9%	99.2%	97.1%	89.18%	89.8%	91.48%
M-90	49.5%	35.3%	34.9%	90.82%	98.7%	95.84%
P-7	99.4%	98.8%	93.6%	89.52%	99.6%	99.57%
P-8	98.5%	93.8%	91.3%	91.53%	99.3%	98.40%
P-51	98.4%	98.6%	99.0%	89.51%	96.60%	96.20%

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OPERATIONS ANALYSIS TECHNICAL MEMORANDUM NO. 10

	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
Total Number of Inbound tracks Plotted	5486	4585	4709	5427	4622	5531
Total Number of Identified	5272	4459	4556	5417	4531	5495
Total Number of Outbound Tracks Plotted	1373	1399	1361	1112	750	769
METHOD OF IDENTIFICATION						
1. Flight Plan (within one minute)	3566	3578	3775	4341	3854	4713
2. Late Flight Plan (more than one min.)	86	56	64	9	5	11
3. Altitude	1068	441	337	322	300	253
4. Speed	62	79	65	36	32	64
5. Interception	93	60	56	66	45	37
6. Radio Contact	55	91	161	580	75	195
7. Friendly Fighter	306	154	98	63	30	104
8. Late Position Report	--	--	--	--	12	7
9. LIZ	--	--	--	--	62	34
10. ADIZ	--	--	--	--	71	67
11. Others (skytrys jamming)	--	--	--	--	45	10
12. Outbound	1373	1399	1361	1112	750	769
CORRELATION DATA						
Number of Flight Plans Received	5245	5253	5653	5493	5114	M-94 5770 P-8 1003 Div. 6773
Number of Tracks Plotted (including outbound)	6859	6346	6468	6539	5795	M-94 5812 P-8 488 Div. 6300
Number of Tracks Correlated with Flight Plan	3505	3634	3839	4335	3854	M-94 4349 P-8 415 Div. 4764
Number of Flight Plans not Correlated	1740	1344	1676	1158	1260	M-94 1357 P-8 588 Div. 1945

OPERATIONS ANALYSIS TECHNICAL MEMORANDUM NO. 10

ATTEMPTED INTERCEPTIONS (DAYLIGHT)	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
1. Number Attempted from Scramble	90	96	95	49	56	43
2. Number Attempted from Diversion	102	67	65	35	18	17
Total Attempted	192	163	160	84	74	60
3. Number Completed from Scramble	48	42	27	35	34	26
4. Number Completed from Diversion	45	18	29	31	11	11
Total Completed	93	60	56	66	45	37
5. Number of Intercepts Incomplete and reason:						
a. Contact Lost	65	30	21	8	17	16
b. Others	12	12	14	10	12	7
Total Incomplete	77	42	35	18	29	23
INTERCEPTION NOT ATTEMPTED AND REASON						
1. No All-Weather Fighters Available	95	68	92	26	--	8
2. Track Lost Contact Before Action	30	16	13	1	16	1
3. Others	12	--	13	--	--	--
(NAIF)	--	--	--	--	32	13
(NFA)	--	--	--	--	3	--
(CA)	--	--	--	--	1	--
Total Not Attempted	137	84	118	27	52	22
Attempted Intercepts dropped when the tracks were Identified by other means	22	61	69	8	12	3
Tracks Identified Unknown at ADDC but Identified prior to being forwarded to higher headquarters	84					

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OPERATIONS ANALYSIS SECTION

INTERCEPT INFORMATION

Intercept attempted but incomplete due to identification before intercept by;

	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
1. Late Fix	--	10	30	2	2	--
2. Direction	5	8	3	4	1	3
3. Proximity to Base	--	5	7	--	--	--
4. Misplot	2	2	3	--	--	--
5. Radio Contact	4	5	20	2	--	2
6. Speed	--	3	3	--	1	--
7. Altitude	5	3	1	1	--	--
8. Contact Lost	6	25	30	16	17	16
9. Friendly Fighter	--	--	--	--	1	--
10. Weather	--	--	--	1	1	--
11. Position Report	--	--	--	--	3	1
12. Late F/P	--	--	--	--	2	--
TOTALS	22	61	97	27	29	23
a. Total Attempted	192	163	160	84	74	60
b. Total Completed	93	60	56	66	45	37
c. Percentage Completed	48.43%	36.80%	35.00%	78.60%	60.80%	61.60%
d. Percentage Incomplete	51.57%	63.20%	65.99%	21.40%	39.20%	38.40%

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OPERATIONS ANALYSIS TECHNICAL MEMORANDUM NO. 10

AVERAGE TIMES

DAYLIGHT ATTEMPTS	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
1. First Plot to "X"	1.92	2.78	2.57	2.06	3.02	2.27
2. "X" to Scramble	.38	.33	.55	.68	.78	.47
3. Scramble to Airborne	4.07	3.86	3.75	3.50	3.52	3.58
4. Airborne to Intercept	8.89	12.76	10.61	8.19	12.58	15.89
5. First Plot to Intercept from Scramble	15.26	19.73	17.48	14.43	19.90	22.21
6. First Plot "X"	1.66	2.25	2.04	2.29	2.94	2.23
7. "X" to Diversion	.45	.66	1.11	.77	.64	.57
8. Diversion to Intercept	10.28	16.77	12.31	6.29	9.39	11.30
9. First Plot to Intercept from Diversion	12.39	19.68	15.46	9.32	12.97	14.10

OPERATIONS ANALYSIS SECTION

DAILY INTERCEPT MISSION AVERAGE

	52 JAN.	52 FEB.	52 MAR.	53 JAN.	53 FEB.	53 MAR.
BIG PHOTO REQUESTS PER DAY	.6	1.5	1.5	1.23	.64	.40
TIME FIGHTERS WERE UNDER GCI CONTROL	1.18	1.13	.72	.66	.62	.30
TRACKS PLOTTED PER DAY	221	219	208	211	206	203
UNKNOWN TRACKS PER DAY	13.32	11.6	11	3.45	4.5	2.64
NUMBER OF FORM 18'S SUBMITTED PER DAY	13.32	11.6	11	3.45	4.5	2.64
SCRAMBLES PER DAY	2.90	3.6	3	1.58	2.0	1.72
DIVERSIONS PER DAY	3.29	3.2	2	1.13	.64	.55
INITIAL PICKUP TO UNKNOWN TIME PER UNKNOWN TRACK	1.79	2.51	2.1	2.22	2.98	2.36
UNKNOWN TO SCRAMBLE TIME	.38	.33	.41	.68	.78	.47
SCRAMBLE TO AIRBORNE TIME	4.07	3.86	3.9	3.50	3.52	3.58
UNKNOWN TO DIVERSION TIME	.45	.66	1.04	.77	.64	.80
DIVERSION TO INTERCEPT TIME	10.28	16.77	12.5	6.29	9.39	11.30
INTERCEPT DISTANCE FROM PRIMARY TARGET	69	69.5	63.5	67	64.31	61
INTERCEPT DISTANCE FROM FIGHTER BASE	37	34	33.5	46	48.72	41.5
A/B TO INTERCEPT TIME	8.89	12.76	11.1	8.19	12.59	15.89

COMMENTARY

Some information and procedures in this presentation are for the period previous to implementation of procedures outlined in ADC Regulation 55-29, Air Surveillance Procedures, dated 21 January 1953, and ADCM 55-6, dated 6 January 1953. In order to provide a clear comparison figures subsequent to implementation of above procedures have been processed to fit the 1952 procedures.

The 34th Air Division (Defense) has been testing and developing ways and means of improving the effectiveness of air defense. This summary has been prepared to show the results of the use of some of the procedures and mechanical aids. In order to show clearly the results, the air defense cycle has been broken down into phases. Since the Initial Pickup distance from the target area has such an important bearing on the intercept distance from the target complex, it is felt that radar track information must be posted to the vertical board and an attempt made at identification as quickly as possible after the appearance of the radar echo on the radar scope. The identification of the track as either Friendly, (requiring no intercept action), or Unknown, (requiring intercept action), must be made as quickly as possible, in order that the

intercept be completed as far away from the target complex as possible. To this end the following mechanical aids and procedures were tested and found to be effective:

At the instant the radar scanner announces an "Initial", (he is relatively certain he has a bonafide track and not a transient echo), the air defense cycle begins. Upon receipt of the track information from the Scanner, the Plotter performs the following:

(1) Draws a dot on the vertical board at the point of pickup.

(2) Holds a small light, (color coded to indicate the squadron reporting the radar pickup), focused at the point of Initial Pickup while drawing a circle around the dot. If the track cannot be identified at the end of two minutes the red light automatically begins to blink. This blinking red light alerts the direction center that an Unknown track is operating within their area of responsibility and intercept action must be initiated.

Proper use of the above procedures minimize any delay in posting and taking necessary action on radar information. It was found that beginning the timing cycle at the time the Initial

Pickup was posted to the vertical board rather than at the actual time of pickup by the radar scanner allowed the Identification Technician a full two minutes for correlation. This reduced considerably the number of Unknown tracks recorded.

PLANS and REQUIREMENTS

The assistant Plans and Requirements Officer has the additional responsibility of obtaining operational bases[11] to which the 34th Air Division can direct its interceptor aircraft in the event they are extended during combat to a point of no return to home station at Kirtland Air Force Base.

Walker, Biggs, Davis-Monthan and Lowry Air Force Bases were visited during the historical period purely for a review of previously accomplished agreements. This review normally would entail spot checks of a synthetic nature to test the local operational plans of a particular Air Force base to determine that it can function properly and give the fighter aircraft all the support called for by the cited agreements.

Specifically, spot checks consisted of "on the spot" communications tests at these various bases to ascertain the degree of speed with which fighter-interceptors could be refueled and

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11. Joint Plan for Recovery and Ret of Int. Acft. to AD system, dtd 22 Oct 51.

rearmed in the event of an actual emergency.

Webb Air Force Base, Big Springs, Tex., was added to the list of recovery bases by the signing of a joint agreement[12] with the 34th Air Division (Defense). Of the bases checked, Lowry Air Force Base Colo., was found to be in an excellent state of preparedness for an actual test by 93rd Fighter-Interceptor Squadron F-86A aircraft.

A check also was made of the Walker Air Force Base, Roswell, N. M., Recovery Plan for 34th fighter aircraft; however, a test involving two F-86As to check the effectiveness of the plan at Walker proved unsatisfactory. Time required to transport ammunition from the dump to the aircraft was too long because of the great distance involved. Personnel dispensing ammunition apparently had not been briefed on their responsibilities since they were not aware that they had the authority to furnish ammunition to fighter aircraft.

The following is an extract[13] from the 93rd Fighter-Interceptor Squadron's letter to Commander, 34th Air Division (Defense), outlining what took place during this Operational Capability Test:

"Following (is) turn-around information on two air-

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12. See footnote 11. Supra
13. Ltr. 93rd Fighter-Interceptor Sqdn, dtd, 11 Feb 53.

craft sent to Walker Air Force Base, N. M. on 31 Jan 1953 for turn-around on Operational Capability Test conducted by this organization."

"At 0705M, 31 Jan 1953, Rainbow Idaho Blue composed of six aircraft took off on an Operational Capability Test. After completion of firing of guns, Blue 5 and Blue 6 were directed to fly to Walker Air Force Base, N. M., for turn-around."

"At approximately 0755M, Blue 5 called Walker tower giving the tower the code word, 'Pepperbox', which was acknowledged by the tower. Landing was accomplished at 0805M. Only one fuel truck was available. Blue 5 was refueled at 0820M (15 min) and Blue 6 was refueled at 0830M (25 min). "

"At 0835M the armament truck arrived with ammunition, but informed the pilots that it was 'combat reserve' and they could not give it to the pilots. Further questioning by the pilots revealed that none of the armament crew was familiar with arming the F-86A. It was pay-day morning and the pilots were told that the regular armament crew was at pay-call. The pilots stated that co-ordination with higher authority would have been necessary in order to obtain armament turn-around at this time, so they returned to Kirtland immediately."

It was found later that the Recovery Plan had not been scheduled as "required reading" or as a special subject, or that replacement personnel had been briefed as to what was expected of them in such an eventuality. This situation has since been clarified to the extent that the next test should be successful, inasmuch as Walker AFB now has prepared a written SOP for the conduct of "Pepperbox" exercises.

Should an attack be imminent, it would be necessary to draw upon a reserve force of fighter aircraft to augment those already assigned to the task of air defense[14]. The 12th and 27th Fighter-Escort Wings are listed as two of this division's augmentation forces. These two wings are equipped with F-84G type aircraft and are located at Bergstrom Air Force Base, Austin, Tes., which is approximately 600 air miles southeast of the 34th Air Division Control Center.

There are, of necessity, certain instructions and regulations[15] on which they must keep posted for possible 24-hour notice so that their entrance into the air defense system may be achieved in an orderly manner. Problems which they encountered were discussed and an inspection of the Operations Information File (OIF) which the 34th Air Division had furnished them, covering

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14. Ref. ADC Ops. Order 4-53, dtd, 1 Jan 53.
15. Ref. 34th AD(D) C/DIF and OIF.

all air defense regulations and procedures, was conducted. The reading, disseminating and understanding of regulations and SOPs comprises the major problem presently confronting the augmentation forces.

Since the 12th and 27th Fighter-Escort Wings are equipped entirely with UHF radio gear, their employment will demand considerable planning and coordination before they can be integrated in the system in the immediate future.[16]

FLIGHT SECTION

Air Support for the fighter and aircraft control and warning squadrons has been adequately provided by 34th headquarters flight section. In the past, the flight section was equipped with two C-47s, two T-11s, one T-6 and three L-20 type aircraft. Of the number of aircraft listed, the section soon will lose both T-11s and the T-6.[17] These aircraft will not be replaced, thus the support capability of the section will be reduced pending the projected delivery of two H-19 helicopters.

The liaison (L-20) aircraft proved to be one of the most useful aircraft assigned to support duties. Its versatility allows the L-20 to be employed in many instances where faster and larger

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16. Ref. 12th F-E Wng Opns Plan 49-52, dtd 20 Nov 52
17. TWX CADF, Acft-4 0822, dtd, 17 Aug.

aircraft could not be utilized. L-20s are being used for expediting supplies and personnel to the 769th Aircraft Control and Warning Squadron, Continental Divide, N. M.

Winter weather conditions prevalent in this area justify the use of these aircraft since road conditions, due to icing, are bad and the possibility of the supply lines to the sites being cut off is evident. Any delay, however temporary, in supplying the squadrons with communications, radar, and various other support equipment would hamper the mission of the AC&W and fighter units. This would, in turn, imperil the defense of the vital Albuquerque area.

With the loss of the three aircraft noted above, it will be difficult for pilots to maintain the required amount of flying time. Routine and preventive maintenance will keep some aircraft grounded over extensive periods of time, necessitating the doubling up of one or more aircrafts' operational time.

In several cases it has been found that aircraft have been grounded for excessive periods,[18] the reason being that aircraft parts are maintained at so low a level by the Base that maintenance.

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18. Pers Int. w/Capt Schaefer, OIC, Flight Sec., 20 Jul 53

personnel cannot obtain needed replacements. This is pointed up by citing the fact that a 34th Air Division C-47 was "AOCP" for a total of 14 days. This subject is under joint consideration by Base and Division personnel.

OPERATIONS AND TRAINING

On-the-Job Training or "Job Progression"[19] as it now is designated, was the chief occupation of the training section (OJT) during the period. Establishment of an organized OJT program, standard throughout the Division, is the ultimate objective. New directives are being written, additional personnel has been assigned and specific means of aiding the units are being devised.

Maj. JOSEPH W. BELL, Training Officer, prepared and presented a staff study on the OJT status of the Division, then, accompanied by Lt. ROWLAND P. SMITH and Mr. LEONARD F. JURAKEWICZ, Radio Corporation of America Technical Representative, toured all the units of this command to brief on the OJT program with emphasis on implementation of the new 34th Air Division (Defense) Regulation 50-23.[20] The team offered instructions on the maintenance of the new AF Form 623.

In attempting to establish an effective OJT program, two major problems were evident. Specific directives from higher headquarters have not been forthcoming and a lack of qualified in-

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19. Ref. 34th AD(D)R 50-23, dtd 15 May 53.
20. See footnote 19. Supra

structors at each site are the two problems to be overcome in order to establish a workable and effective modus operandi. Staff visits to the sites produced the impression that very little OJT was being accomplished there. An OJT program is in effect, but, as noted earlier, lack of instructor personnel had prevented its proper utilization during the early months of 1953.

This division has established a "Scanner School", more properly designated as an AC&W Operators' Course.[21] Normally one operator from each site attends each course. The course has proved invaluable in providing a means to improve the efficiency of the AC&W operators. Personnel who are filling a Table of Organization vacancy elsewhere presently operate the school.

A current study[22] was under way at the end of the reporting period by Lieutenant SMITH and Mr. JURKIEWICZ to determine critical career fields based on an assigned/authorized basis, and on a survey of the number of AFJKT and APT test taken within a given field as against the number failed. Completion of this study will serve to determine where emphasis first should be placed in preparing OJT course outlines.

An evaluation of the OJT test results were made to help[23] determine the need for emphasis in the program. This method has serious flaws in that many more tests must be taken in all career

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21. VOGC, 25 June 1952
22. Staff study by Mr. Jurkiewicz requested by Col Dougherty.
23. See footnote 22. Supra

fields before any validity may be given to this study. It is the intention of the training section to compile this record monthly and use it not only to determine emphasis on a passed-failed basis, but as a tool to establish the validity of a given test.

Another project was initiated to aid in determination of emphasis of OJT by making a monthly consolidation of the authorized/assigned personnel by unit. This study should clarify where emphasis should be given within a unit, as well where emphasis is needed on a personnel average basis at any level within a selected career field.

On 15 Jun 1953, the section was visited by Mr. ALFRED SMODE of the Personnel Research District, Mich. Mr SMODE is a member of a team currently surveying OJT problems in the ADC areas. He was taken on a visit to the 93rd and 767th Squadrons in order to give him a picture of the program as it exists at this Division. Mr. SMODE briefed the OJT section on a similar survey made in 1950 and which delineated many of the problems encountered at that time. However, it was gratifying to note that many of the contretemps of that study have been, or are in the process of being, eliminated.

New training aids in the form of electronic demonstrators

arrived during the six-month period. Three of these aids have been consigned, one each to the 93rd Fighter-Interceptor Squadron, 768th and 769th AC&W Squadrons. Instruction in this equipment will be conducted by the Philco Technical Representatives. These aids are expected to prove very beneficial in training airmen through a practical approach to the problem.

The training section continued to slant its efforts towards the OJT program in the Division. Mr. JURKIEWICZ prepared and distributed a lesson plan on the AN/GRT-3; equipment and training aids were distributed, installed and explained at all sites in accordance with the plan.[24]

Plans were firmed up to teach the required passive defense course to each of the organizations under this command, starting with the 120th AC&W Squadron.[25] Classes will be held for six days, eight hours per day. The course is expected to be completed by 25 Sep 1953.

Lt. Col. JAMES G. WELLS, JR. and Capt. CHESTER A. BIENUL have been working on the training problems involved in the transition from F-86A to F-86D aircraft in this command. Quotas have been requested for factory training on the F-86D at the North American Aviation factory.[26]

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24. Ref. AN/GRT-3 OJT Lesson Plan , Radio Maint., dtd May 53
25. 34th AD(D)R 355-1, Passive Defense, dtd 4 Dec 51
26. TWX, 34thOOT 2836, dtd, 12/2130Z May 53 to CADF

Division expects to begin transition training in F-86Ds in late July. The present bottleneck is that no ground-handling or test equipment had arrived for this aircraft as of the end of June. Test equipment for the armament of the aircraft also had not been delivered. The majority of pilots assigned, fortunately, have had training in the "Dog", but future plans for training of replacement pilots was in abeyance as of the end of the reporting period.

Training plans were being followed through, but until such time as the F-86D flight simulator[27] arrives there can be no actual training; neither had there been assigned a mobile training detachment to instruct on maintenance for ground personnel. All these militating factors are expected to be overcome in the next six months and the new aircraft will be integrated as a weapon in the defense of this Division's area of responsibility.

Colonel WELLS, Operations and Training Officer, underwent a three-day indoctrination course on the history, construction, future plans and results of past experiments with the atom bomb.[28] This was followed by a visit to the locales of previous atom bomb tests, plus instructions on safety precautions normally observed during the explosion of an atomic device. Climax of the course was the witnessing of an explosion of an atomic device from a distance of 4,000 yards.

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27. TWX 34th OOT3726, dtd. 30/1530Z Jun 53 to CADF
28. Auth. Conf. Msg. Ohns C0364 dtd. 14/2010Z Apr 53

Installation of Electronic Counter-Measures equipment was completed and tested in the Division C-47s, and both now are ready to begin ECM training flights against AC&W squadrons. It is anticipated that a minimum of five hours of training per week will be provided to each squadron under this program. An omnidirectional transmitting antenna is installed in C-47 No. 6095. This antenna will permit missions to be run against squadrons, regardless of the aircraft's heading and position from the station. A directional antenna with 45-degree beam width is installed in C-47 No. 6072. This antenna can be used only in head-on jamming attempts, but provides more power concentration on the ground station being jammed.

A joint Air Defense Command-Strategic Air Command[29] Counter-Measures and camera-gunnery agreement was drawn up and signed by representatives of the 34th Air Division (Defense) and 15th and 8th Air Forces. Subject agreement gives the 34th Air Division (Defense) more rigid control over "Big Photo" aircraft and provides for better utilization of joint training facilities available to 34th Air Division (Defense) and Strategic Air Command units concerned.

Capt. KENNETH B. JORGENSEN attended the 8th Air Force Fighter-Bomber meeting at Carswell Air Force Base, Fort Worth, Tex., during February 1953. He covered all ADC-SAC procedures

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29. Memo for Agreement, between 8th, 15th and 34th AD(D)

involved in "Big Photo" camera Gunnery and ECM. Fifteen (15) camera gunnery missions were planned for the month of March by 8th Air Force. The 8th and 15th Air Forces were invited to attend a joint meeting with the 34th AD(D) late in February in order to iron out all differences on "Big Photo" activities and to achieve more understanding and cooperation in the future. A Standard Operating Procedure was prepared by Captain JORGENSEN, covering in detail the methods to be used in carrying out all "Big Photo" missions involving SAC and the 34th.

FRINGE STATIONS

There are several Air Force bases located around the 34th Air Division ADIZ which are designated as "fringe stations". By this is meant that aircraft clearing from a "fringe station" normally would penetrate the ADIZ before Air Route Traffic Control Center of the Civil Aeronautics Administration would have time to forward the Flight Plan to Kirtland and have it passed in turn to the Identification Section at the Air Defense Direction Center. This means that an aircraft from such a station would become an "unknown" penetrating the Air Defense Identification Zone and would, in turn, cause the scramble of interceptors for identification purposes. Byvisiting these stations, a plan was developed jointly whereby aircraft departing from such stations would not penetrate before Air Defense Direction Center received information on such flight, thereby saving a $2,000

scramble for identification.

"Fringe stations" so coordinated were Holloman, Walker, Biggs, Davis-Monthan, Marana and Lowry Air Force Bases.

Captain JORGENSEN presented a lecture to flying personnel of Holloman Air Force Base covering all problems of "fringe station" flight planning into or through the Albuquerque Air Defense Identification Zone.[30] There were also briefed on the facilities of the 34th Air Division and how they could employ the communications facilities for transiting the ADIZ.

COMBAT OPERATIONS

Much of the early months of 1953 was spent preparing for the changeover from Western Air Defense Force to Central Air Defense Force. In order to facilitate that change, Major (later Lieutenant Colonel) ROBERT A. ZACHMANN, Director of Combat Operations, first visited Central Air Defense Force Headquarters, Kansas City, then, soon after his return, was called to Air Defense Command and thence to Washington to lecture on the Air Defense responsibilities and capabilities of the 34th Air Division (Defense). He later spent one week at Headquarters, Western Air Defense Force, with the Ad Hoc committee on Air Defense problems in the Western region.

On 22 January, Operation "Sky-Try"[31] was put into effect. Capt. JORGENSEN, (OPR) working in cooperation with Combat

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30. Ref. AFR 60-22, dtd, 26 Jan 53
31. A "Fast Freight" Operation

Operations, made numerous trips to bases within and close to the Albuquerque ADIZ to coordinate the fighter recovery plan.

Capt. JACK A. MATLOCK, Aircraft Control and Warning Officer, completed the re-accomplishment of the Controller/Director Information File. He conducted a meeting of Senior Directors from the attached sites to answer any queries they might have on maintaining the C/DIF. Also present at this meeting were the various flight leaders and the Operations Officer of the 93rd Fighter-Interceptor Squadron. Problems arising between interceptor pilots and Ground Intercept Controllers were discussed and ironed out. He also started work on an Alert Check List[32] and presently is working on a Position Manning Regulation.[33]

A major accomplishment of the Combat Operations section was the completion of the new Operations Information File. At the request of Colonel MATHENY, then commanding, a copy of the Controller/Director Information File and a complete Operations Information File was prepared for his personal use. A complete Operations Information File was prepared and forwarded to the 15th Fighter-Interceptor Squadron at Davis-Monthan Air Force Base.

COMMUNICATIONS AND ELECTRONICS

During the mid-period, plans were completed and action initiated to completely rewire and remodel the High Frequency transmitter site at Sandia Base. This wiring will be done with

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32. 34th AD(D)R 55-50, dtd, 8 May 52 (Class)
33. 34th AD(D)R 55-46, dtd 23 Jun 53

the view to eventually having all transmitting facilities for the Division installed at this location. This operation will require removal of all old cables, changing the position of the patch panel, laying a new 100-pair cable, as well as 10-pair cables, terminated at intervals along the floor trench, so that future equipment can be installed without interrupting operations during installation.

It is observed that two Delta matched antennas serving the Squadron High Frequency net day and night, and erected by Air Materiel Command, have not been cut to the proper operating frequency. The rhombic antenna serving Central Air Defense Force net, day and night, is oriented toward the west and originally was established to serve Western Air Defense Force. A request[34] to have these antenna discrepancies corrected has been submitted to Central Air Defense Force. It is planned to move the VHF/FM/AM/TRC equipment to the transmitter building as soon as Air Installations Office sets four wooden poles (already acquired) for the purpose of mounting the AM/TRC antennas.

The transmitter and receiver site projects were completed during April. Work entailed included the installation of four T-4 transmitters, two modulators, one power supply, two AN/TRC-1 transmitters, one AN/TRC-8 transmitter, three CF-1 carrier bays,

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34. TWX, OCE 02915, dtd 10/1545Z Apr 53, to HQ CADF (Class)

two EE-101A ringers, one SP-239/GTA patch panel and four wooden poles for the mounting of the AN/TRC antennas. The installations at the transmitter building also included the wiring of the raceways and patch panel to provide additional AC outlets and cable terminal strips to meet future equipment requirements.

The installation of lower crystal frequencies on all frequency modulation channels is in progress and all circuits were expected to be operational by the end of June. Theoretically, the new frequency assignments should eliminate interference with civilian agencies and increase the range of the transmitted signals.

Several trips were made to Sandia Crest to maintain the frequency modulation relay station. Ringing facilities were completed between this headquarters and all sites on the frequency modulation circuits, channels 2 and 3, i.e.: controller-to-controller and switchboard-to-switchboard. In order to improve the functioning of equipment at the unattended FM relay point, plans are in preparation to devise an adequate cooling and ventilating system for the equipment and HO-17 shelter in which it is housed. The frequency drift encountered, it is believed, is due to the large amount of heat dissipated by the equipment, plus any seasonal increase or decrease in temperature, thus disabling the crystals because of inadequate ventilation.

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The FM radio back-up network between P-47, P-7, P-8, P-51[35] and M-94 sites still is not dependable due to the necessity of using old equipment and the lack of a permanent relay station in the Sandia Mountains. A project is in process to provide a building and suitable equipment for a relay station, but had not reached the implementation phase by the end of the reporting period.

The radio maintenance and wire maintenance section completed the project of installing remote operations to the transmitter building from the receiver building. A direct telephone system was installed between the transmitter and receiver building for swift and efficient coordination. High frequency operations from the receiver building were inaugurated during the six months.

Incident to the transfer of this Division from Western Air Defense Force to Central Air Defense Force, all telephone and teletype circuits were reterminated to provide communications with Central Air Defense Force, but was not satisfactory due to the fact that an interim antenna had to be used until the presently installed rhombic antenna could be re-oriented.

In compliance with CADF COI 46-2, work was initiated on an up-to-date wire communications network diagram giving schematic presentation of all telephone and teletype leased-lines

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35. Station listing of 34th AD(D) Sqdns.

serving this Division. Relative to this, a listing of all circuits designated by priority of importance was sent to the Mountain States Telephone and Telegraph Co. in order to indicate which circuits should be restored first in the event of mass disruption due to emergency or disaster.

The problem of poor readability over the telling lines to the Air Defense Direction Center at site M-94 from sites P-7, P-8 and P-51 has been solved by installing a TP-14 telephone repeater on each line to match the impedance of government-owned terminating equipment at the sites to the impedance of commercial company telephone lines.

The overlap telling circuit serving P-7, P-8 and P-51 proved unsatisfactory because it was a loop circuit with all three sites on the same line. A request[36] was forwarded to Central Air Defense Force to install a separate circuit from P-7 to P-8 and from P-51 to P-8, which then could be used both for telling to the Air Defense Direction Center at P-8 and for overlap telling.

Upon acceptance of the receiver building in March, two AN/TRC-8 receivers were installed in addition to two SP-600 receivers, on SP-239/GTA patch panel and one TG/7B teletypewriter. House cable was laid and terminated to the equipment and patch panel so as to provide remote circuits from the receiver building to the transmitter building and to Air Defense Direction Center.

36. TWX OCE C-188, from 34th AD(D) to Hq, CADF

A letter[37] was written to San Antonio Air Material Area station on the unsatisfactory conditions encountered in implementation of the ultra-high frequency radio installation at Aircraft Control and Warning sites. This was done in an effort to speed up the installation and flight checking of equipment in order that the operational requirement for ultra-high frequency air/ground communications could be met.

The Air Movements and Identification System (AMIS) for this area had been delayed for approximately six months due to non-availability of necessary telephone equipment for the Air Movements and Identification System center at Civil Aeronautics Administration terminal, Albuquerque Municipal Airport. The installation, however, now has been completed and lines to all stations have been installed. Full-scale operation was undertaken during March.

The installation of the telephone Tactical and Surveillance Teletype network resulted in a greatly increased workload for teletype personnel. Effective 1 July, teletype personnel also will be required to work the Division switchboard from 0001 to 0800 hours, which will increase further the workload of the section. Due to shortage of personnel, it is believed this will seriously affect morale and efficiency. A suggestion was made

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37. Lt. WAM 413.44, Subj: Installation and Operations of UHF Equip.

by the communications center supervisor to have Air Defense Control Center personnel send the one-half hour channel checks between 2100 and 0500 hours when tracks are seldom sent. This will relieve teletype personnel from this duty during these hours. A teletype man will be placed on alert and can be called to the communications center in the event he is needed for tracks or other type of emergency.

Completion of the Air Defence Control Center Fighter Display System is dependent on the acquisition of the following parts:

(1) 816 Dialco type pilot light assembly; (2) 50 HB Jones connector plugs, male.

Headquarters Squadron Supply is in the process of obtaining these parts. A technical manual [38] on the Air Defense Control Center Fighter Display System (C&E Project No. 29) has been prepared by the Director of Communications and Electronics office. As soon as new photographs of the system are made (estimated July 1953) the manual will be ready for distribution.

Early in the year, a meeting [39] was held with representatives from the 4925th Test Group (Atomic), Kirtland Air Force Base, the Air Installations office, also of Kirtland, and the 34th Air Division's Director of Materiel. Discussed were possible effects on the Special Weapons' new instrumentation lot by the radar

38. Tech Manual (C&E) Spcl Proj No. 29, w/plts and schematic
39. Ltr w/Ind, from 34th AD(D) to 4901st, Subj: Relocation of Radar Site, M-94

equipment at site M-94. It was recommended by people from Special Weapons that M-94 be relocated. General concensus was that the location of M-94 within the boundaries of Kirtland Air Force Base would be deleterious to the aforementioned electronic operations at Sandia Base. As of the end of June, no firm answer to this problem had been developed and the matter continued under combined scrutiny of agencies concerned.

INTELLIGENCE

Although marked by virtually a 100 percent turnover of personnel between 1 January and 30 June, by the end of the reporting period the Directorate of Intelligence had attained a high degree of stability and was more than adequately manned by highly trained and competent personnel. As of the end of June, the Directorate reflected the following assigned personnel:

One (1) Captain (2011) Director of Intelligence.

One (1) Master Sergeant (20470) NCOIC and Intelligence Operations Technician.

One (1) Airman 2/c (20450) Senior Intelligence Operations Specialist, presently attending 20470 (Advanced Intelligence Course) at Lowry Air Force Base.

Two (2) Airmen (WAF) 3/c (20430) Intelligence Operations Specialists.

Hard on the departure of Technical Sergeant CARL D. HIGGINS[40]

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40. CARL D. HIGGINS T/Sgt. Left 28 Feb 53, 34th AD) SO 4 Par 4, dtd 19 Feb

to duty with the 4602d Air Intelligence Service Squadron, Ent Air Force Base, late in February, First Lieutenant GLEN D. PARRISH,[41] Director of Intelligence, received overseas movement orders to England.

Effective 2 March, Captain CHARLES L. DEWEES,[42] recent Korea returnee and Intelligence Officer of the 93rd Fighter-Interceptor Squadron, was transferred to the 34th Air Division (Defense) vice Lieutenant GIBSON, who was reassigned to the 93rd FIS as Intelligence Officer.

The current Table of Distribution (15 April 1953) authorizes one Officer and two Airmen Intelligence Specialists at Division level. While this authorization is sufficient to scrape by under normal administrative conditions, it does not allow for the increased work-load imposed by either actual or simulated hostilities, nor does it give an Intelligence capability much beyond accomplishing the minimum essential administration. Furthermore, the Director of Intelligence, to perform his mission properly, should accomplish frequent and extensive staff visits to monitor Intelligence training and requirements; this necessarily leaves the Directorate "headless" for much of the time which otherwise could be devoted to policy studies and presentations. An additional drain on the time of the Director is the

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41. GLEN D. PARRISH 1/Lt. Left 3 Mar 53, 34th ADD SO 5 Par 6 dtd 20 Feb 53
42. CHARLES L. DEWEES Capt. Arr 2 Mar 53, 34th ADD SO 11 Par 9 dtd 28 Feb 53

requirement for personally investigating and interrogating observers of unidentified aerial phenomena.[43] This situation can be alleviated to an extent by employing the personnel of Detachment 1-D, 4602d AISS; however, in time of emergency these people will have their own assigned mission and would not normally be available to the Director of Intelligence.

Experience and observation strongly tend to indicate that the Intelligence Directorate at Division level well might be standardized at two Officers and three Airmen, two of which would be trained Intelligence Specialists and the third a Clerk-Typist, well schooled in Air Force administrative procedures. It is not deemed that any useful purpose is served by employing skilled, highly trained technicians to accomplish routine filing, letter-writing and the myriad essential administrative tasks that have no immediate or direct bearing on the Intelligence function and mission.

Five investigations of Unidentified Flying Objects were conducted during March. Four were evaluated to be weather balloons and were filed without further action; one investigation was completed and forwarded on AF Form 112.[44]

All the aforementioned investigations were completed with the assistance of First Lieutenant RAYMOND ADDICKS, commanding

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43. Ref ADCR 200-4 dtd 14 Oct 52.
44. FLYOBRPT No. 20, Mt Taylor, 27 Mar 53.

Detachment 1-D, 4602d AISS, this station. Coordination also was effected with the Office of Special Investigations for information purposes.

One report of strangely strewed "chaff" or"window" in the BADGER area was received from a forest ranger through the local detachment, OSI.[45] At the request of the OSI, a B-50 radar mission was coordinated and flown in the area with negative scope returns. The matter was referred to the Albuquerque office of the Federal Bureau of Investigation for follow-up as necessary. Subsequent data from ATIC at Wright-Patterson AFB determined the chaff to be of U. S. manufacture and probably dropped during exercise "Brownstone". The FBI advised that it considered the matter closed.

In the field of Training, two matters of importance were undertaken during March. The first is the CADF-imposed requirement for training of Battle Station Intelligence Teams utilizing Officers and Airmen of non-tactical sections.[46] Upon alert or emergency, these personnel would revert to operational control of the Director of Intelligence and would be so employed as to insure a 24-hour, seven-day manning of the Directorate during periods of exercises or hostilities. This training was undertaken formally the first week in May and continued for eight

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45. Telephone call from 17th Dist OSI, KAFB, N. M.
46. Ref. CADFR 50-4 dtd 22 April 52.

weeks, four hours weekly.

It is evident that personnel so trained will enhance greatly the Intelligence capability during emergencies or practice alerts. They were given a basic Intelligence course with stress placed upon proper reporting procedures and accomplishment of required reports and forms. Six Officers and 16 Airmen were trained for Headquarters 34th Air Division (Defense) and two additional Officers and four Airmen for each of the AC&W Squadrons and the 93rd FIS. Training was accomplished under the personal direction of the Director of Intelligence, predicated upon the requirements established in CaDFR 50-4, "Training, Battle Station Intelligence Teams", dated 22 April 1952.

Although not directly a Division function, the Directorate of Intelligence took steps to assist the 93rd FIS in the training of combat pilots in aircraft recognition. Although the Squadron Intelligence Officer had encountered some difficulty in having time allotted for this purpose, a program was worked out to insure that a minimum of formal recognition training is accomplished. This is being done by scheduling the Intelligence Officer for a 30-minute period weekly at each Pilots' Meeting, plus "spur-of-the-moment" instruction when pilots are available due to weather or maintenance stand-downs. Additionally, pilots are being trained in recognition through wide dissemination of Training

Bulletins and display of posters. A color code chart on pilot proficiency is kept current by means of periodic tests.[47] This office requires from the Intelligence Officer of the 93rd FIS a formal monthly report of training accomplished, listing pilots by name and the type of aircraft utilized. Furthermore, an informal weekly report is rendered to the Directorate by the 93rd on the state of training so that this office may monitor the program and assist in determining the areas of weakness.

It is felt that implementation of ADC Regulation 50-14, "Recognition Training for Fighter-Interceptor Squadrons," 28 February 1953, greatly will improve the quality of the training now provided. Reference Paragraph 6 of subject Regulation, this office is awaiting a list of standard slides and the Proficiency Test required to be administered each quarter. This test, it is believed, will give both the Division and the Squadron a more accurate check on the state of training and will be of great assistance in determining whether specialized or intensified recognition procedures will be required to meet the demands of ADCR 50-14 for proficiency purposes.

Of considerable concern to the Directorate of Intelligence is the lack of a properly secured Air Room in which could be displayed classified information of value to Division personnel

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47. Color Code Chart. Sup Doc No.

and for use in Staff and Command briefings as desired.

The present quarters, being employed for general conferences, previewing of motion pictures and other non-classified projects, cannot now be utilized for the permanent posting of Order of Battle information, Estimate of Situation data and other processed and evaluated Intelligence of high security classification.

As of the end of the reporting period, two steps were being undertaken to remedy the foregoing:

1. A space reallocation was being studied and the Deputy for Operations had indicated that thought is being given to the establishment of a classified reading room and library to be set up and administered directly by the Directorate of Intelligence;

2. The Directorate personnel are preparing a "Daily Intelligence Briefs" sheet, using information culled from the INTSUM, JINTSUM, WATCH REPORT, and the normal Intelligence publications available such as WIR, FEAF ROUNDUP, etc. This classified sheet is circulated to the Commanding Officer, Vice-Commander, Deputy for Operations, Deputy for Personnel, Deputy for Maintenance, Adjutant General and Inspector General. While not considered completely satisfactory, this sheet will serve as a stop-gap measure pending establishment of a secure Air Room for the Division.

Command-wise, the Intelligence personnel picture is reasonably good. The 93rd FIS has a trained Intelligence Officer (2051)

assigned, plus two Airmen recently returned from Korea. One of these, however, will be reassigned shortly to the 15th FIS at Davis-Monthan Air Force Base, leaving the 93rd with its Table of Distribution authorization of one Officer and one Airman. As of the end of June, each of the AC&W sites had assigned a non-schooled Airman Intelligence Specialist and one Officer with additional duty as Intelligence Officer.

The "April Showers" Command System Exercise of 6 April was the outstanding operational event during the month.[48] This exercise was promulgated by Air Defense Command primarily as a test of the communications net, hence the actual passing and preparation of teletype confirmations of voice messages was not required.

Upon receiving the alert, the Director of Intelligence and the NCOIC transferred their operating base to the ADCC for the duration of the three-hour alert. Considerable improvement over the previous CSX "Moonlight" was noted as all Intelligence personnel indicated their increased familiarity with telephone procedures and with the necessity for prompt and accurate passing of information upward, downward and laterally.

A major project undertaken during April was the development of an adequate Intelligence Situation map for use during alerts and exercises. Since present restrictions prevent the

48. CADF Ops Order

posting of Intelligence informational data on a permanent basis within the ADCC, it was decided to mount a satisfactory map on four 4x8 feet plywood panels which could be transported easily to the center of operations. The map selected for this purpose was the Canadian Department of Mines and Resources map, scale 1:6,500,000. This particular map is comparatively uncluttered with detail and is considered excellent for Intelligence operations.

Major MARTIN, Adjutant General, turned over to this office an anonymous letter addressed to him in which the writer rambled at great length, and incoherently, concerning Communism, Capitalism, Socialism, Transcendentalism and garden-variety religion. General tone of the letter appeared to be biased in favor of Communism and was faintly anti-American in its over-all tone. The material was surrendered to the local Detachment of the OSI for further investigation. At the end of June, no OSI follow-up had been received.

The Director of Intelligence represented 34th Air Division at the ADC-wide Intelligence Conference, Colorado Springs, 23 and 24 April. Conferees were given complete briefing on the Intelligence picture from the ADC standpoint and were given an opportunity to present their individual problems, solutions and questions. Of particular interest to D/I, this Division, was the revelation that almost without exception, other ADC Divisions

are equipped with strictly Intelligence "hot-lines" to all Squadrons and Sites for use during practice alerts or emergencies. These lines are restricted solely to the passage of Intelligence messages and information and this system is deemed well-worth consideration by the 34th since one of the "Chinese Walls" of the Intelligence function is the rapid and timely transmittal of Intelligence data. Additionally, this system removes a tremendous communications burden from the Command and Status lines during emergencies.

From an operational standpoint May was comparatively quiet since no test alerts or exercises were scheduled during the period. Intelligence personnel concentrated on cleaning up a backlog of minor projects and in reorganizing the staff assignments to insure a more equitable distribution of the workload during times of personnel strain.

A quarterly inspection was conducted on 27 May by Lieut. LLOYD D. GARY of the Inspector General's Section with no major discrepancies being brought to the attention of the Director of Intelligence. One or two minor errors in administration were corrected on the spot.

The "flying object front" also was quiet, only one report of a sighting being received during May.[49] This report was made

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49. Flyobrpt file, OIN, No. 6, May 1953

by a Mr. C. W. GARBER of Albuquerque, a former rated four-engine pilot and ex-Intelligence Officer. The Director of Intelligence personally interviewed Mr. GARBER and, further, wrote him a letter of appreciation for his efforts.[50] It is felt that persons having such specialized training and experience could be valuable unofficial aides in the Collection Plan if they are encouraged and made to feel that their observations are treated as important contributions to the Intelligence Mission.

The "FLYOBRPT" noted above was evaluated as a Weather Balloon, probably of the "Pibal" type, hence was not forwarded on AF Form 112. It is interesting to note that the observer (Mr. GARBER) himself had evaluated the sighting as a Weather Balloon, thus lending validity to his personal experience and powers of observation.

In preparation for forthcoming Exercises, Intelligence completed maps mounted in sections on plywood panels for ready transportation to the COC; however, the project's completion has been delayed because acetate overlay was not available during the month. Supply personnel were re-contacted and a promise of immediate action was obtained.

A letter[51] was prepared and forwarded to all subordinate requesting submission of specific Essential Elements of Information that might affect successful accomplishment of their respective

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50. Ltr. OIN Corres, 16 May 53
51. OIN Ltr file, Cirsel, Outgoing, 13 May 1953

missions. A suspense date of 30 May 1953 was established for these replies. As of the suspense date, an analysis of answers received indicated an amazing and dangerous ignorance of what constitutes an "Essential Element of Information". As an illustration, one unit returned a request for the entire AFR 205-series as an EEI. Accordingly, steps were taken immediately for the Director of Intelligence and the NCOIC to make a round-robin visit to all sites and installations to clarify these misconceptions. It is anticipated that this trip will be made the first week in July.

At the request of the Commanding Officer (First Lieutenant RAYMOND AD ICZS) of Flight 1-D, 4602d Air Intelligence Service Squadron, the Director of Intelligence prepared a letter[52] for the Commanding General's signature detailing the extent and type of logistical support to be provided to Flight 1-D by units of this Command when required in the accomplishment of the AISS mission. This aid includes use of tactical communications facilities, transportation, mess and billeting facilities and personnel to safeguard enemy prisoners and/or materies that might fall into friendly hands in event of hostilities.

On 5 May a work order for two (2) "Hot Guns" recognition devices was prepared and forwarded to Special Projects. At that

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52. OIN Ltr file, OIN 461, Outgoing, 26 May 1953.

time the Directorate was informed that nothing could be accomplished until after 16 May, due to a pending move of the section to a new location. As of the end of the reporting period, a check indicated that the project had received a "Priority 3" classification, but that no work had been accomplished in the preparation of blueprints. In view of the seriousness of the recognition problem in the Fighter-Interceptor Squadrons, Special Projects was asked to give the device its immediate attention.

On 7 May, this office received from Colonel PRICE (OOT/ADC) a projected brochure, text and cartoon-style, entitled "AC&W Intelligence Functions". Colonel PRICE requested the Director of Intelligence to study the presentation and to make any written comments and recommendations deemed desirable. It was felt that the brocure, intended solely for AC&W use, was too broad in scope and contained too much information which would be valueless to the AC&W Intelligence mission. The D/I's comments were prepared and delivered to Colonel PRICE prior to his departure.[53]

In the field of training attention was focused during May on the instruction of personnel assigned to Headquarters Battle Station Intelligence Team "Able". Due to two holidays (Armed Forces Day and Memorial Day) falling within the reporting period,

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53. D/F from D/I to Colonel Price, 20 May 53

it was possible to conduct only two (2) two-hour training sessions. The Director of Intelligence presented a two-hour illustrated lecture on Military Symbols, Air/Ground Situation Maps and Safe-guarding Military Information on 9 May; on 23 May, M/Sgt STARKUS instructed the class in maps and projections and when, where and how Intel igence uses the various types. Following this hour-long presentation, Mr. WILLIAM HARROAD, Training Officer for District 17, OSI, discussed the Intelligence aspects of OSI work and the coordination desired and effected with lateral collecting agencies.

As a result of inquiries from subordinate units, all have been advised to make full use of Air Defense Command's "Intelligence Training Outlines"[54] which are received regularly through normal distribution channels. At present, Nos. 1 through 33 have been published and are, or should be, in the possession of all Squadron Intelligence and/or Training Officers. This will be made a subject of special inquiry during the impending inspection visit to all sites and Squadrons by the D/I and NCOIC of this Directorate.

Administratively, June was comparatively routine in nature, major attention being devoted to preparing and reviewing necessary forms, Regulations and journals for the forthcoming Air Defense Exercise "Tailwind", scheduled for early July. All personnel

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54. Ref. ADCM 50-4 dtd March 1952.

assigned to the Directorate were required to read and review the reporting procedures and to familiarize themselves with the Intelligence operations of past Exercises ("Signpost" and "Brownstone") so they would be in a better position to avoid the errors that developed during those specific operations. Also, a firm schedule[55] of visits to the Fighter Squadrons and ACeW sites was set up in advance, and all concerned were notified, for the purpose of checking on the state of Battle Stations Intelligence Team training and acquainting all personnel with the ADX Intelligence requirements.

Pursuant to the personal visit/inspection trip, a letter[56] was prepared outlining BSIT requirements and forwarded to all Squadrons and sites so that preliminary organization and training might be instituted.

In reply to a query from Air Defense Command,[57] the Director prepared an indorsement[58] concerning proposed changes in the dissemination of current Intelligence information to subordinate units, i.e.; a daily teletyped summary to replace the "Weekly Intelligence Review" (ADCWIR). So far as coded dissemination to Division level is concerned, it is believed that the data will be of much greater value if forwarded daily; however, the time-delays occasioned by the encoding-decoding requirements render

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55. 34th L.O. No. 7-7
56. OIN Ltr. 353, subj: Training of BSIT, dtd 4 Jun 53.
57. Ltr. Hq ADC, ADLGD 319.1, dtd, 9 Jun 53.
58. 2nd Ind to Ltr noted in footnote 61. Supra

the project will-nigh impossible insofar as dissemination to subordinate units is concerned due to the shortage of cryptographic personnel from Division downward. Since the Director of Intelligence prepares a daily "Intelligence Briefs"[59] sheet for the Staff and Commanders of subordinate units, employing current material selected from the daily teletypes and other resources, it is believed that the problem could be solved by teletyping the daily "Nutshell" to Division level only.

Nothing of outstanding importance in the operational field developed during the month. As June opened, the Directorate received a report forwarded from the Duty Controller, ADOC, concerning an unidentified sighting telephoned in by Mr. A. J. FRY,[60] civilian, residing at 4207 Lunado Avenue, Albuquerque, N. M. Subsequent conversation with Mr. FRY, plus cross-checking with the Weather Balloon release schedule and other sources, indicated, in fact, that the sighting was a Weather Balloon (Pibal). The report was filed as "Evaluated, Not Forwarded" for future reference. A letter of appreciation[61] to Mr. FRY was prepared and forwarded by the D/I.

On 22 June, a second FLYOBRPT[62] was received via mail from Mr. HERB SHIPLEY, Santa Fe, N. M. As in the case of the previously cited observation, this report checked out as a Weather Balloon and no further action was taken. Mr. SHIPLEY was sent

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59. See discussion Page 47.
60. FLYOBRPT File OIN.
61. Ltr. OIN Corres. file, 16 Jun 52.
62. See footnote 60 Supra

a letter of appreciation for his efforts.[63]

On the morning of 11 June, the Duty Controller relayed a call from Maj. RICHARD POOLE, Special Weapons Center pilot, airborne to Albuquerque from Riverside, Calif. He advised the Controller that he was flying airways between Zuni and Grants, N. M., at 20,000 feet and observed a large white cross on the ground, with the vertical arm pointing in the general direction of Los Alamos (BADGER) area. He further advised that this was the first time, in months of flying the route, that he had made this observation. The Director of Intelligence immediately contacted Lieutenant ADDICKS, OIC, Flight 1-D, 4602d AISS, and preparations were instituted to make an immediate investigation. An L-20 flight was set up to accomodate a photographer, the D/I and the OIC, Flight 1-D. The flight was made on the same morning without incident and the location of the reported cross was pin-pointed without difficulty. Upon return to base with photographs, an investigation was launched which subsequently disclosed the "cross" to be a former bombing-range used by APG personnel. Apparently long unused, the white-washed stones marking the AP had become discolored until recent rains had washed away sufficient dirt and dust to reveal the cross. Central Air Defense Force Intelligence was notified of the findings and the affair was closed out without further action or investigation.

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63. Ltr. OIN Corres. file, 21 Jun 53.

S P E C I A L S U B J E C T S

INSPECTOR GENERAL

Due to considerable personnel changeover during the six-month period, the Inspector General's section operated largely in a shoestring, hence was able to accomplish the bare minimum of required inspections.

During the period, the IG's people processed a total of 61 complaints by 34th Air Division (Defense) personnel and accomplished the following schedule of inspections:

JANUARY

93rd Fighter-Interceptor Squadron	28 - 30	Semi-Annual
120th Aircraft Control and Warning Squadron	21 - 23	Semi-Annual

FEBRUARY

768th Aircraft Control and Warning Squadron	11 - 13	Semi-Annual
17th WAF Squadron	17	Semi-Annual

MARCH

135th Aircraft Control and Warning Squadron	18 - 20	Semi-Annual
769th Aircraft Control and Warning Squadron	26 - 27	Semi-Annual

APRIL

135th Aircraft Control and Warning Squadron	27 - 29	Follow-up
93rd Fighter-Interceptor Squadron	8 - 10	Follow-up
767th Aircraft Control and Warning Squadron	1 - 3	Semi-Annual

MAY

Headquarters, 34th Air Division (Defense)	25 - 29	Semi-Annual
Headquarters Squadron Section	25 - 29	Semi-Annual
767th Aircraft Control and Warning Squadron	6 - 8	Follow-up
17th WAF Squadron	14	Follow-up

JUNE

Headquarters, 34th Air Division (Defense) 17 - 19 Follow-up
Headquarters Squadron Section 17 - 19 Follow-up

COMPTROLLER

Transferring from Western Air Defense Force to the Central Air Defense Force during February caused an entire rearranging of reporting statistical files and rewriting of the Directory of Controlled reports for all agencies to incorporate the requirements of Central Air Defense Force and to eliminate the Western Air Defense Force requirements. This was accomplished without incident.

The first Commanders' Note Book for the Division was prepared during April for the period 1 July 1952 through 31 March 1953; however, the publication was discontinued due to losses of personnel required for continued maintenance of the publication.

Maintenance and Operation funding continued through the last half of the fiscal year on a very satisfactory basis and to the extent that part of the appropriated funds allotted to the Division were returned to source.

Difficulty was encountered in funding for Major Repairs and Minor Construction funding. Projects could not be concluded to the point that plans and specifications were available to enable the allotment of funds until the early part of June and, during that month, all Division projects were funded even though

Training accomplishments probably were the primary achievement of the Directorate during June. Battle Stations Intelligence Team "Able", consisting of one Officer and five Airmen, completed the prescribed course of instruction and as of the end of June were deemed fully capable of assuming Intelligence duties as required during emergencies or exercises.[64]

Staff visits conducted by the Director of Intelligence to the Squadrons and AC&W sites during the six-month indicated that Intelligence training generally was on a satisfactory level. Commanders appeared to be thoroughly aware of the Intelligence requirements and responsibilities and were extending utmost cooperation in arranging time for lectures and demonstrations and in providing facilities for display and dissemination purposes. Only one AC&W site, however, has a formally trained Intelligence NCO, and, so far, it has not been possible either to award a secondary AFSC to personnel performing Intelligence duties or to change such AFSCs to primary in Intelligence. This adverse factor has posed a personnel-morale problem in the Airmen assigned to Intelligence duties, some for a period exceeding a year, feel that their efforts in this field should receive some official recognition.[65] This situation presently is being studied to determine what alleviation, if any, is possible under current personnel regulations and practices. The solution may be to request formal schooling at the Basic Intelligence Course, Lowry AFB.

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64. See footnote 46 Supra
65. Per Pers Int. by Cmd Hist w/Col Deutsch, Dep for Pers, 12 Apr 53.

actual construction and repairs could not be started until within the succeeding fiscal year.

During June, the division was host to an Air Defense Command Budgetary Conference. This conference lasted one week and was attended by nearly all of the budget officers within that command and within the United States. The purpose of the conference was to form the ground-work of an amended ADCM 172-1 that would shift the responsibility for financial planning from the budget officers to financial planners at the source of obligating.

FUTURE PROBLEMS

Below is a list of projects and problems, most of which were not beyond the conference stage at the end of the December/June 1953 reporting period. They will be covered fully in the Historical Report covering the period 1 July through 31 December 1953:

1. Shortage of AC&W Operators and Controller/Director personnel.
2. Problems raised by hazards from F-86D rockets.
3. Re-programming of M-92 and M-96.
4. Operation "Tailwind"
5. Operation "Sparkgap"
6. Air National Guard integration.
7. Use of TPS-1D at Davis-Monthan AFB, Ariz.
8. Airmen Directors.

FIFTEENTH FIGHTER-INTERCEPTOR SQUADRON

Due to the comparatively recent activation[66] of the 15th Fighter-Interceptor Squadron, based on Davis-Monthan AFB, Tucson, Ariz., it is felt that the following data will prove of some historical value. The data was researched and prepared by First Lieut. ROBERT A. PRECIADO and approved by Lt. Col. WESTON W. MARSHALL, Squadron Commander:

"When the threat of war hung over the United States during the critical years of 1940 and 1941, the U.S. Army Air Force was in a process of building up its strength. As a result of this general buildup, the 15th Pursuit Squadron (Interceptor) was activated at MacDill Field, Tampa, Fla.,[67] on 15 January 1941 and assigned to the 53rd Fighter Group stationed at MacDill Field."

"During its infancy, the 15th Pursuit Squadron was assigned P-35 and P-40 type aircraft for training purposes. Personnel were assigned from the 29th Bombardment Group and from the General Headquarters Recruitment detachment. Shortly after the sneak attack on Pearl Harbor, the unit was alerted for overseas shipment[68] and on 26 December 1941, the unit was placed aboard a troopship and embarked for the Canal Zone, Panama. New Year's Day, 1942, saw the Squadron arrive at Balboa, Canal Zone."

"Prior to leaving for overseas duty, the unit received new

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66. G.O. No. 9, Hq, CADF, dtd 9 Mar 53.
67. Ltr., GHQ, AF, 322.082, dtd 5 Dec 40.
68. Ltr., Research Studies Institute, 10 Apr 53.

P-39 type aircraft and the flying personnel of the Squadron ferried the aircraft to Panama. While in Panama, the Squadron flew combat air patrols, interceptions and maintained an alert schedule. The unit was returned to the United States on 22 November 1942 and entrained for Dale Mabry Field, Tallahassee, Fla., arriving there on 26 November. When the unit was transferred from Panama, only essential flying officers returned. All aircraft and equipment were left in Panama. As a result, flying activities were curtailed for some months owing to lack of aircraft and supplies. At Dale Mabry Field the Squadron began duties as a Replacement Training Squadron.

" On 4 June 1942, the unit was re-designated as the 15th Fighter Squadron (Single Engine). As such, the unit was disbanded at Page Field, Fort Myers, Florida on 1 May 1944. The squadron remained inactive until 10 March 1947 at which time it was redesignated the 15th Fighter Squadron (All Weather) and activated at Andrews Field, Maryland. Upon activation, the unit was assigned to the 419th Troop Carrier Group. On 27 June 1949, the unit was again de-activated.

"After four (4) years of inactivity, the Squadron was redesignated as the 15th Fighter-Interceptor Squadron and was activated on 20 April under the provisions contained in General Order Number 9, Headquarters Central Air Defense Force. Placed

under the operational control of the 34th Air Division (Defense), the unit was activated at Davis-Monthan Air Force Base, Tucson, Ariz. A cadre of experienced personnel from the 93rd Fighter-Interceptor Squadron, Kirtland Air Force Base, was dispatched on orders to Davis-Monthan Air Force Base to begin the task of making the Squadron operational.

"Under the leadership of Lieut. Col. WINTON W. MARSHALL, who relinquished command[69] of the 93rd Fighter-Interceptor Squadron to assume command of this squadron, the unit has progressed rapidly towards attaining full combat capabilities to fulfill its vital Air Defense Mission."

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69. Ref. 34th AD(D) SO 105 Par 1 dtd 29 Jun 1953.

SUPPORTING DOCUMENTS

NL1 EO15
RR 6FV
DE NL1 30
R 101634Z
FM HQ CADF KSC MO
TO CG 34TH ADIV KIRTLAND AFB N MEX
MIL PERS-OA 6914. ISSUE ORDERS REASSIGNING COL. WILLIAM A. MATHENY, 428A TO 31ST ADIV (DEF), FT SNELLING, MIN. FOR DY AS CG, REPORTING NLT 16 JUNE 1953. COL MATHENY WILL REPORT TO CG OOIS HQ 15 JUNE 1953 FOR ONE (1) DAY TDY. MVMT ORDER NO 53-152 W/B UTILIZED. PAR 7, CADFR 35-1A, 3 MAR 53 W/B COMPLIED WITH. ORDERS ISSUED WILL CITE AFR 35-59 AND THIS MSG AS AUTH FOR TRF.
10/1656Z JUN NL1

A CERTIFIED TRUE COPY

Charles L. Dewees

CHARLES L. DEWEES
Captain, USAF
Director of Intelligence

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

GENERAL ORDERS)
NUMBER 9)

16 June 1963

Under the provisions of Air Force Regulation 35-54, and change thereto, the undersigned hereby assumes command of the 34th Air Division (Defense), Kirtland Air Force Base, New Mexico, vice COLONEL WILLIAM A. MATHENY; 428A, relieved.

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PLUS: 5 cys AFSWC
5 cys 490lst

HARVEY J. HUGLIN
Colonel USAF
Commanding

0553

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

GENERAL ORDERS)
NUMBER 10)

10 July 1953

STAFF ANNOUNCEMENT

1. LIEUTENANT COLONEL WILLIAM E. SACKETT, A0362464, United States Air Force, is announced Adjutant, Headquarters, 34th Air Division (Defense) effective 6 July 1953, vice Major James F. Martin, 14447A, relieved. Exigencies of the service having been such as to preclude the issuance of competent written orders in advance, are hereby confirmed and made a matter or record. VOCC: 6 July 1953.

BY ORDER OF THE COMMANDER:

OFFICIAL:

WILLIAM E SACKETT
Lt Col USAF
Adjutant

Sam Odensky
SAM ODENSKY
1st Lt USAF
Asst Adjutant

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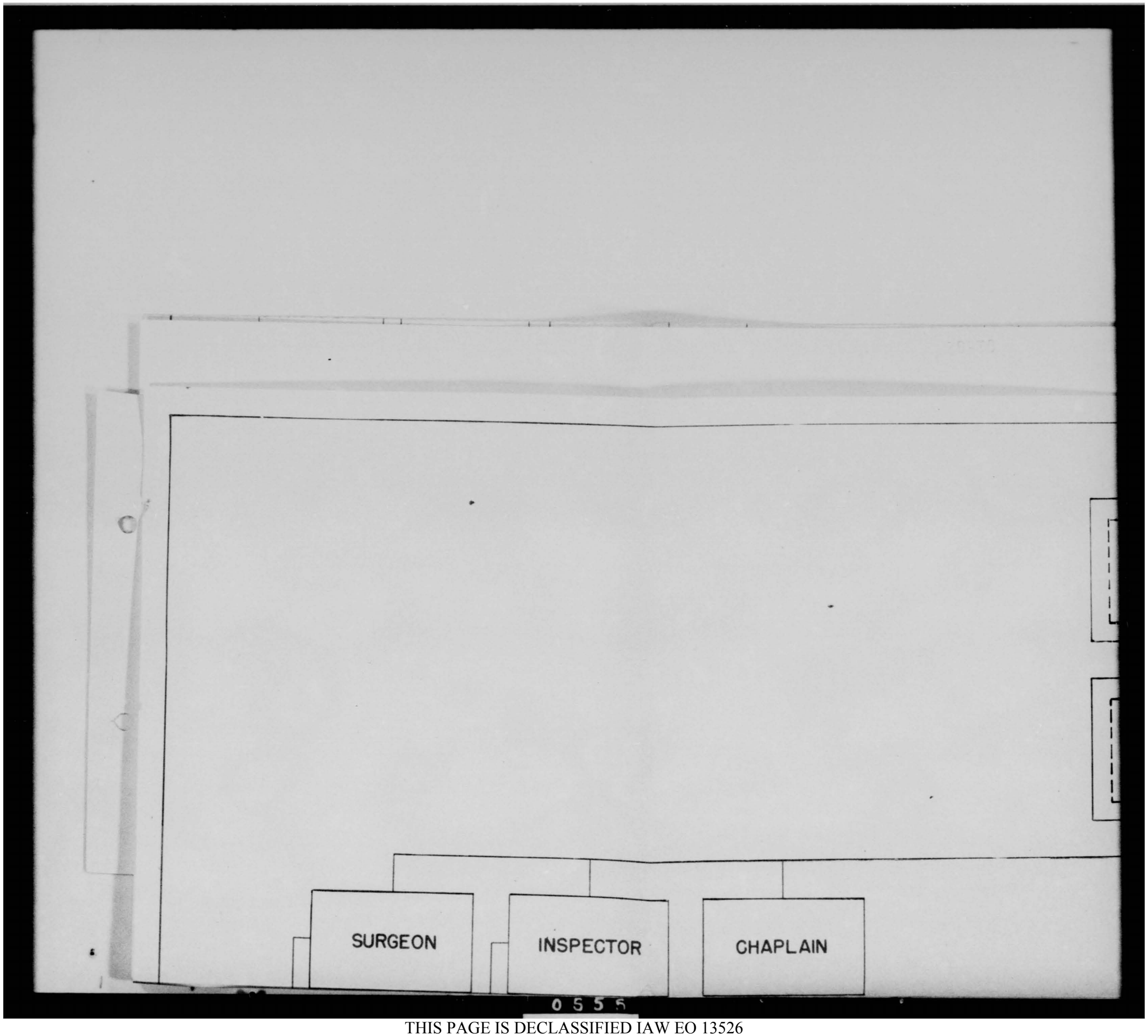

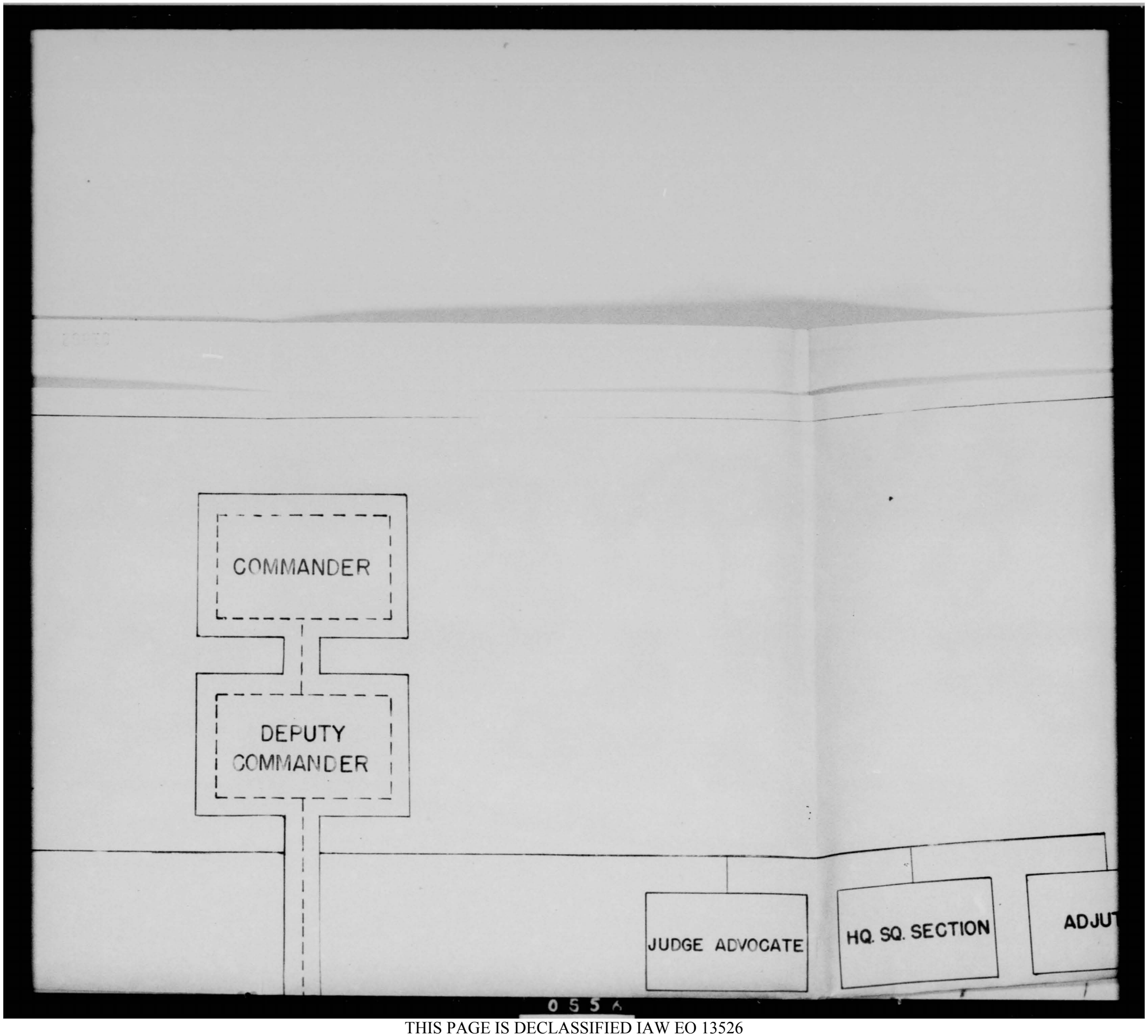

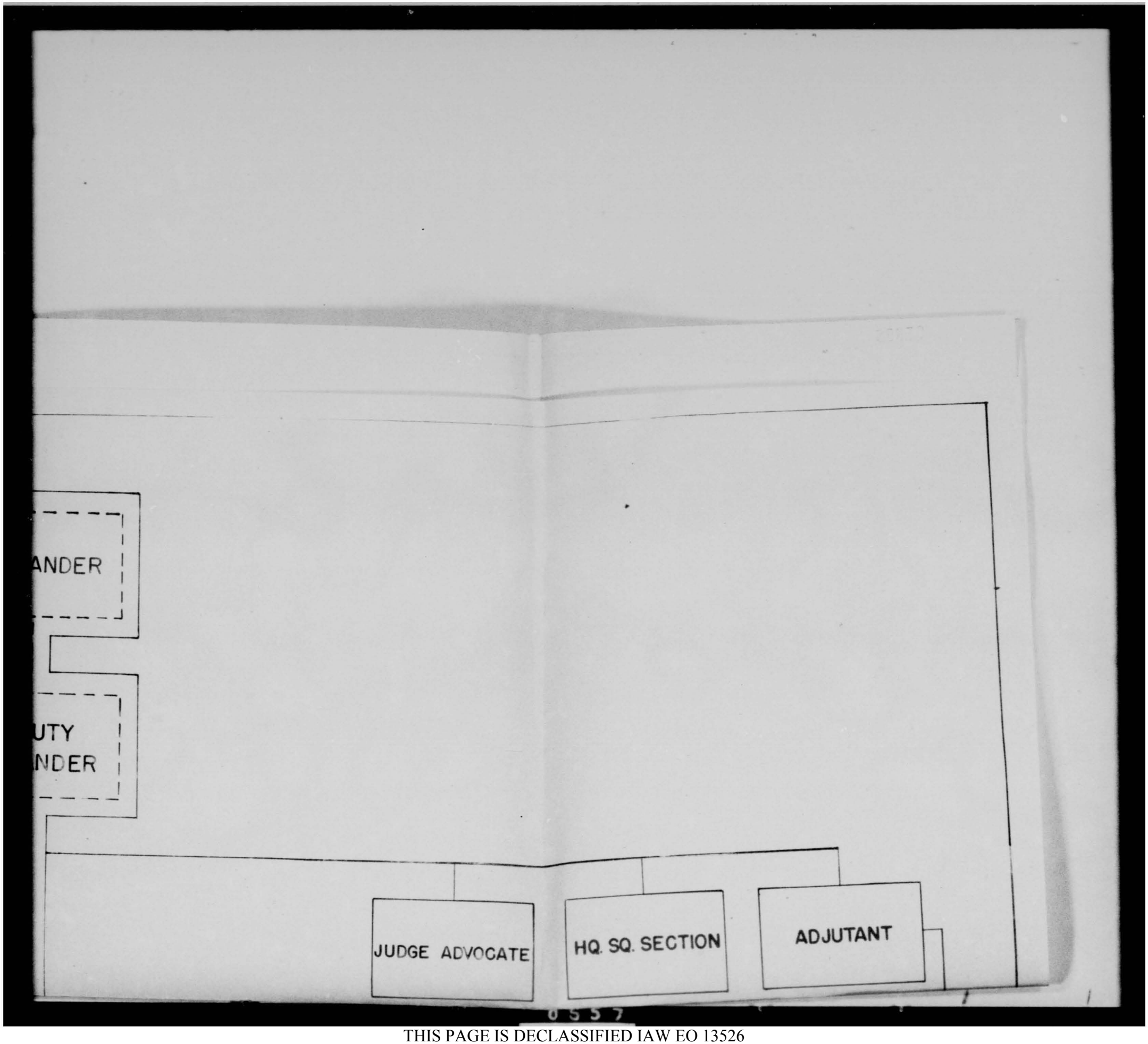

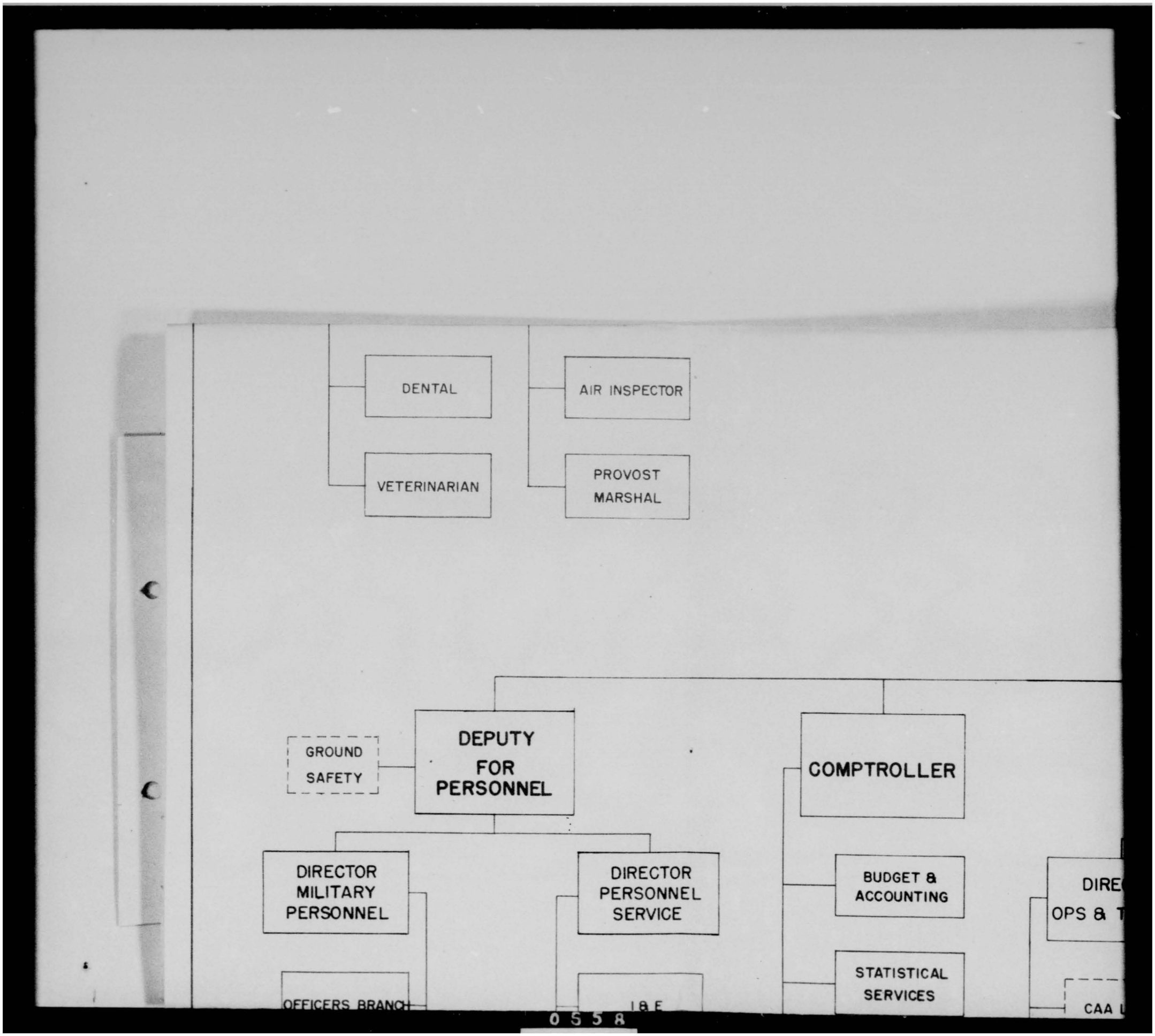

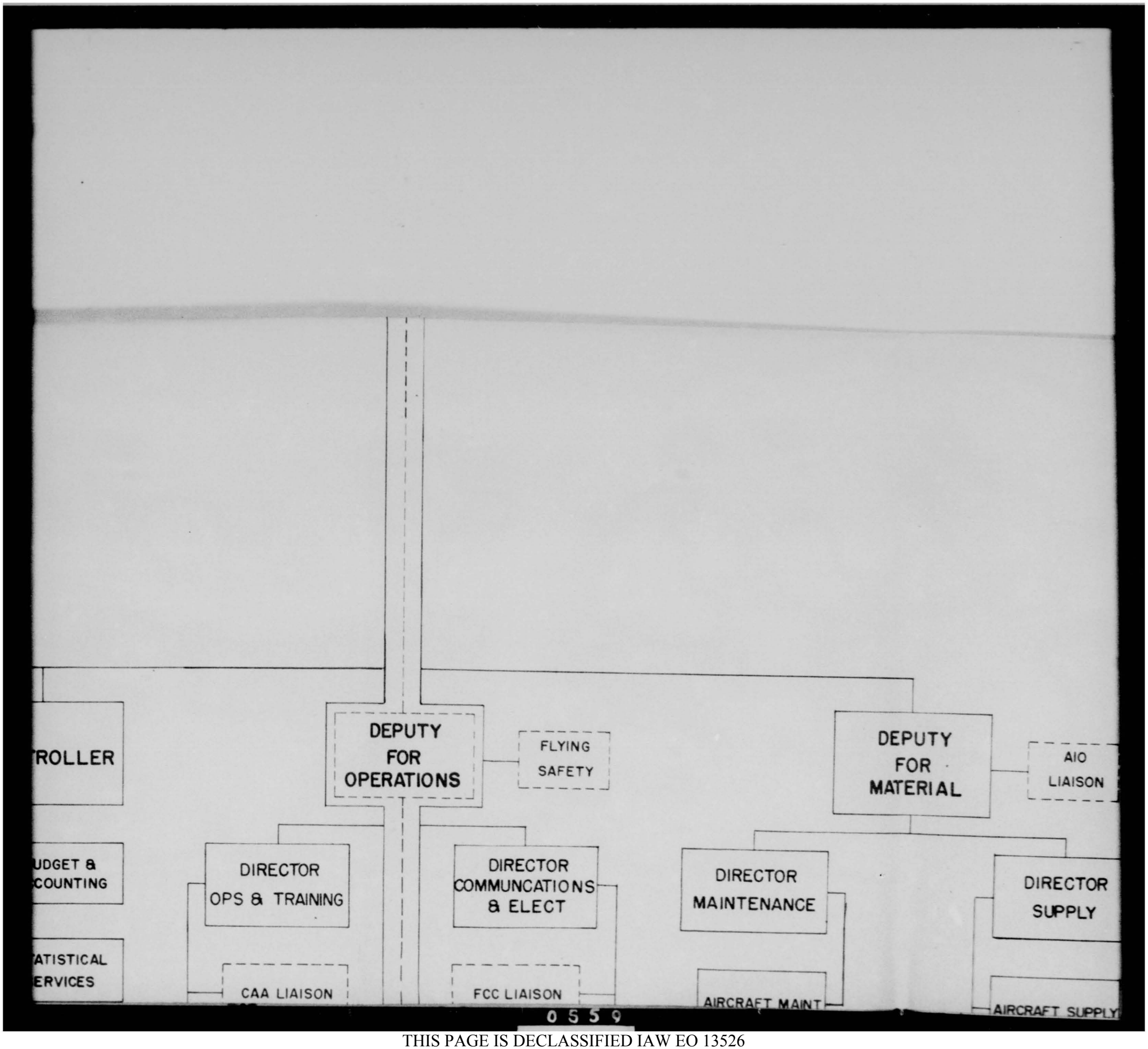

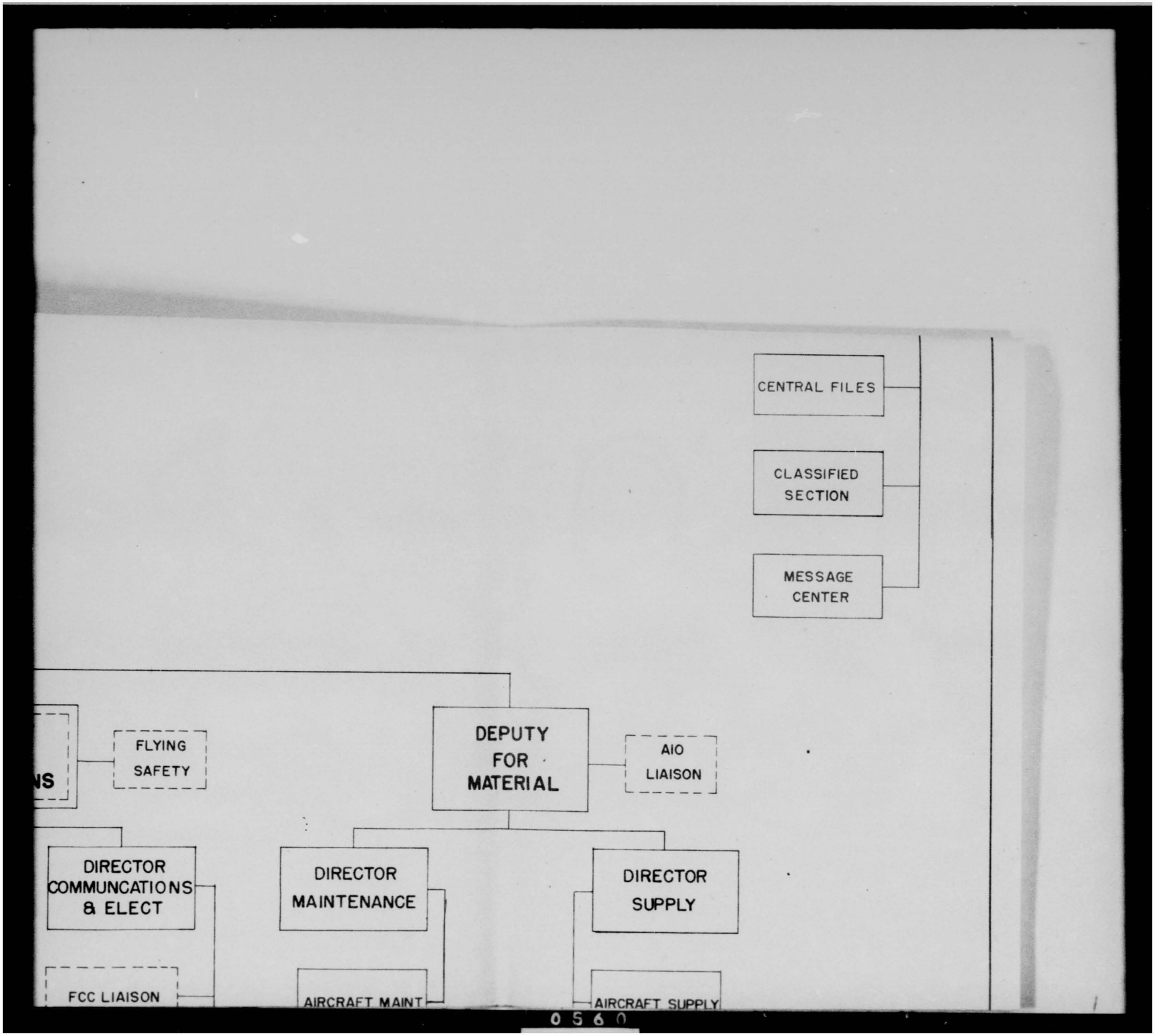

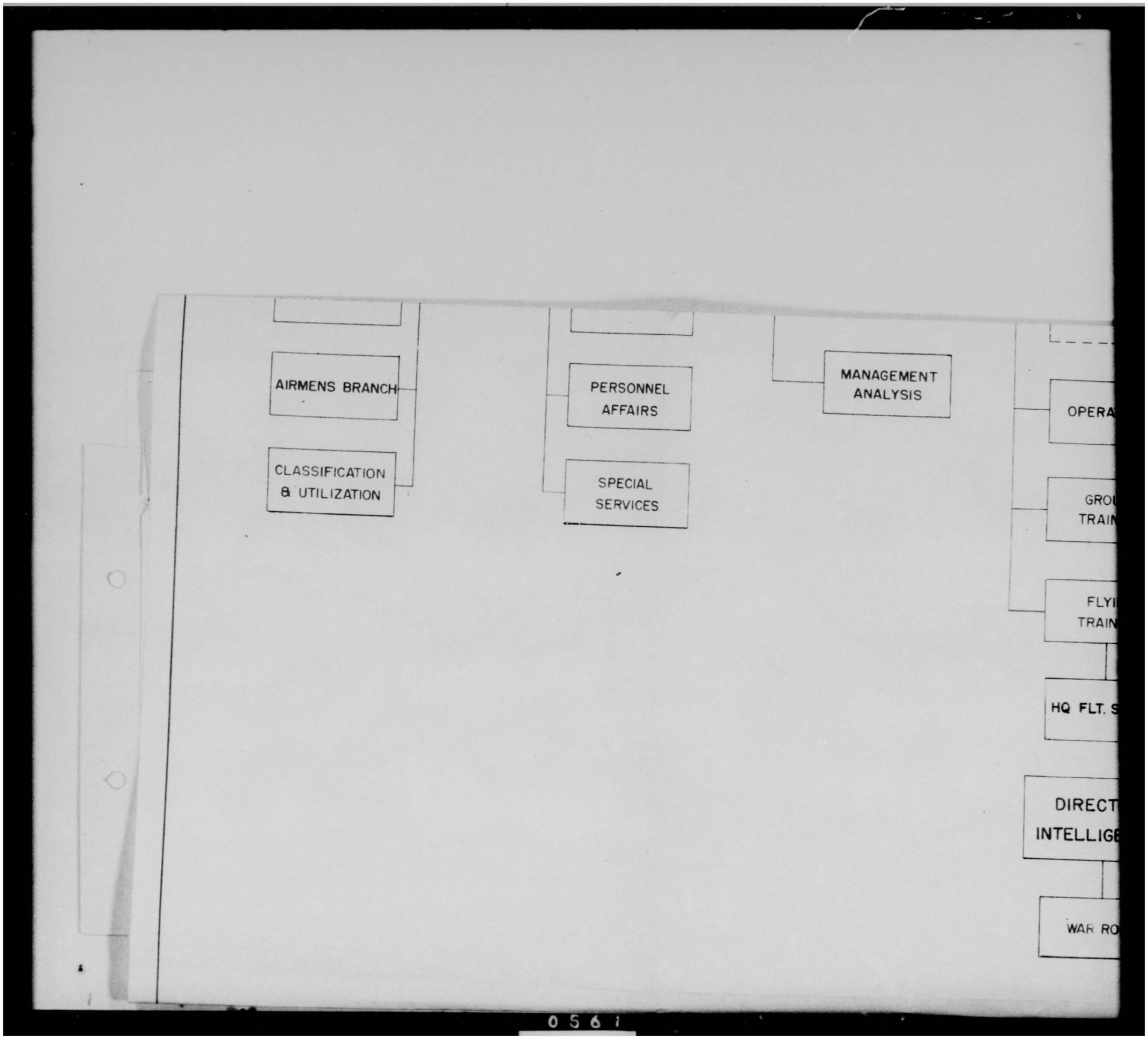

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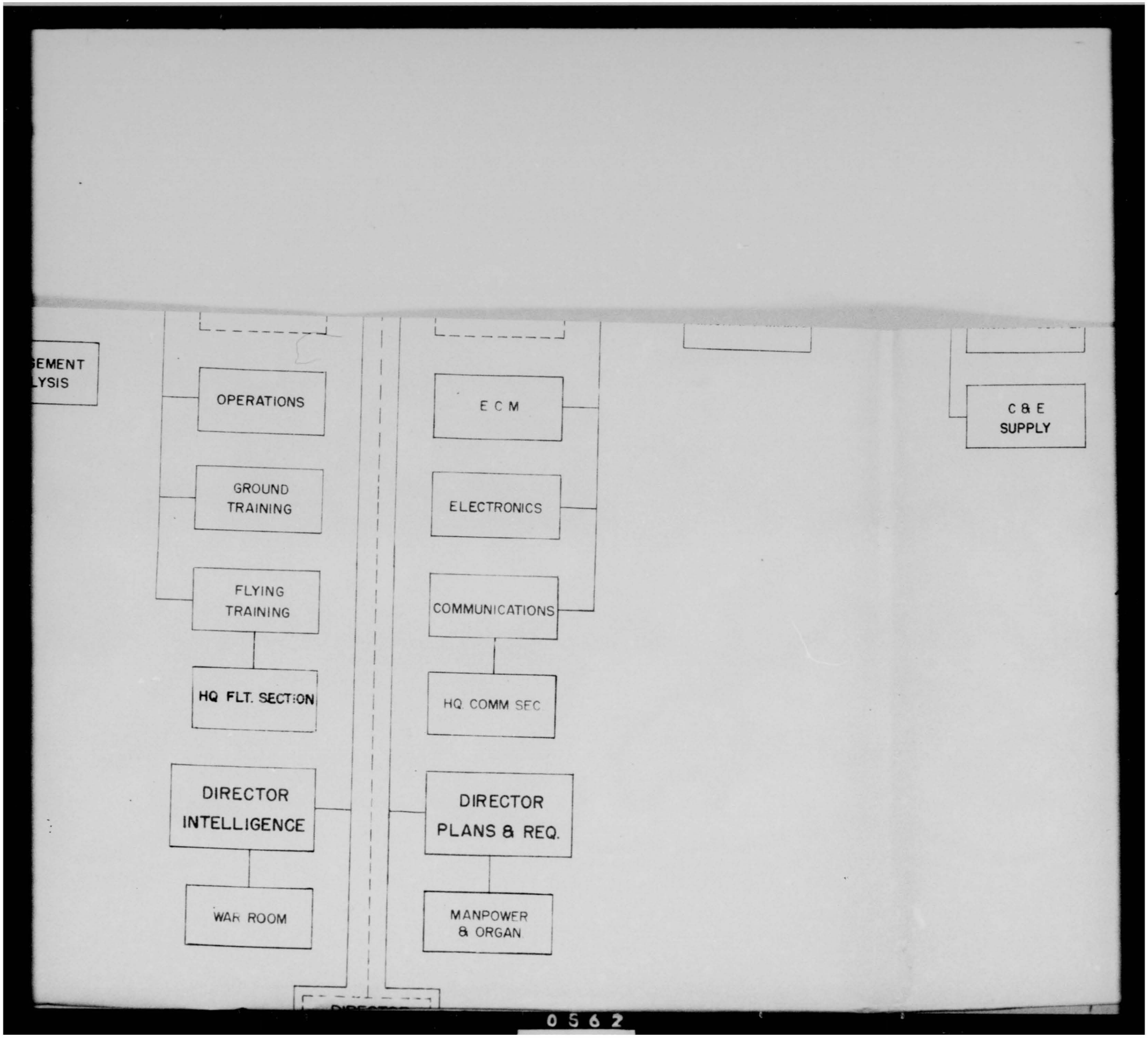

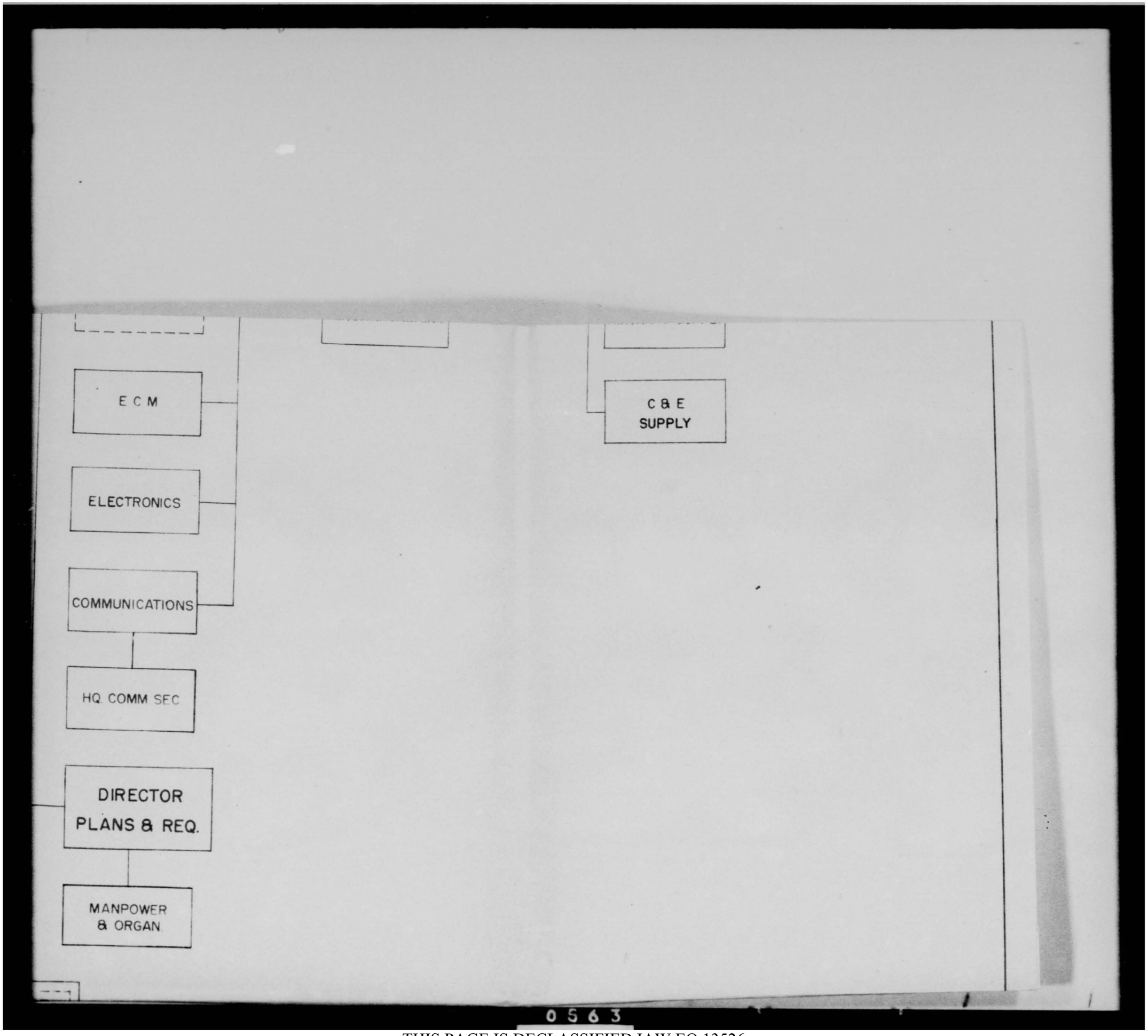

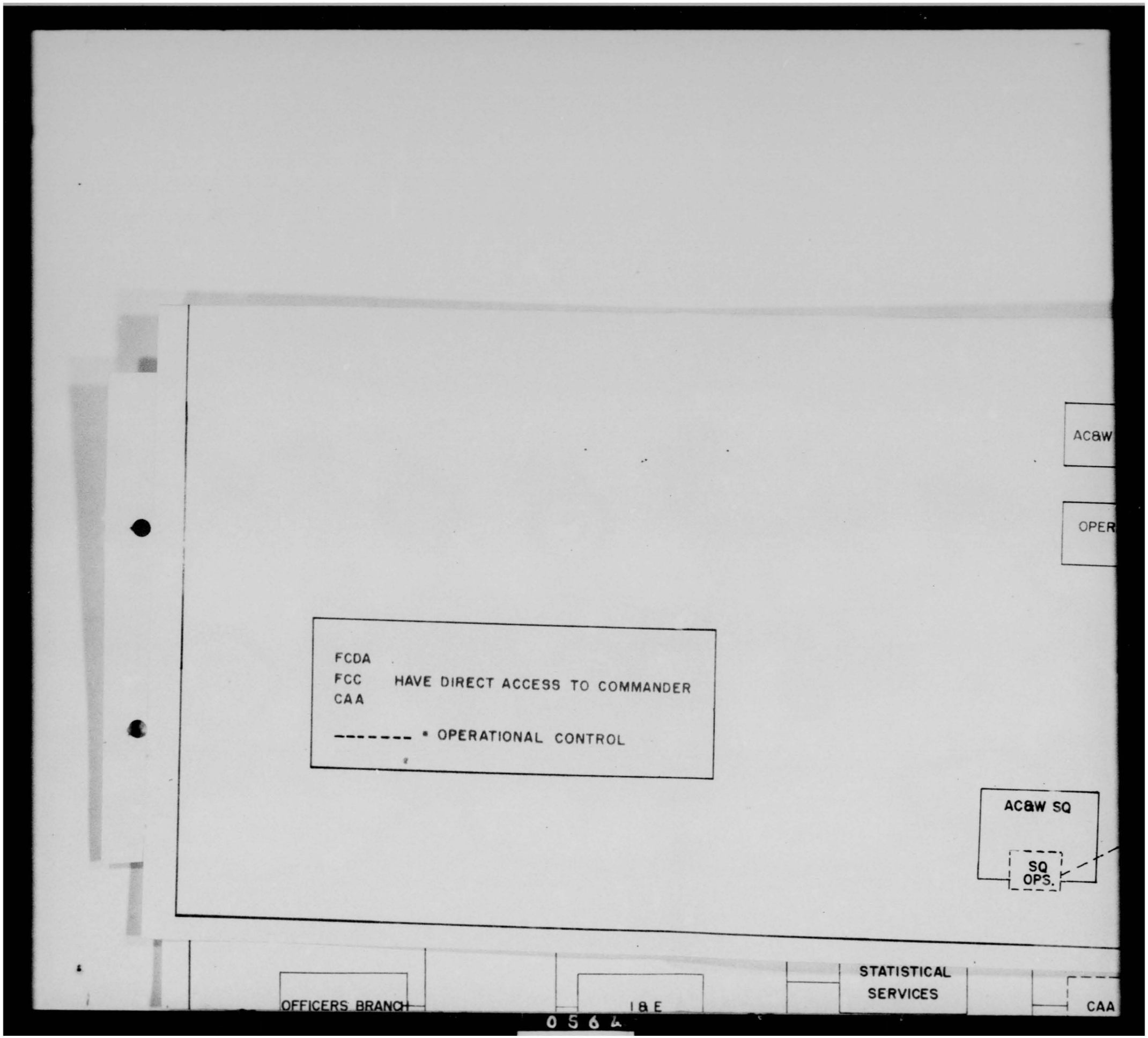

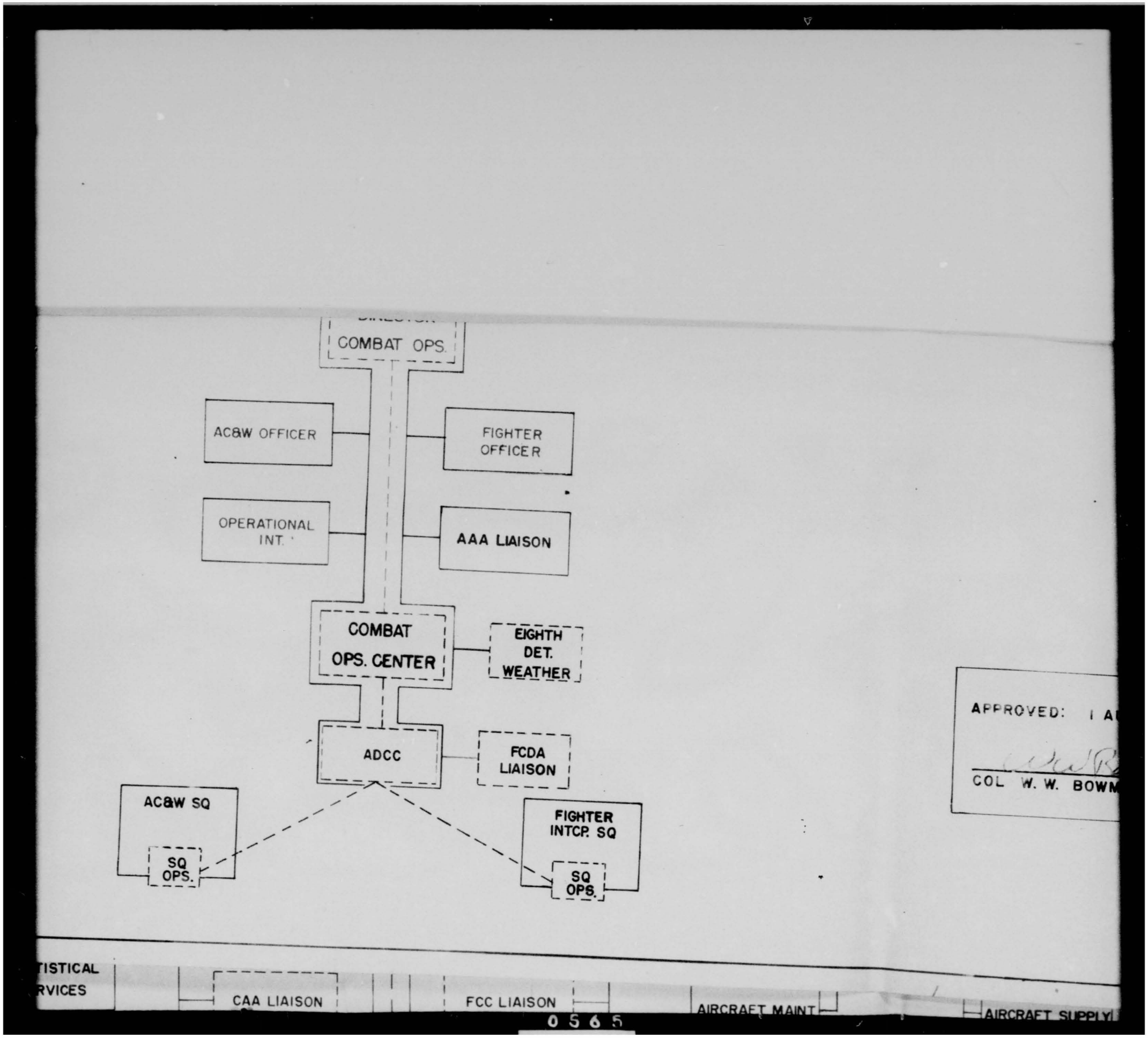

FIGHTER OFFICER

AAA LIAISON

EIGHTH DET. WEATHER

FCDA LIAISON

FIGHTER INTCP. SQ

SQ OPS.

APPROVED: 1 AUG 53

COL W. W. BOWMAN

FCC LIAISON

AIRCRAFT MAINT

AIRCRAFT SUPPLY

0566

Secret

SECRET	
BY AUTH: CG 34ADD	
INITIALS	DATE
9MB	22 Oct 57

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

Joint Plan for Recovery and Return of Interceptor Aircraft to the Air Defense System

22 October 1951

I. GENERAL.

1. Fighter-Interceptor aircraft assigned or attached to this command may, by reason of a military situation, be sent to make an intercept, or to perform other specific missions, which are beyond their normal operating range. When such circumstances exist, it will be necessary that these aircraft land at installations other than their home base to be serviced, and if necessary, to be rearmed and have minor maintenance performed.

2. It is the object of this Plan to establish the authority by which this servicing and maintenance of fighter-interceptor aircraft may be accomplished, and to prescribe the procedures by which the aircraft may be serviced as required and returned to the Air Defense System with the least possible delay.

II. AUTHORITY.

1. WADF Letter, WDOTN-2, 333.5, subject: "SOP for Defense Mission Clearance," dated 12 December 1950.

2. WADF Letter, WDOTN-1, 360.1, subject: "SOP for Defense Mission Clearance," dated 14 August 1951.

3. ConAC Letter, CNOOT-D, 360.1, subject: "SOP for Defense Mission Clearance," dated 29 November 1951.

4. WADF Letter, WDOTN-1, 333.5, subject: "Recovery and Return of Intercept Aircraft to the Air Defense System," dated 11 May 1951.

5. Extract from Air Force Regulation 60-16, dated 11 July 1949, paragraph 49.

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III. OPERATIONS.

1. Landing clearance. When so ordered by the GCI Controller, or when a military situation dictates, any interceptor aircraft of this command may land at Walker Air Force Base; Roswell, New Mexico; or Biggs Air Force Base, El Paso, Texas, without having to have clearance by, or approval of, any military flight clearance granting agency.

2. Initial Radio Contact. Upon proper radio call identification (see Aircraft Identification, paragraph 12), the interceptor aircraft will be given priority over all other traffic for approach and landings, except actual emergencies.

3. Radio terminology, air to ground.

a. The interceptor pilot, after initial contact with the control tower at the point of landing, will request landing instructions for his number and type of aircraft according to existing regulations and practices. Immediately following this request for landing information, he will add the code word which will specify the services required (see Servicing Code, paragraph 11). The control tower will repeat the service code upon completing the issuance of landing information. An example of the voice procedure would be:

"Biggs Tower, this is Parka Blue, over."

"Parka Blue, this is Biggs Tower, over."

"Biggs Tower, this is Parka Blue, 60 miles northwest. Request landing instructions for 2 F-86's, Pepper Box, over."

"Parka Blue, this is Biggs Tower. Cleared to enter traffic pattern runway 21, wind southwest ten, altimeter 30.10. Call on initial approach. Understand Pepper Box."

b. If any portion of the descent will be made under Instrument Flight Rule weather conditions, the interceptor pilot will contact the appropriate CA facility and advise:

(1) His present position

(2) Altitude

(3) Request let-down instructions

Secret

SECURITY INFORMATION

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This contact will be prefixed with the squadron radio call sign and appropriate flight color. The CAA Air Route Traffic Control Center and/or Approach Control Tower will make every effort to land the aircraft as expeditiously as possible consistent with traffic density and weather.

c. The interceptor pilot will contact the control tower when as far from the station as possible in order that the servicing units involved can be notified by the tower and will be ready for the arrival of the aircraft.

d. Upon receipt of the Servicing Code from the interceptor aircraft, the control tower will take immediate action to alert the units from which service will be required as predetermined by the installation concerned.

4. Servicing and Parking

a. Services required will be made available as expeditiously as possible in order that the aircraft be made ready to take-off with the least possible delay.

b. Aircraft will be parked as near the servicing and maintenance facilities as practicable, and must be met by refueling and starting units as are required.

5. Supervision of Servicing and Maintenance. Servicing, arming, and maintenance will be performed under the supervision of the pilot or pilots of the aircraft. The pilot will be responsible that his aircraft is refueled and rearmed properly and completely. He will supervise the maintenance accomplished insofar as it is possible for him to do so.

6. Clearance.

a. The pilot will not be required to file any clearance or receive any weather or flight briefing. He need not leave the immediate vicinity of the aircraft if doing so will delay his departure.

b. When ready for departure, the interceptor pilot will request taxi and take-off information from the control tower according to existing regulations and practices, and will inform the control tower of his intended destination, route and altitude. The tower will pass this information to base operations for relay to the home station of the aircraft.

Secret

c. If the climb-out will be conducted under Instrument Flight Rule weather conditions, the Control Tower will relay to the appropriate CAA ARTCC or Tower:

(1) Destination

(2) Route

(3) Altitude

The CAA facility responsible for the control of air traffic at departure point will make every effort to expedite the departure of the interceptor.

7. Take-off. The interceptor aircraft will be given priority over all airport traffic except in absolute emergency. Control tower operators should keep in mind that jet type aircraft can be airborne within forty-five seconds after lining up on the runway. The Control Tower operator is authorized to honor the interceptor pilot's requests for specific runway for take-off, and any other requests the pilot may have in accordance with reasonable safety and the existing military situation.

8. Return to Air Defense System. The interceptor aircraft will return as expeditiously as possible to home base or to GCI Control, as required.

9. Acknowledgment of Services Received. The interceptor pilot will acknowledge the services received by appropriate entry in the aircraft's AF Form 1A, and by entry in his Fighter-Interceptor Mission Report.

10. Authorized Land Communications.

a. The interceptor pilot will be authorized the use of the following communications facilities for any necessary messages regarding aircraft status and maintenance and/or tactical flight messages.

(1) Military Flight Service lines.

(2) CAA Service "F" interphone circuit.

b. Any teletype communications will be dispatched "Operational Priority."

11. Servicing Code:

Secret

SECURITY INFORMATION

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Secret

7 a. "Petroleum." Aircraft requires fuel, oil, oxygen and hydraulic service only.

b. "Pipper Box." Aircraft requires the servicing covered under "Petroleum," plus ammunition.

c. "Colossal." Aircraft requires maintenance in addition to fuel, oil, hydraulic, oxygen, and ammunition service.

12. Aircraft Identification. All flights will be identified by squadron radio call sign and the appropriate color, i.e., "Parka Red," "Parka Blue," "Parka White," etc. Normal color designations are Red, White, Blue, Green, Black, and Orange.

s/ Wm. A. Matheny
WILLIAM A. MATHENY
Colonel, USAF
Commanding Officer
34th Air Division (Defense)

s/ John B. McPherson
JOHN B. McPHERSON
Colonel, USAF
Commanding Officer
Walker AFB, New Mexico

s/ R. H. Baker
R. H. BAKER
CAA Liaison Officer
34th Air Division (Defense)

s/ James Y. Parker
JAMES Y. PARKER
Colonel, USAF
Commanding Officer
Biggs AFB, Texas

Secret

SECURITY INFORMATION

34TH ADD REGULATION)
NUMBER 50-23)

HEADQUARTERS, 34TH AIR DIVISION (DEFENSE)
Kirtland AFB, New Mexico, 15 May 1953

TRAINING

On-The-Job Training

1. REFERENCES. AFR 50-23 and ADCM 50-23.

2. PURPOSE. To establish responsibilities, policies, and procedures for the conduct of an on-the-job training (OJT) program within the 34th AD(D).

3. SCOPE. The provisions of this regulation are applicable to all units assigned or attached to 34th Air Division (Defense).

4. DEFINITIONS.

a. On-the-job training is the supervised instruction of an individual for qualification in the performance of duties of a given AFS while working in a position within that specialty. There are two types of on-the-job training.

(1) Formal on-the-job training - This is systematic training conducted by the unit of assignment as a substitute for formal training at an approved USAF school. This training applies when:

(a) An individual classified at the "1" (helper) level is in training for the award of the "3" (apprentice) level.

(b) An individual is in training for any new AFS which is not within the normal vertical progression.

(c) An individual is in training for a different suffix to his AFS.

(d) Training from the "5" (senior) to the "7" (supervisor-technician) level when formal schooling is not available.

(2) Proficiency on-the-job training (or proficiency training). This is training designed to increase the airman's potential in his AFS and to qualify him for upgrading to specialties in normal vertical progression. It includes:

(a) Vertical progression from the "3" to "5" level.

(b) Day to day association with co-workers and supervisors.

(c) Training with mobile training units.

(d) Special factory and familiarization courses.

(e) Special on-base courses.

b. OJT Officer is that officer designated on Personnel Actions Memorandums to maintain constant supervision and administration of the OJT program within the unit as an additional duty.

c. Training Supervisor is the officer or non-commissioned officer in charge of a section.

d. Instructor is that person who conducts training within the section.

e. Training Chart - A progress chart used by the section to indicate overall detailed OJT progress within the section. (34th ADD Form 151, "Training Chart").

5. PREREQUISITES.

a. The prerequisites for formal on-the-job training will be in accordance with the provisions of AFR 35-390 and AFR 35-400 series.

b. Prerequisites for award of AFS.

(1) Completion of formal school training leading to the award of an AFS.

(2) Completion of on-the-job training leading to the award of an AFS and:

(a) Attainment of qualifying score on the appropriate airman's proficiency test (5 and 7 levels) or the appropriate Air Force job knowledge test (3 level). This requirement does not apply when a test does not exist for the specialty.

(b) Appropriate personnel classification board action.

THIS PAGE IS DECLASSIFIED IAW EO 13526

c. Airmen will not be denied proper skill upgrading or award of an AFS in which qualified, solely because manning documents do not authorize the specialty.

6. RESPONSIBILITIES. Commanders, OJT Officers, personnel officers, and supervisors have a continuing responsibility for the initiation and accomplishment of an active on-the-job training program.

a. Commanders will:

(1) Appoint an OJT officer on Personnel Actions Memorandums to administer the program.

(2) Develop and implement procedures for all phases of unit on-the-job training program. (ADCM 50-23 may be used as a guide).

(3) Insure that OJT officers, supervisory personnel, and instructors are familiar with and adhere to the procedures outlined in (2) above.

b. OJT officers will:

(1) Administer and maintain constant supervision of the OJT program.

(2) Assist training supervisors and instructors in preparing OJT course outlines and lesson plans.

(3) Supervise maintenance of on-the-job training records. (AF Form 623 and 34th ADD Form 151).

c. Training supervisor will:

(1) Maintain AF Forms 623 and training charts.

(2) Prepare and maintain on file OJT course outlines and lesson plans.

(3) Initiate requests for formal and proficiency on-the-job training (see attachment #1, 34th ADD Form 3, 1 Oct 52).

(4) Request the unit test control officer to administer Air Force job knowledge tests for personnel successfully completing formal OJT for the "3" level.

(5) Evaluate and initiate requests for reclassification after airmen have successfully completed OJT and have attained a qualifying score on the airman proficiency test or Air Force job knowledge test. (see attachment #2, 34th ADD Form 4, 1 Oct 52).

(6) Keep the airman under his supervision advised of all changes concerning AFS and status of training.

d. The instructor will:

(1) Conduct personal instruction in techniques and work steps of an Air Force specialty in which OJT is to be given.

(2) Prepare, with assistance of training supervisor and OJT officer, course outlines and lesson plans.

(3) Conduct and evaluate, under supervision of training supervisor, written and/or practical proficiency tests of OJT trainees.

e. Personnel officers will:

(1) Take prompt action on requests for Personnel Actions Memorandums from the training supervisor.

(2) Advise the training supervisor in writing, of results of Air Force job knowledge tests and airman proficiency tests.

7. STANDARDIZATION. All units will maintain sufficient individual training records to insure that training is being conducted effectively.

a. Training Charts, distributed by this headquarters, will be utilized by each section to depict current and projected on-the-job training.

b. AF Form 623, "Formal On-The-Job Training Record", maintained by the training supervisor will be utilized by all units to maintain a cumulative record of individual progress and proficiency. All OJT--formal and proficiency-- will be recorded on this form.

c. Training supervisors will maintain AF Forms 623 in individual folders. All substantiating data such as PAMs pertaining to airmens' AFS and results of AFJKT and APT's will be filed in this folder with AF Form 623.

d. Upon transfer of personnel, AF Form 623 and folder will accompany the individual as part of the field personnel records group.

8. PROCEDURES.

a. Training charts (34th ADD Form 151) serve to depict current and projected on-the-job training within the section and allow the commander and unit personnel to quickly and correctly evaluate the overall

progress in this training. Training charts will be maintained as follows:

(1) One chart will be used for each AFSC in which training is being received.

(2) The AFRs of 35-400 series applicable to the AFS will be inserted in the AFR blank.

(3) "Certifying personnel" is the training supervisor.

(4) Description of phases will be inserted in the oblique column. This column will depict training required leading to award of AFSC. For purpose of neatness and clarity, it is suggested that the phases and subjects be typed or printed on a separate sheet of paper and be inserted under the transparency.

(5) Names of airmen will be transcribed in the "Names" column.

(6) When an individual completes a subject an "X" will be placed in the appropriate block. If the subject is only partially completed, a diagonal (/) will be inserted. An "O" indicates non-applicability of the training subject.

(7) Entries will remain on the chart until the individual has completed the training or is transferred.

(8) To insure close coordination and supervision, the OJT officer will periodically check the training program. The results of these checks will be indicated in the column headed "Monitor Check."

b. The standard form for recording individual on-the-job training as prescribed by AFR 50-23, is AF Form 623. The following standardized procedures will be utilized throughout this division.

(1) Each individual's AF Form 623 will be maintained by the training supervisor in a separate folder, with substantiating data such as PAM's and results of Air Force job knowledge tests and airman proficiency tests.

(2) One form will normally suffice for three on-the-job training objectives. When required, additional sheets for extention of Section II will be firmly fastened to the printed form.

(3) Instructions for completing AF Form 623:

(a) Section I, Items 1 through 6 are self explanatory.

(b) Entries in Items 7 and 8 will be made from the PAM

or authority contained in item 9.

(c) Item 10 will contain the OJT objective, such as, "Qualify Airman in AFSC 36230."

(d) Item 11 will contain the estimated completion date of OJT. At no time will the OJT time be less than 90 days or 1½ times the length of a comparable formal course, whichever is longer.

(e) Signature of the trainee will appear in item 12 and will be signed at the time training is started. This action insures that the trainee is aware of the OJT objective.

(f) Item 13 is self-explanatory.

(g) Section II will contain the phase of training as transcribed from the training chart with a brief description of training received such as "Phase III, Measuring Devises." As each phase of training is completed, results will be transcribed to the AF Form 623, and authenticated by the training supervisor. The trainee will acknowledge results of each phase by initialling the check in the "qualified" column.

(h) Each entry in Section III confirms completion of OJT and AFSC gained. A brief statement of the training objective should be included. A record of tests, that is, AFJKT or APT, classification board action, and dates, will also be entered in Section III. An example entry after an individual completes OJT and classification requirements for the "3" level is as follows: "Qualify airmen in AFSC 36230 (AFJKT Qual 125 10 July 1952). Awarded PAFSC 36230 20 July 1952, par 2, PAM 36."

(i) Airmen who fail to qualify on an APT or AFJKT will be required to undergo further training. Criteria for retests will be in accordance with AFR 35-382 and AFR 35-383.

9. CLASSIFICATION. Classification action will be in accordance with provisions of AFR 35-392. Competency in the AFS, based upon demonstrated knowledge and ability to perform duties and tasks associated with the

specialty, must be the criterion for classification action, rather than completion of or participation in a training program.

10. REPORTS. Reporting of OJT will be in accordance with AFM's 171-5 and 171-6.

BY ORDER OF COLONEL MATHENY:

JAMES F. MARTIN
Major, USAF
Adjutant General

OFFICIAL:

SAM ODENSKY
1st Lt, USAF
Asst Adj Gen

DISTRIBUTION
"D"

2 Attachments
1. 34th ADD Form 3
dtd 1 Oct 52
2. 34th ADD Form 4
dtd 1 Oct 52

DIRECTORATE

_____

_____

_____
Date

SUBJECT: Request for Formal On-The-Job Training

TO: Unit Personnel Officer

1. Request Personnel Actions Memorandums be published placing

_____
Grade Full Name AFSN PAFSC

to duty on formal on-the-job training status for _____
AFSC

2. Justification:

_____
Supervisor's Signature

_____
Typed Name and Grade

1st Ind

TO: Unit Orders Clerk

_____Approved _____Disapproved

_____
Unit Personnel Officer

_____
Typed Name and Grade

34th Air Div Form 3, 1 Oct 52
Attachment #1, 34th ADDR 50-23, 15 May 1953

JOB PROFICIENCY RATING

The rating must be accurate and fairly completed; failure to do so will defeat the purpose for which it is intended.

KEY: 1 - Lowest Degree; 5 - Highest Degree

	1 2 3 4 5
(1) Degree of Technical Knowledge	
(2) Degree of Accuracy of Work	
(3) Thoroughness in Details of his Work	
(4) Plans Work Carefully and Logically	
(5) Takes Proper Action in Absence of Orders	
(6) Requires no Detailed Instructions	
(7) Supervises Subordinates Properly	
(8) Persists in Overcoming Obstacles	
(9) Gets Along With Men and Knows How to Handle Men	

I have personally checked, and am familiar with the job description and job requirements of the Air Force Specialty of subject airman.

The descriptive information herein is correct. I (do) (do not) request action.

Supervisor's Signature

Signature of Airman concerned.

Typed Name and Grade

DIRECTORATE

_____

_____

_____
Date

SUBJECT: Supervisor's Evaluation and Request for Reclassification

TO: Commanding Officer

1. Request_____ _____ _____ _____ _____
Grade Full Name AFSN PAFSC

be considered for classification action as indicated:

a. Award AFSC (s)_____ _____ _____ -

b. Redisignate Primary AFSC_____to_____

c. Delete AFSC (s)_____ _____ ___ _____

2. The following data is submitted concerning subject airman's duties:

a. Airman has served under my (direct) (indirect) supervision for_____months.

b. Frequency of official observation of duties. Daily_____ weekly___ _____Occasional_____.

c. Number of personnel airman directly supervises_____

d. Number of personnel airman indirectly supervises_____

e. Current duties. (Attach additional sheets if required).

34th ADiv (Def) Form 4, 1 Oct 52
Attachment #2, 34th ADDR 50-23, 15 May 1953

0581

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
KIRTLAND AIR FORCE BASE NEW MEXICO

AN/GRT-3
OJT LESSON PLAN
RADIO MAINTENANCE

PHASE V
Subject D

May 1953

REFERENCE [illegible] 50-[illegible] (AM TRANSMITTERS)

0582

THIS PAGE IS DECLASSIFIED IAW EO 13526

OJT LESSON PLAN

SUBJECT: UHF TRANSMITTING SET AN/GRT-3

OBJECTIVE: To acquaint the airman with the AN/GRT-3 and to show him how to tune the set and perform maintenance.

PROCEDURE: Lecture, demonstration, and student practice on equipment

TRAINING AIDS: Blackboard presentations, tuning guide, preventive maintenance check list, and actual equipment.

SUGGESTED TIME: 9 Hours

PRESENTATION: 1 INTRODUCTION
1:00 Hour

a Official Nomenclature

(1) Single channel UHF Transmitter
(2) Ground Control air Base installation

b Function of Equipment

(1) Provides UHF transmission on any one of 1750 frequencies between 225 and 399.9 mc.
(2) Provides "VOICE" or "TONE" transmission

c Application of Equipment

(1) This set provides UHF transmissions from ground to air

d Limitations of Equipment

(1) Set cannot operate outside -20° to -131°F
(2) Modulator-Power Supplies with serial numbers less than 1000 require intermittent operation at temperatures exceeding -86°F.
(3) WARNING: THE TRANSMITTER MUST NOT BE OPERATED WITHOUT AN ANTENNA

e Reference Publications

(1) AN 16-30GRT3-1
(2) AN 16-30GRT3-2
(3) AN 16-35T282-3
(4) TO No 16-35T282-4
(5) TO No 16-1-292 Implementation of Comm-Elect Programs

f Safety Precautions

(1) AVOID CONTACT WITH HIGH VOLTAGE INSIDE CABINETS

PRESENTATION: 2 DESCRIPTION
1:00 Hour

a Physical

(1) Identification of Major Components

(a) Transmitter T-282/GR
(b) Modulator-Power Supply MD-141/GR
(c) Antenna AS-505/GR
(d) Rack MT-686/GR
(e) Cables as shown in section 3c

(2) General Description of Major Components

(a) Modulator-Power Supply amplifies audio to modulate the transmitter 100%
(b) The 100 watt RF output from the transmitter is fed to antenna AS-505/GR thru RG-17/U

(3) Systems used in conjuction with

(a) AN/GRR-7-UHF Radio Receiving Ground Set
(b) Receiver Section of AN/GRC-87

b Electrical

(1) Frequency Range

(a) From 225 to 399.9 mc.
(b) On any one of 1750 frequencies
(c) Spaced 100 KC apart

(2) Emission

(a) VOICE
(b) TONE

(3) Local or Remote Operation

(a) Can be keyed locally or from remote position
(b) Frequency can be changed locally only

c Specifications

(1) Input and Output Powers

(a) AC input is 105 to 125 vAC or 210 to 250 vAC
(b) RF output is nominal 100 watts

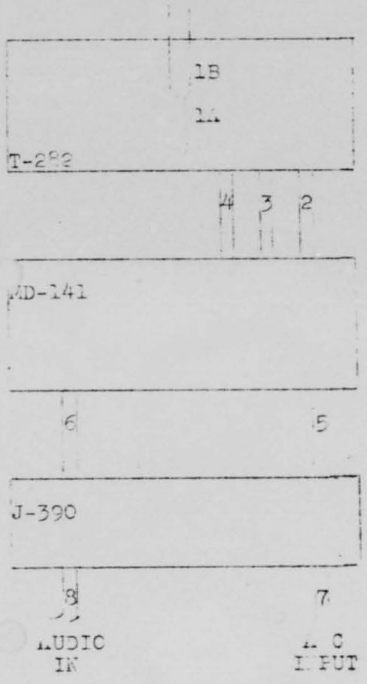
(2) Range of communications is LINE OF SIGHT

0582

CLASSIFICATION: C SECRET RESTRICTED
1:00 Hours

.. Functional Block Diagram of Each Major Section

To Ant CU-505/GR

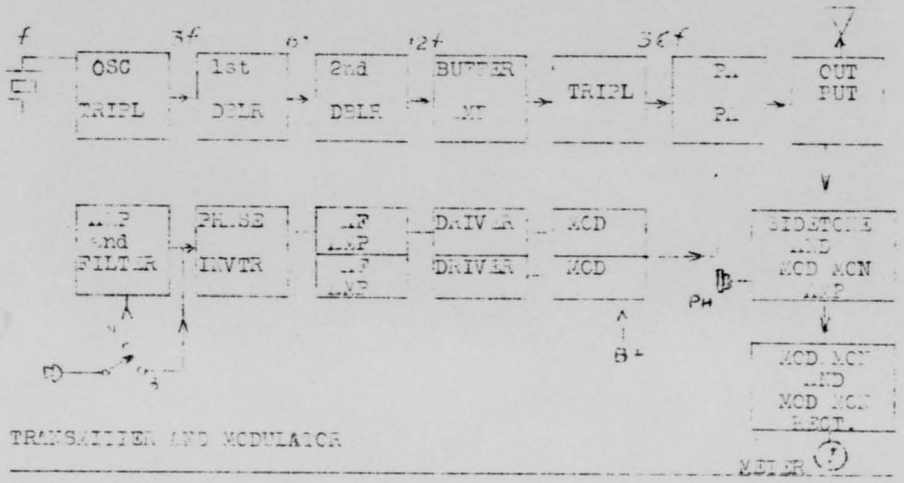


Cables Used

1A-RF Cable Assembly CG-707/U
1B-RF Cable Assembly CG-597/U
2 -W 902
3 -W 903
4 -W 904
5 -Power Cable Assembly CX-1541/U
6 -Shielded Audio Pair
7 -Lead covered Cable for AC Power Input
8 -Shielded Audio Pair

0585

b Functional Block Diagram of Entire Transmitter



TRANSMITTER AND MODULATOR

4 CIRCUIT ANALYSIS-PRESENT THIS LATER

PRESENTATION: 4:00 Hours

5 PREVENTIVE MAINTENANCE

a Explain and demonstrate the use of the AN/GRT-3 Preventive Maintenance Check List.
b Have each student perform the operations indicated in the Preventive Maintenance Check List for the AN/GRT-3. Supervise and Monitor The operations.
c Show and explain the use of the 208 for a. Have each student fill out the applicable forms.

PRESENTATION: 2:00 Hours

6 SYSTEMATIC TROUBLESHOOTING

a Have each student practice the tuning procedure as indicated in the attached Tuning Guide.
b Review the steps in the Preventive Maintenance Check List for most troubles can be cured this way.

34TH AIR DIVISION (DEFENSE)
Preventive Maintenance Check List
Equipment Type (AN/GRT-3)

DAILY

1. Check with operator for any discrepancies.

2. Inspect and clean exterior of entire set.

3. Check operation of "POWER" and "PLATE" indicator lights on Modulator-Power Supply MD-141/GR. Replace or correct.

4. Check meter readings. Replace bad pilot lamps, etc.

5. Check modulation from local and remote position. Use meter on Transmitter T-282/GR and SIDE TONE OUTPUT jack.

WEEKLY

6. Perform checks 1 to 5 inclusive.

7. Clean air filters with trichlorethylene.

8. Clean all accessible parts. Cables at rear should be tight.

9. Inspect antenna, mast, guys, leadins, and supports.

10. Remove antenna co-ax and measure its insulation resistance.

11. Check minimum performance as per Table 5-3 on page 30 of PRELIMINARY INSTRUCTION BOOK, Radio Receptor Co. Inc. June 30, 1952.

MONTHLY

12. Perform checks 1 to 11 inclusive.

13. Zero all meters. Inspect interior parts for burning, breaking, etc.

14. Inspect and clean interiors of set with vacuum cleaner or brush.

15. Check all tubes visually, with a tube tester, and/or meter readings.

16. Examine crystal oven and crystal unit. Outside of crystal unit should be hot after a few minutes operation. Crystal prongs should be free of corrosion.

17. Perform Systems Operation Analysis using Table 5-4 on page 33 of PRELIMINARY INSTRUCTION BOOK, Radio Receptor Co. Inc.

NOTE: This check list will be revised when T.O.'s are available.

REFERENCE: PRELIMINARY INSTRUCTION BOOK for T-282/GR and MD-141/GR, Radio Receptor Co., Inc. Brooklyn, N.Y., June 30,1953

TUNING OF AN/GRT-3 TRANSMITTER SET

A Install crystal CR-27/U. Operating Freq. = 36 times crystal freq.
B Set "POWER ON-OFF" and "PLATE ON-OFF" to "OFF" position.
C Turn "CARRIER ON-PUSH TO TALK" switch to "CARRIER ON" position.
D Turn "TUNE-OPERATE" switch to "TUNE" position.
E Turn "METER 1" to position "1".
F Turn "METER 2" to position "CARRIER WATTS".

G Switch "POWER ON-OFF" to "ON". Green light should come on.
H After a 5 minute warm-up continue tuning. Loosen all dial locks.

J Set "MAIN TUNING" dial to approximate frequency. Lock.
K Set "OUTPUT COUPLING" to extreme clockwise position.
L Set "PLATE ON-OFF" switch to "ON". Red light comes on in one min.
M METER 1, position 1 will read .05 ma.

N Set METER 1 to position "2". Tune "OSC & 1st DOUBLER PLATES" for meter maximum. Lock.
O Set METER 1 to position "3". Tune "2nd DOUBLER PLATE" control for maximum. Lock.
P Set METER 1 to position "4". Tune "BUFFER AMPL PLATE" control for minimum.
Q Set METER 1 to position "5". Tune "DRIVER GRID" for maximum.

R Readjust controls in the two previous steps P & Q.
S Set METER 1 to position 7. Tune "DRIVER PLATE" for minimum.
T If "dip" cannot be obtained in step S, set Meter 1 to position 6 and tune "DR. GRID" for maximum.

U Leave METER 1 on position 6 and manipulate "DR. GRID" and "DRIVER PLATE" for a maximum on meter. If meter reads over .4ma, detune "DR. GRID" until meter drops to .4ma. Lock both controls.
V Tune "PA. PLATE" control for maximum power indication on METER 2.
W Set METER 1 to position 8, throw "TUNE OPERATE" switch to "OPERATE" and tune "PA. PLATE" for maximum on meter 2. METER 1 reads .5 to .62 ma.
X Readjust "PA. PLATE" for maximum and "OUTPUT COUPLING" until 100 watts output is indicated on METER 2.

METER 1-TRANSMITTER KEYED			METER 2-TRANSMITTER KEYED	
POSITION	METER READS	CURRENT IS	POSITION	METER READS
1	.05ma	times 2	"CALIBRATE"	On CAL mark when the "CALIBRATION CONTROL" is adjusted about 85% when modulating at least 90
2	.2 to .5ma	times 2		
3	.2 to .6ma	times 5		
4	.4 to .85ma	times 100		
5	.4 to .75ma	times 20		
6	.05 to .4ma	times 50	"% MOD"	
7	.25 to .85ma	times 50		
8	.5 to .62ma	times 500	"CARRIER WATTS"	
9	full scale at 200 volts			

REFERENCE. INSTRUCTION BOOK for T-282/GR and MD-141/GR, Radio Receptor Co., Inc. June 30, 1952.

01882

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

MEMORANDUM FOR AGREEMENT: Joint ADC-SAC Big Photo Missions within Albuquerque, ADIZ

1. The purpose of this Memorandum is to formalize procedures whereby facilities available to the 34th Air Division (Defense) for Big Photo Missions can be most effectively utilized by all participating units.

2. Operating procedures for Camera Gunnery and Electronic Counter-Measures missions conducted by participating units are contained in Tabs "A" and "B", attached. These procedures may be changed or amended by the 34th AD(D) to meet changing situations or as recommended by participating units.

Wm A Matheny
WILLIAM A. MATHENY
Colonel, USAF
34th Air Div (Def)

Norton F. Goldwasser
Major USAF
8th Air Force

Van R. Parker
Lt. Col. USAF
15th Air Force

Incl 1. Tabs A & B

00808

0589

Secret

Secret
SECURITY INFORMATION

Secret

TAB "A"

1. This TAB outlines procedures for conducting joint SAC-ADC Big Photo Camera Gunnery training missions within the 34th Air Div (Def) ADIZ.

2. BIG PHOTO CAMERA GUNNERY. Joint ADC-SAC Big Photo Camera Gunnery missions carried out within the Albuquerque ADIZ will be in compliance with ADC Regulation 51-4 and SAC Regulation 51-6 and 50-22. To further insure the success of every Big Photo camera gunnery mission scheduled within the ADIZ the following SAC-ADC procedures are mutually agreed upon by the 8th and 15th Air Forces and 34th Air Div (Def), subject to later rejection by and at the discretion of either command:

a. Missions will be scheduled on Monday through Friday inclusive (holidays excepted) of each week.

b. Gunnery training will be limited to two starting periods daily, 1700Z to 1800Z and 2100Z to 2200Z. Meeting of schedules within these hours will be mandatory inasmuch as other types of SAC-ADC missions will be conducted during the other daylight hours. A Big Photo aircraft will be considered as being "on time" if it appears within the radar coverage of the Albuquerque area at any time during the scheduled hour.

c. Big Photo aircraft must stay clear of radar coverage until scheduled time of arrival, changing ETP with appropriate CAA facility as necessary.

d. Requests for Little Photos by off schedule and unknown transient aircraft will not be honored.

e. A departure message will be sent in accordance with ADC Reg 51-4 and SAC Reg 51-6. A normal Form 175 will always be filed for penetration and identification purposes.

f. Prior to entering 34th ADD radar coverage, a prearranged telephone call will be made by the SAC unit involved to the Air Defense Control Center (ADCC), telephone number, Albuquerque 7-1451, extension 143. The SAC unit will give aircraft or flight identification. The senior controller will verify availability of fighter aircraft and designate one of the following as training area to be used:

(1) Area "Datil" which is a direct course line from a point 107° 52' West longitude, 34° 07' North latitude to a point 107° 05' West longitude 34° 26' North latitude.

(2) Area "Cabezon" which is a direct course line from a point 107° 30' West longitude, 36° 08' North latitude to a point 106° 50' West longitude, 35° 28' North latitude.

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(3) Area "Carrizozo" which is a direct course line from a point 105° 55' West longitude, 33° 40' North latitude to a point 106° 20' West longitude, 34° 33' North latitude.

The purpose of these three established courses for camera gunnery is to keep such activity away from civil airways and restricted areas.

g. 34th Air Div (Def) fighters will not fly camera gunnery missions if the weather in the Kirtland area is 5/10th or more cloud coverage and/or visibility less than three miles. These weather minima will also apply in designating training areas over which camera gunnery activity shall take place. The controller may assign other areas as he sees fit to maintain radar surveillance, comply with weather minima, etc..

h. A Big Photo aircraft, having filed a flight plan in accordance with AFR 60-16 and AFR 60-22 with destination Albuquerque, will begin calling on 133.20 Mc when it presumes itself to be within VHF range of any 34th ADD radar station.

i. Once identification is established, 34th ADD radar stations will render any required assistance, including completion of int recpt by fighters and vectoring to a suitable training area when weather interferes.

j. Fighters will take off for camera gunnery only after a Big Photo is definitely identified by its flight plan.

k. All SAC aircraft will be notified by VHF when they have faded from the controlling radar station's scope by using the code word "Blotto". The SAC aircraft will then either render an accurate position report once each five minutes, file a new flight plan with CAA, descend to four thousand feet above the terrain, or take up an outbound track away from any target complex, whichever is appropriate.

l. In the event VHF contact is lost SAC aircraft will consider this the same as a fade condition and will follow one of the courses outlined above.

m. Radio frequencies for all SAC-ADC big photo missions are as follows:

(1) VHF 133.20 GCI common.

(2) VHF 136.80 GCI Search (Fighter-Bomber Liaison)

(3) If not possible to contact the stations on any of the above channels, call the nearest CAA facility and ask to have the information passed on to the 34th ADD.

3. Participating units will be advised monthly of estimated little photo sorties available for succeeding month.

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4. A proportionate number of Big Photo Camera Gunnery sorties will be deducted from those allocated 4th and 15th AF for each violation of the [illegible] instant.

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TAB "B"

TO

MEMORANDUM FOR AGREEMENT

(JOINT ADC-SAC BIG PHOTO MISSIONS WITHIN ALBUQUERQUE ADIZ)

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TAB "E"

1. This TAB outlines procedures for conducting joint SAC-ADC ECM training missions within the 34th Air Division (Defense) ADIZ.

2. All ADC-SAC Big Photo ECM missions carried out within the Albuquerque ADIZ will be in compliance with ADCR 51-4, ADCR 51-7, SACR 51-6, 51-20, 51-23, 51-17 and SACR 51-18. To further insure the success of every Big Photo ECM mission scheduled within the ADIZ, the following ADC-SAC procedures are mutually agreed upon by the 8th and 15th Air Forces and the 34th Air Division (Defense), subject to later rejection by and at the discretion of either command:

a. ECM missions will be scheduled 24 hours per day, 7 days a week throughout the month. A three (3) hour period will be assigned each participating unit every day by 8th or 15th AF. During this period a minimum of two spot runs will be made for every one record run obtained. Meeting of schedules during these assigned periods will be mandatory inasmuch as other ADC-SAC missions will be conducted during the other hours. Requests for ECM missions by off schedule and unknown transient aircraft will not be honored.

b. Big Photo aircraft must stay clear of radar coverage until scheduled time of arrival, changing ETP with appropriate CAA facility as necessary.

c. A departure message will be sent in accordance with ADCR 51-4 and SACR 51-6. A normal Form 175 will always be filed for penetration and identification purposes.

d. Prior to entering 34th Air Division (Defense) radar coverage, a prepaid telephone call will be made by the SAC unit involved to the Air Defense Control Center (ADCC), telephone number, Albuquerque 7-1451, extension 143. The SAC unit will give aircraft or flight identification. Upon receipt of SAC telephone call, the command controller, 34th Air Division (Defense) will then designate an AC&W station by code name, for that particular SAC mission. No other AC&W station will be worked by that SAC mission without further approval by the Command Controller, 34th Air Division (Defense).

e. A Big Photo aircraft having filed a flight plan in accordance with AFR 60-16 and AFR 60-22 with destination Albuquerque, will begin calling on 133.20 MC when it presumes itself to be within VHF range of any 34th Air Division (Defense) radar stations.

f. Lost Contact: Lost contact procedures will be as outlined for Camera Gunnery (TAB "A").

3. To verify identification between SAC aircraft and ground radar stations the following system will be used:

TAB "E"

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a. Identification of aircraft.

(1) Upon establishing contact the SAC aircraft will give its exact geographical location.

(2) The Director will request the aircraft to make an identifying turn at this time.

b. Identification of ground radar station.

(1) After the aircraft's track has been definitely established on the radar scope, the SAC aircraft will be so informed and at this time the aircraft will request a "Dick Tracy".

(2) The Director will acknowledge the request by an answer of "Roger".

(3) Just prior to the next painting of the target on the scope, he will give his site code name.

(4) At the instant the scope sweep paints the target aircraft, he will give the code word "Item".

(5) If identification of the ground radar station is positive the aircraft radio operator will answer "Item Out".

(6) This process will be continued until positive identification is made of the ground radar station. The record or spot run will then begin in the prescribed manner. (ADCR 51-4, ADCR 51-7, SACR 51-6 & SACR 51-18).

4. Participating units will be allocated BCM exercise periods as follows:

a. Each 24 hour day will be considered as an BCM exercise period. These periods will be assigned to the 8th and 15th Air Forces at the ratio of two for the 8th to one for the 15th AF.

b. For simplicity, the 8th Air Force shall have the 1st and 2nd day and the 15th Air Force shall have the 3rd day of each month. Scheduling in like sequences for the remainder of each month shall determine the BCM monthly schedule.

5. A proportionate number of Big Photo Camera Gunnery sorties will be deducted from those allocated 8th and 15th Air Forces for each violation of the ADIZ by SAC aircraft.

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34TH ADD REGULATION)
NUMBER 55-46)

HEADQUARTERS, 34TH AIR DIVISION (DT EW&C)
Kirtland AFB, New Mexico, 23 June 1955

OPERATIONS

AC&W Position Manning

PDP

Paragraph

PURPOSE 1
SCOPE 2
GENERAL 3
AC&W POSITION MANNING LIST . 4

1. PURPOSE. To establish a priority list for the manning of AC&W Squadron operations positions under conditions of reduced manning.

2. SCOPE. The provisions of this regulation will apply to AC&W Squadrons assigned to the 34th Air Division (Defense).

3. GENERAL.

a. The maintenance of an effective air defense system requires standardized manning of AC&W operations positions. Under varying personnel conditions, ie., number of operators actually reporting for duty, it becomes necessary to spell out which positions will be manned and thus have operational priority over certain others.

b. The AC&W Postion Manning Priority List is a guide for the accomplishment of the above. It provides all AC&W Squadron Commanders with 34th AD(D) policy concerning operations on a reduced status and may be altered as operational requirements dictate.

c. The Manning Priority List is developed from the total number of operational positions required to maintain maximum effectiveness in relation to a maximum and minimum number of AC&W operators reporting for duty to man these positions.

4. AC&W POSITION MANNING LIST. Attachment #1 through #6 indicate AC&W positions to be operated under varying conditions of personnel reporting for duty.

a. P-41 Operations Section. The Priority List for P-41's Operations Section is based on a minimum crew of three (3) operators and a maximum crew of nine (9) operators. See attachment #1 for position manning.

b. M-9A Operations Section. The Priority List for M-9A Operation Section is based on a minimum crew of six (6) operators and a maximum crew of fifteen (15) operators. See attachment #2 for position manning.

c. M-9A Identification Section. The Priority List for M-9A Identification Section is based on a minimum crew of two (2) operators and a maximum crew of five (5) operators. See Part 1 of attachment #3 for position manning.

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d. P-7 and P-51 Operations Section. The Priority List for these units is based on a minimum crew of one (1) operator and a maximum crew of nine (9) operators. See Attachment #4 for position manning.

e. P-8 Operations Section. The Priority List for P-8's Operation Section is based on a minimum crew of one (1) operator and a maximum crew of ten (10) operators. See Attachment #5 for position manning.

f. P-8 Identification Section. The Priority List for P-8's Identification Section is based on a minimum crew of one (1) operator and a maximum crew of three (3) operators. See Part II of Attachment #3 for position manning.

g. M-90 Operations Section. The Priority List for M-90 Operation Section is based on a minimum crew of two (2) operators and a maximum of eight (8) operators. See Attachment #6 for position manning.

BY ORDER OF THE COMMANDER:

JAMES F. MARTIN
Major, USAF
Adjutant General

OFFICIAL:

Sam Odensky

SAM ODENSKY
1st Lt., USAF
Asst Adj Gen

DISTRIBUTION "D"
Plus 8 cys for C/DIF

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

23 June 1953

ARMY POSITION MANNING

Priority List for P-41 Operations

	No. of Operators Reporting for Duty						
	3	4	5	6	7	8	9
1. Control Tech	1	1	1	1	1	1	1
2. Scanner M-9A	2	2	2	2	2	2	2
3. Recorder M-9A	3	3	3	3	3	3	3
4. Plotter M-9A	*	4	4	4	4	4	4
5. Plotter P-8	*	*	5	5	5	5	5
6. Recorder P-8	*	*	3	6	6	6	6
7. Scanner P-8	*	*	2	2	7	7	7 & 8
8. Raid Stand Clerk	*	4	5	5	5	8	8
9. Status Clerk	1	1	1	1	1	1	1

* This position will not be manned.

EXAMPLE: When six (6) operators report for duty the Control Technician (1), will have additional duties of Status Clerk (9); Scanner M-9A (2), will have additional duties of Scanner P-8 (7); Plotter P-8 (5), will have additional duties of Raid Stand Clerk (8), etc.

Attachment #1
34 ADDR 55-46, 23 June 1953

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

23 June 1953

AC&W POSITION TRAINING

Priority List for M-94 Operations

	No. of Operators Reporting for Duty									
	6	7	8	9	10	11	12	13	14	15
1. Control Technician	1	1	1	1	1	1	1	1	1	1
2. Air Surveillance	2	2	2	2	2	2	2	2	2	2
3. Height Tote Clerk	3	3	3	3	3	3	3	3	3	3
4. Scanner #1	4	4	4	4	4	4	4	4	4	4
5. Plotter M-94	5	5	5	5	5	5	5	5	5	5
6. Recorder	6	6	6	6	6	6	6	6	6	6
7. Plotter P-51	4	7	7	7	7	7	7	7	7	7
8. * ADCC Teller	1	1	8	8	8	8	8	8	8	8
			2	2						
9. Plotter P-7	5	5	5	9	9	9	9	9	9	9
10. * Scanner #2	2	2	2	2	10	10	10	10	10	10
			8	8						
11. HRI	**	**	**	**	**	11	11	11	11	11
12. Plotter P-8	5	7	7	9	9	9	12	12	12	12
13. Floor Supervisor	**	**	**	**	**	**	**	13	13	13
14. Cross Teller	1	1	8	8	8	8	8	8	14	14
15. Reports Clerk	1	1	1	1	1	1	1	1	1	15

** This position will not be manned.
* The top number is to be used during periods of heavy traffic and the bottom number is for periods of light traffic.

EXAMPLE: When eight (8) operators report for duty the Control Tech (1) will perform additional duties of Reports Clerk (15); Air Surveillance (2), will perform additional duties of Scanner #2 (10); Plotter M-94 (5), will perform additional duties of Plotter P-7 (9), etc.

Attachment #2
34 ADDR 55-46, 23 Jun 53

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

23 June 1953

ACOW POSITION MANNING

PART I

Priority List for M-94 Identification Section

	No. of Operators Reporting for Duty			
	2	3	4	5
1. AMIS Recorder East	1	1	1	1
2. ID Technician East	2	2	2	2
3. ID Technician West	2	3	3	3
4. AMIS Recorder West	1	1	4	4
5. ID Log Recorder	2	2&3	2&3	5

PART II

Priority List for F-8 Identification Section

	No. of Operators Reporting for Duty		
	1	2	3
1. AMIS Recorder	1	1	1
2. ID Technician	1	2	2
3. ID Log Recorder	1	2	3

EXAMPLE: When two (2) operators report for duty at M-94 Identification Section the AMIS Recorder East (1) will also perform duties of AMIS Recorder West (4), and the ID Technician East (2) will perform duties of the ID Technician West (3) and Identification Log Recorder.

Attachment #3
34TH ADDR 55-46, 23 Jun 53

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

23 June 1953

ACCW POSITION MANNING

Priority List for P-7, P-51 Operations

	No. of Operators Reporting for Duty								
	1	2	3	4	5	6	7	8	9
1. Scanner #1	1*	1	1	1	1	1	1	1	1
2. Control Technician	**	2	2	2	2	2	2	2	2
3. ARI	**	**	3	3	3	3	3	3	3
4. Recorder	**	2	2	4	4	4	4	4	4
5. Height Toto Clerk	**	**	**	**	5	5	5	5	5
6. Plotter #1	**	**	**	**	5	5	6	6	6
7. Scanner #2	**	1	1	1	1	6	7	7	7
8. Plotter #2	**	**	**	**	5	5	5	8	8
9. Cross Teller	**	*2	*2	*4	4	4	4	4	9

** This position will not be manned.

* If only one ACCW operator is on a shift he will perform scanner duties only. He will scan the full limits of the set, calling all information to the ADOC. The ADOC will record the track, and will be informed that their is the only track record being kept. The scanner will be relieved periodically by the radar maintenance man on duty.

EXAMPLE: When two operators report for duty the Control Technician (2), will perform the additional duties of Recorder (4), and Cross Teller (9); and Scanner #1 (1), will scan the full limits of the set.

Attachment #4
34 ADDR 55-46, 23 Jun 53

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HEADQUARTERS
3MTH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

23 June 1953

AC&W POSITION MANNING

Priority List for P-8 Operations

	No. of Operators Reporting for Duty									
	1.	2.	3.	4.	5	6	7	8	9	10
1. Control Technician	*	1	1	1	1	1	1	1	1	1
2. Scanner #1	1	2	2	2	2	2	2	2	2	2
3. Scanner #2	1	2	2	2	3	3	3	3	3	3
4. HRI	*	*	*	4	5	5	5	5	5	5
5. Plotter	*	*	*	4	5	5	5	5	5	5
6. Weight Tote	*	*	*	4	5	5	5	5	6	6
7. ADCC Teller	*	1	1	1	1	1	6	6	7	7
8. Plotter #2	*	*	*	*	*	*	6	6	8	8
9. Recorder	*	1	3	3	4	6	7	7	9	9
10. Cross Teller	*	*	3	1	1	1	7	8	6	10

* This position will not be manned.

EXAMPLE: When 2 operators report for duty the Control Technician (1), will have additional duties of ADCC Teller (7); Scanner #1 (1) will scan the Full Limits of the set; the Recorder (9) will have additional duties of Cross Teller (10).

Attachment #5
2h ADO Reg 55-46, 23 Jun 53

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

23 June 1953

ACOW POSITION MANNING

Priority List for I-90 Operations

	No. of Operators Reporting for Duty						
	2	3	4	5	6	7	8
1. Control Technician	1	1	1	1	1	1	1
2. Scanner #1	2	2	2	2	2	2	2
3. Plotter #1	1	3	3	3	3	3	3
4. Recorder	1	1	4	4	4	4	4
5. Scanner #2	2	2	2	5	5	5	5
6. Plotter #2	*	*	3	3	6	6	6
7. Height Tote Clerk	*	*	3	3	6	7	7
8. Teller	1	1	1	1	1	1	8

* This position will not be manned.

EXAMPLE: When 2 operators report for duty the Control Technician (1) will perform the additional duties of Recorder (4) and Teller (8); Scanner #1 (2) will operate full limits of the set; Plotter #1 (3) will perform plotter duties only.

Attachment #6
34 ADDR 55-46, 23 Jun 53

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CG, 34TH AIR DIV (...) APR 53 RESTRICTED

ROUTINE

CG, CADF X

X

OCE 02915 PD IN COMPLIANCE W/AFR 100-46 CMA REQ ACTION BY AMC TO REORIENTATE ONE EA THREE CURTAIN RHOMBIC AT XTMR SITE AND TWO EA SINGLE CURTAIN RHOMBICS AT REC SITE PD ALL RHOMBICS INSTLD UNDER PROJECT DIRECTIVE NO PH1-AGPP-50-SA ARE DIRECTIONAL TO WADF PD C IS NEC TO IMPROVE HF BACK UP W/YOUR HQS PD

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A. W. JAEGERS, MAJOR, USAF

OCE 110

RESTRICTED

SAM ODENSKY
2dt., USAF
Asst Adj Gen

A CERTIFIED TRUE COPY
Charles L. Dewens
CHARLES L. DEWENS
Captain, USAF
Director of Intelligence

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SECURITY INFORMATION

0605

STATION LISTINGS

P-41	34th AD(D)
M-94	135th AC&W Sqdn
M-90	120th AC&W Sqdn
P-8	767th AC&W Sqdn
P-51	768th AC&W Sqdn
P-7	769th AC&W Sqdn

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CG, 34TH AIR DIV (DFF) 19/2320Z FEB 53 CONF

ROUTINE

CG, CADF X

X

OCE C-188 PD UNDER THE PROVISIONS OF CADF COI FOUR ONE DASH THREE REQ OVERLAP TELLING CIRCUIT GFP ONE ZERO THREE CMA AF CODE ONE SEVEN DASH SEVEN FOUR BE CHANGED PD CIRCUIT IS NOW A LOOP CIRCUIT TERM AT PETER SEVEN CMA PETER FIVE ONE AND PETER EIGHT PD IMM REQMT EXIST FOR A SEPARATE CIRCUIT FM PETER SEVEN TO PETER EIGHT AND FM PETER FIVE ONE TO PETER EIGHT PD CABLES FACS ARE AVAIL AT EA SITE PS CIRCUITS WILL TERM ON GOVT OWNED MAIN FRAME AT EA SITE PD CONTACT OFF ARE CAPT DEAS AT PETER EIGHT AND LT BOURG AT PETER SEVEN CMA WOJG JONES AT PETER FIVE ONE PD SEPARATE FACS TO BE USED JOINTLY AS TL AND OT LINES TO ADDC CMA PETER EIGHT AS BOTH PETER SEVEN AND PETER FIVE ONE HAVE FREQUENT REQMTS FOR TELLING PLOTS SIMULTANEOUSLY TO PETER EIGHT PD

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CONFIDENTIAL

JOHN W. LEE, MAJOR, USAF
OCE, 110

/t/JAMES F. MARTIN
/s/JAMES F. MARTIN
Major, USAF
Adjutant General

A CERTIFIED TRUE COPY
Charles L. Dewees
CHARLES L. DEWEES
Captain, USAF
Director of Intelligence

HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

MAM 413.44

SUBJECT: Installation and Operation of UHF Equipment

TO: Commanding General
San Antonio Air Force Area
Kelly Air Force Base
Texas

1. With view towards USAF program of installation and operation of UHF equipment, (Reference is made to letter, USAF, AFOAC-E/N, Subject: Ground UHF Program, dated 19 February 1952, and message ADOCF-C 38009, dated 12 August 1952), your attention is invited to the status of the installation of UHF equipment in this division.

a. P-51

(1) Two multi-channel equipment, AN/GRC-27, consisting of 2 transmitters, 2 receivers and 2 modulators installed prior to 1 July 1952. One transmitter was found non-operational and was returned to SAAMA. The other equipment was operational.

(2) Two single channel equipment, consisting of 2 transmitters, T-282/GR, 2 receivers, R-361/GRR, and 2 modulators, MD-141/GRR installed prior to 25 January 1953.

(3) Single channel equipment does not have crystals.

b. P-8

(1) Two multi-channel equipment, AN/GRC-27, consisting of 2 transmitters, 2 receivers, and 2 modulators installed and operational prior to 1 July 1952.

(2) Four ingle channel equipment, consisting of 4 transmitters, T-282/GR, 4 receivers, R-361/GRR, and 4 modulators, MD-141/GRR installed prior to 25 January 1953.

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c. P-7

(1) Two multi-channel equipment, AN/GRC-27, consisting of two transmitters, two receivers, and two modulators installed and operational prior to 1 July 1952.

(2) Two single channel equipment, consisting of two transmitters, T-282/GR, two receivers, R-361/GRR, and two modulators , MD-141/GRR, installed prior to 25 January 1953.

(3) Single channel equipment does not have crystals.

2. With rerence to letter Headquarters Wadf, WDMS-A 333, Subject: "Technically Equipped Acceptance Procedures for Permament AC&W Sites," dated 16 July 1951, the above equipment has not to date been adequately flight checked by a SAAMA team. The facts also stand that on approximately 7 to 27 January 1953, Mr Sparks and Mr. Pectmacky of your headquarters visited this division for the purpose of determining whether the UHF equipment installed was serviceable and could be operated. This project was undertaken by your representatives at our suggestion and the following was found:

7 P-51

(1) One transmitter, T-217/GR, had been returned to SAAMA. On 17 February 1953, this transmitter was replaced at the site.

(2) One transmitter, T-217/GR, has a faluty plate insulator, Reference Symbol E512 and E513.

b. P-8

(1) One transmitter, T-217/GR, was found to have the following faulty parts:

(a) Reference Symbol P501, Connector

(b) Reference Symbol P101, Connector

(c) Reference SymbolZ501, RF Tuner

(d) Reference Symbol Z302, RF Coil

(e) Reference Symbol C307, Capacitor

c. P-7

(1) The equipment was found in order.

3. With reference to paragraph 4, letter USAF, AFOAC-E/N, Subject: Ground UHF Program, dated 19 February 1952, and message, WADF, WDOCE-4, a team from this division has also made a preliminary inspection as preparatory to acceptance at P-51, and the following was noted 18 February 1953 at the Transmitter buildings.

a. Transmission line of single channel UHF transmitter enters opposite side of room and crosses room on way to equipment.

b. Vertical drops of single channel UHF transmission line and multi-channel transmission line to equipment are not in line with each other.

c. Power cables, remote keying cables, and equipment connecting cables, of both multi-channel and single channel UHF transmitters are not dressed properly.

d. Fan motors of the multi-channel UHF transmitters are very noisy.

4. The following was noted the same day at the Receivers Building.

a. Transmission lines of UHF equipment enters building from three different sides and meet at one rack containing four receivers. Transmission lines sag enroute to rack.

b. Power cables, remote keying cables, and inter-connecting cables of all UHF receivers are not dressed properly.

c. Lacing of COAX transmission lines at UHF receiver rack is poor.

5. It is requested that all possible assistance and attention be given towards the realization of early operation of UHF equipment in this division.

s/t HARVEY P. HUGLIN
Colonel USAF
Deputy Commander

cc: CG, CADF
SAAMA Liaison Officer
34th Air Div (Def)

0610

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

ADCC FIGHTER STATUS DISPLAY SYSTEM

(C&E Special Project #29)

14

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Confidential C&E Special Project #22

INTRODUCTION

One of the most important aspects of Air Defense is the accurate immediate display of various types of status. With this in mind the Commanding General, 34th Air Division (Defense) requested the Director of Communications and Electronics to make a study of all possible methods of displaying this information.

Out of this study the equipment and circuits described in this brochure were developed.

* * *

Mr. K. V. Post, RCA Technical Instructor is responsible for design and construction of this system.

* * *

Published by the Director of Communications & Electronics
34th Air Division (Defense)
Kirtland Air Force Base, New Mexico

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C&E Special Project #29

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SECTION 1

GENERAL

1. The methods used up to now for displaying various types of status were found to be cumbersome, time consuming and requiring personnel whose only duties are posting changes in status. The first step in streamlining Control Center operation (in this division) was the development of new method of presenting fighter status. The criteria established by the Commanding General required the following features to be incorporated:

a. Elimination of status personnel.

b. Display of information to be accomplished immediately on receipt of this information from direction centers.

c. Perfect readability of this display from any position in the control center.

d. Changes in status display are to be controlled by personnel having other duties, and should be accomplished with a minimum of time and motion.

e. Method must not create maintenance problems either due to complexity of design or frequent breakdown of components.

f. Initial cost of construction should be compensated for by saving in personnel during the first few months of operation.

g. Equipment should have a life expectancy of at least ten (10) years, provided a normal amount of preventive maintenance is performed.

2. Early in the study of this problem it was decided to present all information as numerals, formed by lighting designated lamps on light panels. A commercial engineering organization in Albuquerque was invited to present bids on design and construction of a device capable of performing the necessary functions.

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An examination of their proposals revealed operational limitations of this system, excessive power requirements and an initial cost in excess of $40,000.00.

3. After many tests a system was designed and constructed locally consisting of the following:

a. Individual light panel made of 24 lights capable of displaying numerals from 1 through 0 ---112 panels per each status display. (See drawing of a panel --- Figure 1).

b. Solenoid actuated selector switch, capable of completing light circuits, providing 16 point contacts in eleven positions. Each selector containing releasing solenoid ---112 assemblies per each status board.

c. Jones socket and plug to connect light panel to the selector switch --- 112 sets per each status board.

d. Two wires from the controller's dais to selector switch. One wire for stepping pulses, and one wire for release current --- 112 pairs per each status board.

e. Jack box with jacks corresponding to the light panels --- 1 per each status board.

f. Dial assembly consisting of:

(1) Dial with plug.

(2) Battery.

(3) Relay.

(4) Releasing push button.

g. Power Supply.

(1) Transformer having 6.3 V AC output (3KVA) for panel lights - 1 per board.

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(2) Transformer having output of 50V AC for actuating and releasing of selector switch - 1 per board.

A five (5) ampere cartridge fuse is provided for each lamp panel circuit at the point where the current is obtained from the common bus. The transformer (3KVA) is also fused on the primary side with thirty (30) ampere fuse.

Many tests were conducted to establish the most desirable configuration of lights to portray the various numerals. Final arrangement is shown in Table of Light Arrangement, pages 11, 12 and 13. (A complete circuit analysis may be found in Section V).

4. Operation of the status display is accomplished by the Control Technician plugging the dial into the proper jack, pushing the button to release present display and then dialing the new information. This operatio requires an average time of two (2) seconds and is usually performed while the information is coming in over the telephone circuit from one of the Direction Centers.

5. Two of each status boards with component parts were constructed using personnel who had very little technical training, by employing training, wiring and inspection methods commonly used in the manufacture of telephone equipment.

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SECTION 2

FABRICATION

1. In order to facilitate construction, it is suggested that whenever possible all personnel perform the same operation at the same time, thus simplifying training and supervision. The more simple wiring operations should be performed first, allowing personnel to develop necessary skill for more exacting work later on. Wiring of the selector contact plates is unquestionably the most difficult and therefore reserved for last.

2. No compromise can be made as far as quality of workmanship is concerned. More difficulty will probably be experienced in restraining those who think they know how to solder properly than in teaching those who have had no previous wiring experience. It is advisable to mechanically inspect all wiring and to identify the inspector by means of a rubber stamp. This will establish responsibility for each piece of work and eliminate the possibility of uninspected work getting mixed in with that properly inspected.

3. The various wiring operations can be considerably speeded by the use of simple wooden wiring jigs and fixtures and by having all wires precut and skinned to the proper length. A word of caution on wire skinning: do not allow personnel to skin insulation by the use of any cutting tool (Diagonal cutters, side cutters, knife, etc..). Insulation must be removed by crushing with a pair of "flat" long nose pliers. This procedure eliminates the possibility of the wire breaking at the skinning point due to being nicked in the skinning process.

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4. Sub-assembly tests will quickly reveal wrong wiring which may otherwise continue undetected until final test. For example, the lamp panels with cable and Jones plug attached may be checked for correct wiring in a matter of seconds by connecting to a completed selector and running through all the position.

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SECTION 3

INSTALLATION

1. Placement of the major components will depend to some extent on operational requirements. It is recommended, however, that every effort be made to locate the lamp panel frames as high as possible in order to leave room for future displays such as communications and electronics status, weather status, etc.

2. Due to the weight of the status display assembly (approx 700 lbs) it is advisable to mount it with 3/8" bolts run through wall and secured on other side by means of a steel plate.

3. Selector cabinet should be placed below the lamp panels frame (board) and the selectors should be easily accessible.

4. Dial and jack box should be mounted at the controller technician's position.

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SECTION 4

OPERATION

1. To initiate the display of status, select the proper flight, and jack within that flight on the control unit (jack box). Operation of the dial will then cause the number dialed to be presented on the status display panel in the appropriate position. Upon withdrawal of the dial plug from the jack, the number will remain on the status display panel.

2. To remove indication of status, insert dial plug into desired jack and depress push button momentarily. This will cause selector to return to the off position. In the event of error in dialing merely depress push button and re-dial.

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SECTION 5

CIRCUIT ANALYSIS AND MAINTENANCE PROCEDURES

1. Detailed Circuit Analysis. The normal position of dial contacts is as shown in schematic diagram, figure #2, with contact A closed and contact B open. Contact C is not used for this project. As the dial is rotated clockwise, contact B closes, completing the circuit and applying 24V d-c to the windings of relay K-1. The relay, thus actuated, closes contact D applying 50V, from the 110V a-c stepdown transformer, to the tip of the dial plug. Although the plug consists of tip, ring, and sleeve connections, only tip and sleeve connections are used in this circuit.

Individual lamp panels of the status board are selected by means of a control unit consisting of a jack panel into which the dial plug is inserted. (See figure #3).

When the desired plug and jack connection has been made, the 50V actip voltage is applied to the related operating solenoid. The solenoid, thus energized, cocks the stepping lever, and releases the releasing solenoid holding lever, allowing a dog on said lever to engage the teeth on the stepping wheel.

When the desired digit is dialed, the dial wheel returns to its normal position, and the ortating cam contained within the dial mechanism breaks and makes contact "A" the required number of times corresponding to the dialed digit. At each break of contact A the circuit continuity is broken, releasing relay K-1. The operating solenoid is de-energized durin each of these no-current pulses, releasing the spring loaded lever which is then pulled forward, thus rotating the stepping wheel one position. The stepping wheel is prevented from returning to its initial position each time the stepping lever is cocked, by the tooth engaging dog on the releasing solenoid holding lever.

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When contact A is opened for the last no-current pulse, contact B opens before contact A is made again.

Each status board panel consists of 24 lamps, each individual lamp of which is selected by the rotating selector switch fingers which are afixed to the stepping wheel shaft. The desired lamps are lighted by contacts made between the selector fingers and the rivets on the contact plate. A 6V source for this purpose is obtained by use of a 110V a-c input stepdown transformer. A complete path is provided by grounding the contact selector fingers and one side of the transformer secondary.

Any number may be removed from the status board by selecting the proper jack in the control unit panel and by depressing push button SW-1 momentarily. This operates the releasing solenoid by applying 50V to its windings. The releasing solenoid plunger disengages the dog on the solenoid holding lever from the stepping wheel. The holding lever, in turn, disengages the stepping lever from the stepping wheel. Spring action then returns the stepping wheel and contact fingers to their normal (off) position.

Although the releasing solenoid is energized only momentarily, the solenoid plunger is prevented from returning to the de-energized position by the holding lever, thus eliminating the necessity of supplying current to the solenoid during the entire recycling period. The solenoid plunger, holding lever, and stepping lever remain in the above described positions until a new number is dialed.

2. Periodic Preventive Maintenance.

a. Dial contacts must be burnished once every two (2) weeks.

b. Rivets on all contact plates will be cleaned as needed using a cloth moistened with trichlorethylene.

c. Contact plate rivets will be polished lightly with crocus cloth once a month.

d. Check adjustment and tension of selector fingers once a month, and if necessary readjust with correct size relay spring adjusting tool.

e. Check and replace lamps as necessary.

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SECTION 6

TABLE OF LIGHT ARRANGEMENTS

1. The selector switch assembly consists of the following major components:

a. Sixteen (16) selector fingers (arranged in 4 quadrants, 4 fingers in each quadrant).

b. One contact plate.

c. One stepping wheel.

d. One energizing solenoid 50V AC.

e. One releasing solenoid 50V AC.

2. The contact plate of each selector switch is wired to its associated panel lamps (24) as is shown in figure #4. An analysis of the wiring of the contact plate will aid the reader to comprehend the method employed in securing the desired figures.

3. Note:

a. All sequences referred to in this paragraph will be counter clockwise. When reference is made to the contact plate, it is made to the face side, and not to the wiring side.

b. The contact plate is divided into four quadrants which we will call large A, B, C, D. Each quadrant contains four rows which we will call small a, b, c, d. Each row contains 12 contacts (not counting the neutral position, of which we will only utilize the first 10), this we shall call numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 0. We now established the following code for the contact plate:

Large letter	Quadrant (4) A B C D
Number	Contact line (10) 1 - 0
Small letter	Row (4) a, b, c, d.

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For example: "1 is dialed, the selector fingers are rotated one digit around the contact plate engaging and completing the pre-wired lamp circuits of the 24 panel lamp unit, and illuminating the necessary lamps which comprise the figure #1.

By placing a coin in the 24 lamp panel template of figure #4, the reader can easily see the derived figure. There may be some controversy as to the physical shape of a particular figure, however, this headquarters has tried many deviations of each figure and from a standpoint of legibility from operating personnel point of view, the following tables of light arrangements has proven very satisfactory.

A1a . . . . Lamp 16		A2b . . . . Lamp 2	
A1b . . . . Lamp 2		A2c . . . . Lamp 3	
B1a . . . . Lamp 5		B2a . . . . Lamp 5	
B1b . . . . Lamp 6		B2b . . . . Lamp 21	
B1c . . . . Lamp 21		C2b . . . . Lamp 11	(2)
C1a . . . . Lamp 10		C2c . . . . Lamp 22 & 23	
C1a . . . . Lamp 22 & 23		C2d . . . . Lamp 24	
D1a . . . . Lamp 14		D2a . . . . Lamp 14	
		D2d . . . . Lamp 17	
A3a . . . . Lamp 1		A4a . . . . Lamp 1	
A3b . . . . Lamp 2		A4d . . . . Lamp 4	
A3c . . . . Lamp 3		B4a . . . . Lamp 5	
A3d . . . . Lamp 4		B4c . . . . Lamp 8	
B3b . . . . Lamp 21		B4d . . . . Lamp 9	
B3c . . . . Lamp 8	(3)	C4c . . . . Lamp 24	(4)
C3a . . . . Lamp 10		C4d . . . . Lamp 13	
C3b . . . . Lamp 11		D4a . . . . Lamp 14	
C3c . . . . Lamp 22 & 23		D4d . . . . Lamp 15	
C3d . . . . Lamp 24		D4c . . . . Lamp 16	
D3c . . . . Lamp 16 & 20		D4d . . . . Lamp 12	
A5a . . . . Lamp 1		A6a . . . . Lamp 1	
A5b . . . . Lamp 2		A6b . . . . Lamp 2	
A5c . . . . Lamp 3		A6c . . . . Lamp 3	
A5d . . . . Lamp 4		A6d . . . . Lamp 4	
B5a . . . . Lamp 5		B6a . . . . Lamp 5	
B5b . . . . Lamp 21		B6b . . . . Lamp 21	
B5d . . . . Lamp 9	(5)	B6d . . . . Lamp 9	(6)
C5a . . . . Lamp 10		C6b . . . . Lamp 24	
C5b . . . . Lamp 11		C6c . . . . Lamp 22 & 23	
C5c . . . . Lamp 22 & 23		C6d . . . . Lamp 13	
D5c . . . . Lamp 16		D6a . . . . Lamp 14	
		D6b . . . . Lamp 15	
		D6c . . . . Lamp 16 & 20	
		D6d . . . . Lamp 17	

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A7a	Lamp 1		A8b	Lamp 2	
A7b	Lamp 2		A8c	Lamp 3	
A7c	Lamp 3		B8a	Lamp 5	
A7d	Lamp 4		B8c	Lamp 8	
B7b	Lamp 21		C8a	Lamp 10	
B7c	Lamp 8	(7)	C8b	Lamp 11	(8)
C7b	Lamp 11		C8c	Lamp 22 & 23	
D7a	Lamp 14		C8d	Lamp 13	
D7d	Lamp 17		D8c	Lamp 16	
D7d	Lamp 17		D8d	Lamp 17	
A9a	Lamp 1		A0b	Lamp 2	
A9b	Lamp 2		A0c	Lamp 3	
A9c	Lamp 3		B0a	Lamp 5	
A9d	Lamp 4		B0c	Lamp 8	
B9a	Lamp 5		B0d	Lamp 9	
B9b	Lamp 21		C0c	Lamp 22 & 23	
B9c	Lamp 8	(9)	C0d	Lamp 13	(0)
B9d	Lamp 9		D0d	Lamp 12	
C9a	Lamp 10		D0c	Lamp 16	
C9b	Lamp 11		D0d	Lamp 17	
C9c	Lamp 22 & 23				
C9d	Lamp 24				
D9b	Lamp 12				
D9c	Lamp 16				

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SECTION 7

PARTS LIST

Parts requirements shown are for one squadron status board.

AF S/N	QUANTITY	DESCRIPTION
3340 NL	1 ea	Transformer, 3KVA, 115/230V Prim, 6.3V Sec.
3380 NL	112 ea	Solenoid Assy 50V, 60 cy with energizing and releasing windings
3380 NL	112 ea	Wiper contact assembly, 16 points
3380 NL	112 ea	Bakelite plate, 200 contacts
7700-548540	2688 ea	Pilot light assembly, Dialco type #95408 with plastic caps. (This organization uses 288 light assemblies with red caps for "SCRAMBLE" and 2400 light assemblies with green caps for remaining light panels).
8800-444163	2688 ea	Lamp, T-bulb, 6-8V, 15A, G.E. #47
8850-604181	112 ea	Connector, receptacle, H. B. Jones #5324 AB
3300-293590810	112 ea	Connector, plug, male, H. B. Jones #P324CCT
-	220 ft	Cable, switchboard, WE #69CL (100 pair) Rubber covered
-	1000 ft	Cable, switchboard, WE #79CL (10 pair) Rubber covered.
8850-747540	112 ea	Jack, Telephone, W-E #238A
6N4903	50 feet	Ribbon, bonding, copper #16B&S, 3/8" wide
4B 794.6	1 ea	TP Dial WE Co. 5H
3380-295011400	1 ea	Relay, BK-35
3340-296911870	1 ea	Transformer, 115VP 50V Sec.
8800-360984	112 ea	Fuse, AGC5, 250V
8800-152185	224 ea	Fuse holder, clip

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AF S/N	QUANTITY	DESCRIPTION
NL	336 ea	Fahnestor Clip 3/4"
6700-8?3050	560 ea	Wood screw 3/8" #3 black
6700-705150	??4 ea	Machine screw, RH, steel 4/32" x 3/4" with nuts
6800-NL	16 lb	Solder, triple rosin core, 16 ga.
-	300 ft	Bus wire, 1? ga, copper, tinned.

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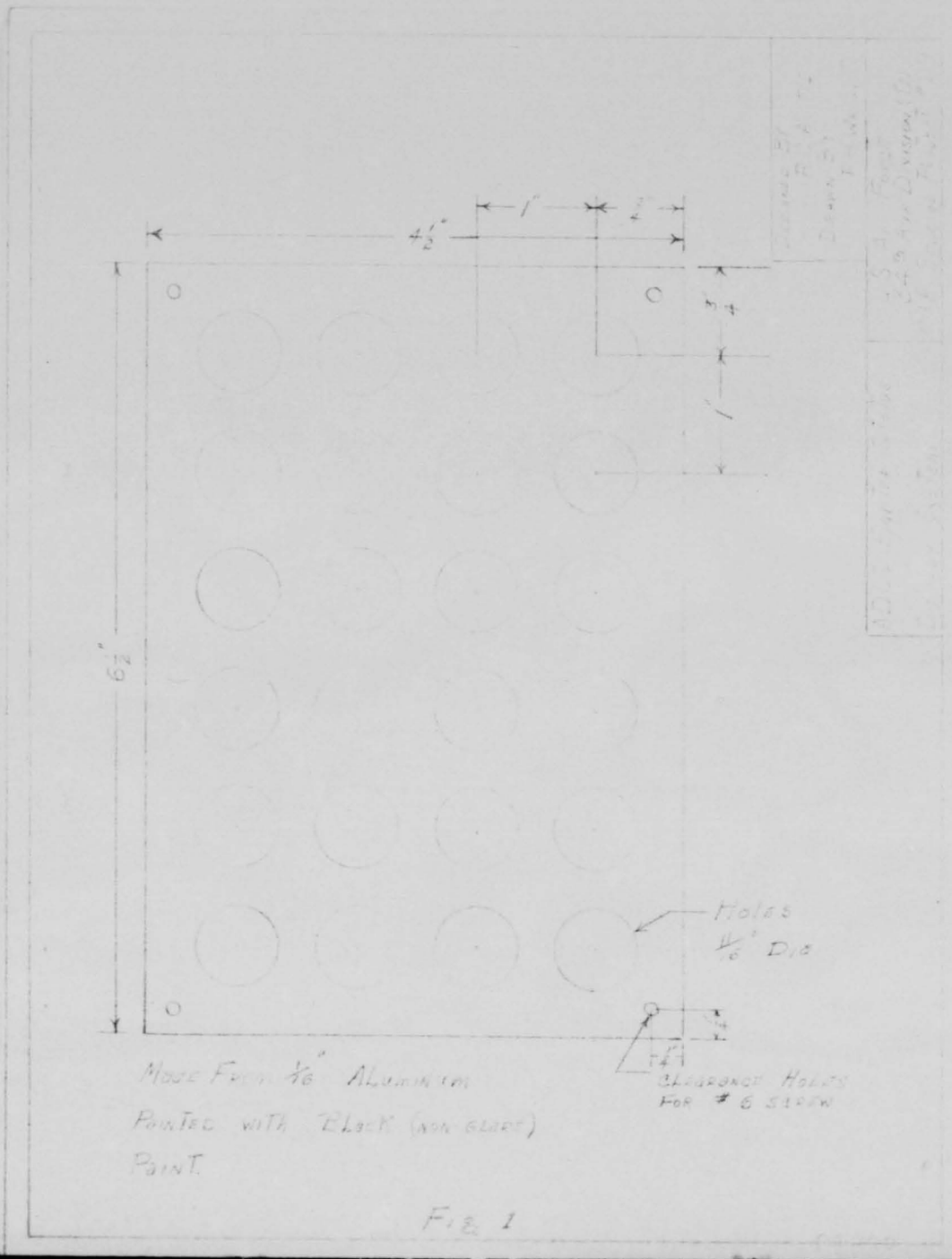

Fig. 1

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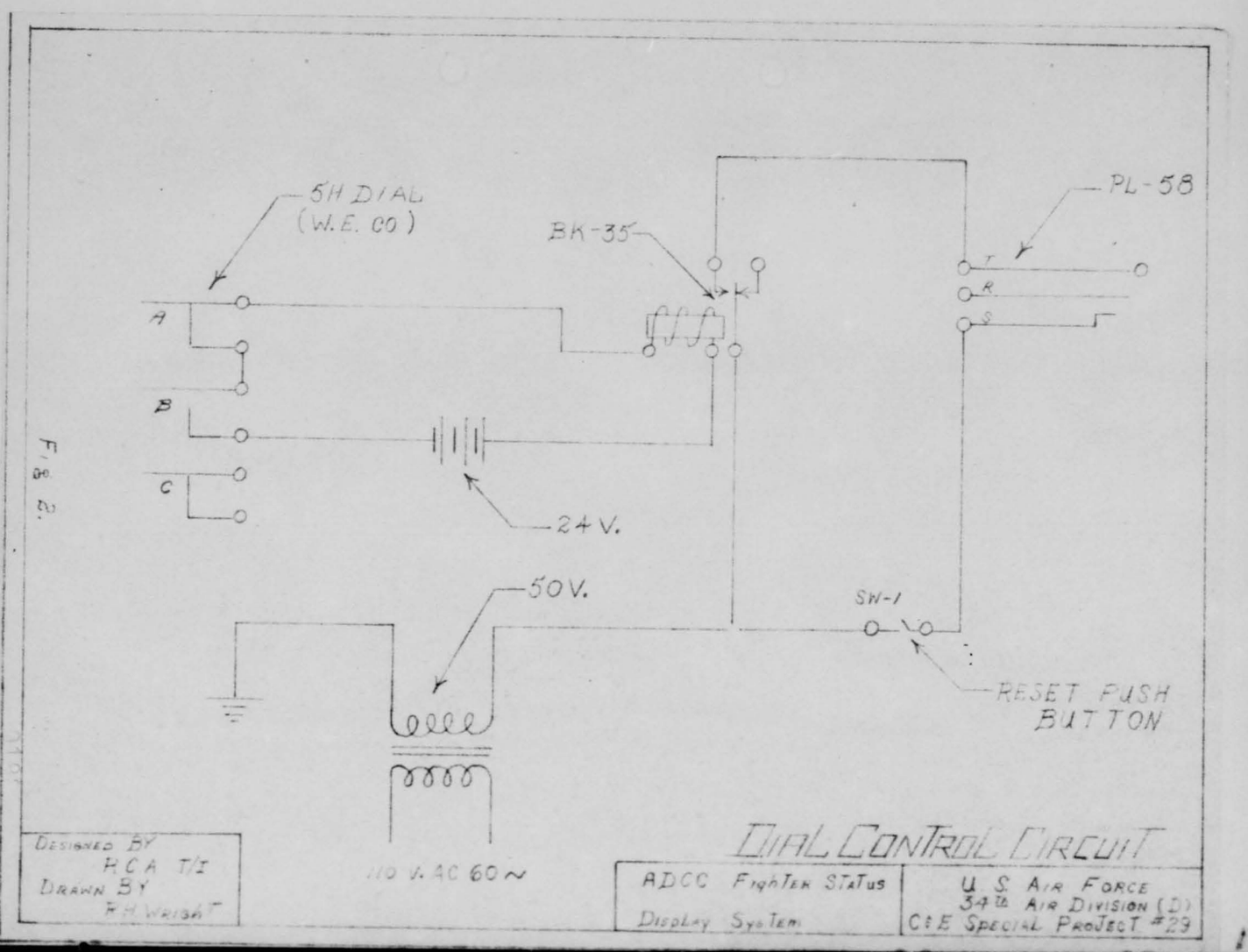


DESIGNED BY
HCA T/I
DRAWN BY
F.H. WRIGHT

DIAL CONTROL CIRCUIT

ADCC FIGHTER STATUS
DISPLAY SYSTEM

U.S. AIR FORCE
34TH AIR DIVISION (D)
C&E SPECIAL PROJECT #29

0630

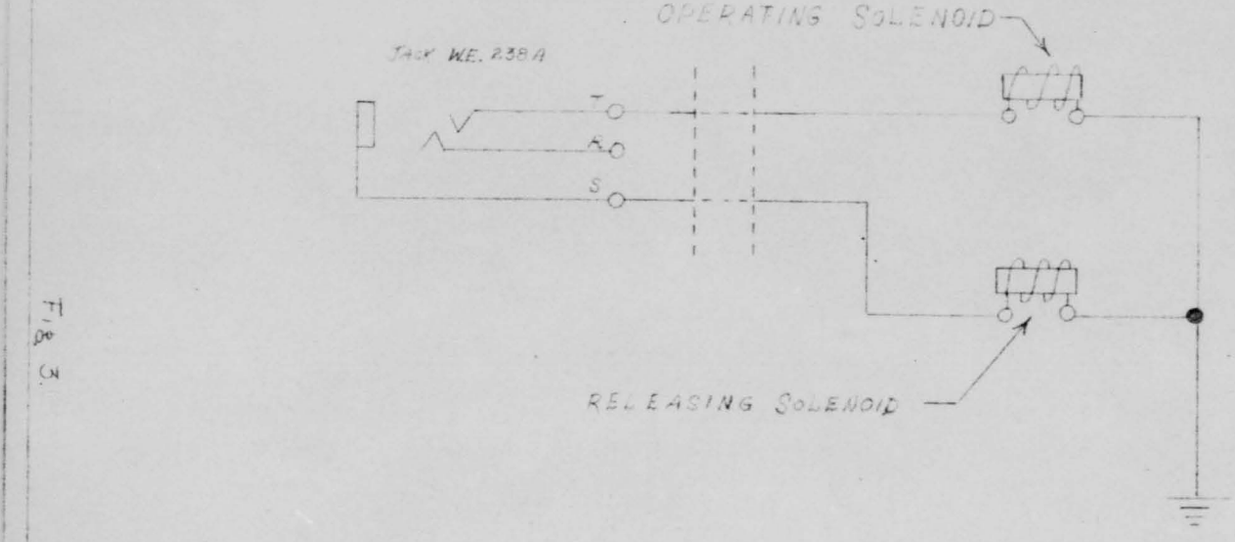


FIG 3

DESIGNED BY
R.C.A. T/I
DRAWN BY
R.H. WRIGHT

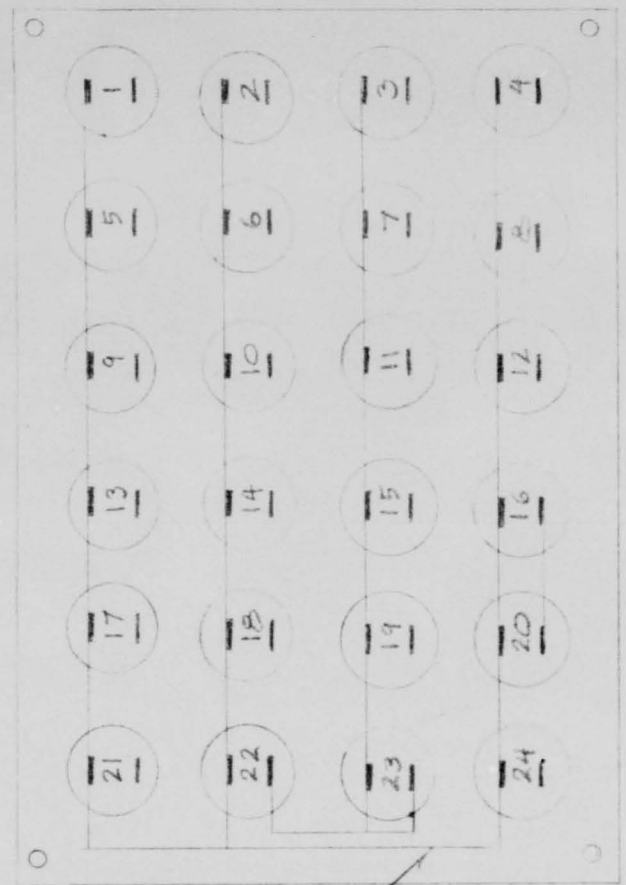
TYPICAL JACK CIRCUIT INCLUDING SELECTOR OPERATING & RELEASING SOLENOIDS

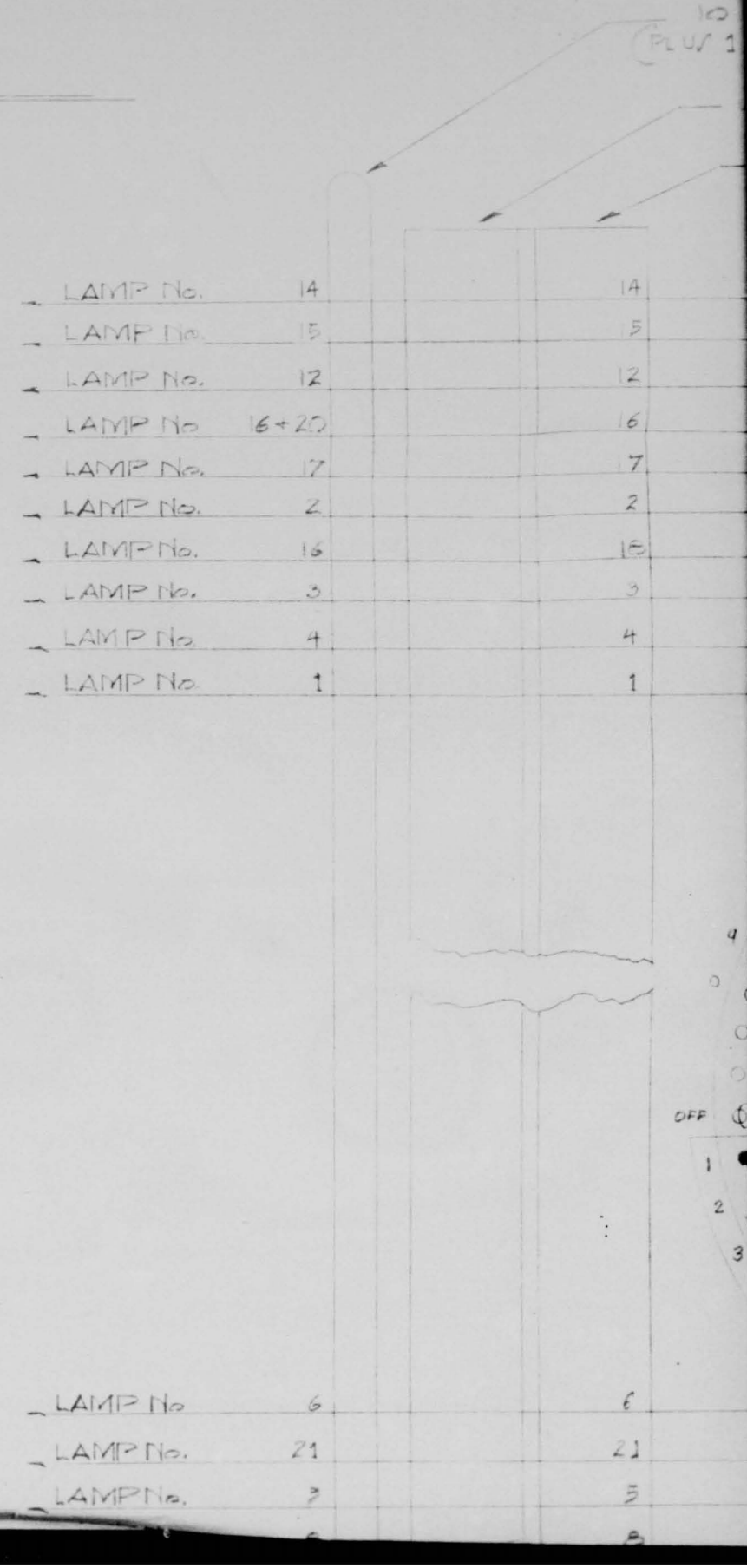
ADCC FIGHTER STATUS DISPLAY SYSTEM	U.S. AIR FORCE 34TH AIR DIVISION (D) C&E SPECIAL PROJECT #29

0631

OPERATING & LIGHT CIRCUIT

(WIRING SEQUENCE & WIRE CONNECTIONS)





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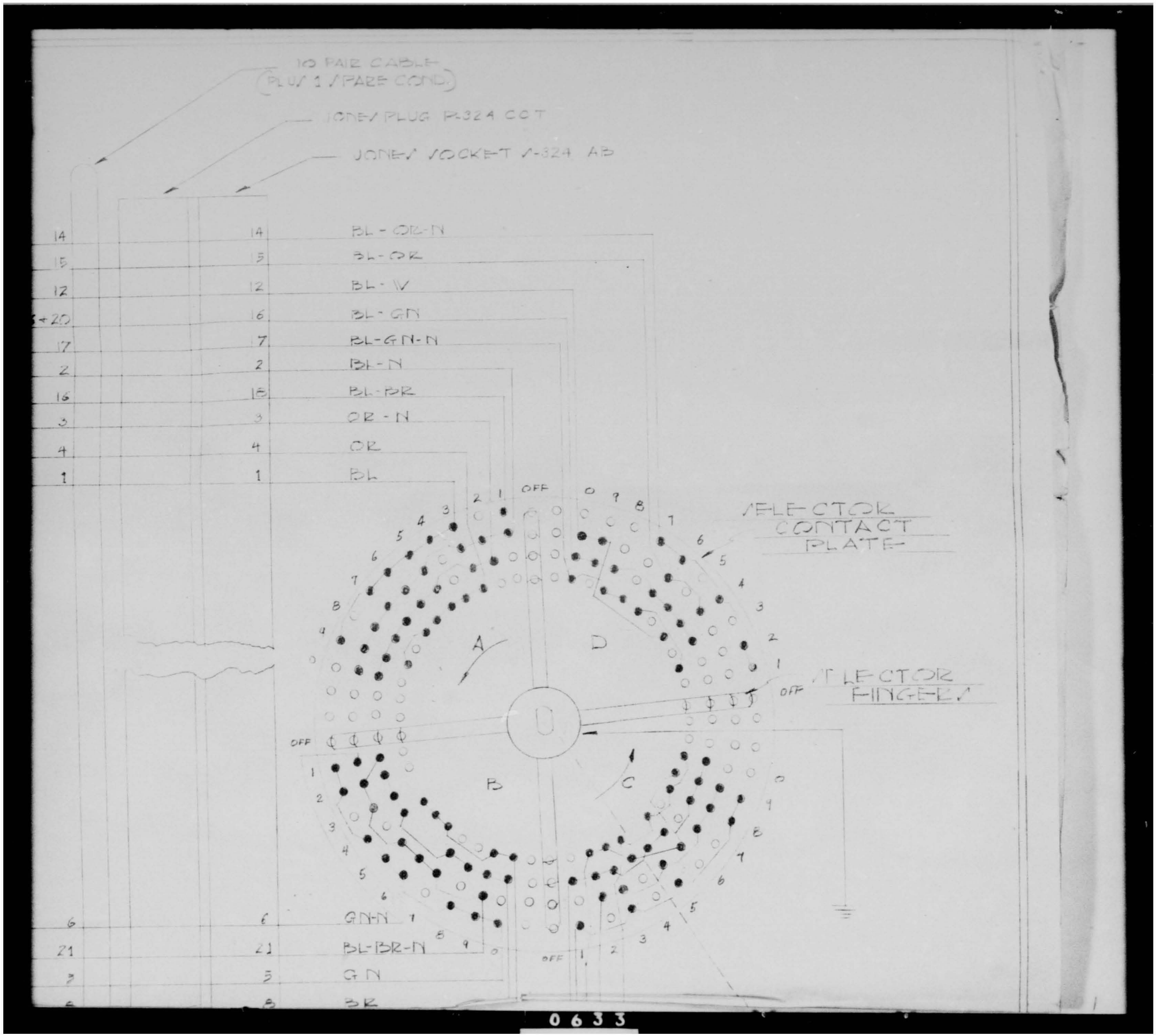

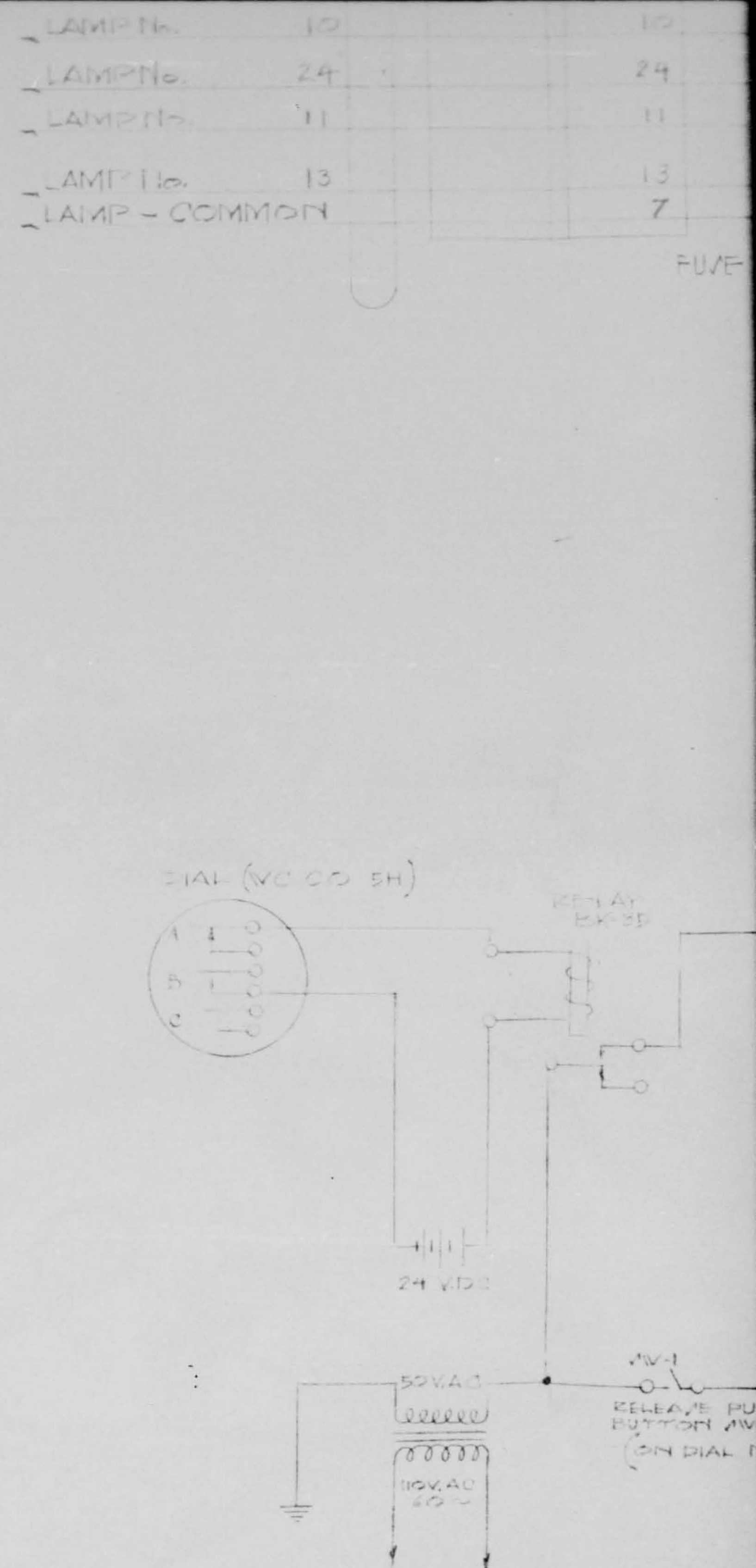

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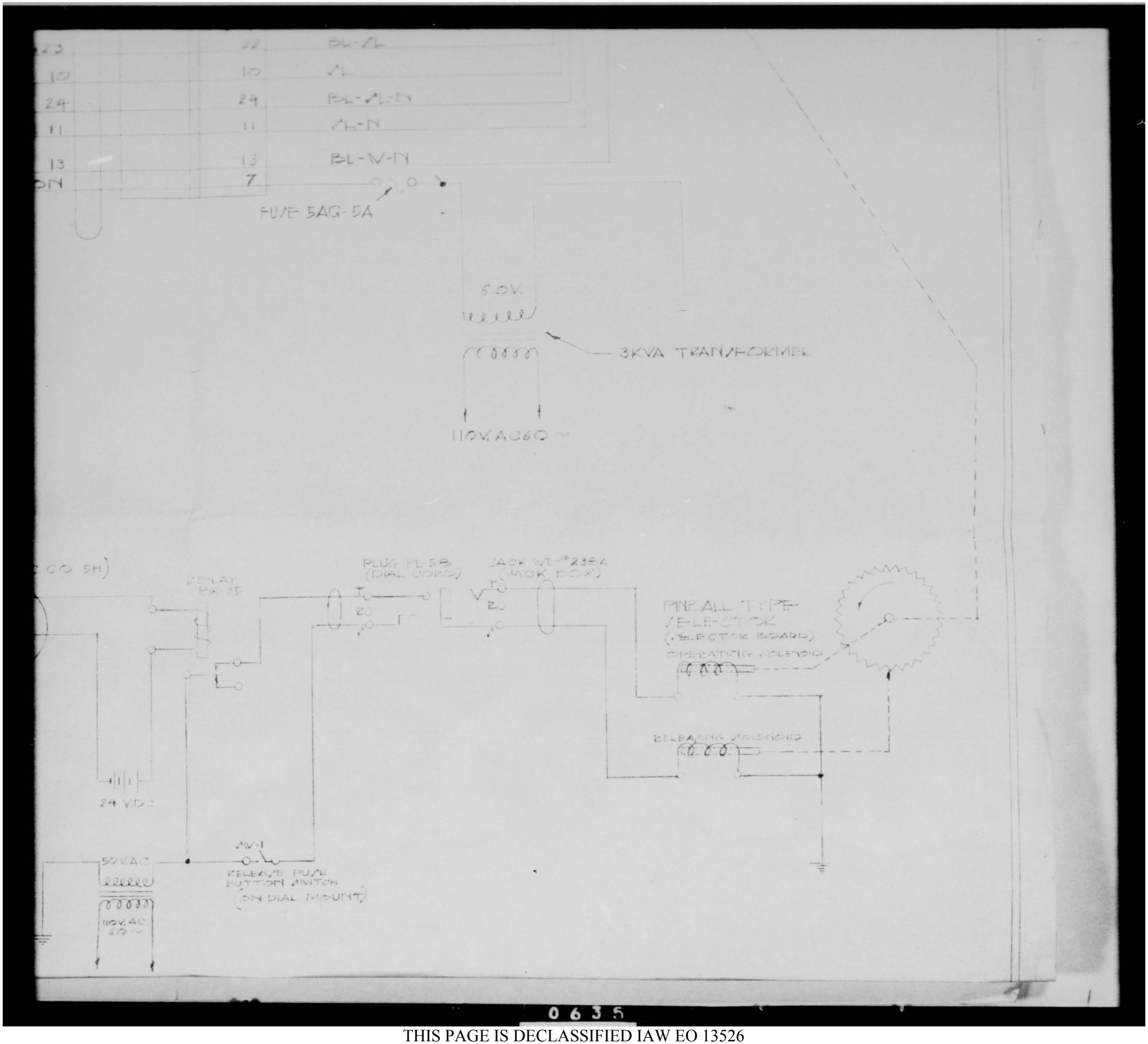

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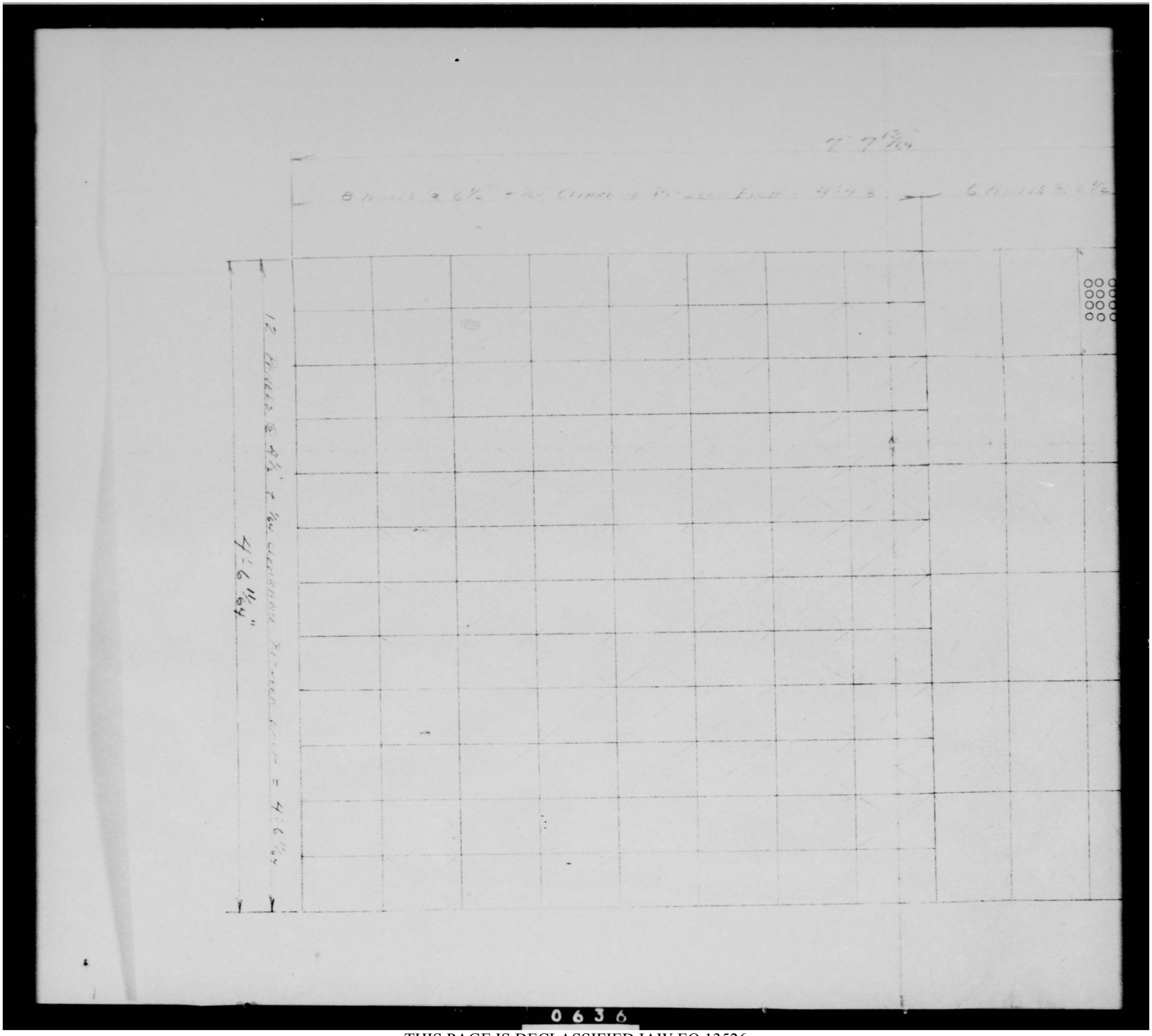

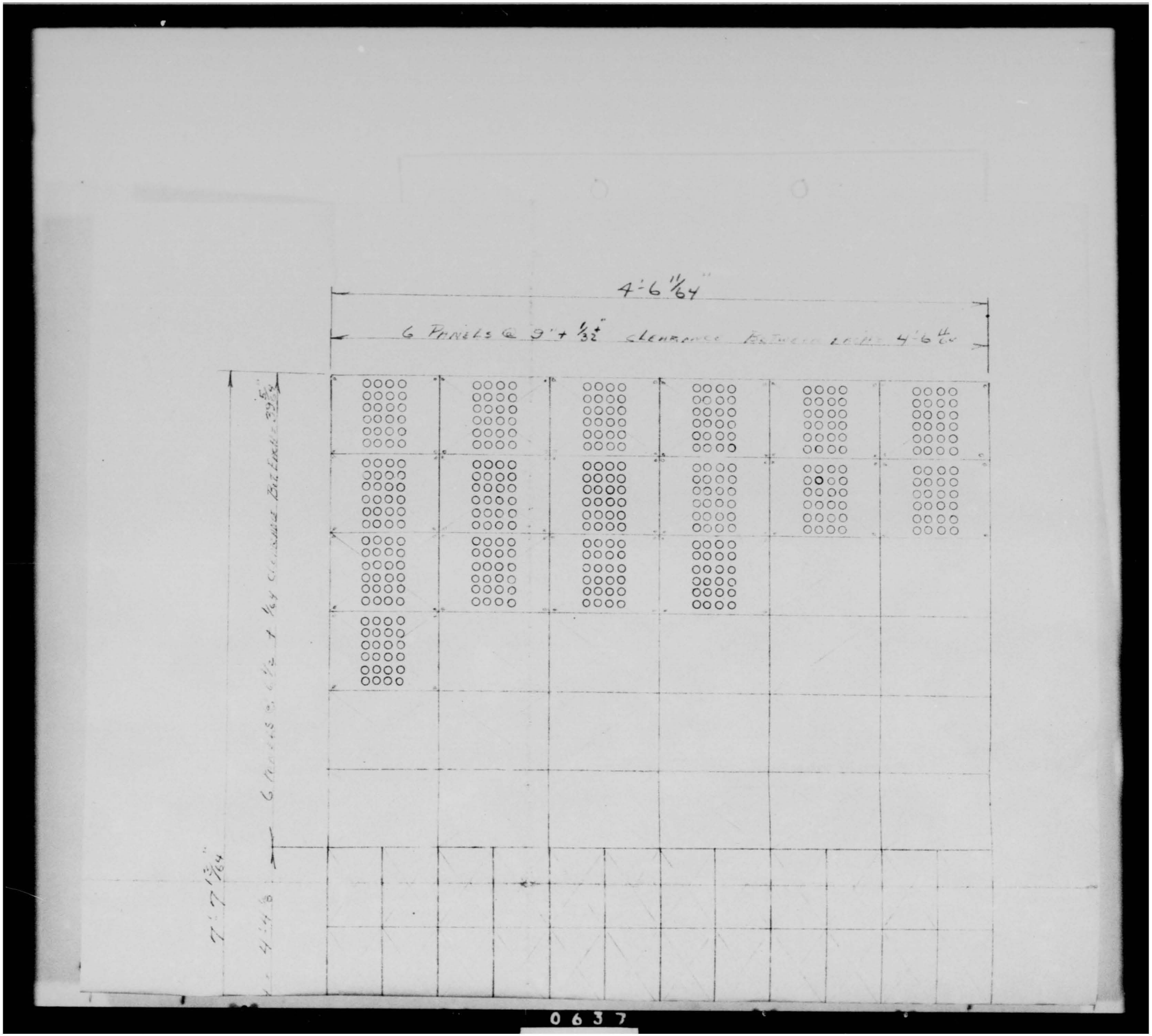

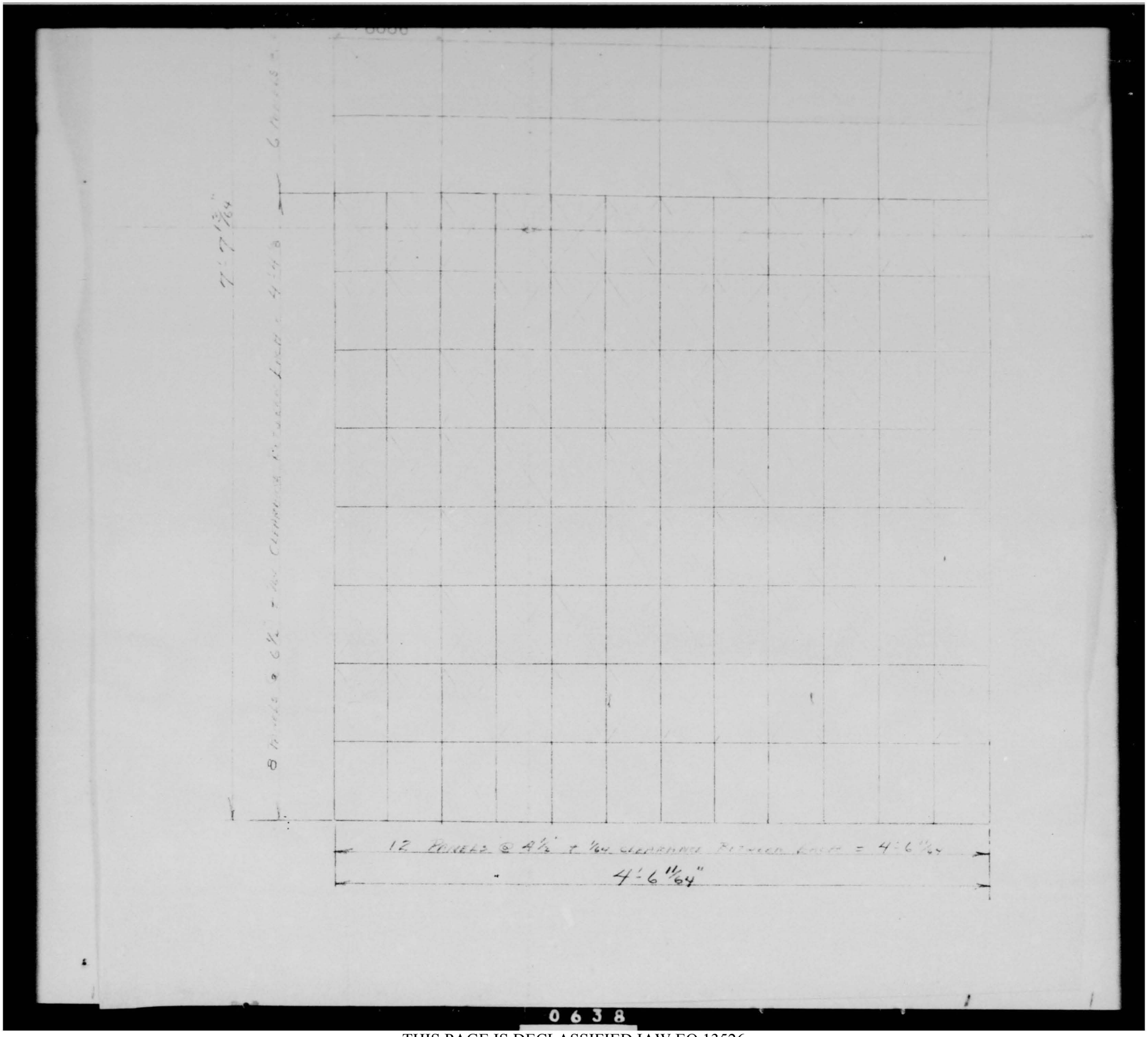

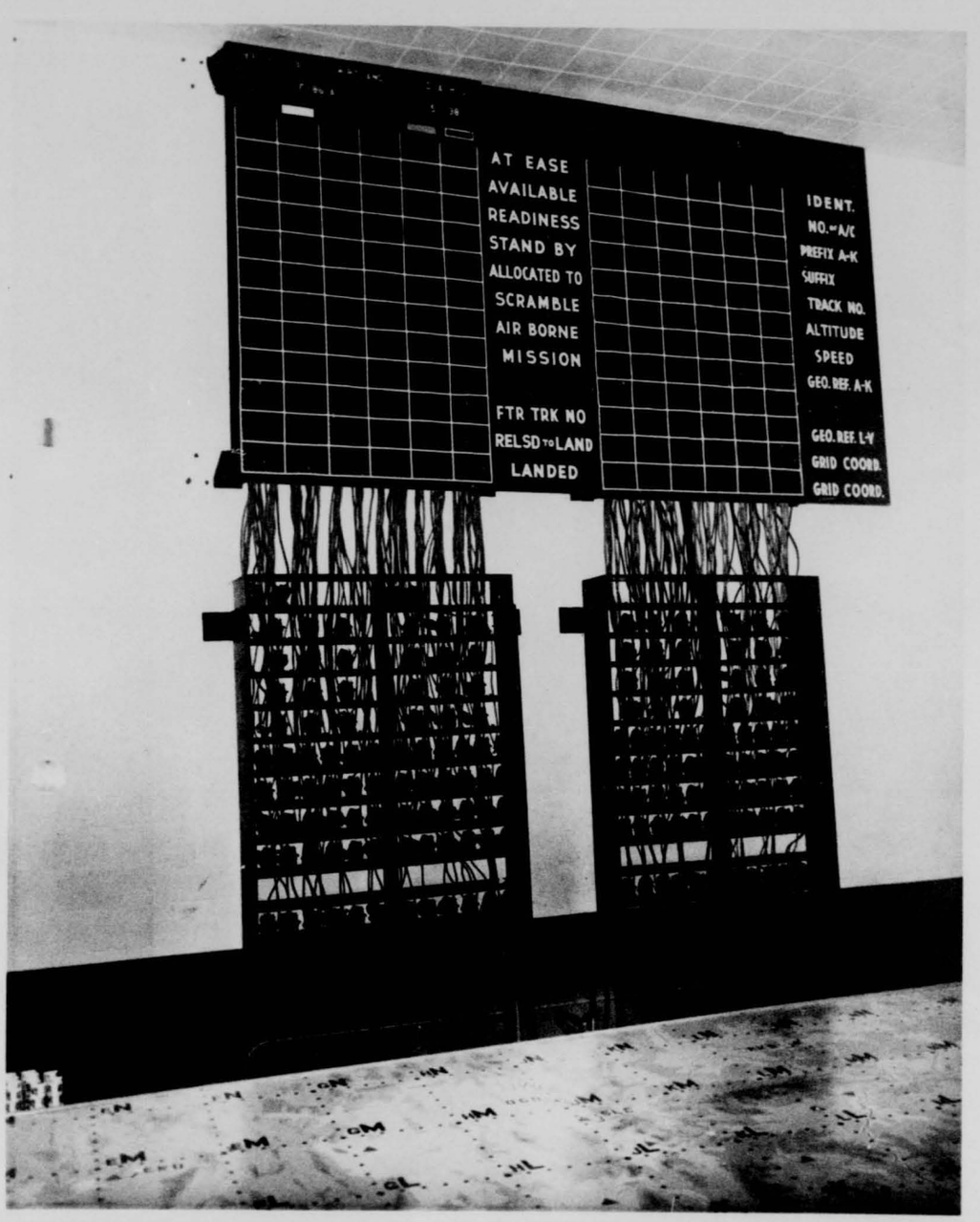

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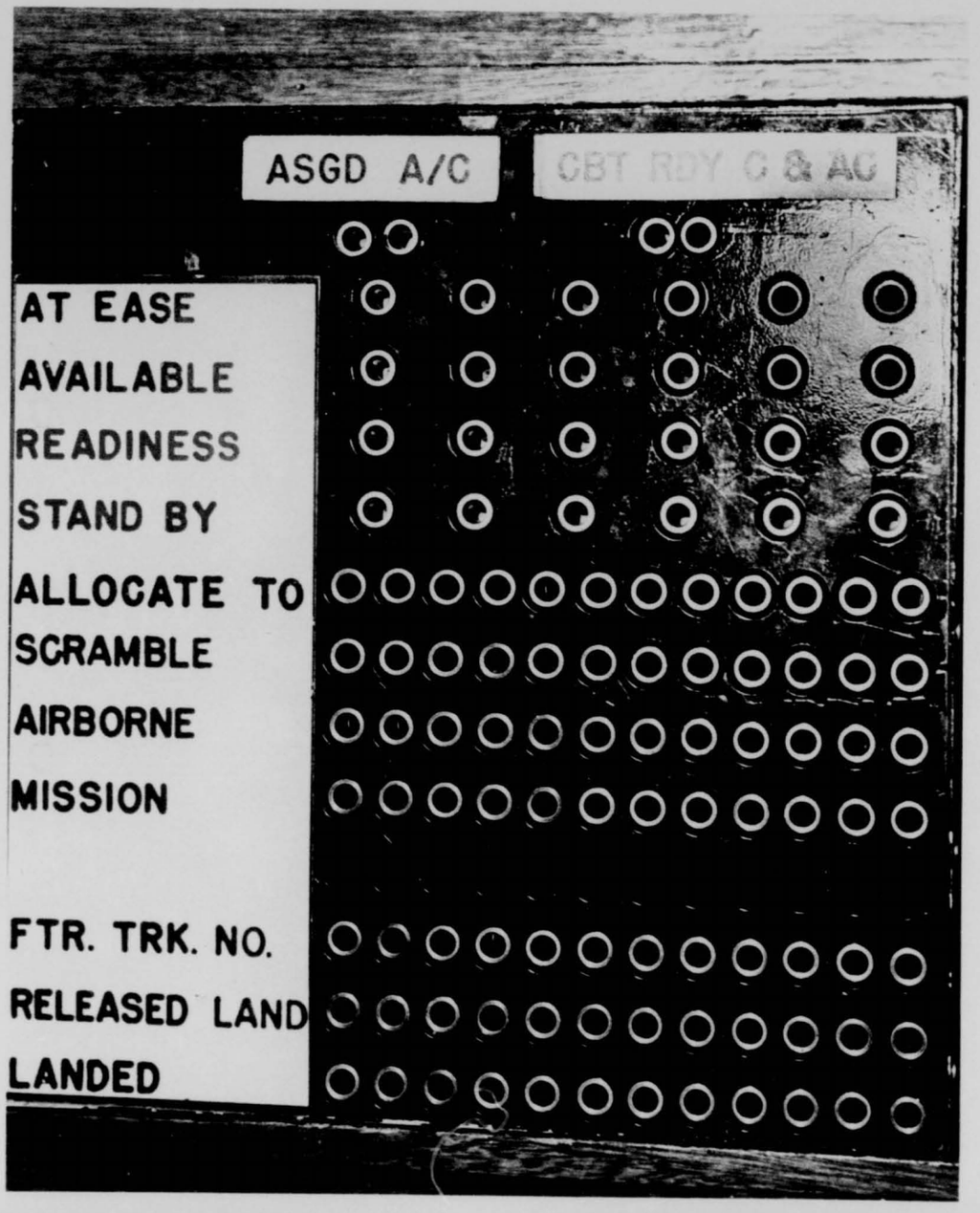

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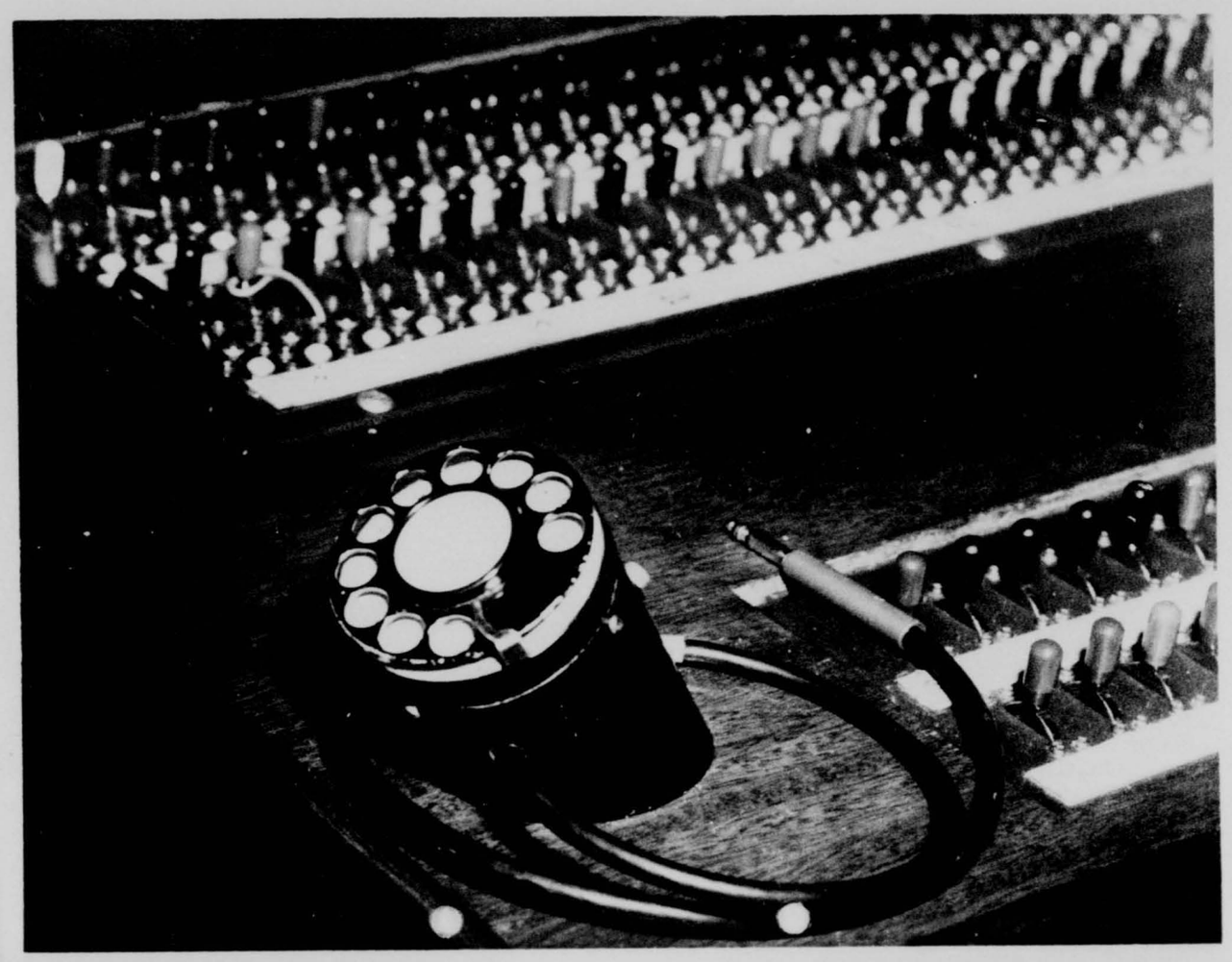

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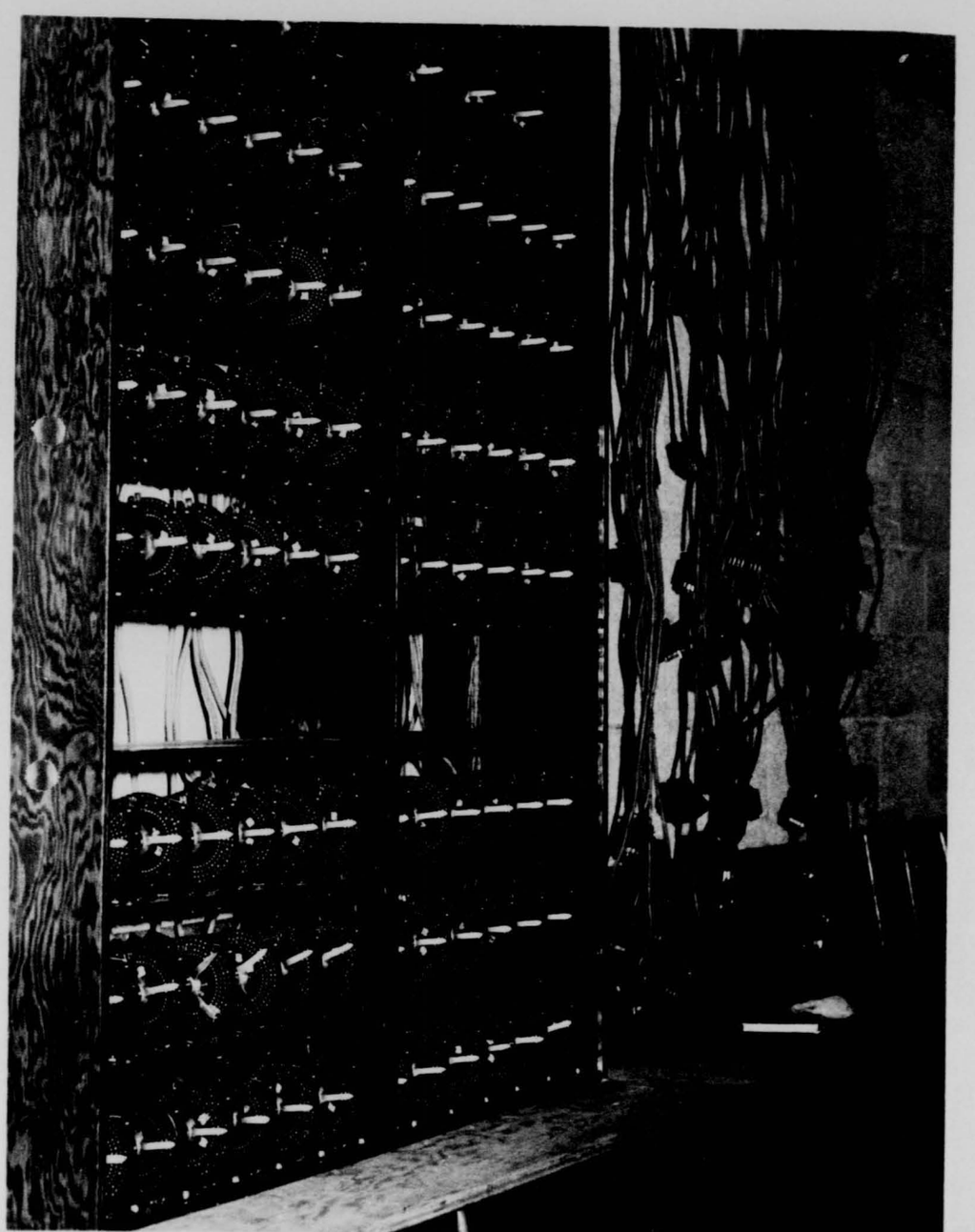

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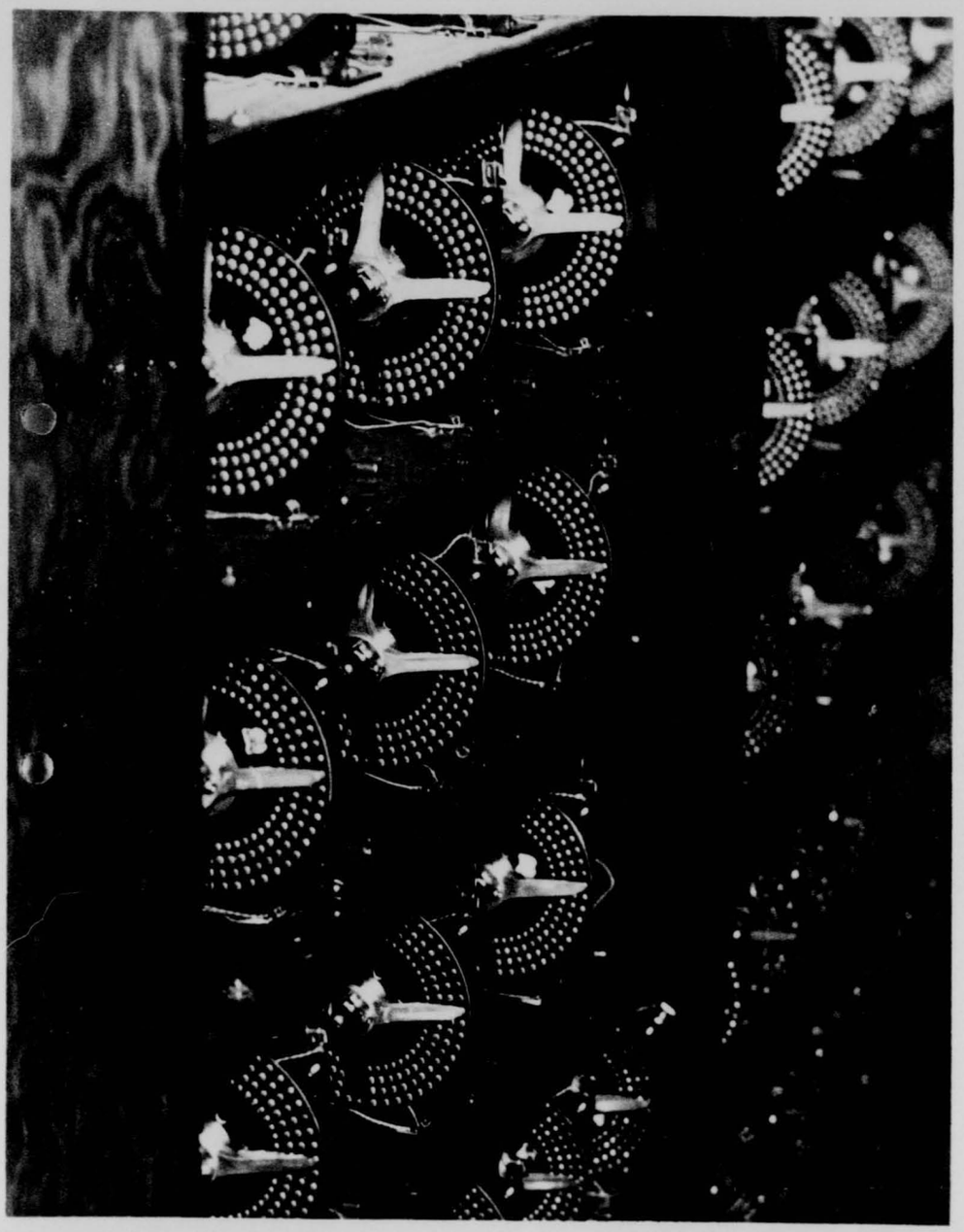

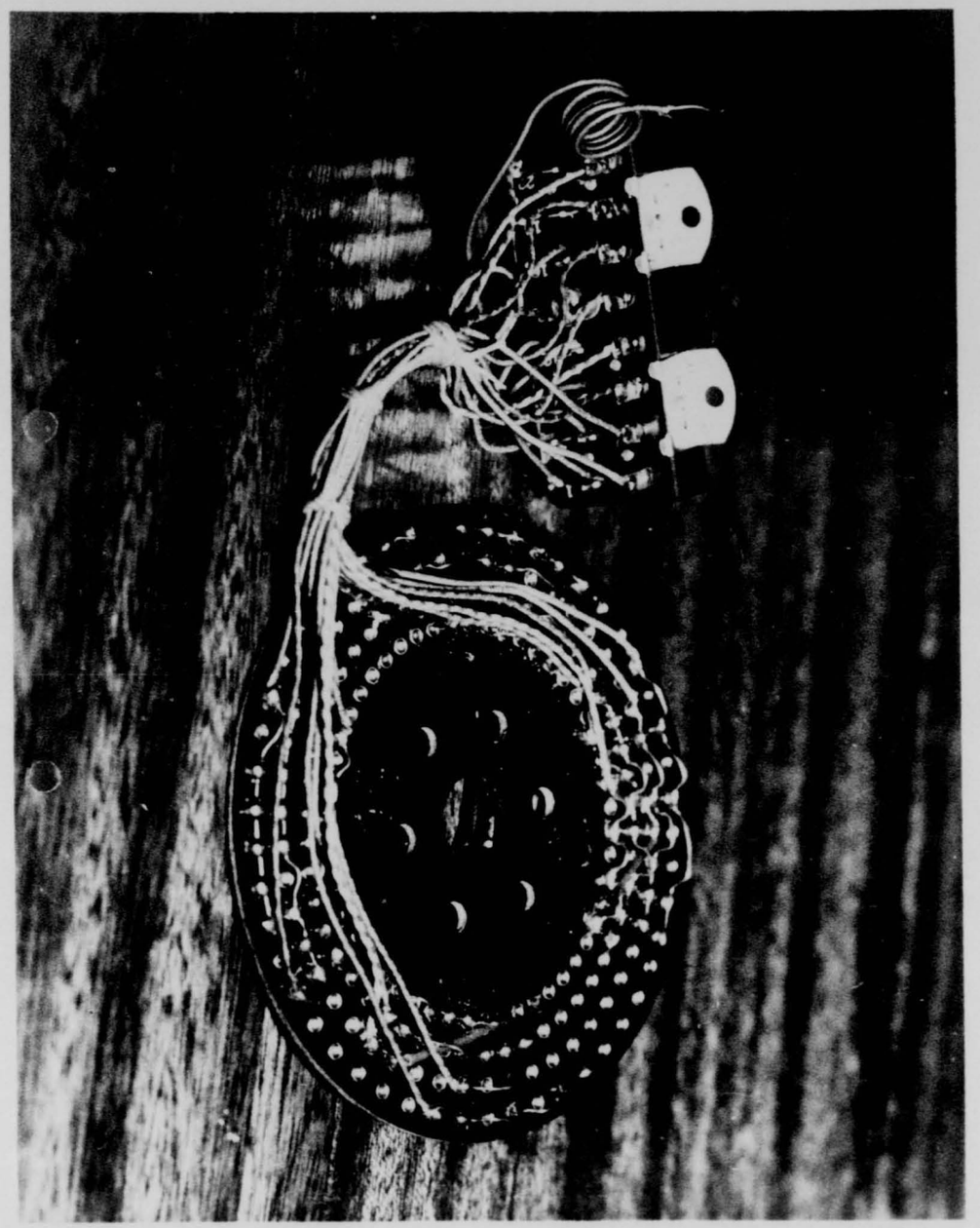

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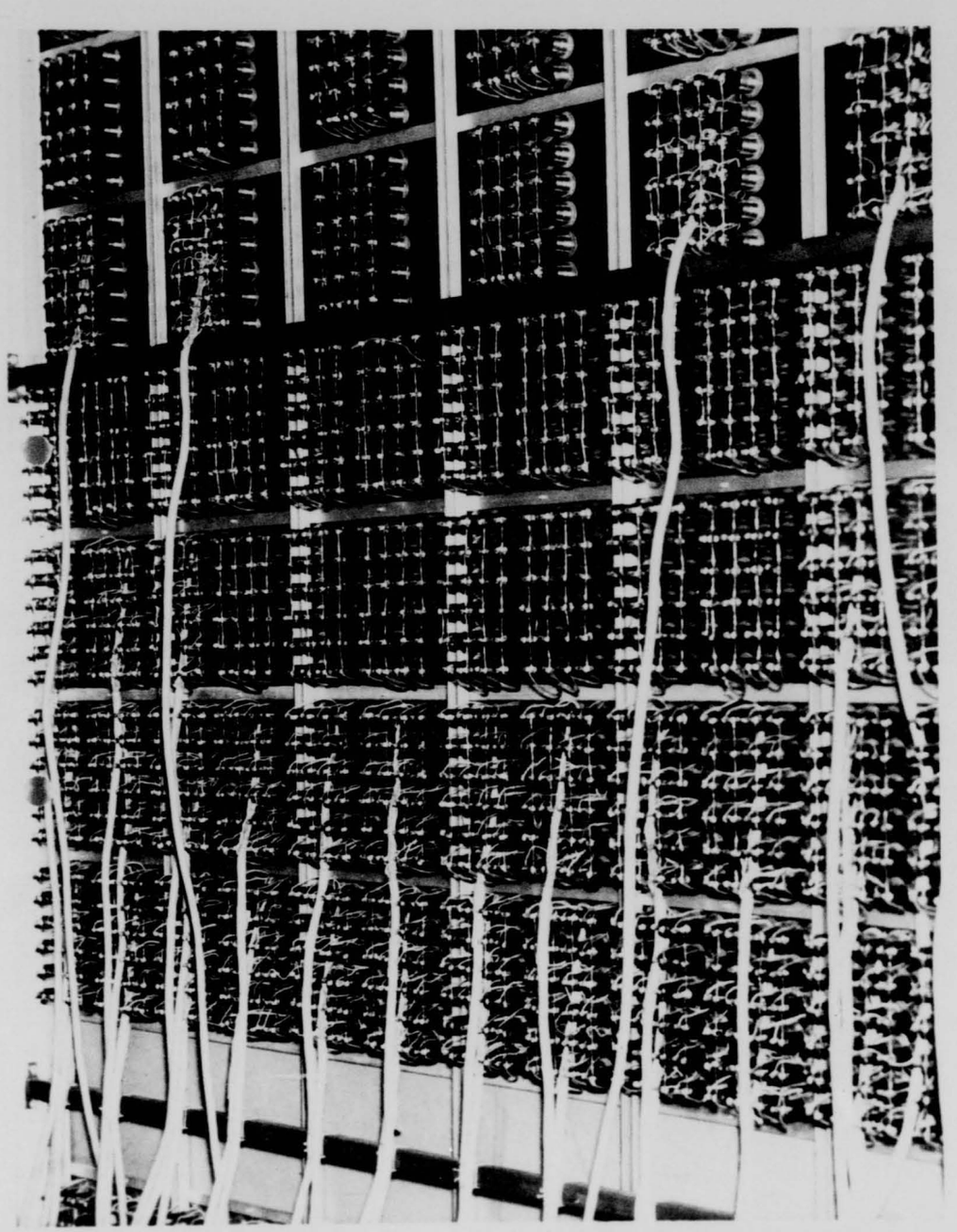

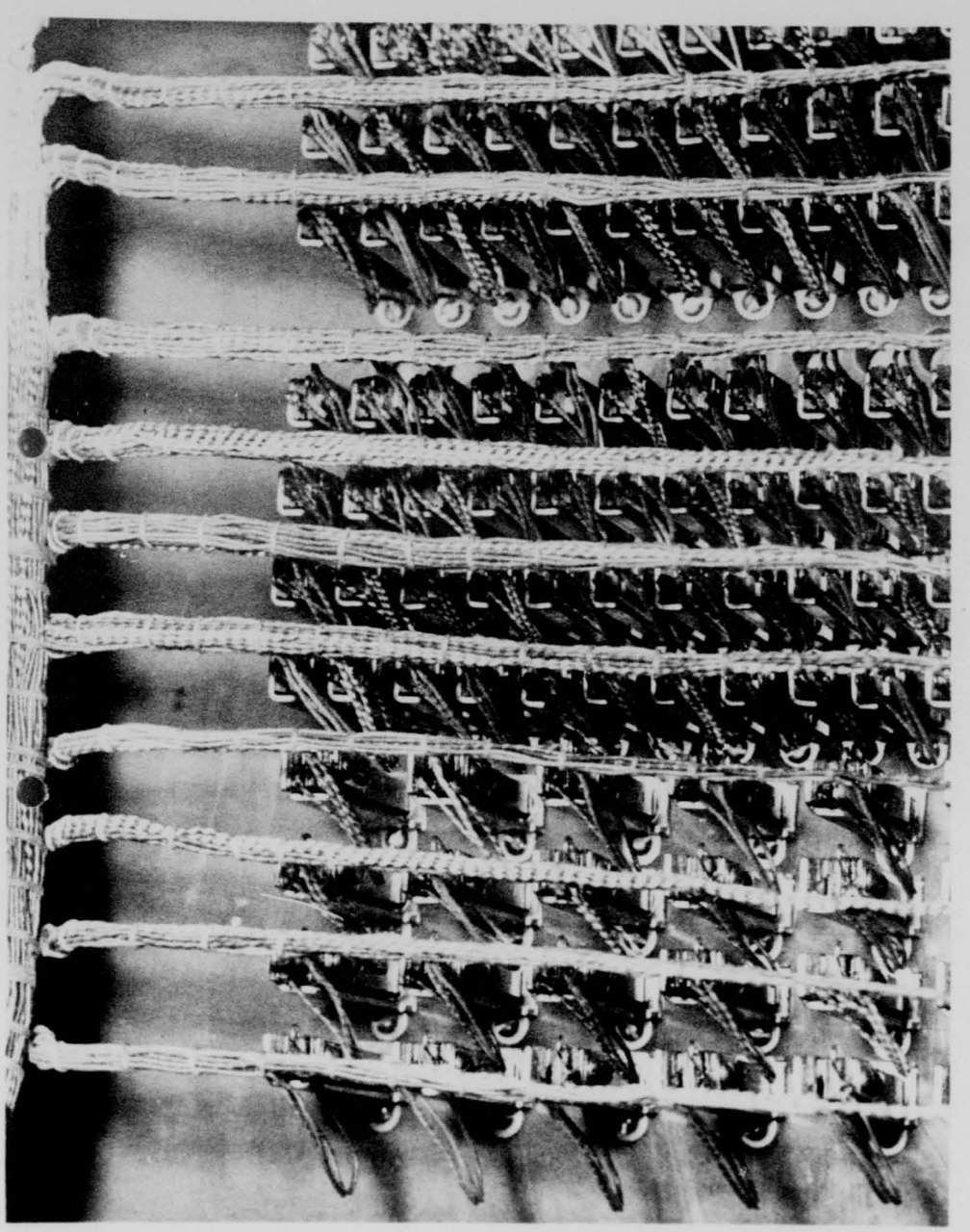

AIRCRAFT RECOGNITION PROFICIENCY

DATE	PILOT	TYPE AIRCRAFT
	Marshall	
	Ruettgers	
	Warden	
	Chandler	
	Ferber	
	Forsyth	
	Hector	
	Hornbuckle	
	Markam	
	Austin	
	Auten	
	Derr	
	Ickes	
	Tryon	
	Green	
	Johnson	
	McClure	
	Mahler	
	Puding	
	Putnam	
	Pringle	
	Ruglond	
	Smith	
	Streich	
	Varn	
	Waller	
	Barr	
	Jones	
	Majden	
	Peterson	
	Wilson	

COLOR CODE · 100 · 90-99 · 80-89 · 70-79 BELOW 70

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

SPECIAL ORDERS)
NUMBER 105)

29 June 1953

This special orders consists of 1 to 18 paragraphs inclusive. Classified paragraphs NONE not included in the compilation.

BY ORDER OF THE COMMANDER:

OFFICIAL:

JAMES F MARTIN
Major, USAF
Adjutant

SAM ODENSKY
1st Lt, USAF
Assistant Adjutant

DISTRIBUTION: "B"

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

SPECIAL ORDERS)
NUMBER 106)

29 June 1953

EXTRACT

1. LT COL WINTON W MARSHALL, 9999A, is reld fr asgnt & dy 93d Ftr-Intcp Sq, Davis-Monthan AF Base, Tucson, Ariz, WP o/a 5 Jul 53, rept for duty as Sq Comdr. Off is cleared for access to TOP SECRET material. Tvl by common carrior, including commercial air, military aircraft and/or TPA auth. Two (2) days tvl time auth for TPA. WP TDN PCS PCA. Transfer is CADF directed and all costs incidental thereto are chargeable to acctng class 5733500 379-5001 P533.6-99 S14-611; 5743500 479-5002 P533.6-99 S23-608. A copy of all documents pertaining to this movement will be furn the B&A Off, 4610th AB Gp, Fairfax Field, Kansas City, Kansas. Mo. No. 53-174. Auth: AFR 35-59 and verbal orders of CADF Commander. EDCSA 6 Jul 53.

2. UP AFR 35-22, A/3C Bonnilynn M. Woodard, AA8303159, this Hq, is granted four(4) days ord lv eff o/a 2 Jul 53. Lv Add: Brooklyn, New York.

3. The automatic suspension (grounding) for physical reasons of 1ST LT. GEORGE W. PRINGLE, A0190976C, 93rd FIS, UP AFR 35-16 is made a matter of record 26 Jun 53. Exig of the sv having been such as to proc the issuance of comp written ord in adv, are hereby confirmed and made a matter or record. VOC. 26 Jun 53.

4. UP AFR 35-22, A/2C Carolyn F Jacoby, AA8106818, this Hq, is granted six (6) days ordinary lv eff o/a 2 July 53. Lv Add: 755 Bronx River Road, Bronxville 8, New York.

5. M/Sgt Allan C Nolson, AF16306571, P&DAFSC 73270, W, RegAF, EOS-ne, FSSD-18 Sep 51, YOB-21, TOE-Indef, DOS-Indef, P G-M/Sgt, Sv Cat-1, TC-A, pres TDY to 3750th Mod Gp, Sheppard AFB, Texas., is reld asgmt Hq 34th A Div, this sta, and reasgd in gr to 3750th Mod Gp, Sheppard AFB, Texas. PCA. PCS. NTI. Acctg cl 5743500 448-391 P533.15-99 S99-999. Auth: AFR 35-58, AFR 3539, AFR 35-59 and ltr USAF Hosp, 3750th Mod Gp, Sheppard AFB, Texas, Sibkd Req for Asgmt to Detachment of Patients, dtd 17 Jun 53. EDCSA: 7 Jul 53.

6. SMOP 29, SO 102, cs, this Hq, as pert to 1st Lt DONALD B. JONES, 24673A, as reads EDCSA: 16 Jun 53 is amended to read EDCSA: 4 Jul 53.

7. SMOP 3 SO 100 as pertains to A/1C Curtis L Harjo, AF28193105, as reads: "PCS. TDN. 5733500 448-401 P534.1-02-03-07 S99-999." is amended to read: "PCS. TDN. 5743500 448-401 P534.1-02-03-07 S99-999."

8. A/2C Jack J Hanon, AF19441374 (W)(RegAF)(P&DAFSC 47135) (DOS 17 Aug 56)(TOE 4 yrs)(FSSD 7 Dec 51)(EOS Yes)(TOR 28)(PG A/2C)(SvCat-1) is reld asgmt & dy q 34th ADiv (Def), this sta, and reasgd in gr to 135th ACW Sq, this sta. PCA. NTI. WP o/a 2 Jul 53 reptg NLT 2 Jul 53. Auth: AFR 35-59. EDCSA: 8 Jul 53.

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Security Information

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Extracted

HEADQUARTERS 34TH AIR DIVISION (DEFENSE) SPECIAL ORDERS NUMBER 105
29 June 1953

9. A/B Howard L McGowan, AF14469912 (PAFSC 96010)(DAFSC 96130)(W)(RegAF)(EOS yes)(FSSD 7 Dec 41)(YOB 34)(TOE 4 yrs)(DOS Jun 56)(SvCat-1)(TC A)(PG A/B) is reld asgmt and dy 135th AC&W Sq, this sta, and reasgd in gr to Hq 4910th AB Gp, this sta. Amn WP c/a 1 Jul 53, reptg NLT 1 Jul 53. PCA, MTI. Auth: AFR 35-59 EDCSA: 6 Jul 53.

10. M/Sgt Willis H Wilson, AF18025303 (P&DAFSC 46270)(W)(RegAF)(EOS yes)(FSSD Oct 51)(YOB 22)(TOE 6 yrs)(DOS Mar 57)(SvCat 1)(TC A)(PG T/Sgt) is reld asgmt & dy 93d Ftr-Intcp Sq, this sta, and reasgd in gr to 2353d Pers Proc Sq, Parks AFB, Calif, for fur asgmt to FEAF (Repl for T/Sgt James T Russell, Proj FEAF 0502). Amn WP c/a 6 Jul 53, reptg NLT 8 Aug 53. Amn auth twenty-eight (28) DDALVP at 34 Fourth St, Proctor, Minn, not to interfere w/reptg dt. Prov AFM 35-6 (POR) and AFR 35-39 w/b compl with. Immun w/b compl IAW AFR 160-102. Tvl by comm carr, trans off w/furn nec TR and meal tkts. TBGAA. TBMAA. PCA. PCS. TDN. Acctg cl 5743500 448-341 P533.5-02-03-07 S99-999. Auth: AFR 35-59, AFR 35-39, & msg CADF MIL PERS-AA 7561, dtd 23 Jun 53. EDCSA: 20 Jul 53.

11. T/Sgt (96170) Donald C Leighton, AF39497029, having been asgd this Hq per par 1 SO 119, 6403d Pers Proc Sq, dtd 29 Apr 53, is pl on dy w/Prov Marshal Sec. Amn is attached to Hq Sq Sec 34th ADD for qrs, rats admin and disciplinary control.

12. S/Sgt (27350) Roy E Webb, AF14319452, having been asgd this Hq per par 8 SO 88, Hq 34th ADiv (Def), dtd 8 Jun 53, is pl on dy w/ADCC. Amn is attached to Hq Sq Sec 34th ADD for qrs, rats, admin & disc control.

BY ORDER OF THE COMMANDER:

OFFICIAL:

JAMES F MARTIN
Major, USAF
Adjutant

Sam Odensky
SAM ODENSKY
1st Lt, USAF
Assistant Adjutant

DISTRIBUTION: "B"
PLUS: 5 cys to 2353d PPS

Extracted
Security Information

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HEADQUARTERS
34TH AIR DIVISION (DEFENSE)
Kirtland Air Force Base, New Mexico

SPECIAL ORDERS)
NUMBER 105)

29 June 1953

E X T R A C T

12. SMOP 1 SO 105, cs, pertainint to LT COL VINTON W MARSHALL, 9999A, as reads "93d Ftr-Intcp Sq, Davis-Monthan AF Base, Tucson, Ariz" is amended to read" 93d Ftr-Intcp Sq, this sta, and is asgd to the 15th Ftr-Intcp Sq, Davis-Monthan AF Base, Tucson, Ariz."

13. SMOP 12 SO 100, cs, as pert to CAPT HENRY W FRAZIER, A0805023, is amended to include five (5) DDALVP auth at 3501 Thaxton, SE, Albuq, NM.

14. SMOP 28 SO 102, cs, as pert to LT COL ROBERT F ZACHMANN, 6739A, as reads "5743500 479-5002 533.6-02-03-07-08 S14-611" is amended to read "5743500 479-5002 533.6-02-03-07-08 S23-608".

15. SMOP 29, SO 102, cs, pert to 1ST DONALD B JONES, 24763A, as reads "5743500 479-4002 P533.6-02-03-07 S05-603 (RCN)" is amended to read "5743500 479-4001 P533.6-02-03-07 S05-603 (FCN)".

16. S/Sgt (43171A) Alfred T Herrington, AF17031814, having been asgd this Hq per par 1 LO 1854, 3403d Pers Proc Sq, APO 959, dtd 9 May 53, is pl on dy w/Flight Section. Amn is attached to Hq Sq Sec 34th ADD for qrs rats, admin and disciplinary control.

17. A/3C (36130) Donald H Ward, AF15504626, having been asgd this Hq per par 27 SO 140, Hq Sampson AFB & 3650th Mil Trng Sq, Sampson AFB, Geneva, N.Y. dtd 12 Jun 53, is pl on dy w/Comm & Electronics Section. Amn is attached to Hq Sq Sec 34th ADD for qrs, rats, admin and disc control.

18. T/Sgt (62270) Troy Burt, AF34616513, having been asgd this Hq per par 9 SO 97 Hq 34th ADiv (Def), dtd 18 Jun 53, is pl on dy w/Deputy for Materiel Section. Amn is attached to Hq Sq Sec 34th ADD for qrs, rats, admin, and disciplinary control.

BY ORDER OF THE COMMANDER:

JAMES F MARTIN
Major, USAF
Adjutant

OFFICIAL:

Sam Odensky
SAM ODENSKY
1st Lt, USAF
Assistant Adjutant

Restricted
Security Information

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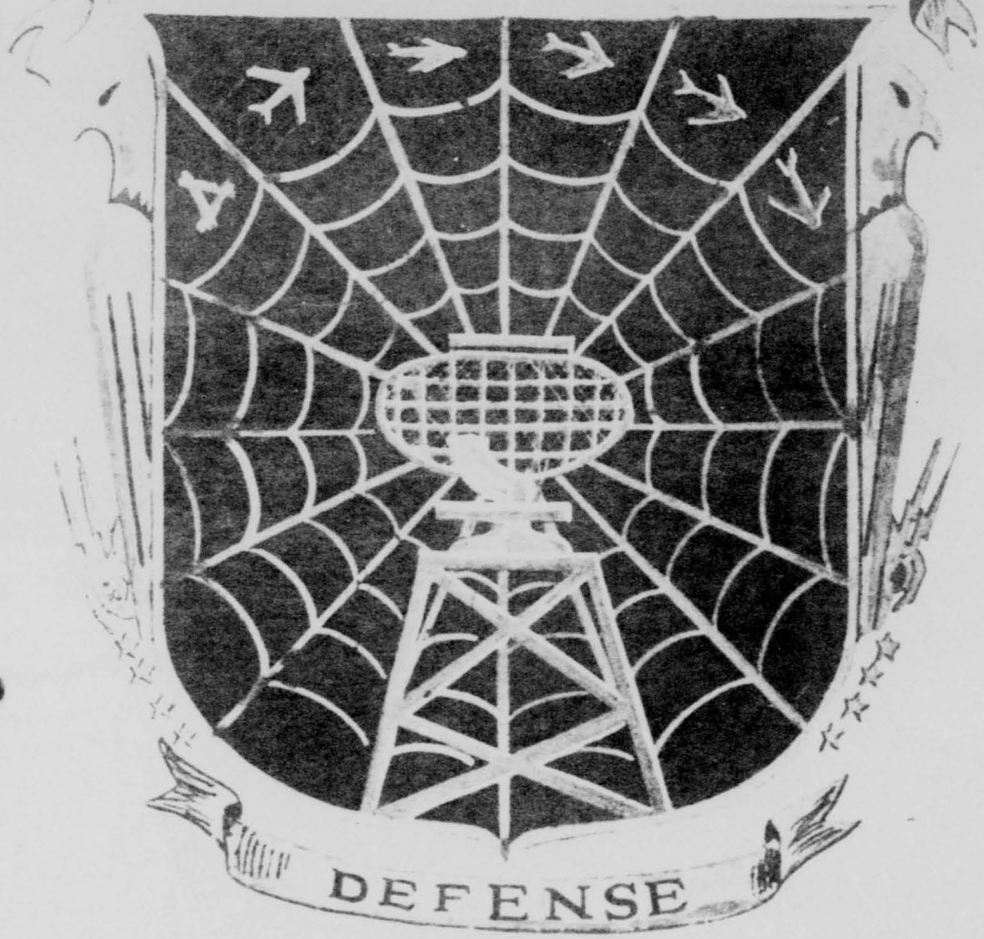
HISTORICAL REPORT
MEDICAL

DETECTARE ET DESPOLIARE

34th AIR DIVISION



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MEDICAL HISTORICAL REPORT

34TH AIR DIVISION (DEFENSE)

1 JANUARY 1953-30 JUNE 1953

(RCS:1-AF-D2)

Prepared for the Division Surgeon,
34th Air Division (Defense), by Captain
Donald T. Setterlund, USAF (MSC)
30 September 1953

(Central Air Defense Force, Air Defense Command)

CONTENTS

CHAPTER I

This narrative medical historical report is for the period of 1 January 1953 through 30 June 1953. This is a consolidated report covering the medical activities of the 767th, 768th and the 769th Aircraft Control and Warning Squadrons of the 34th Air Division (Defense), Kirtland Air Force Base, Albuquerque, New Mexico.

The health of these units of this division for the period reported has been excellent. This was brought about by the sincere effort on the part of the Division Surgeon, Captain Mark R. Neary, USAF (MC). He visited each outlying site twice monthly performing routine medical care and treatment, and he maintained constant contact with the outlying squadrons as to their daily rate of upper respiratory cases, such as common colds, sore throats, etc. The assignment of fully qualified medical technicians added greatly to the elimination and control of disease and of any possible epidemics.

The mission of the Medical Service of this division and of the medical section of the outlying sites is to render each man fully physically and mentally fit to perform his mission and assigned duties in the keenest interest of the defense of these United States. The medical support necessary for these units to accomplish this mission fully is found in the present organization of site dispensaries. This type of operation is very satisfactory and coupled with frequent and scheduled visits by the division surgeon provides site personnel, both Air Force personnel and their dependents, with excellent medical support.

The medical relationship between the division surgeon and the site medical technicians has been maintained at a very high level. Constant medical training has been given in the form of briefing and actual

demonstration to these technicians by the surgeon to insure full qualification in reference to their medical knowledge, duties and responsibilities. This personal instruction has proven to be of great value to instill more confidence in the technicians in the rendering of emergency and routine medical treatment in knowing what to do and when to do it.

Excellent relationship has been experienced between this section and that of the Medical Service of Kirtland Air Force Base. Extreme care has been taken to maintain perfect liaison and complete harmony to insure all of us full accomplishment of our missions. On several occasions, medical technicians have been loaned on a TDY basis by the local medical group to the different outlying squadrons to help out during a period of shortage of site medical service personnel. This medical support offered these units has been excellent.

CHAPTER II

The current organization of the medical section of the outlying squadrons is not complete enough to render full and efficient medical treatment. In case of the absence of 1 medical technician, for illness or leave, it would be impossible for the 1 remaining technician to pull full duty for any length of time. This division is not authorized any surplus pool of medical technicians to cover in these cases nor is it always possible to borrow medical technicians from the local medical group. A total of 3 medical technicians is needed to render complete medical coverage at each location. Past experience has shown that the assignment of veterinary technicians at these units is not practical nor recommended. The lack of medical knowledge and know how has proven a definite hinderance. Their display of knowledge can be exhibited only slightly at these locations as veterinary duties there are practically negative.

The overall function of the medical administrative procedure within this division has operated very smoothly. One difficulty has been the time lapse for correspondence, reports, etc., to reach the squadron or surgeon's office due to the slowness of the regular mail service. Short suspence dates hurries either party causing occasional errors which could have ordinarially been eliminated if only 1 more day could have been given on a suspence. Distance is one factor which should be taken into account when establishing medical administrative policy, procedure and directives. A definite problem has been the interpretation of Air Force Regulations (160 Series) in respect to there application to the operation of outlying site dispensaries. Our suggestion would be to consider the operation and function of Air

Division (Defense) site dispensaries when compiling and drafting Air Force Regulations (160 Series) or publish Air Force Regulations which pertain to this type operation to assist the medical administrators in the field.

Under the present authorized T/D for this section, it is felt that 1 dental officer, 9826, could be eliminated as 2 dental officers can effectively and effeciently perform all necessary dental car and treatment on the site personnel. One 60330, vehicle operator, should be added to the approved T/D in order to provide permanent assignment of a driver for the mobile dental van. Only 1 medical administrative man should be authorized, either a 90651 or 90670. That airman plus the medical services administrator, 9025, would provide ample manpower to handle all medical administrative functions. Kirtland AFB veterinary officer is the attending veterinarian for this division.

During this period reported approximately $4850.00 was spent for TDY travel under P478 funds. It has been the experience here that it is extreemely difficult to estimate anticipated P478 funds. Patient travel is very unpredictable. Staff visits and dental visits are routine and rather easy to budget for. F/Y 53 ended with only $8.50 remaining in P478 fund account. The control of P478 funds for this division was excellent for F/Y 53 and for the period covered by this report.

The medical equipment in service at all outlying site dispensaries is in excellent condition. The medical technician in charge of the site dispensary is responsibile for the proper repair and maintenance of all medical equipment. Most of the white enamel equipment has been replaced with stainless steel type which has added greatly to the general appearance and serviceability of this equipment. The medical support

rendered the AC&W squadrons has been superior. Kirtland AFB Medical Supply officer has provided all necessary medical supplies and equipment and he visits the sites quarterly to make inspection of all medical equipment and also to check to make sure that the sites lack nothing in the way of medical supplies and equipment to complete their mission of medical care and treatment. Exceptional liaison has been maintained between the division surgeon and the medical supply officer to insure ourselves of effective and ample medical support.

The method of evacuation of patients from the sites to the nearest civilian or military hospitals for medical treatment is by ambulance. Three new Dodge field type ambulances were assigned to this division recently so now the method of transportation can be considered to be adequate. Due to the type of terrain that these ambulances travel over, a comfortable ride is not afforded the patient. The maintenance on these ambulances is performed by the site motor pool or Kirtland AFB motor pool. The biggest problem has been the procurement of a replacement when the ambulance in in for 2d or 3rd echelon maintainence. However, Kirtland AFB infirmary has been able to loan the site a replacement until their ambulance is off deadline. The distance of travel for medical treatment from the sites is as follows: At the 767th AC&W squadron, Tierra Amerilla, New Mexico, the nearest civilian physician is Dr. E.K. Bryan, MD, at the Chama Valley Medical Center, Parkview, New Mexico, 15 miles from the site. The nearest civilian hospital is Espanola Hospital, Espanola, New Mexico, 90 miles from the site. The nearest civilian dentist is Dr. Huntington, DDS, Chama, New Mexico, 30 miles from the site. The nearest military hospital is Sandia Base Hospital, Sandia Base, Albuquerque, New Mexico, 190 miles from the site. At the 768th AC&W Squadron, Moriarity ,New Mexico,

the nearest civilian physician is Dr. Wiggins, Estancia, New Mexico, 32 miles from the site. The nearest hospital is the Sandia Base Hospital Sandia Base, Albuquerque, New Mexico, 50 miles from the site. The nearest dental treatment facility is the dental clinic located at Kirtland AFB, Albuquerque, New Mexico, 52 miles from the site. At the 769th AC&W Squadron, Continental Divide, New Mexico, the nearest civilian physician is Dr. C. F. Kettel, MD, Gallup, New Mexico, 30 miles from the site. The nearest civilian hospital is St. Mary's Hospital, Gallup, New Mexico, 30 miles from the site. The nearest military hospital is Sandia Base Hospital, Sandia Base, Albuquerque, New Mexico, 130 miles from the site. The nearest civilian dentist is Dr. Milan, Gallup, New Mexico, 30 miles from the site.

CHAPTER III

The turnover of medical service personnel with this division during this period has been in comparison with other sections fairly low. This has been the prime factor in rendering the excellent medical care and treatment by the medical technicians at the sites, and the suppression of any possible epidemics or diseases.

The present replacement program has been operating very effectively. There has been no extra delay in obtaining replacements and the replacements received thus far have been very adequately trained. The last two replacements were excellent airmen and medical technicians fully qualified to hold their respective AFSC's.

The rate of reenlistments for medical service personnel within this division has been negative. Those few airmen separated from the service have gone to other commands to reenlist. The biggest objection to this type of duty has been the isolation of these units. However, among the present assigned 9 medical technicians at the 3 sites, there is an average of 7½ years service in the medical corps per airman which adds up to a great deal of practical experience.

During the past 18 months only 2 medical technicians have attended any medical service school. We have received several medical technicians who have graduated from an independent aid duty school and these airmen have been very well trained and fully qualified to perform as such.

CHAPTER IV

Current Air Force Regulations concerning chlorination and Bacteriological examinations of the water supply has been in effect and has been followed very closely. Water samples were drawn twice weekly by each site and were submitted to the State Public Health Laboratory, University of New Mexico Campus, 305 Quivira, Albuquerque, New Mexico. The biggest problem for this required test has been the dilivery of these water samples due to the long distance between the outlying units and the State Laboratory. However, these tests have been completed faithfully in spite of the fact of the long distance involved in delivery of same. Empty water sample bottles for the required twice weekly bacteriological examinations have been delivered by the surgeon on his regular visits. Much emphasis has been placed on the proper and sterile technique of collection of these water samples by the site medical technicians to insure true and satisfactory findings by the State Laboratory.

The annual chemical analysis of the water supply completed on the 768th ACeW Squadron by the United States Geological Survey Laboratory at Albuquerque, New Mexico, showed a concentration on Nitrate Ion of 42 ppm. This amount of concentration was verified on a recent recheck. This condition has existed since the activiation of the installation. In surveying all available literature, it is apparent that with concentrations below 50-60 ppm of Nitrate Ion the water can be considered relatively harmless. However, it was deemed advisable to recommend procurement of bottled water from other sources for use by infants. It is felt that Nitrate Ion in water supplies would have no untoward effects in adults. The parents concerned at this site were notified of the water condition and private arrangements were made to obtain a satisfactory

water supply for the infants.

The food was nutritionally adequate at all outlying sites and the Master Menu was followed as closely as possible. All minor deficiencies noted during the sanitary inspections were discussed with the food services supervisor who made all necessary corrections immediately. Meals eaten were excellent in taste and preparation.

Garbage and trash disposal at the 769th ACW Squadron has been inadequate and uneconomical for the past 15 months. The method of disposal is hauling by truck to Gallup, New Mexico, 30 miles away. This hauling has been accomplished daily except Sunday at a terrific expense to the Air Force where the installation of an approved incinerator could have solved this expensive maneuver very easily. It has been impossible to arrange for a suitable contract for the removal of said garbage and trash.

The general physical condition of site personnel has been excellent. Training in personal hygiene has been accomplished periodically through lectures and training films. The laundry, dry cleaning and bathing facilities are considered adequate.

All personnel at the 3 outlying sites received influenza immunizations during January 1953 ad directed by the USAF Surgeon. There has been no unusual increase nor incidence of any communicable diseases during this report period.

The Preventive Medicine Team at present consists of the division surgeon, the medical administrative officer and the veterinary technician. This team has operated very effectively in reference to its function to the outlying units. Evidence of this has been seen in the low morbidity rate the low amount of outpatient treatments, and the elimination of any

possible epidemics. Only through an effective preventive medicine program can a unit successfully complete and carry out its mission.

During this period covered by this report 87 visits to the site dispensaries has been made by the Air Force dependents of personnel assigned to the different units. 87 treatments have been accomplished and all of these have been general medicine. The division surgeon has been seeing most of these dependents and during each visit to the squadrons time is set aside for seeing and treating dependents. When the surgeon feels that further treatment or examination is required he schedules these dependents for the family clinic at Kirtland AFB Infirmary where these same patients are further seen by the division surgeon who works on a regular schedule at Kirtland AFB Infirmary seeing 34th AD (D) dependents.

Medical treatment rendered at outlying AC&W Squadrons has consisted mostly of outpatient treatments. During the time reported on this report 1540 outpatients visits have been received by the 3 outlying units. Of this number Air Force Personnel have made 1453 visits and 87 have been on dependents. A total of 1686 treatments have been performed broken down into the following catagories: General Medicine 1345, Dermatology 53, General Surgery 13, Surgical Dressing Room 188, Ophthalmology 33, ENT 47, and Physiotheraphy 20. 566 immunizations have been given this period. One difficulty in reference to outpatient treatments has been the proper and correct recording of each treatment given. It is so easy to render medical treatment without properly recording same in order to keep an accurate and honest record of total treatments given.

The division surgeon on his twice monthly visits to these units sees

many cases being treated on an outpatient status. The site dispensaries and medical technicians are very limited as to the extent medical care and treatment can be rendered.

CHAPTER V

The dental health of this command has been maintained at a very high standard due to the sincere effort of the assigned dental officers and technicians. At present there are 2 dental officers assigned and 2 dental technicians. The mobile dental van added completeness to the dental service. The dental van is a wonderful piece of equipment and it has aided the dental officers to increase the dental service now by approximately 25%. Present plans call for the mobile dental team to perform dental treatment monthly at 1 squadron. This way enables each site to have dental service once every 3 months or 4 months out of each year. The mobile dental van was displayed and demonstrated at the New Mexico State Dental Association Convention held at the Hilton Hotel, Albuquerque, New Mexico, 24-27 May 1953.

While visiting the 769th AC&W Squadron for the performance of dental treatment, occasionally time is alloted for treatment on Fort Wingate, New Mexico, U S Army Personnel. This coordinated activity with an other service has added many benefits to this unit plus the fact these people are afforded an opportunity for this excellent dental service.

CHAPTER VI

The veterinary service rendered this division is accomplished by Kirtland AFB Veterinary Officer, Lt Col William Lukens, USAF (VC). He is the attending veterinarian to this command and his services are utilized in a staff or advisory basis. A 90850 is presently assigned to this section and his duties fall under the supervision of the attending veterinarian. He occasionally accompanies the division surgeon on his site visits and performs whatever veterinary duties are present at the site.

CHAPTER VII

In summarizing the overall evaluation of the medical service program in reference to air defense, nothing can be placed ahead of this service and the preventive medicine program as far as importance is concerned. Our air defense can be only as strong as the health of the command is concerned. Our best defense is good health.