

**COPY 1,**

**Report No. FAA-NA-75-161**

FAA WJH Technical Center



00090585

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# **TERMINAL FACILITY CONFIGURATION AND DATA SURVEY**

## **ST. LOUIS TOWER/TRACON**



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**U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
National Aviation Facilities Experimental Center  
Atlantic City, New Jersey 08405**



**LAMBERT-ST. LOUIS INTERNATIONAL**

## PREFACE

This document is published by the National Aviation Facilities Experimental Center, Atlantic City, New Jersey, in response to a requirement from Systems Research and Development Service to provide basic data to the sustaining engineering program. It is intended only as a reference source, containing operational information, equipment content, layout, and physical design characteristics of major terminal facilities. It will be published as a series of facility supplements which will be updated as required during March of each year as long as the information is required for system planners. Changes to the reported conditions, of a nature believed to warrant an errata page, are to be forwarded to NAFEC, attention ANA-210, annually during the month of January. Suggestions on content, involving modification, revisions and/or additions, are also encouraged at that time.

Subprogram Manager.....K. Cohen, ARD-120  
SRDS, Washington, D. C.

Program Area Agreement (PAA) Manager.. F. Hierbaum, ANA-210  
NAFEC, Atlantic City, N. J.

Activity Leader.....D. Martin, ANA-210  
NAFEC, Atlantic City, N. J.

Prepared by.....J. Hartnett, ANA-210  
NAFEC, Atlantic City, N. J.

1. NAME OF FACILITY: ST. LOUIS
2. TYPE FACILITY: FAA TOWER/TRACON
3. GEOGRAPHIC LOCATION: ST. LOUIS COUNTY, MO.
4. MAILING ADDRESS/FACILITY OFFICERS:  
AIRPORT TRAFFIC CONTROL TOWER  
10805 NATURAL BRIDGE ROAD  
HAZELWOOD, MO. 63044  
PHONE: (FTS) 8-314-256-0335  
  
CHIEF: DON D. EARLY  
DEPUTY: RICHARD W. BARKER  
OPERATIONS OFFICER: IVAN R. HUNT
5. TYPE OF TOWER CAB:
  - a. PEI C-1
  - b. BASE IS UNORTHODOX
  - c. HEIGHT IS 133 FT.
6. DISTANCE BETWEEN TRACON AND PRIMARY TOWER CAB:  
133 FT.
7.
  - a. TYPE OF RADAR(S): ASR-6
  - b. ANTENNA LOCATION(S): ON AIRPORT, 1/2 MILE SOUTH  
OF RUNWAYS
  - c. TYPE OF RADAR BEACON INTERROGATOR: ATCBI-3
8. NUMBER OF DISPLAYS:
  - a. TRACON/RAPCON: 4 VERTICAL (ARTS TYPE-1),  
2 HORIZONTAL (ARTS TYPE-2)
  - b. MAINTENANCE ROOM: ONE VERTICAL
9. NUMBER AND TYPE OF BRITE SYSTEM(S): ONE BRITE I SYSTEM  
NUMBER AND TYPE OF DISPLAY(S): ONE BRITE I AND ONE BRITE II
10. ALPHA/NUMERIC CAPABILITY ON BRITE DISPLAY(S): YES
11. TYPE OF RADAR SERVICE PROVIDED: TCA

12. LIST OF AUTHORIZED POSITIONS OF OPERATION:

TOWER: FLIGHT DATA (FD)  
CLEARANCE DELIVERY (CD)  
GROUND CONTROL-1 (GC-1)  
GROUND CONTROL-2 (GC-2)  
LOCAL CONTROL-1 (LC-1)  
LOCAL CONTROL-2 (LC-2)  
CAB COORDINATOR (CC)  
FDEP (FDEP)

TRACON: DEPARTURE RADAR-1 (DR-1)  
DEPARTURE RADAR-1 HAND-OFF (DR-1 HO)  
DEPARTURE RADAR-2 (DR-2)  
DEPARTURE RADAR-2 HAND-OFF (DR-2 HO)  
ARRIVAL RADAR-1 (AR-1)  
ARRIVAL RADAR-1 HAND-OFF (AR-1 HO)  
ARRIVAL RADAR-2 (AR-2)  
ARRIVAL RADAR-2 HAND-OFF (AR-2 HO)  
SATELLITE-1 (SAT-1)  
SATELLITE-1 HAND-OFF (SAT-1 HO)  
SATELLITE-2 (SAT-2)  
SATELLITE-2 HAND-OFF (SAT-2 HO)  
OUTER ARRIVAL RADAR-1 (OAR-1)  
OUTER ARRIVAL RADAR-1 HAND-OFF (OAR-1 HO)  
OUTER ARRIVAL RADAR-2 (OAR-2)  
OUTER ARRIVAL RADAR-2 HAND-OFF (OAR-2 HO)  
COORDINATOR (CI)  
TERMINAL CONTROL AREA-1 (TCA-1)  
TERMINAL CONTROL AREA-1 HAND-OFF (TCA-1 HO)  
TERMINAL CONTROL AREA-2 (TCA-2)  
TERMINAL CONTROL AREA-2 HAND-OFF (TCA-2 HO)  
SUPERVISOR (SI)  
AIRPORT SURVEILLANCE RADAR (ASR)

13. NORMAL STAFFING BY SHIFTS:

08 - 16 TOWER: CD, GC-1, LC-1, LC-2, CC  
TRACON: TCA-1, TCA-2, DR-1, DR-1 HO, DR-2, DR-2 HO,  
AR-1, AR-2, CI, SI

16 - 24 TOWER: SAME  
TRACON: SAME

00 - 08 TOWER: GC-1, LC-1  
TRACON: DR-1, SI

14. CONSOLIDATION OF POSITION PROCEDURE:

COORDINATOR CAB TO CLEARANCE DELIVERY  
GROUND CONTROL TO LOCAL CONTROL-1  
COORDINATOR IFR ROOM TO SUPERVISOR IFR ROOM  
RADARS TO DEPARTURE RADAR-1

15. SATELLITE AIRPORTS (APPROACH CONTROL AND/OR RADAR SERVICES PROVIDED):

JERSEYVILLE AIRPORT - 21.5 nm N - NO TOWER  
COLUMBIA AIRPORT - 18.5 nm SE - NO TOWER  
FESTUS AIRPORT - 32.5 nm S - NO TOWER  
WEISS AIRPORT - 13 nm SSW - NO TOWER  
ARROWHEAD AIRPORT - 7.5 nm SW - NO TOWER  
CREVE COEUR AIRPORT - 6.5 nm SW - NO TOWER  
WENTZ VILLE AIRPORT - 22 nm W - NO TOWER  
ST. CHARLES AIRPORT - 9 nm NW - NO TOWER  
CIVIC MEMORIAL AIRPORT - 18.5 nm NE - FAA TOWER  
SCOTT AFB - 27 nm ESE - USAF TOWER  
SPIRIT OF ST. LOUIS AIRPORT - 14 nm SW - AF TOWER  
ST. CHARLES (SMARTT) AIRPORT - 11.5 nm NNW - (AF ON SATURDAY AND SUNDAY ONLY)

16. NUMBER OF ARTS KEYPACKS (LOCATIONS):

- a. TOWER: ONE LOCATED AT FD
- b. TRACON/RAPCON: 12 LOCATED AT DR-1 HO, DR-1, TCA-2, OAR-1, OAR-2, AR-1 HO, AR-2, AR-2 HO
- c. MAINTENANCE: ONE IN MAINTENANCE ROOM

17. AIR/GROUND FREQUENCIES BY POSITION (MHz):

TOWER: CD 119.5, 121.9, 118.5, 121.65, 363.1, 348.6, 257.7, 306.2  
GC-1 & 121.9, 121.65, 119.5, 118.5, 348.6, 306.2,  
GC-2 121.5, 257.7  
LC-1 & 121.5, 243.0, 123.7, 379.1, 335.5, 289.1, 360.6,  
LC-2 324.1, 121.9, 348.6, 121.65, 306.2, 118.5, 257.7, 120.5, 284.6

TCA-1	121.5, 243.0, 119.75, 118.95, 126.7, 254.3,
TCA-2	124.2, 388.0, 119.9, 335.5, 124.9, 289.1,
DR-2	125.15, 360.6, 126.5, 324.1
DR-1	121.5, 243.0, 118.95, 379.1, 126.7, 254.3, 124.2, 388.0, 119.9, 335.5, 124.9, 289.1, 125.15, 360.6, 126.5, 324.1
AR-1 & AR-2	121.5, 126.7, 119.9, 125.15, 243.0, 254.3, 335.5, 360.6, 119.75, 124.2, 124.9, 126.5, 118.95, 388.0, 289.1, 324.1
SAT-1	379.1, 126.7, 119.9, 126.15, 123.7, 254.3, 335.5, 360.6, 119.75, 124.2, 124.9, 126.5, 118.95, 388.0, 289.1, 324.1
SAT-2	121.5, 243.0, 123.7, 119.9, 125.15, 379.1, 335.5, 360.6, 123.7, 124.2, 124.9, 126.5, 118.95, 388.0, 289.1, 324.1

18. FLIGHT DATA HANDLING ACTIVITY PECULIAR TO THE FACILITY:

BRITE II DISPLAY USED AS ARTS PREVIEW AREA

19. TRAFFIC COUNT FOR A REPRESENTATIVE BUSY DAY: 3/19/75

	<u>AC</u>	<u>AT</u>	<u>GA</u>	<u>MIL</u>	<u>TOTAL</u>
00 - 08	42	30	27	1	100
08 - 16	240	25	311	46	622
16 - 24	<u>216</u>	<u>45</u>	<u>275</u>	<u>37</u>	<u>573</u>
	498	100	613	84	1295

20. FUTURE PLANNING:

PLANNED EXPANSION OF TRACON FOR JULY 1976: THE TRACON WILL BE EXPANDED FROM ITS PRESENT CONFIGURATION OF FOUR VERTICAL AND TWO HORIZONTAL

DISPLAYS TO A NINE VERTICAL CONFIGURATION. THE OPERATING QUARTERS WILL BE ENLARGED FROM ITS PRESENT SIZE TO INCLUDE TWO ADJACENT STORAGE ROOMS TO ALLOW FOR THE EXPANSION.

21. FDEP EQUIPMENT:  
THE FACILITY USES TWO FDEP'S. ONE IN THE TOWER IS USED FOR DEPARTURE INFORMATION. THE STRIP IS THEN DROPPED TO THE TRACON VIA A TUBE. THE FDEP IN THE TRACON IS USED FOR ARRIVAL INFORMATION FOR TRAFFIC TO LAMBERT FIELD AND FOR DEPARTURES AND ARRIVALS TO THE SATELLITES AND FOR OVERFLIGHTS.
22. TOWER EN ROUTE AGREEMENTS:  
SCOTT AFB, BELLVILLE, ILL.
23. ASSOCIATED FSS(S):  
ST. LOUIS FSS
24. RADAR DATA PROCESSING WITH ADJACENT FACILITY(S):  
KANSAS CITY CENTER
25. WEATHER DATA POSTED WITHIN FACILITY (SOURCE AND HOW RECEIVED):  
LAMBERT FIELD VIA ELECTROWRITER FROM NATIONAL WEATHER SERVICE  
CIVIC MEMORIAL AND SPIRIT OF ST. LOUIS AIRPORTS VIA TELEPHONE
26. RVR'S (RVV'S):  
TOUCHDOWN RVR'S ON RUNWAYS 12R AND 24. ONE DISPLAY IN TOWER, FOUR DISPLAYS IN TRACON.
27. ASDE AND TYPE OF DISPLAY:  
FACILITY DOES NOT HAVE ASDE
28. ARTS III COMPUTER:
  - a. CAPACITY (NO. OF K): 32K
  - b. NO. OF INPUT/OUTPUT CHANNELS: 13 CHANNELS
  - c. IS THIS FACILITY AN ASSEMBLY SITE: NO

29. ACCESS TO CAB FOR MOVEMENT OF EQUIPMENT:  
TRAPDOOR AND WINCH THROUGH ELEVATOR SHAFT.



STL

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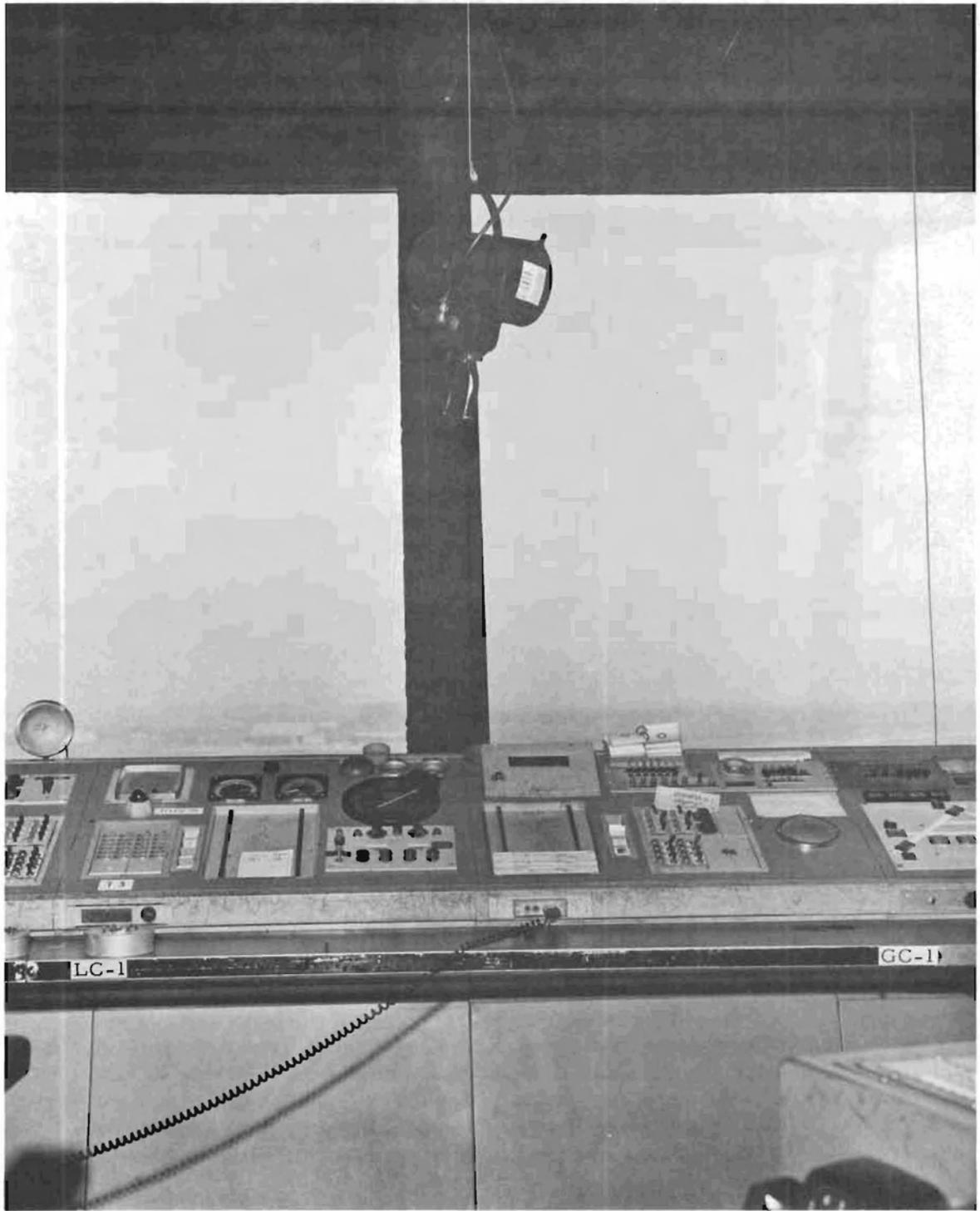
STL TOWER-1



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STL TOWER-2



STL

4/75

STL TOWER-3



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4/75

STL TOWER-4



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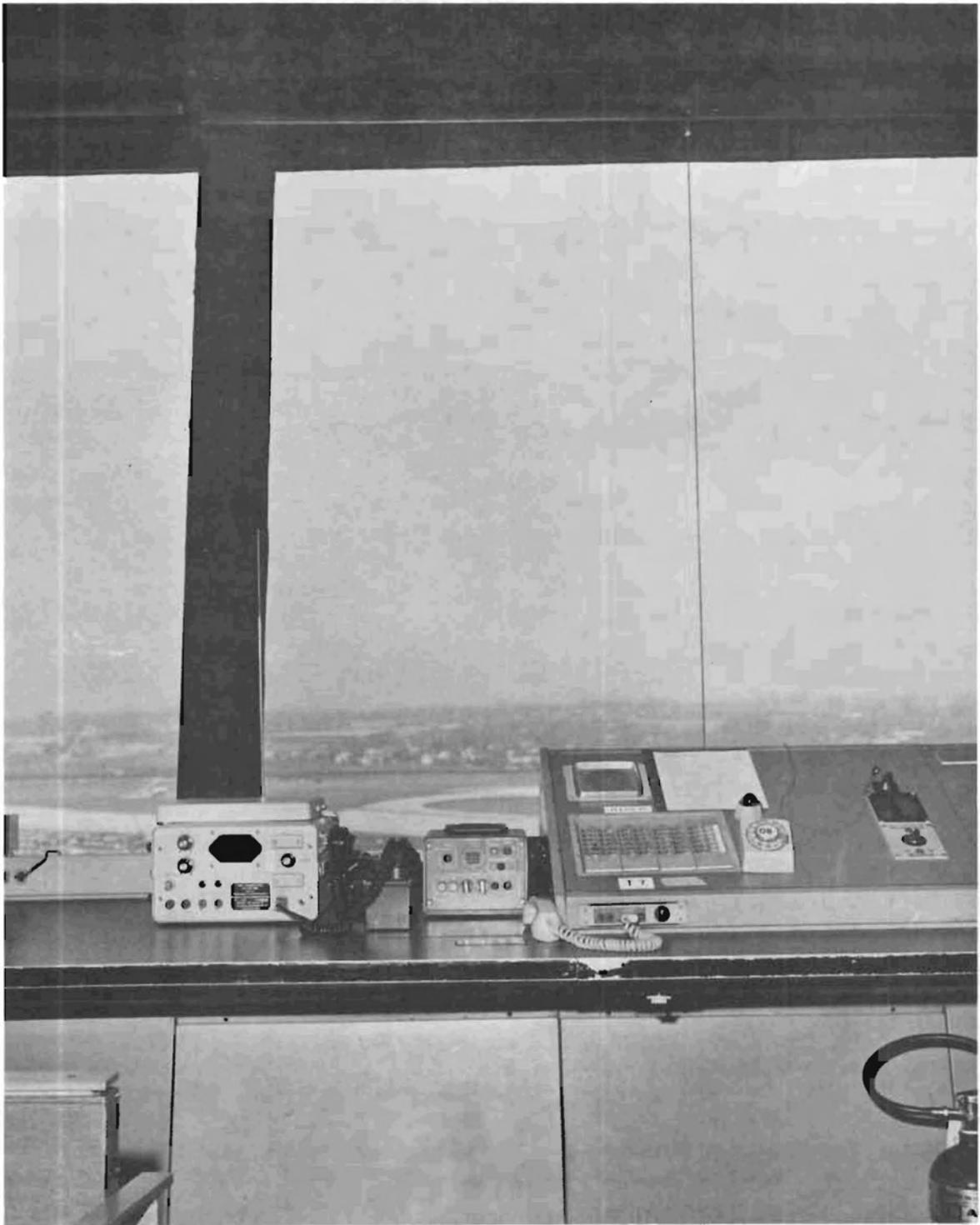
STL TOWER-5



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STL TOWER-6



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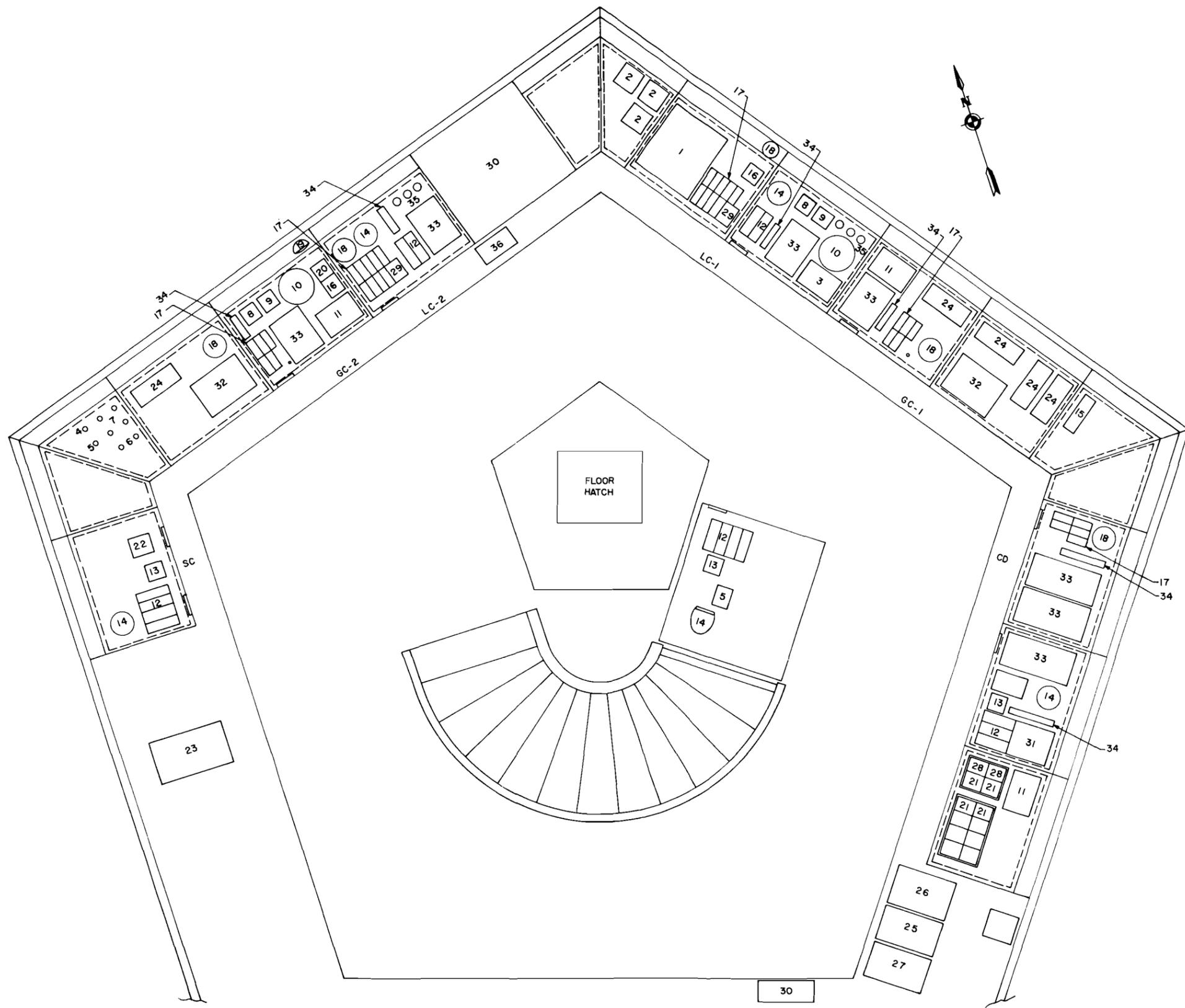
STL TOWER-7



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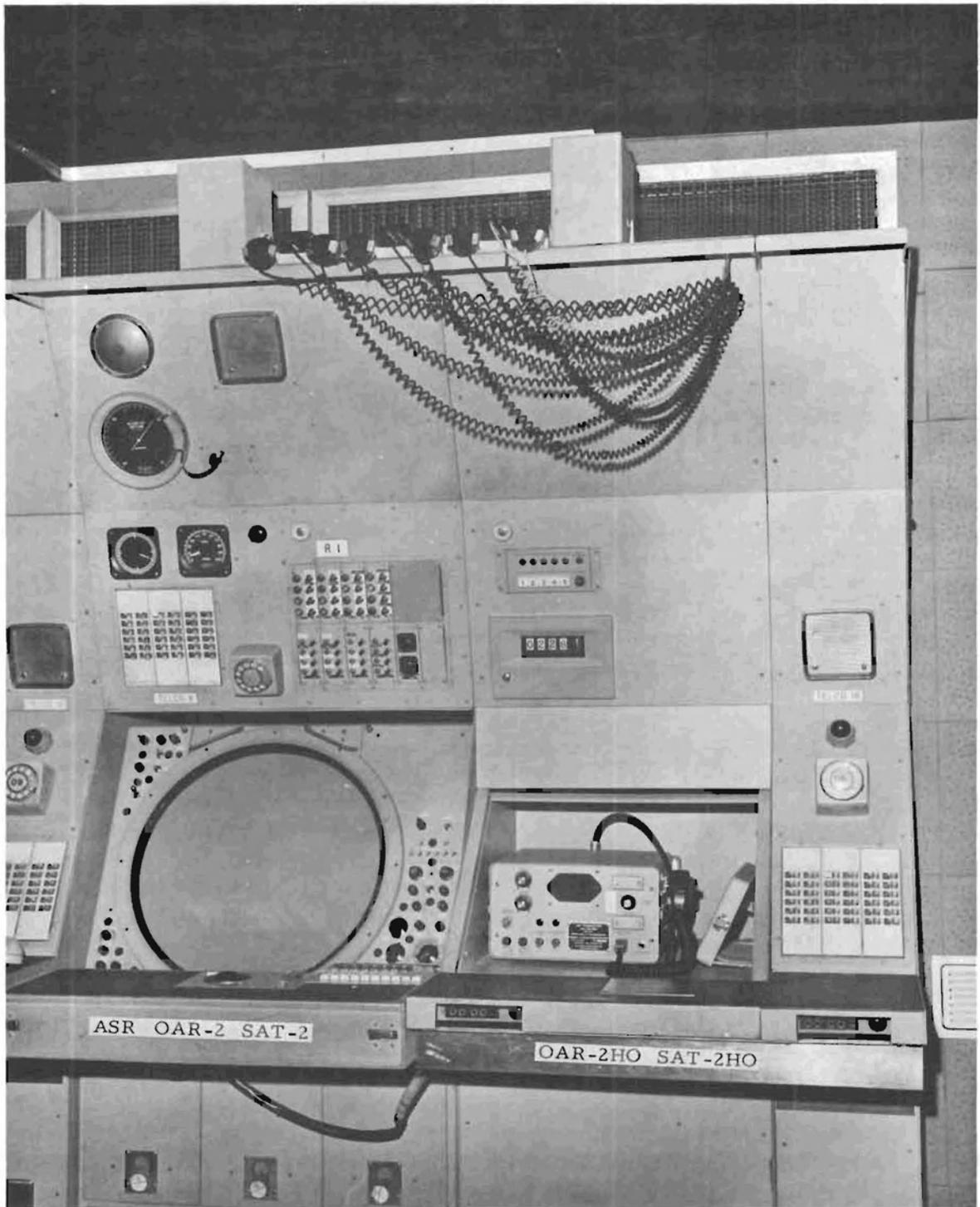
STL TOWER-8



1. FIELD LIGHTING PANEL
2. ALS CONTROL
3. RUNWAY VISUAL RANGE (RVR)
4. FLOOR LIGHT CONTROL
5. DOOR RELEASE
6. CHAIN HOIST CONTROL
7. CAB EMERGENCY VENTILATION
8. WIND DIRECTION INDICATOR
9. WIND VELOCITY INDICATOR
10. ALTIMETER
11. CLOCK
12. TELCO 301 KEY EQUIPMENT
13. TELCO DIAL
14. TELCO SPEAKER
15. EMERGENCY TELEPHONE
16. CRASH ALARM PANEL
17. FREQUENCY SELECTOR PANEL AND VOLUME CONTROL
18. FAA SPEAKER
19. SPEAKER W/4 CHANNEL VOLUME CONTROL
20. RECEIVER MUTING PANEL
21. STANDBY TRANSMITTER AND RECEIVER
22. POSITION MONITOR
23. EMERGENCY VHF TRANSCEIVER
24. ILS MONITOR EQUIPMENT
25. FDEP PRINTER
26. FDEP KEYBOARD
27. ELECTROWRITER
28. ATIS REMOTE UNIT
29. COORDINATION LIGHT PANEL
30. BRITE DISPLAY (BRITE CONTROL HEAD AND MAPPER CONTROL HEAD ARE LEFT FLOATING DUE TO SPACE)
31. ARTS INPUT KEYBOARD
32. MCDONNELL AIRCRAFT ARRESTING GEAR PANEL
33. FLIGHT PROGRESS BOARD
34. STRIP STORAGE
35. STRIP CHUTES
36. PODIUM WITH LIGHT-MOVABLE

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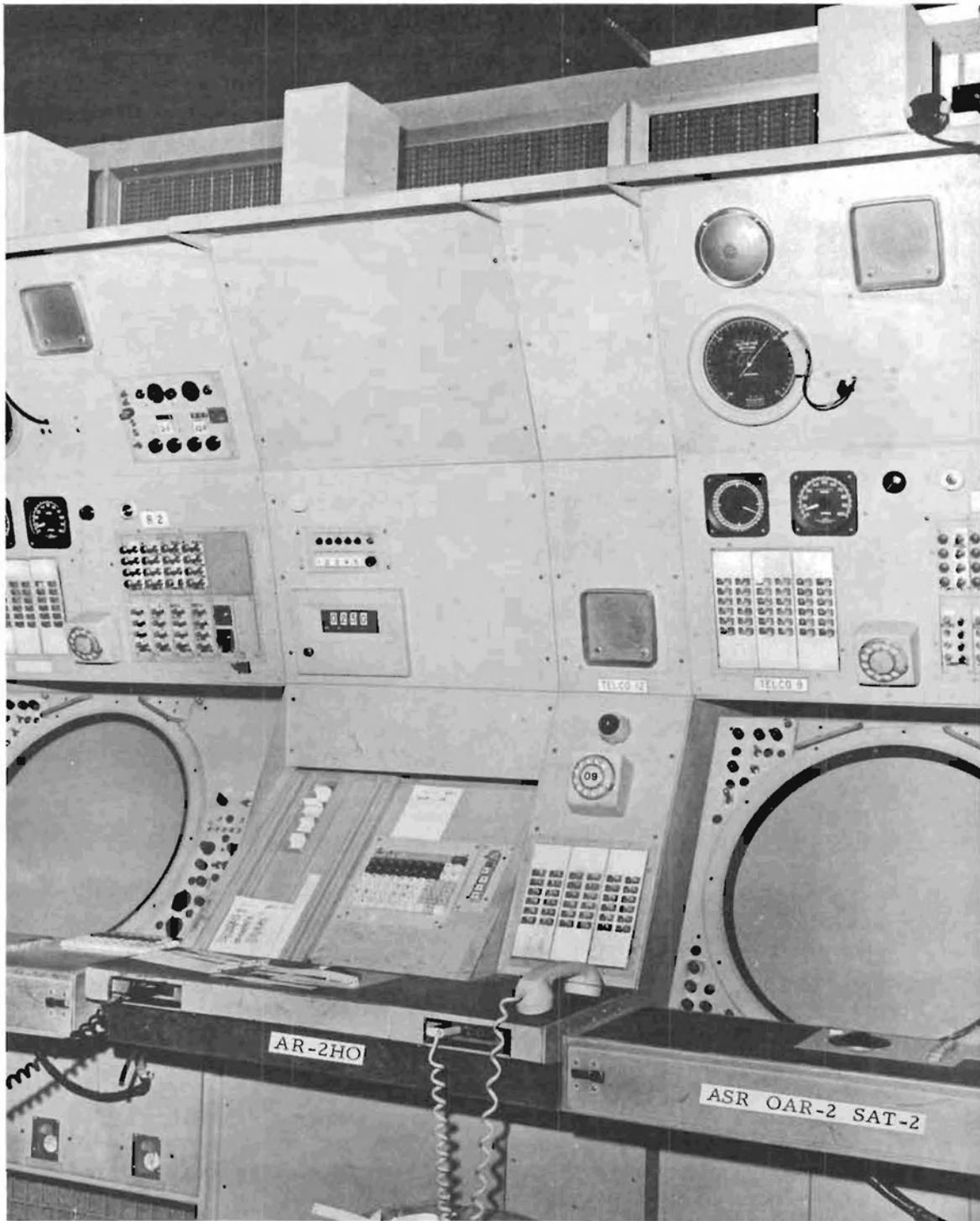
STL TOWER-9



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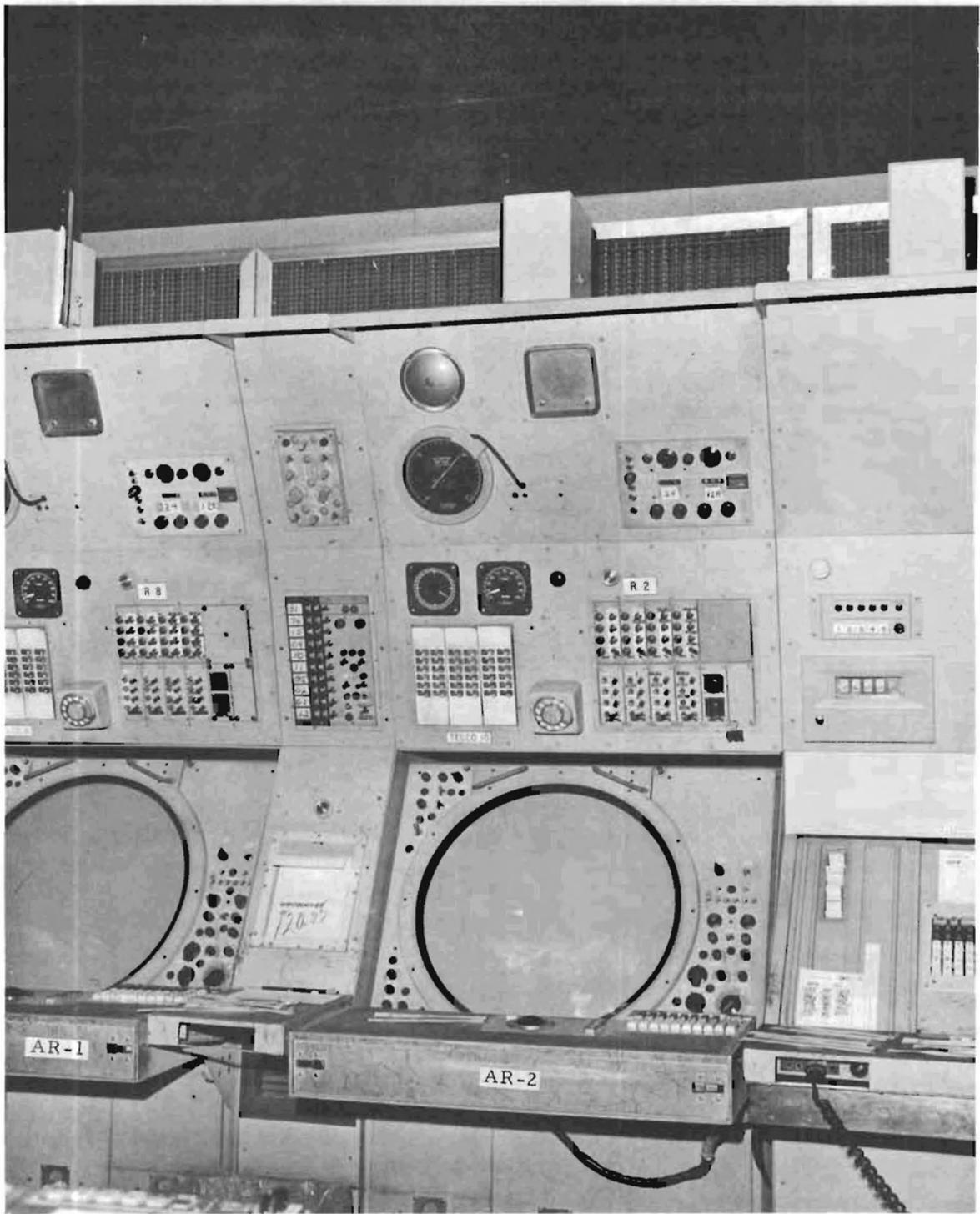
STL TRACON-1



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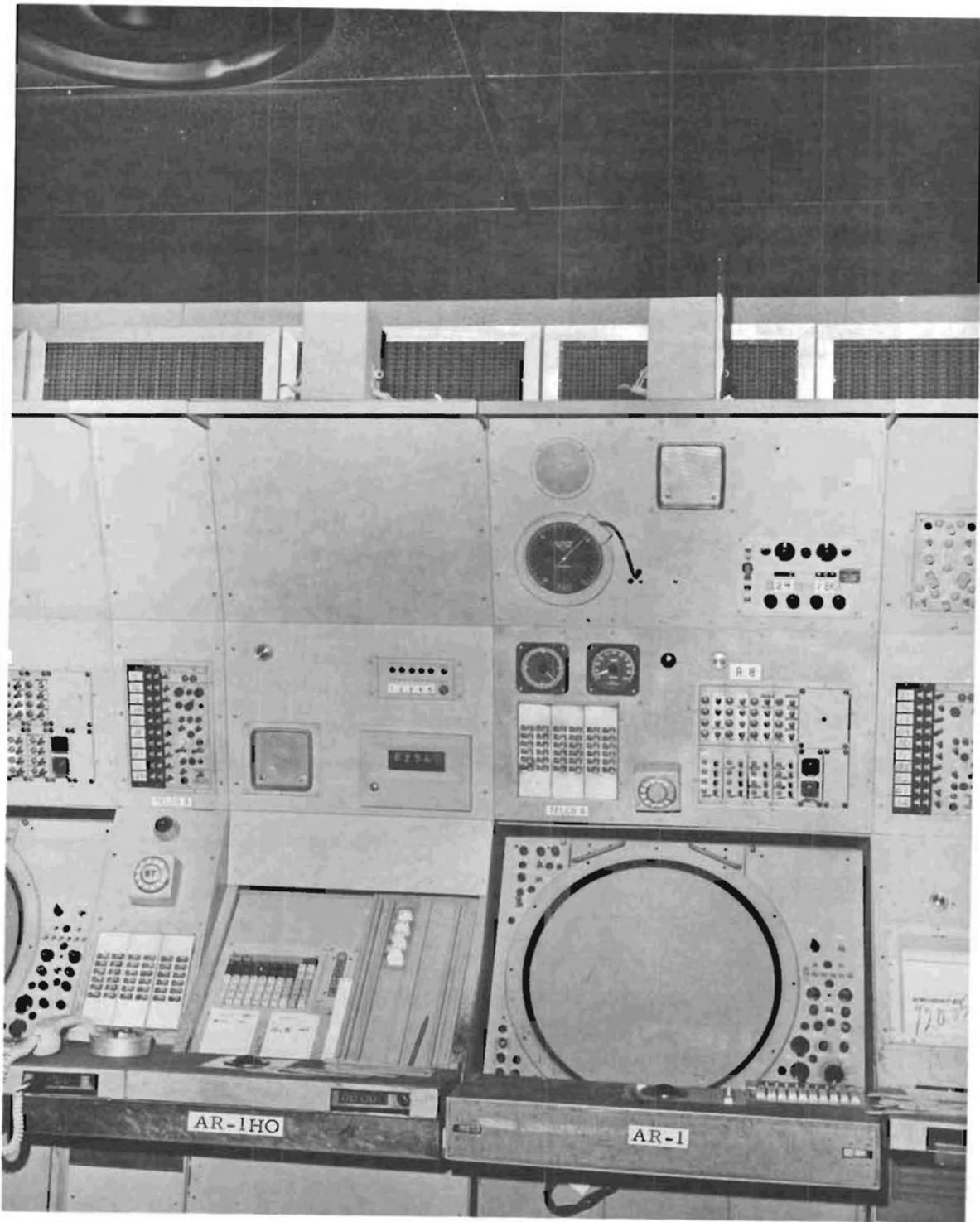
STL TRACON-2



STL

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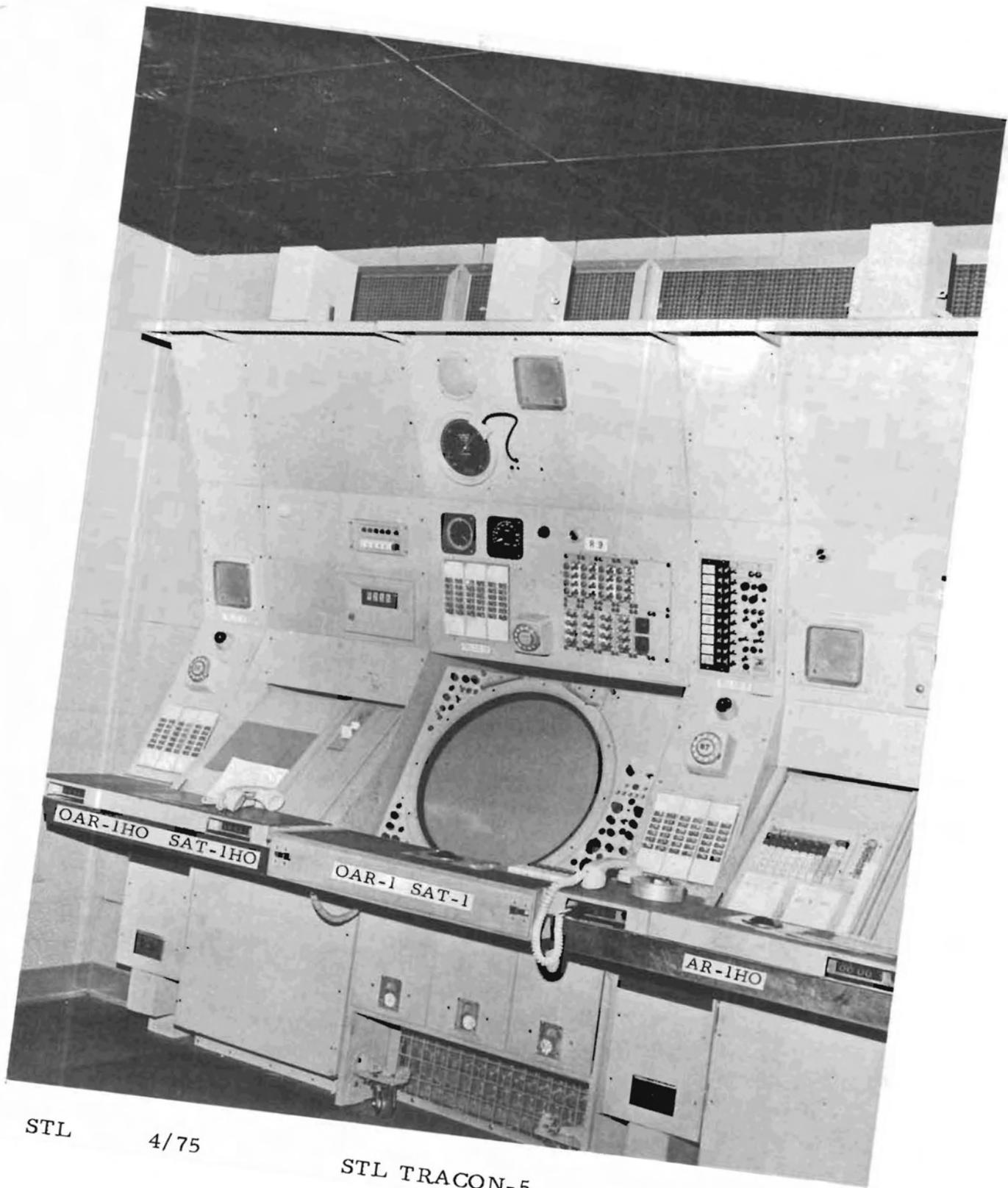
STL TRACON-3



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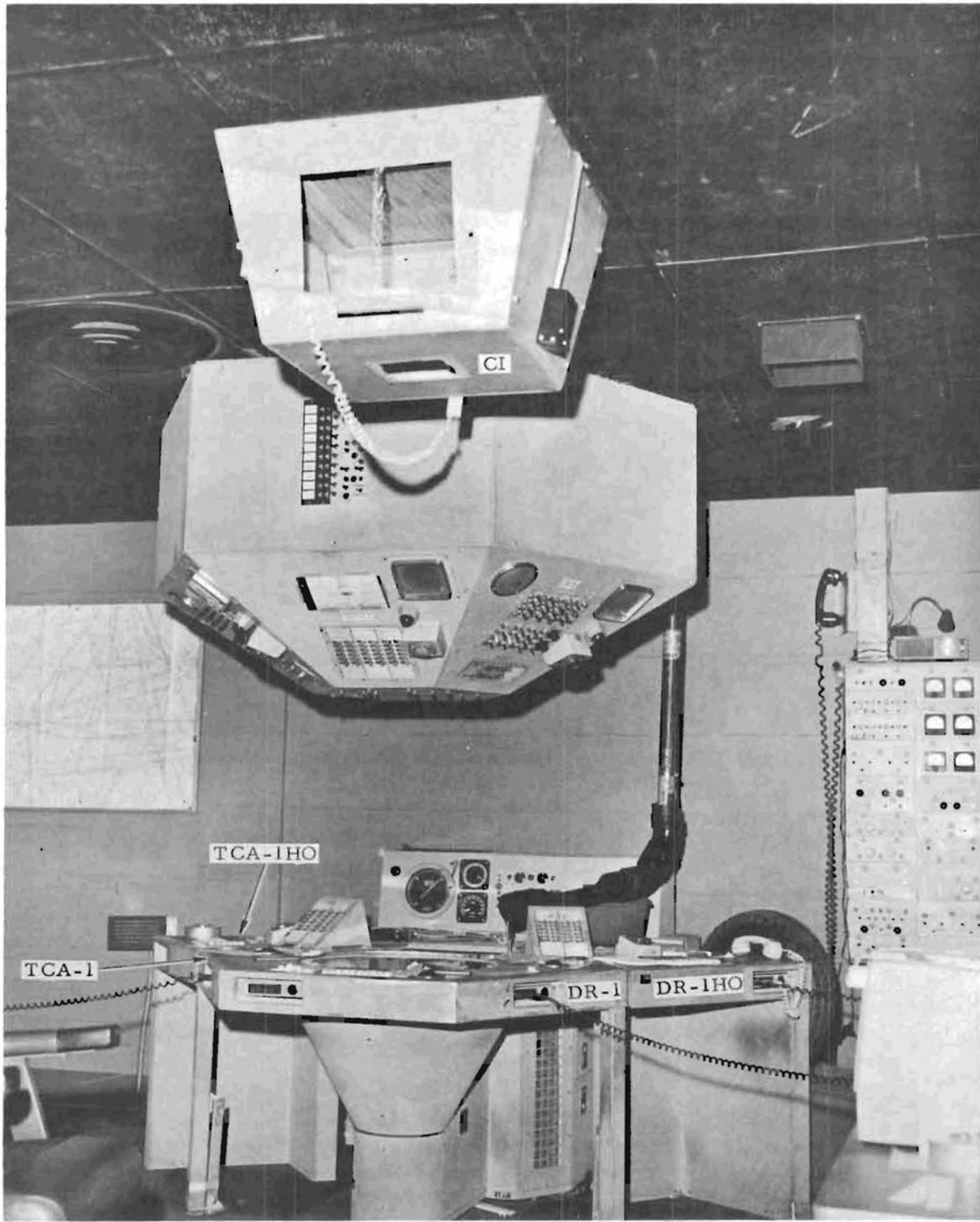
STL TRACON-4



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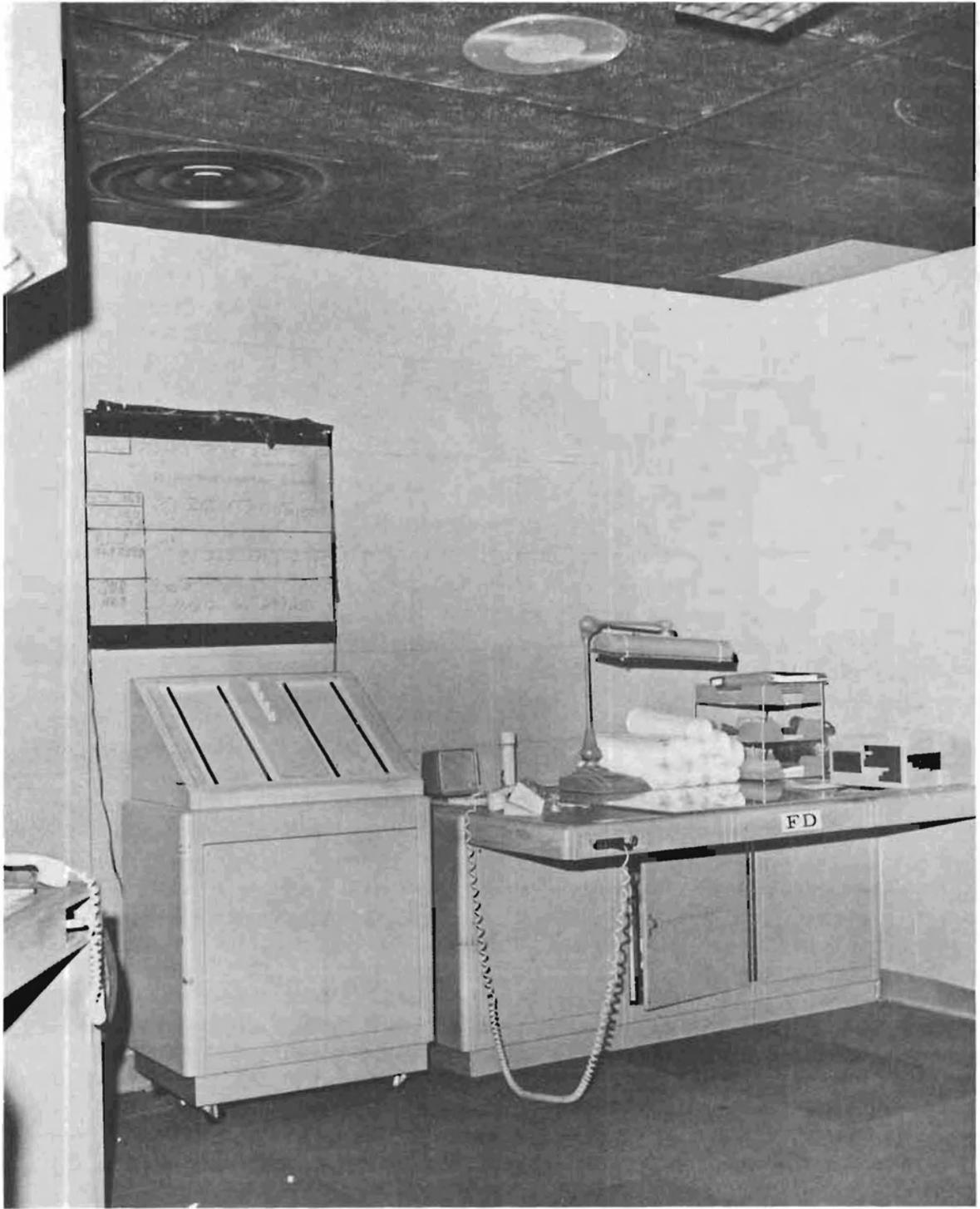
STL TRACON-5



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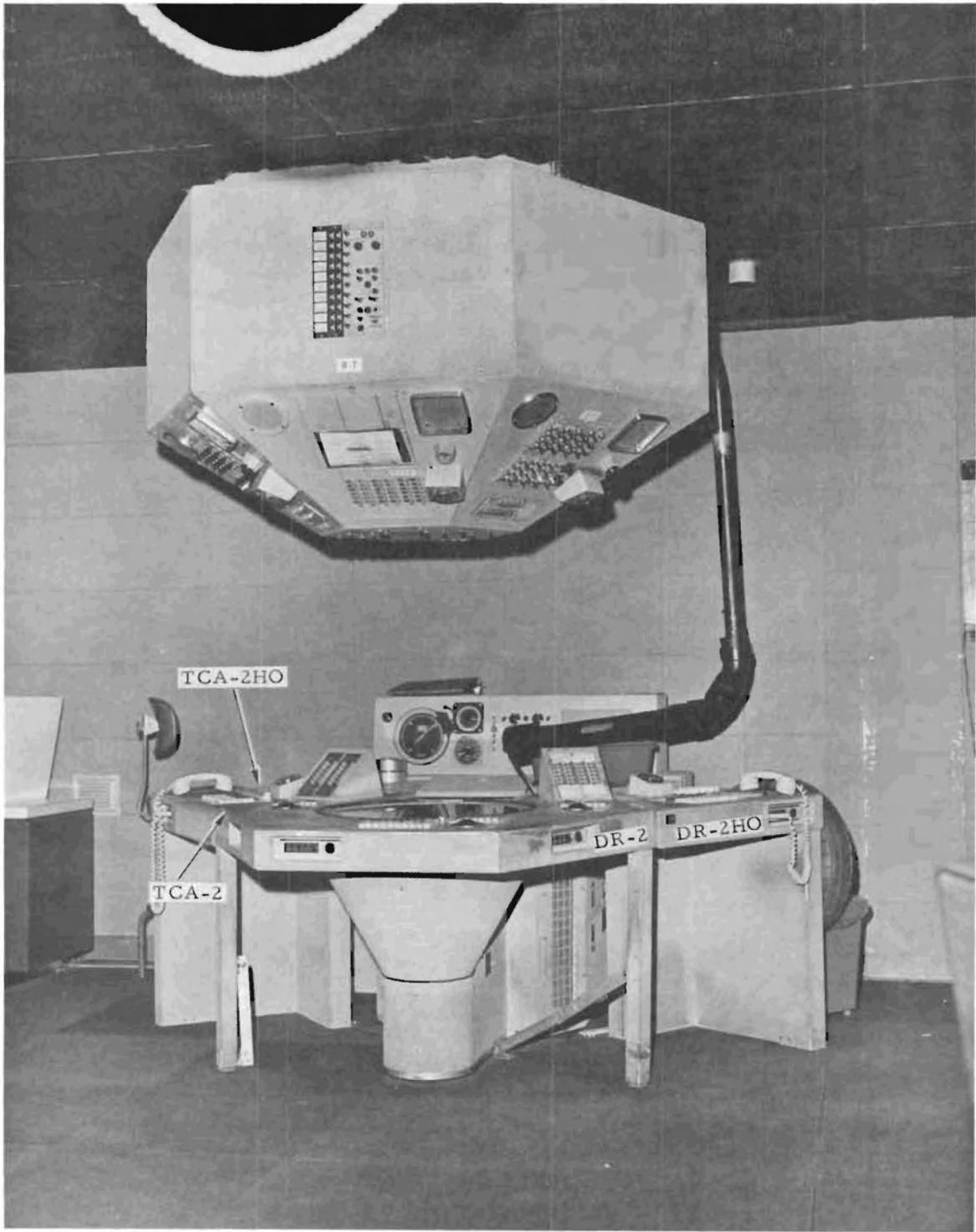
STL TRACON-6



STL

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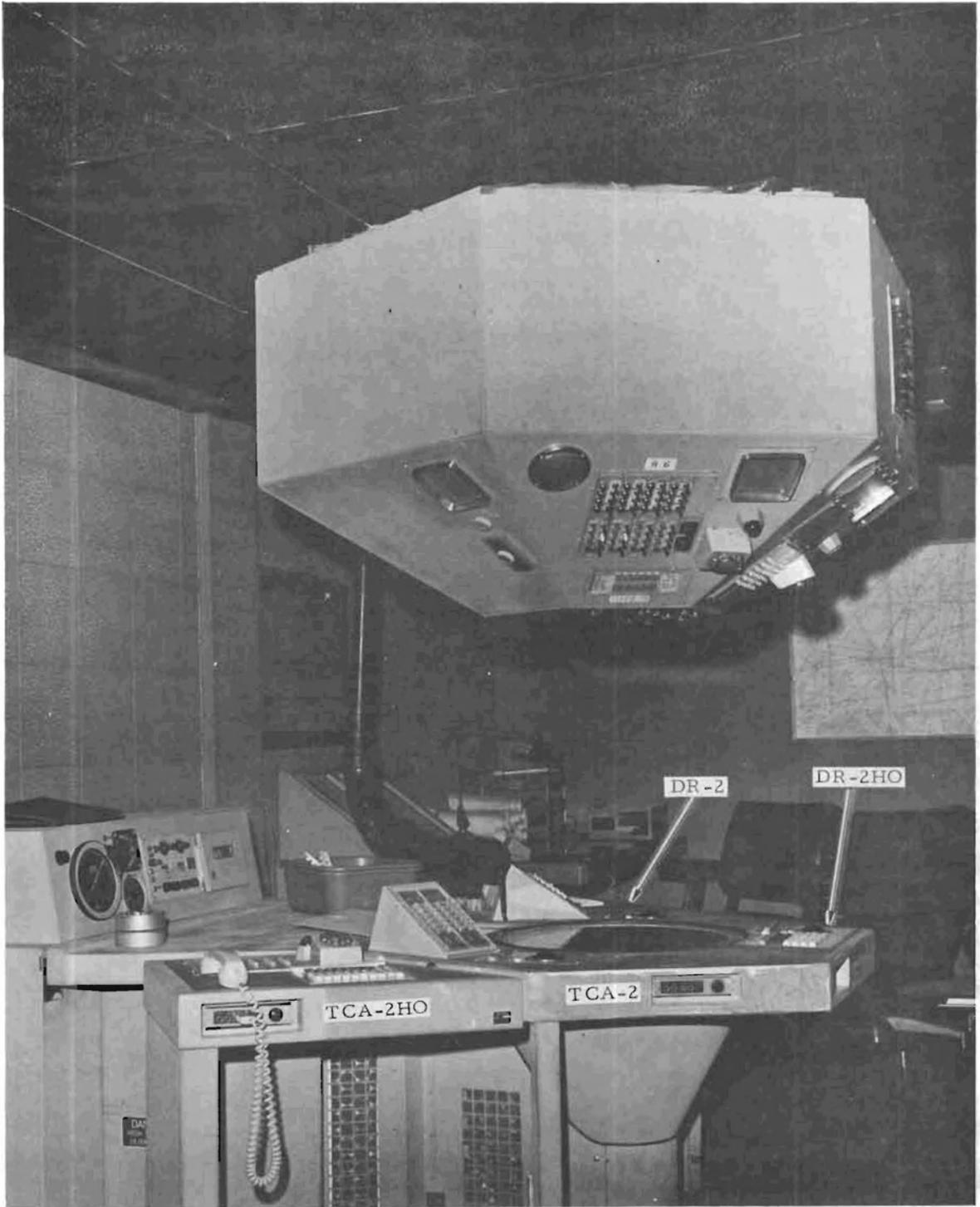
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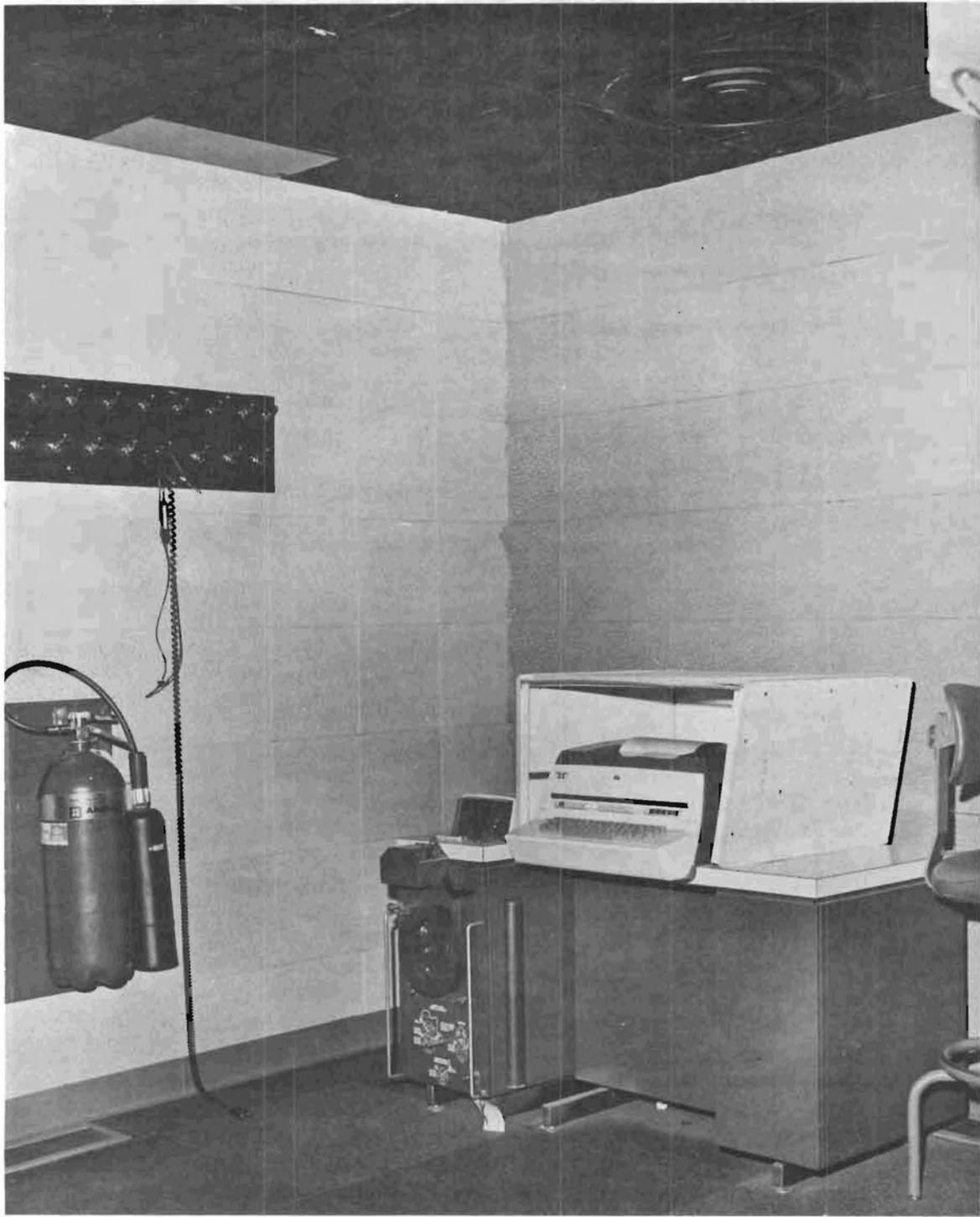
STL TRACON-8



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STL TRACON-9



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STL TRACON-10



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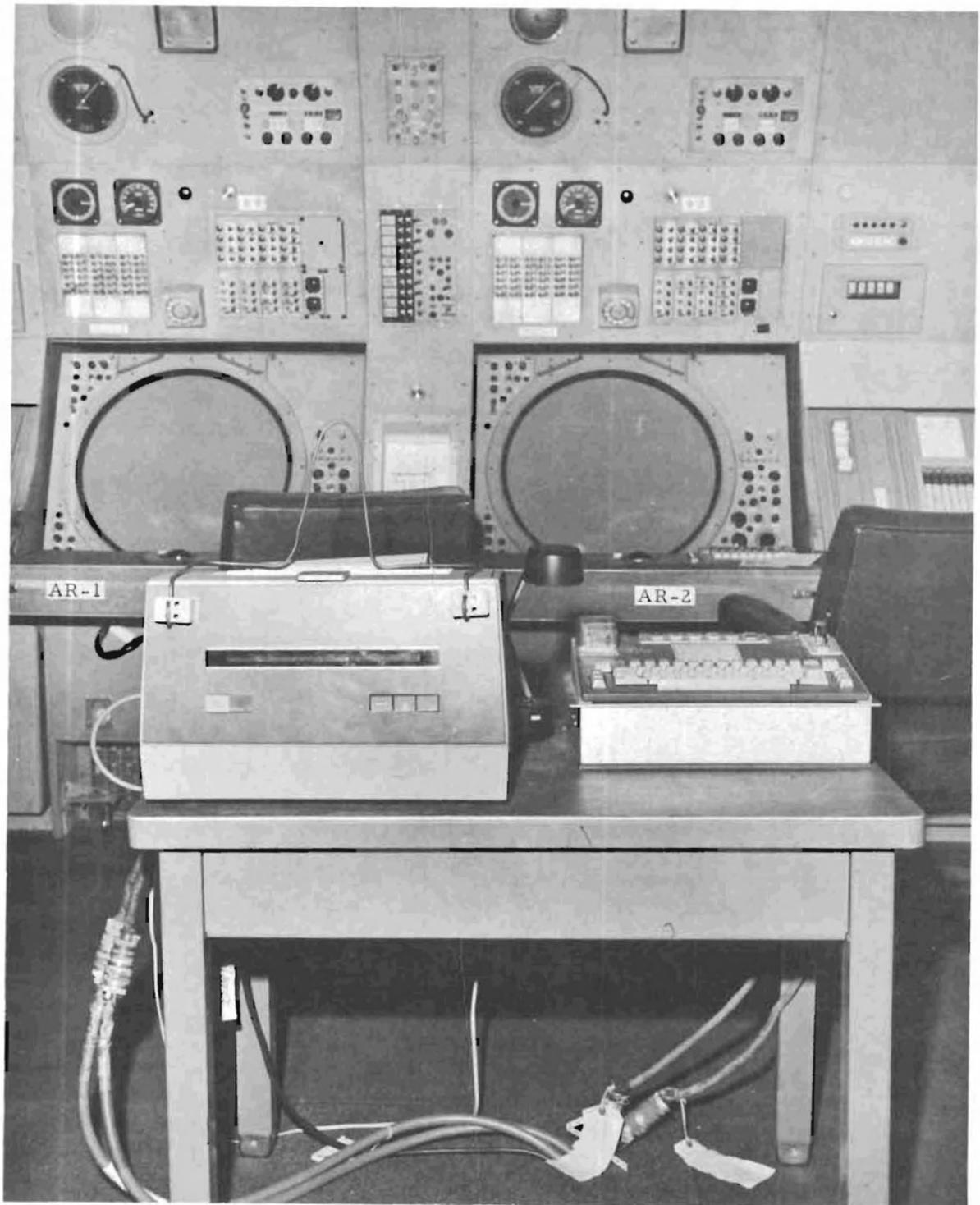
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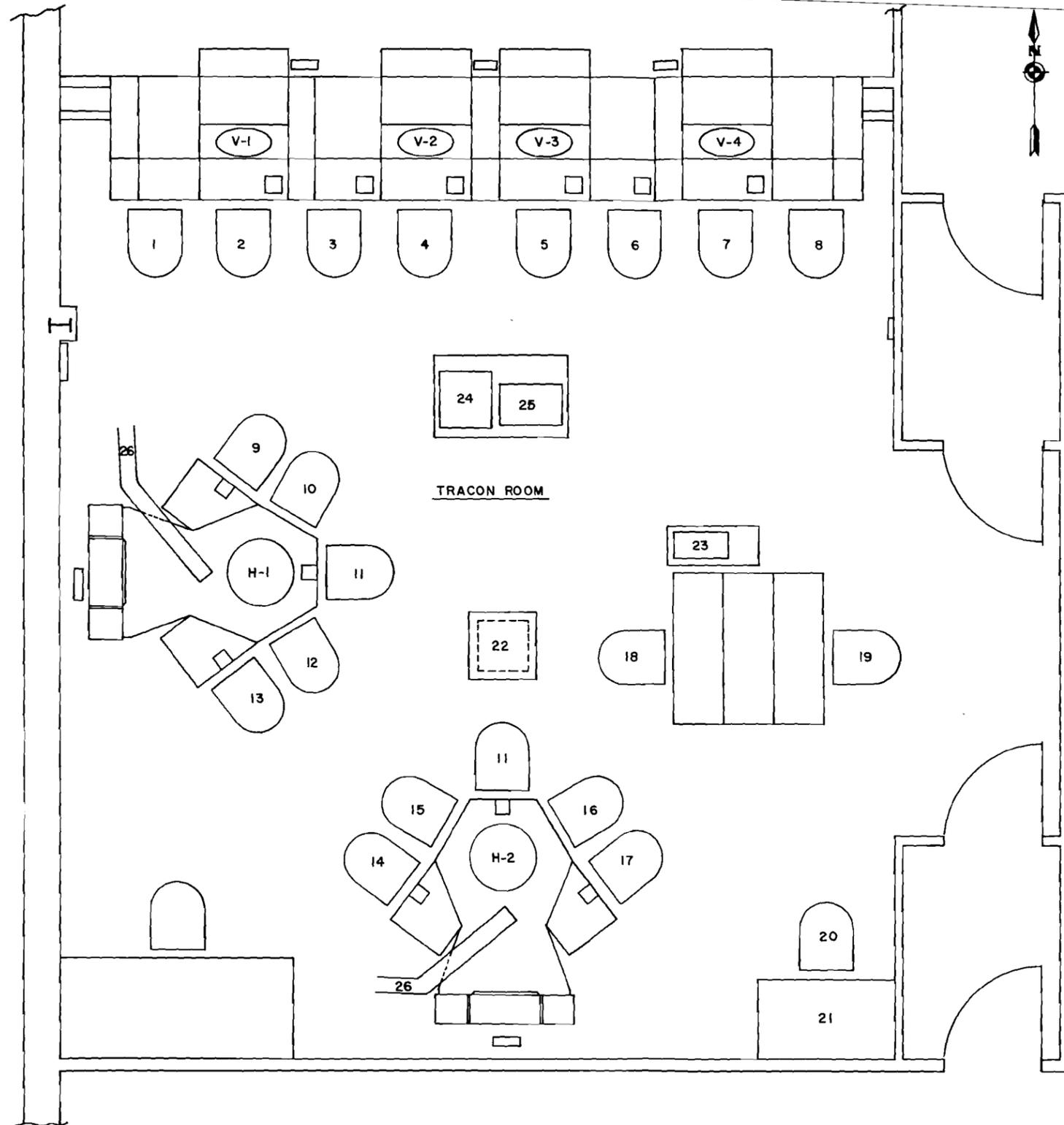
STL TRACON-12



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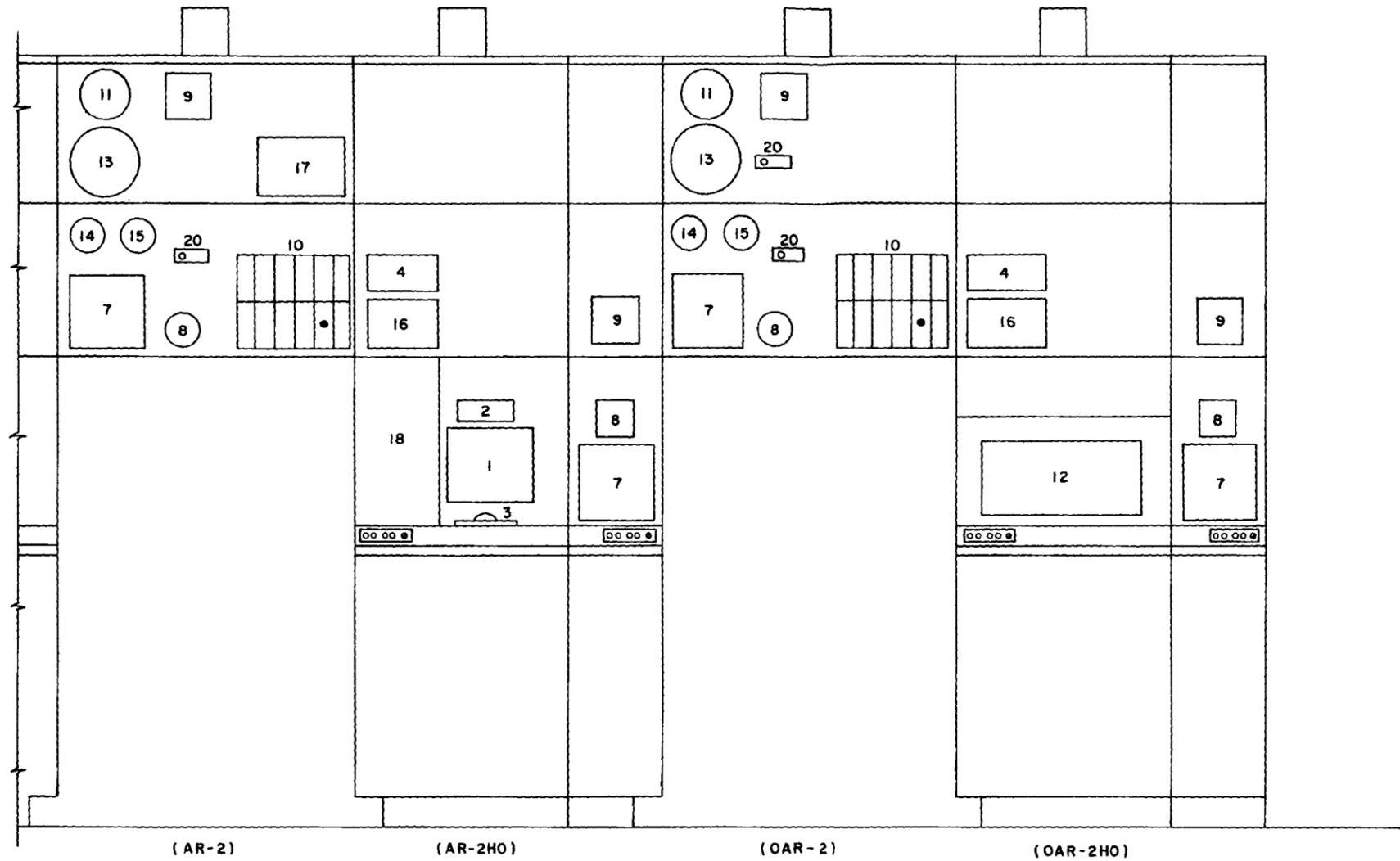
STL TRACON-13



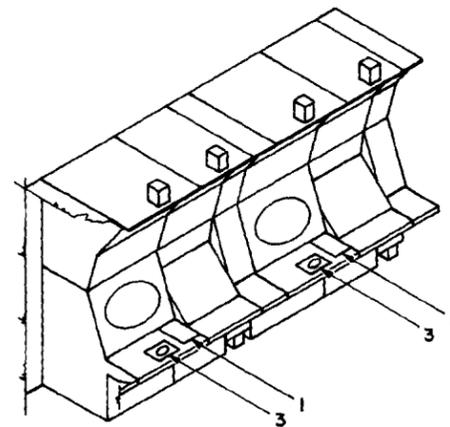
1. OUTER ARRIVAL RADAR -1 HANDOFF
2. OUTER ARRIVAL RADAR -1 AND SATELLITE-1
3. ARRIVAL RADAR -1 HANDOFF
4. ARRIVAL RADAR -1
5. ARRIVAL RADAR -2
6. ARRIVAL RADAR -2 HANDOFF
7. OUTER ARRIVAL RADAR -2, ASR AND SATELLITE-2
8. OUTER ARRIVAL RADAR -2 HANDOFF
9. DEPARTURE RADAR -2 HANDOFF
10. DEPARTURE RADAR -1
11. OPTIONAL HANDOFF POSITION
12. TERMINAL CONTROL AREA -1
13. TERMINAL CONTROL AREA -1 HANDOFF
14. DEPARTURE RADAR -2 HANDOFF
15. DEPARTURE RADAR -2
16. TERMINAL CONTROL AREA -2
17. TERMINAL CONTROL AREA -2 HANDOFF
18. IFR COORDINATOR
19. ASSISTANT CHIEF
20. DATA SYSTEMS SPECIALIST
21. ASR-37 I/O TTY
22. COORDINATOR OVERHEAD CONSOLE
23. ELECTROWRITER
24. FDEP PRINTER
25. FDEP KEYBOARD
26. STRIP TUBE FROM TOWER

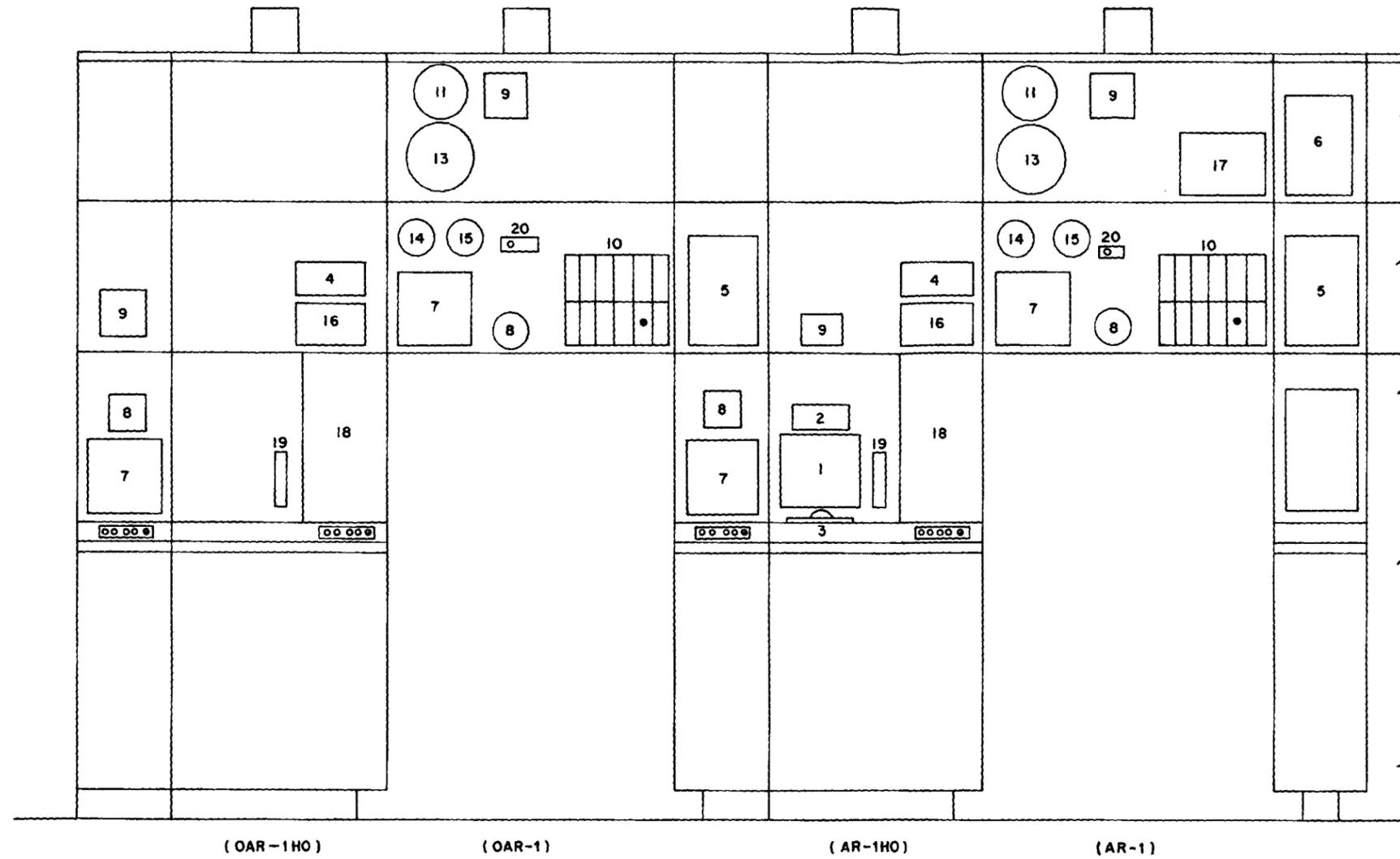
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STL TRACON-14

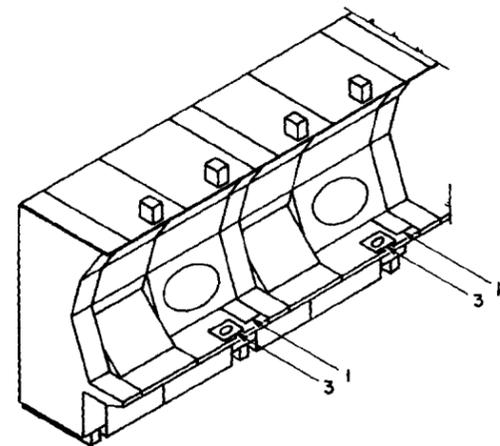


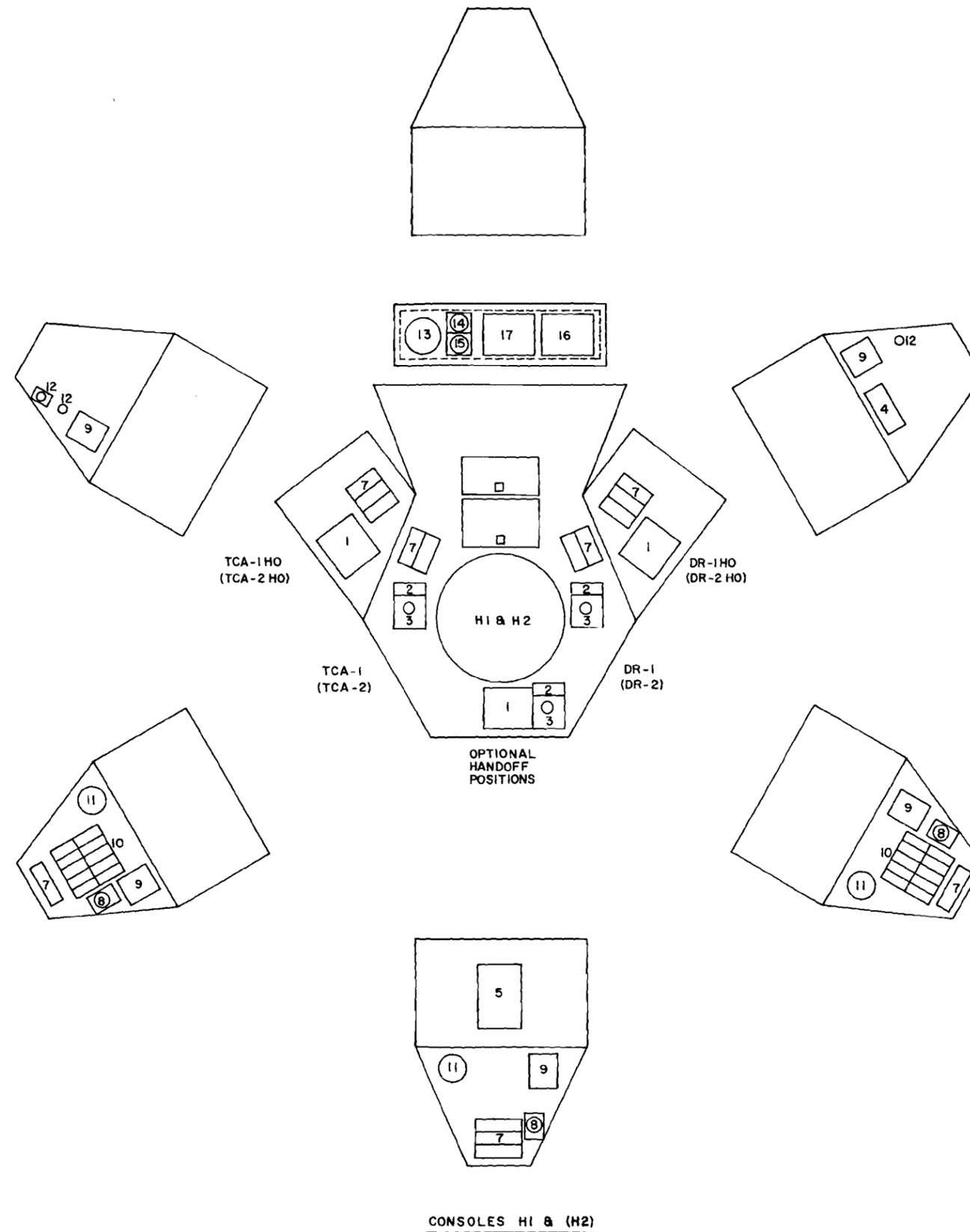
- 1 - ARTS III KEYBOARD
- 2 - QUICK LOOK
- 3 - TRACKBALL
- 4 - MAPPER CONTROL HEAD
- 5 -
- 6 -
- 7 - TELCO 301 KEYS
- 8 - TELCO DIAL
- 9 - TELCO SPEAKER
- 10 - FREQUENCY SELECTOR AND VOLUME CONTROL
- 11 - FAA SPEAKER
- 12 - EMERGENCY VHF TRANSCEIVER
- 13 - ALTIMETER
- 14 - WIND DIRECTION
- 15 - WIND VELOCITY
- 16 - CLOCK
- 17 - RVR INDICATOR
- 18 - STRIP BAY
- 19 -
- 20 - WIND INSTRUMENTS AND ALTIMETER LIGHT CONTROL





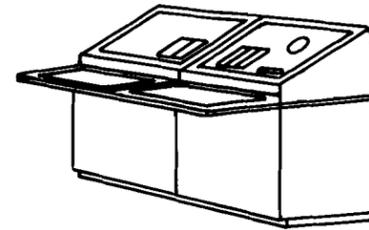
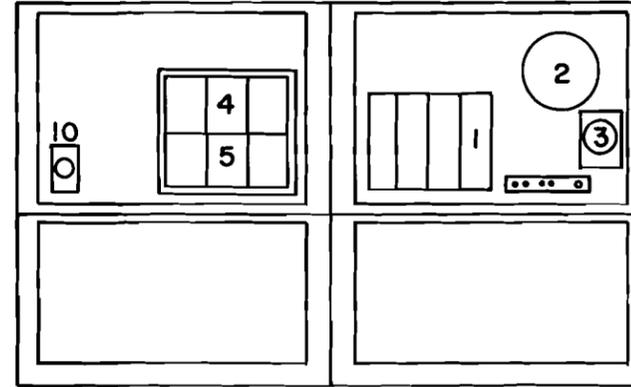
- 1 - ARTS III KEYBOARD
- 2 - QUICK LOOK
- 3 - TRACKBALL
- 4 - MAPPER CONTROL HEAD
- 5 - BEACON CONTROL HEAD
- 6 - RADAR RECEIVER REMOTE CONTROL PANEL
- 7 - TELCO 301 KEYS
- 8 - TELCO DIAL
- 9 - TELCO SPEAKER
- 10 - FREQUENCY SELECTOR AND VOLUME CONTROL
- 11 - FAA SPEAKER
- 12 -
- 13 - ALTIMETER
- 14 - WIND DIRECTION
- 15 - WIND VELOCITY
- 16 - CLOCK
- 17 - RVR INDICATOR
- 18 - STRIP BAY
- 19 - STRIP STORAGE
- 20 - WIND INSTRUMENTS AND ALTIMETER LIGHT CONTROL





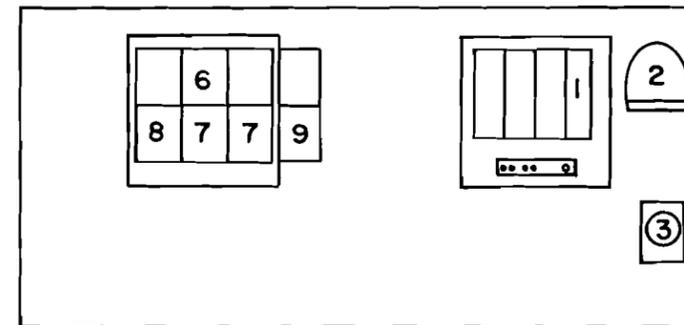
- 1. ARTS III KEYBOARD
- 2. QUICK LOOK
- 3. TRACKBALL
- 4. MAPPER CONTROL HEAD
- 5. BEACON CONTROL HEAD
- 6.
- 7. TELCO 301 KEYS
- 8. TELCO DIAL
- 9. TELCO SPEAKER
- 10. FREQUENCY SELECTOR AND VOLUME CONTROL
- 11. FAA SPEAKER
- 12. LIGHTING CONTROLS
- 13. ALTIMETER
- 14. WIND DIRECTION
- 15. WIND VELOCITY
- 16. CLOCK
- 17. RVR INDICATOR

CONSOLES H1 & (H2)



TEAM  
SUPERVISOR CONSOLE

1. TELCO 301 KEYS
2. TELCO SPEAKER
3. TELCO DIAL
4. STANDBY TRANSMITTERS
5. STANDBY RECEIVERS
6. RECORDER ALARM PANEL
7. DOOR RELEASE
8. TIME CORRECTION ALARM
9. POSITION MONITOR
10. LIGHT CONTROL



ASSISTANT CHIEF DESK

