

GENERAL - OPERATION OF MECHANICAL SUPPLY AND EXHAUST SYSTEMS, AND AIR CONDITIONING UNITS OPERATING IN CONJUNCTION WITH EACH OTHER AT SUMMER AND WINTER CONDITIONS.

1. Supply and Exhaust Blowers shall operate at reduced speeds, and rheostats set as marked for AIR CONDITIONING CYCLE.
2. Listed hereinafter are locations of Supply, Exhaust fans and rheostats.
3. Air Conditioning Unit is supplied with fresh Air from External Supply Blower and is exhausted mechanically in amounts equal to supply air. The balance of air is recirculated through Return Air Damper. Doors should be kept closed as noted.
TEMPERATURE CONTROL
4. "SUMMER" - "WINTER" switch Z controls the AC units.
"AUTOMATIC"- "EMERGENCY" switch X on "AUTOMATIC" allows switch Z to operate as set. Switch X on "EMERGENCY" provides winter ventilation regardless of switch Z position.
PREHEAT: Insertion thermostat B modulates its steam supply valve to maintain approximately 60 degrees both summer and winter.
SUMMER REHEAT: Room thermostat A resets duct thermostat C through relay D to maintain room temperatures when switch Z is on "SUMMER" operation or when switch X is not in "EMERGENCY" position.
REHEAT: Exhaust thermostat B modulates its steam supply valve to maintain room temperatures through relay D when switch Z is on "WINTER" operation or when switch X for the respective AC unit is in "EMERGENCY" position.
"SUMMER", set on switch Z provides the following AC unit control:
The AC unit fan operates.
The bypass damper is closed.
The exhaust damper is in its minimum position.
The return air and intake dampers are open.
On units WITHOUT SUMMER REHEAT the room thermostat A maintains room temperatures by operating relay E which either closes the cooling coil valve, or allows duct thermostat B to maintain approximately 58 degrees discharge temperatures by modulating the cooling coil valve.
On units with SUMMER REHEAT the duct thermostat B maintains approximately 58 degrees duct supply temperatures to the entry side of the reheat coil.
"WINTER", set on switch Z, provides the following AC unit control:
The AC unit fan is inoperative.
The bypass damper is open.
The exhaust damper is in its maximum position.
The return air and intake dampers are closed.
The cooling coil valve is closed.

5.

LEGEND

<u>SYMBOL</u>	<u>OS NUMBER</u>	<u>DESCRIPTION</u>
A	T0900A65X	Room thermostat
B	L0900A82X	Duct thermostat
C	L0902A7X	Submaster thermostat
D	R048A1	Pneumatic relay
E	R049A3X	Pneumatic relay
U	W200A2	Thermometer
V	1401	Pneumatic electric relay
W	M0900B	Damper motor
X	S047B10X	Manual pneumatic switch
Y	D42A	Damper
Z	S047B3	Manual pneumatic switch
M		Main air
B		Branch air
S		Submaster air
NO		Normally open
NC		Normally closed

6.

SWITCHES CONTROLLING AC UNITS

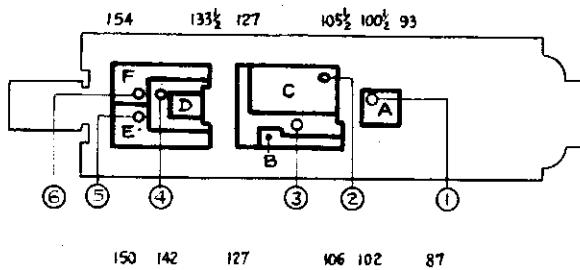
<u>SWITCHES</u>	<u>UNITS</u>
Switch A:	2,3
Switch B:	4,5,6
Switch C:	1,7,8,9,10
Switch D:	12,13,14,15,20,21,22,23,27,28,29,30,31,32,33
Switch E:	16,17,18,19,24,25,26,34,35,36,37,38,39,40

Above switchboard is located on forward Bulkhead Tank Top. Frames 103 port of B. For diagram of control see drawing #34-52136-1C1 "Details of Typical Control Installations" mounted in the air conditioning refrigeration machinery space.

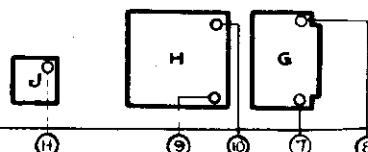
LOCATION OF AIR CONDITIONED AREAS ON USNS GEN JOHN POPE

<u>AREA</u>	<u>ZONE</u>
HOSPITAL	B, C, D, E, F.
LOUNGE	A, G, J, R.
MESS	H, M.
TROOP COMP	K, L, N, P, Q, S, T, U, V, W, X, Y, Z, AA, BB.
NOTE: ZONES "X" AND "Y" ARE CONVERTIBLE RECREATION AREA	

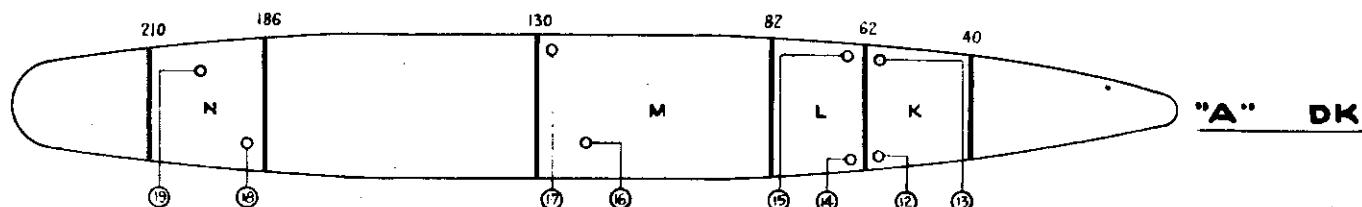
(T-AP 110)



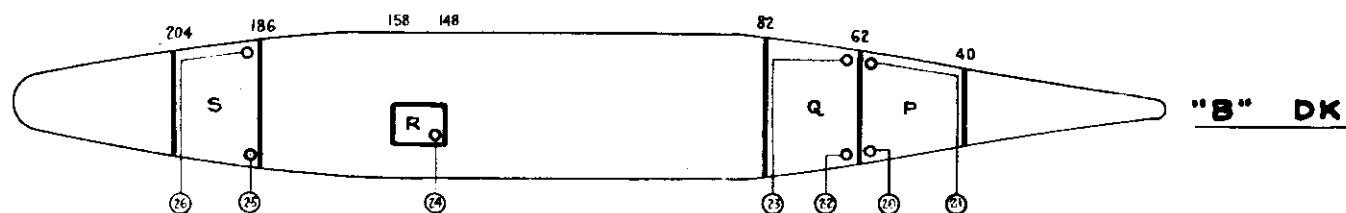
BOAT DK



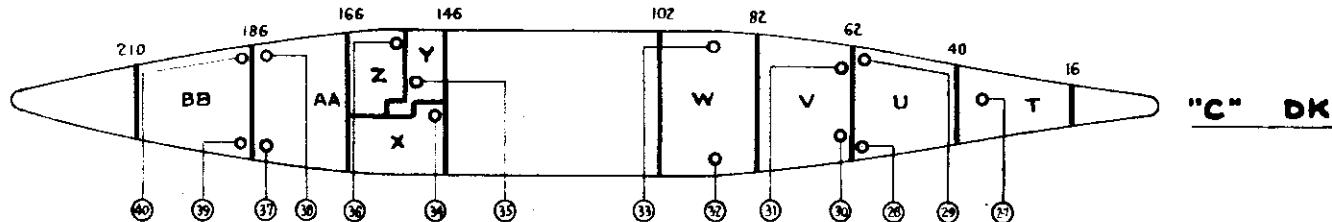
PROM DK



"A" DK



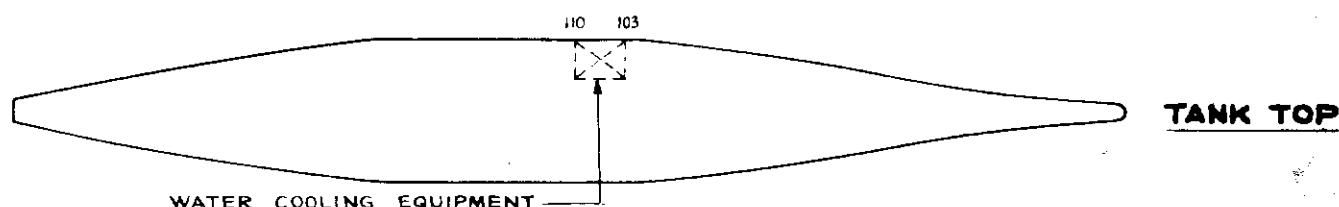
"B" DK



"C" DK

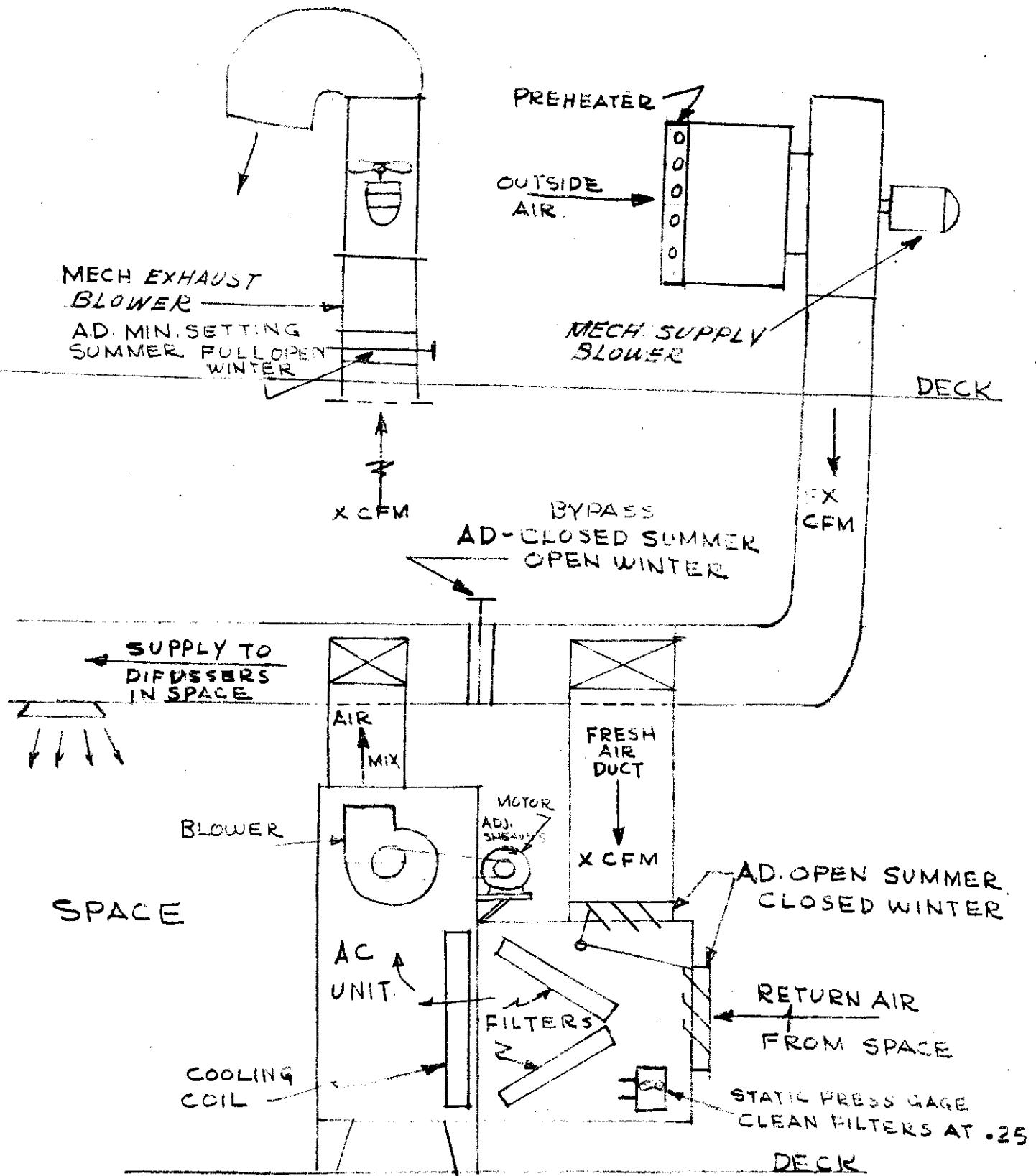


"D" DK



LEGEND

ALPHABETS INDICATE ZONES
NUMERALS INDICATE AIR COND UNITS



TYPICAL AC UNIT AND EXTERNAL BLOWERS.

FOR TEMP CONTROL. { TANK TOP FR-103-110 FRAMED
SEE DWG 34-52136-1C1

OPERATING INSTRUCTIONS FOR A. C. UNIT NO 1. - Zone A

1. Space Air Conditioned & Location: Officers Lounge Boat Deck 93-1014

2. Associated Ventilation:

S-02-108-2 Bridge Dk from 108 Post Rheostat located.

E-02-106-1- Bridge Dk from 106 Starboard Rheostat located Fan Room
#1 Bridge Deck Frame 108 Port

3. Summer Operation (Air conditioning):

Systems S-02-108-2 and E-02-106-1 shall operate at reduced speed
(Rheostats Marked) for A. C.

Supply and Exhaust air in space is balanced hence doors leading out of
zone are closed.

AUTOMATIC DAMPERS: A. C.

<u>DAMPER No</u>	<u>POSITION</u>
------------------	-----------------

<u>1</u>	<u>Closed</u>
----------	---------------

<u>2</u>	<u>Open</u>
----------	-------------

<u> </u>	<u> </u>
---------------	---------------

4. WINTER OPERATION:

S-02-108-2 and E-02-106-1 shall operate at reduced speed (approx.
2/3) the above dampers become reverse acting.

5. Stand-By Operation (Summer-No Air Conditioning):

S-02-108-2 and E-02-106-1 shall operate at full speed, automatic
dampers Item 3c become reverse acting.

6. AC UNIT MOTOR DATA:

TYPE: Elect.Dynamic HP: .75 RPM: 1750 VOLTAGE: 230 DC
AMPS: 3.3

7. CONTROLLER DATA:

HP: 3/4 MFG: C.R.A.N.K VOLTAGE: 230 DC MODEL: 5370 TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT No. 2-Zone #B-C

1. Space Air Conditioned & Location: Boat Deck 105-127 Port

2. Associated Ventilation:

S-02-106-4 Bridge Deck frame 106-P, Rheostat located

E-02-106-2 Bridge Dke frame 106-P, Rheostat located : Fan Room #2
Port Aft Bridge Deck

3. Summer Operation (Air Conditioning):

Systems S-02-106-4 shall operate at reduced speed (Rehostats marked for A. C.)

Supply and Exhaust air in the spaces are balanced hence doors leading out of zone are normally closed.

Automatic Dampers: A. C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>	<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
19	Open		18	Closed	
20	Open				
21	Closed				
22	Closed				
23	P.Closed				
24	P.Closed				

4. Winter Operation:

S-02-106-4 and E-02-106-2 shall operate at 2/3 speed the above dampers become reverse acting.

5. Stand-By operation (Summer - No Air Conditioning):

S-02-106-2 and E-02-106-2 shall operate at full speed.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 2 RPM: 1300 VOLTAGE: 230 DC AMPS: 1000

7. CONTROLLER DATA:

HP: 2 MFG: Clark Controller VOL: 230 DC MODEL: 5370
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT No. 3-Zone B

1. Space Air Conditioned & Location: Hospital Area Boat Deck - 106-12515)
2. Associated Ventilation:

S-02-106-4 Bridge Deck Frame 106 port, Rheostat located

Exhaust System E-02-106-2 Bridge Deck 106 - Port Rheostat is located
Fan Room #2, Aft Port Bridge Deck.

3. Summer Operation (Air Conditioning):

Systems S-02-106-4 and E-02-106-2 shall operate at reduced speed.
(Rheostat marked)

Supply air and Exhaust air are balanced hence, all doors leading out
of zone are normally closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
16	Open	
18	Closed	
24	Open - P.	600
17	Closed	
Balance Damper	Set	170

4. Winter Operation:

Systems S-02-106-4 and E-02-106-2 shall operate at reduced 2/3 speed when
heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Systems S-02-106-4 and E-02-106-2 shall operate at full speed all auto-
matic dampers list above become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG AMPS: 6.2 HP: -1.5 RPM: 1000 VOLTAGE: 230DC

7. CONTROLLER DATA

HP: 1½ MFG: Clark Controller VOL. 230 DC
Model: BU 5270 Type: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT No. #4 - Zone "D"

1. Space Air Conditioned & Location: Operating Room Boat Deck - Frames 134 - 141 - P of $\frac{1}{4}$

2. Associated Ventilation:

Supply System 02-137-1-Bridge Deck Frame 137-S Rheostat

Exhaust System E-02-135-2 Bridge Deck frame 135-#. Rheostat
Fan Room No. 2 aft Port Bridge Deck

3. Summer Operation (Air Conditioning):

S-02-137-1 and E-02-135-2 shall operate at reduced speed. Rheostat Marked for A. C.

Supply and exhaust air are balanced 100% F.A. all doors leading from space shall be closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
9	Closed	
10	Opened	
13	Closed	

4. Winter Operation:

Systems S-02-137-1 and E-02-135-2 shall operate at reduced speed approximately 2/3 when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Systems S-02-137-1 and E-02-135-2 shall operate full speed.

6. AC UNIT MOTOR DATA:

MFG: Elret Dynamic HP: .75 RPM: 1750 VOLTAGE: 230 AMPS: 3.3 DC

7. CONTROLLER DATA:

HP: $\frac{3}{4}$ MFG: CLARK VOL:230DC MODEL:5370 TYPE:15NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO #5 - Zone "E"

1. Space Air Conditioned & Location: Boat Deck Frame 130-154-S.

2. Associated Ventilation:

Supply System No. 02-137-1 located on Bridge Deck frame 137-S
Rheostat

Exhaust System E-02-135-2 - Bridge Deck Frame 135 part (Rheostat
Fan Room #2 Aft Port Bridge Deck

3. Summer Operation (Air Conditioning):

Systems S-02-137-1 and E-02-135-2 shall operate at reduced speed
(Rheostat Marked)

All doors leading out of zone shall be closed, all doors within space
may be opened or closed.

Automatic Dampers : A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>
5	Open
6	Closed
7	Open
12	P.Open
11	P.Open
8	Closed

4. Winter Operation:

Systems S-02-137-1 and E-02-135-2 shall operate at reduced speed when
heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Systems S-02-137-1 and E-02-135-2 shall operate at full speed.

Automatic dampers settings are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1.5 RPM: 1000 VOLTAGE: 230 AMPS: 6.2
DC

7. CONTROLLER DATA:

HP: 1-1/2 MFG: CLARK VOL: 230 AC MODEL: 5370 TYPE: 25NN1

OPERATING INSTRUCTIONS FOR A. C. UNIT No. #6

1. Space Air Conditioned & Location: Boat Deck Frames 130-154-S.

2. Associated Ventilation:

Supply System No. 02-137-1- Bridge Deck Frame 137-S. Rheostat
Fan Room #2 Aft Port Bridge Deck

Exhaust System No. 02-135-2 - Bridge Deck Frame 137, (S) Rheostat
Fan Room #1 Midships 13HJSU Deck Frame 1000

3. Summer Operation (Air Conditioning):

Systems S-02-137-1 and E-02-135-2 shall operate at reduced speed
(Rheostat marked)

Supply air and exhaust air are balanced all doors leading out of zone
shall be closed

Automatic Dampers: A. C.

<u>DAMPER NO.</u>	<u>POSITION</u>
1	Open
2	Closed
3	Open
14	P.Open
15	Open
4	Closed

4. Winter Operation:

Systems S-02-137-1 and E-02-135-2 shall operate at reduced speed (2/3)
when heating is required

5. Stand-By Operation (Summer - No Air Conditioning):

Systems 02-137-1 and E-02-135-2 operate at full speed damper settings
are reverse acting for Winter & Summer Operation.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1.5 RPM: 1000 VOLTAGE: 230 DC AMPS: 6.2

7. CONTROLLER DATA:

HP: 1/4 MFG: CAAIR VOL: 230 DC MODEL: 5370 TYPE: 25MH1

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 7-8 Zone G

1. Space Air Conditioned & Location: Officer's Lounge Prom. Deck 87-102

2. Associated Ventilation:

Supply System 1-92-2 and 1-91-2 Prom. Deck. Frame 91-93 port and starboard Rheostats are located in Fan Rooms (same location) Exhaust system E-01-94-1 Boat Deck frames 94-95 Starboard Rheostat located #1 Fan Room Bridge Deck Forward.

3. Summer Operation (Air Conditioning):

S-1-92-1 and 1-91-1, E-01-94-1 shall operate at reduced speed (Rheostats Marked) All doors leading from zones shall be closed

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
6	Open	395
7	Closed	
4	Open	
5	Closed	

4. Winter Operation:

Systems S-1-91-1 and S-1-192-2 shall operate at reduced speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Systems S-1-91-1 and S-1-91-2, E-01-94-1 shall operate at full speed damper settings are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: El.Dyn. HP: 1.5 RPM: 1000 VOLTAGE: 230DC AMPS: 6.6

7. CONTROLLER DATA:

HP: 1- 1/2 MFG: CLARK VOL: 230DC MODEL: 5372 TYPE: 251YH1

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 9-10 Zone H

1. Space Air Conditioned & Location: Prom. Deck 106-127

2. Associated Ventilation:

Supply Systems 1-91-1 and 1-92-2 Prom. Deck frame 91-93 port and starboard. Rheostats are located in Fan Room (same locations) Exhaust System 1-127-2 Prom. deck frames 127-128 Port.

3. Summer Operation (Air Conditioning):

S-1-92-1 and S-1-92-2 operate at reduced speed (Rheostats Marked) E-1-127-2 shall operate full speed when doors located at frame 127 P45 are closed. E-1-127-2 shall be stopped when doors are open

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>
9	Open
10	Open
11	Open
12	Open

4. Winter Operation:

Systems S-1-91-1 and 1-92-2 shall operate at reduced speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Systems S-1-91-1 and S-1-91-2 and E-01-94-1 shall operate full speed above automatic dampers-are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dynamic HP: 1.5 RPM: 1000 VOLTAGE: 230 DC
AMPS: 6.6

7. CONTROLLER DATA:

HP: 1/2 MFG: CLARK VOL: 230 DC MODEL: 5370 TYPE: 25 NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 11 Zone "J"

1. Space Air Conditioned & Location: Trans. Officer's Lunge Prom. Deck
Frames 142-150~~4~~ starboard

2. Associated Ventilation:

Supply System #S-02-137-2 located on Bridge Deck frame 137 - port of ~~4~~
Rheostat located Fan Room #2 Bridge Deck

Exhaust System #E-1-155-1-Boat Deck frame 154 Starboard of ~~4~~
Rheostat located: Fan Room #2 Bridge Deck

3. Summer Operation (Air Conditioning): A.C.

S-02-137-2 and E-1-155-1 operate at reduced speed (Rheostats Marked)

Doors leading out of zone shall be closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>
14	Closed
15	Open

4. Winter Operation:

Systems #02-137-2 and E-1-155-1 shall operate at 2/3 speed when heating
is required

5. Stand-By Operation (Summer - No Air Conditioning):

Systems #02-137-2 and E-1-155-1 shall operate full speed. Automatic
dampers are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dynamic HP: 1 RPM: 1750 VOLTAGE: 230 AMPS: 4.4
DC

7. CONTROLLER DATA:

HP: 1.1 MFG: Clark Controller VOL: 230 DC MODEL: 5370
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO 12 & 13 Zone #K

1. Space Air Conditioned & Location: Troop Area "A" Deck 40-62 P&S

2. Associated Ventilation:

Supply Systems S-1-59-1, S-1-59-2, S-1-60-1 S-1-60-2 located in Fan Rooms on Prom. Deck frames 58-66 port and starboard. Rheostats located Fan Room #3 - Deck Store Room Forward Prom Deck.

Exhaust Systems E-1-42-2 and E-1-42-1

3. Supply & Exhaust systems listed above shall operate at reduced speeds. (Rheostats Marked) Doors leading out of zone located at frame 40 should remain closed

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>
19	Open
20	Closed
21	Closed
22	Open

4. Winter Operation:

Supply Systems S-1-59-1, S-1-59-2, S-1-60-1, S-1-60-2, and Exhaust Systems E-1-42-2, E-1-41-1 shall operate at 2/3 reduced speed

5. Stand-By Operation (Summer-No Air Conditioning)

Above Supply and Exhaust systems shall operate full speed.

Dampers are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dynamic HP: 3 RPM: 1750 VOLTAGE: 230 AMPS: 12.6 DC

7. CONTROLLER DATA:

HP: 3 MFG: Clark Controller VOL: 230 DC MODEL: 5370
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO 14-15 Zone L.

1. Space Air Conditioned & Location: Troop Area "A" Deck frame 62-68

2. Associated Ventilation:

Supply Systems #S-1-62-2, S-1-64-2, S-1-62-1, S-1-64-2 located in Fan Rooms on Prom. Deck, Frames 58½-66 Port and Starboard Rheostats located Fan Room #13, Prom Deck Forward Resistor House

Exhaust Systems # E01-78-5 and E01-78-6 located on Boat Deck Frame 78 - 79 P&S Rheostat located: #13 Fan Room Forward Resistor House Prom Deck

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speeds (Rheostats marked) doors may be opened or closed as necessary.

Automatic Dampers: A. C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
23	Open	3425
24	Closed	0
25	Closed	0
26	Open	3425

4. Winter Operation:

Supply Systems S-1-62-1, S-1-64-2, S-1-62-1, S-1-64-2 and Exhaust Systems #E-01-78-6 shall operate at 2/3

5. Stand-By Operation (Summer - No Air Conditioning):

Above Systems shall operate full speed
Automatic dampers are reverse acting.

6. AC UNIT MOTOR DATA

MFG: ILG HP: 2 RPM: 1300 VOLTAGE 230 AMPS: 8.2
DC

7. CONTROLLER DATA

HP: 2 MFG: Clark Controller VOL: 230 DC MODEL:
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 16 & 17 Zone M

1. Space Air Conditioned & Location: Troop Mess, A Deck Frames 82-130

2. Associated Ventilation:

Supply System #2-125-2, S-2-124-2 located in Fan Room on "A" deck frames 125 port: starboard.

Exhaust Systems #E-1-90-2 and E-1-90-1 located in Fan Rooms on Prom. Deck frames 90 port and starboard. Rheostats located: Fan Room #12 Midships.

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speeds (Rheostats are marked) Doors leading out of zone frame 130 port and Starboard shall be closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>	<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
30	P.O.	2775	36	Open	2775
31	P.O.	2700	37	Open	10,000
32	P.O.	2775	38	Closed	0
33	P.O.	2460	39	Open	2775
34	P.O.	2500	40	Closed	0
35	P.O.	2295	41	Open	10,000

4. Winter Operation:

Supply and Exhaust systems 2-125-2, S-2-124-2 and E-1-90-1, E-1-90-2 shall operate 2/3 speed.

5. Stand-By Operation (Summer - No Air Conditioning):

Above listed systems shall operate full speed. Dampers are reverse acting air bypasses A. C. units.

6. AC UNIT MOTOR DATA:

MTG: HP: RPM: VOLTAGE: AMPS:

7. CONTROLEER DATA:

HP: 5 MFG: CLARITY VOL: 230 D.C. MODEL: 5370 TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 18-19 Zone "N"

1. Space Air Conditioned & Location: Troop Area A Deck Frame 186-210

2. Associated Ventilation:

Supply Systems #1-186-2, 1-188-2, 1-188-1 and 1-189-1 and Exhaust Systems #E-1-206-2 and E-1-206-1 located in Fan Rooms on Prom Deck frames 183-194 Port and Starboard. Rheostats located Fan Room #9 Starboard Prom. Deck Aft.

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speeds (Rheostats Marked) Doors leading out of zone shall be closed.

Starboard Fan Room Aft #9 Prom Deck

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>	<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
42	Closed	0	48	P. Closed	800
43	Open	5100	49	P. Closed	795
44	Open	800			
45	Open	795			
46	Open	5100			
47	Closed				

4. Winter Operation:

Supply and Exhaust Systems listed in Item 2 shall operate at 2/3 speed.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust Systems listed Item 2 shall operate full speed. Automatic dampers are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dynamic HP: 3 RPM: 1750 VOLTAGE: 230 DC
AMPS: 12.3

7. CONTROLLER DATA:

HP: 3 MFG: Clark Controller VOL: 230 DC MODEL: TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 20-21 Zone "P"

1. Space Air Conditioned & Location: Troop Area frames 40-62 "B" deck

2. Associated Ventilation:

Supply Systems S-1-59-1, S-1-60-2, S-1-59-2, S-1-60-2 located in Fan Rooms on Prom Deck frames 58½-66 Port and Starboard. Rheostats located Deck Store Room Prom Deck Forward #10 Fan Room

Exhaust Systems E-1-42-1, E-1-42-2, Rheostats located: Same as Supply

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speeds. (Rheostats marked) Doors leaving zones should be closed.

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
50	P.Closed	
51	P.Closed	
52	Open	
53	Closed	
54	Closed	
55	Open	

4. Winter Operation:

Supply and Exhaust systems listed in Item 2 shall operate 2/3 speed.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems listed in Item 2 shall operate full speed.

Automatic dampers are reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dynamic HP: 1 RPM: 1750 VOLTAGE: 230 DC
AMPS: 4.4

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 22-23 Zone Q

1. Space Air Conditioned & Location: "B" Deck Troop Area 62-82 P&S

2. Associated Ventilation:

Supply Systems S-1-62-2, S-1-64-2, S-1-62-1, S-1-64-2, located in Fan Rooms on Prom Deck Frames 58 $\frac{1}{2}$ -66 P&S. Rheostats located: Same Location Fan Room #4 Forward Prom Deck

Exhaust Systems E-01-78-5, E-01-78-6 Boat Deck Frames 58 $\frac{1}{2}$ -66 P&S Rheostats located: Same Location Fan Room #4

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speeds (Rheostats Marked) Doors leading from zone and located on Frame 82 shall be kept closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
56	Closed	0
57	Open	2925
58	Closed	0
59	Open	2925
60	Closed	0
61	Open	1630

4. Winter Operation:

Supply and Exhaust Systems listed above shall operate at 2/3 speed when heating is required.

5. Supply and Exhaust systems listed in Item 2 shall operate full speed.

Automatic dampers (Item 3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1.5 RPM: 1000 VOLTAGE: 230 DC
AMPS: 1.2

7. CONTROLLER DATA:

HP: 1 $\frac{1}{2}$ MFG: Clark Controller VOL: 230 DC MODEL: TYPE:

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 24 Zone "R"

1. Space Air Conditioned & Location: "B" Deck Frames 148-158

2. Associated Ventilation:

Supply System 2-146-3 located on "A" Deck Frame 142-147 in Fan Room.
Rheostat located

Exhaust System #E-01-62-3 located on Boat Deck Frame 63-64 starboard.

Rheostat located; Fan Room #14, B Deck Midships

3. Summer Operation (Air Conditioned):

Supply and Exhaust systems listed above shall operate at reduced speeds
(Rheostats marked) doors leading from zone shall be closed.

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
14	Closed	0
15	Open	1540
16	P.Closed	250

4. Winter Operation:

Supply and Exhaust systems listed above shall be operated at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems listed in Item 2 shall operate full speed

Automatic dampers (Item 3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect Dyn. HP: .75 RPM: 1750 VOLTAGE: 230 DC
AMPS: 3.3

7. CONTROLLER DATA:

HP: .75 MFG: Clark Controller VOL: 230 DC MODEL: 5370
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. Units 25-26 Zone 5

1. Space Air Conditioned & Location: B deck frames 186-204 P&S

2. Associated Ventilation:

Supply Systems 1-186-2, 1-188-2, 1-188-1, 1-189-1 located in Fan Rooms Prom Deck Frames 183-190 Port and Starboard. Rheostats located on Fan Room #8 Port Aft Prom Deck

Exhaust Systems E-1-206-2 located on the Prom Deck 206-207 Starboard Rheostat located: Fan Room #9 Prom Deck Aft Starboard.

3. Summer Operation (Air Conditioning):

Supply and Exhaust Systems listed above shall operate at reduced speeds (Rheostats marked) doors lead out of zone on Frame 210 shall be kept closed.

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>	<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
42	Closed	0	48	P.Open	800
43	Open	5100	49	P.Open	795
44	Open	800			
45	Open	795			
46	Open	5100			
47	Closed	0			

4. Winter Operation:

Supply and Exhaust systems listed above shall be operated at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems listed in item 2 shall operate full speed
Automatic dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1.5 SRPM: 1000 VOLTAGE: 230 DC
AMPS: 6.2

7. CONTROLLER DATA:

HB: 1½ MFG: Clark Controller VOL: 230 DC MODEL: TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 27 Zone T

1. Space Air Conditioned & Location: Troop Area Frame 16-40 "C" Deck
2. Associated Ventilation:

Supply System S-2-26-1 located on "A" deck frames 26 Starboard. Rheostat located: Fan Room #10 A Deck Forward.

Exhaust System E-1-36-1 located on "A" deck in Fan Room at frame 36-37 Starboard. Rheostat located: Same as supply.

3. Summer Operation (Air Conditioning):

Supply and Exhaust Fans shall operate at reduced (Rheostats marked) Doors leaving zone shall be closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
71	Closed	0
72	Open	2160
73	P. Open	200

4. Winter Operation:

Supply and Exhaust systems listed above shall be operated at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed. Automatic dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1 RPM: 1000 VOLTAGE: 230 DC AMPS: 4.4

7. CONTROLLER DATA:

TYPE: 1½ MFG: Clark Controller VOL: 230 DC MODEL: 5370
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 28-29 Zone U

1. Space Air Conditioned & Location: Troop Area "C" deck Frames 40-62

2. Associated Ventilation:

Supply Systems S-1-59-1, 1-60-1 and S-1-59-2, S-1-60-2 located in Fan Rooms on Prom Deck at frames 58-66 port & Starboard Rheostats located Fan Room #10 Forward Prom Deck - Deck Store room

Exhaust Systems #E-1-42-1 and E-1-42-2 located on Prom Deck at frames #2 Port and Starboard Rheostats located: Same as Supply

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems shall operate at reduced speeds (Rheostats Marked) Doors leading from zones shall be closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
74	P.Closed	495
75	P.Closed	495
76	Open	2150
77	Closed	0
78	Closed	0
79	Open	2150

4. Winter Operation:

Supply and Exhaust systems listed in Item (2) shall operate at 2/3 speed when heating is required.

5. Supply and Exhaust systems shall operate at full speed. Automatic Dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1.5 RPM: 1000 VOLTAGE: 230 DC AMPS: 6.2

7. CONTROLLER DATA:

HP: 1 $\frac{1}{2}$ MFG: Clark Controller VOL: 230 DC MODEL: 5370
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A.C. UNIT NO. 30-31 Zone V

1. Space Air Conditioned & Location: Troop Area "C" Deck frames 62-82
2. Associated Ventilation:

Supply Systems S-1-62-1, 1-64-1, 1-62-2 and 1-64-2 located in Fan Room on Prom Deck at frames 58-66 port and starboard Rheostat located Same Location Fan Room #4

Exhaust Systems E-01-78-5 and E-01-78-1 Boat Deck Frames 58-66 Port and Starboard Rheostats located: Same Location.

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems shall operate at reduced speeds (Rheostat Marked) Doors leading from zones shall be closed.

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>	<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
23	Open	3425	29	P.Closed	825
24	Closed	0			
25	Closed	0			
26	Open	3425			
27	Closed	0			
28	P.Open	825			

4. Winter Operation:

Supply and Exhaust systems listed in Item (2) shall operate at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed. Automatic dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect Dyn. HP: 3 RPM: 1750 VOLTAGE: 230 DC AMP: 12.3

7. CONTROLLER DATA:

HP: 3 MFG: Clark Controller VOL: 230 Dc MODEL:
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 32-33 Zone W.

1. Space Air Conditioned & Location: Troop Area Frames 82-102 "C" Deck
2. Associated Ventilation:

Supply Systems #S-1-89-3, 1-89-4 located in Fan Rooms on Prom. Deck frames 89-94 port and Starboard Rheostats located: Fan Room #13 Prom Deck Forward

Exhaust systems #E-1-90-1, 1-90-2 located on Prom Deck frames 89-94 P&S in Fan Room Rheostats located: Same as Supply

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speed (Rheostats Marked)

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>	<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
86	Open	1200	92	Closed	0
87	Closed	0	93	Open	4330
88	Open	4330	94	P.Open	610
89	P.Open	610	95	P.Open	610
90	P.Open	610			
91	Open	1220			

4. Winter Operation:

Supply and Exhaust Systems listed in item (2) shall operate at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed (Automatic Dampers) Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dyn. HP: 3 RPM: 1750 VOLTAGE: 230 DC
AMPS: 12.3

7. CONTROLLER DATA:

HP: 3 MFG: Clark Controller VOL: 230 DC MODEL: TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 34 Zone X

1. Space Air Conditioned & Location: Troop Rec. Area "C" deck frames 146-166 Starboard

2. Associated Ventilation:

Supply Systems #s-2-146-1, located on "A" deck in Fan Room frames 143-146 & Rheostats located: Midships Frame 160 B Deck Aft

Exhaust Systems #s-01-162-3, located on Boat Deck frames 163 Starboard Rheostat located: Boat Deck Fan Room #2

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speeds. Rheostats marked. Doors leading from space shall be closed.

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
96	Open	5160
97	Closed	6300
104	P.Open	965

4. Winter Operation:

Supply and Exhaust systems listed in item (2) shall operate at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed (Automatic Dampers) Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect. Dyn. HP: 3 RPM: 1750 VOLTAGE: 230 DC
AMPS: 12.3

7. CONTROLLER DATA:

HP: 3 MFG: Clark Controller VOL: 230 DC MODEL:
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 35 Zone "Y"

1. Space Air Conditioned & Location: Troop "C" deck frames 146-166

2. Associated Ventilation:

Supply System #S-2-146-2 located on "A" deck in Fan Room frames 143-146
& Rheostat located: Frame 160 A Deck Midships

Exhaust System #E-01-162-4, E-01-162-3, located on Boat Deck at frames 162 and 163, port and starboard Rheostat located: Boat Deck Fan Room #1 Forward.

3. Summer Operation (Air Conditioning):

Supply and Exhaust blowers listed above shall operate at reduced speeds (Rheostats Marked) doors leading from area should be closed.

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
98	Open	2330
99	Closed	0

4. Winter Operation:

Supply and Exhaust systems located in Item (2) shall operate at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed. Automatic Dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG Elect HP: 1.5 RPM: 1000 VOLTAGE: 230 DC
AMPS: 6.2

7. CONTROLLER DATA:

HP: 1 $\frac{1}{2}$ MFG: Clark Controller VOL: 230 DC MODEL:
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO. 36 Zone Z

1. Space Air Conditioned & Location: Troop Area Frame 154-166 P&S

2. Associated Ventilation:

Supply System #S-2146-2 located on "A" deck in Fan Room Frames 143-146 & Rheostats located: Same Location Fan Room #9 Aft Prom Deck

Exhaust System #E-01-162-3, E-01-162-4 located on Boat Deck at Frames 62-63 port and Starboard Rheostat: Same Location.

3. Summer Operation (Air Conditioning):

Supply & Exhaust System listed above shall operate at reduced speeds (Rheostats Marked) doors leading from zones are closed.

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
101	Open	3280
100	Closed	0
103	P.Closed	600
102	P.Closed	400
104	P.Closed	965

4. Winter Operation:

Supply and Exhaust systems listed in Item (2) shall operate at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed. (Automatic dampers Item (3)) becomes reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 1/2 RPM: 1500 VOLTAGE: 230 DC
AMPS: 8.2

7. CONTROLLER DATA:

HP: 2 MFG: Clark Controller VOL: 230 DC MODEL:
TYPE: 25NHI

OPERATING INSTRUCTIONS FOR A. C. UNIT NO 37-38 Zone "AA"

1. Space Air Conditioned & Location: Troop Area "C" Deck Frames 166-136

2. Associated Ventilation:

Supply Systems 1-183-4, 1-184, 1-188-3, 1-186-1 located on Fan Rooms on Prom Deck Frames 183-194 Port and Starboard Rheostats located Same Location Fan Room #8 aft Prom Deck

Exhaust Systems #E-2-172-1 located on "A" deck frames 172-173 Starboard of g. Rheostat located: Same Location.

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems listed above shall operate at reduced speed (Rheostats Marked)

Automatic Dampers: A.C.

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
105	P. Open	4500
106	P. Open	1040
107	Open	4250
108	Closed	0
109	Closed	0
110	Open	4250

4. Winter Operation:

Supply and Exhaust systems listed in Item 2 shall operate at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems shall operate full speed (Automatic dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: Elect Dyn. HP: 3 RPM: 1750 VOLTAGE: 230 DC
AMPS: 12.6

7. CONTROLLER DATA:

HP: 3 MFG: Clark Controller VOL: 230 DC MODEL:
TYPE: 25NFI

OPERATING INSTRUCTIONS FOR A.C. UNIT NO. 39-40 Zone BB

1. Space Air Conditioned & Location: Troop Area "C" Deck Frames 186-210

2. Associated Ventilation:

Supply Systems S-1-188-1, S-1-189-1, S-1-186-2, S-1-188-2 located in Fan Rooms. Prom Deck Frames 183-190 Port and Starboard Rheostats located on: Same Location #9 Fan Room Aft Starboard Prom Deck.

Exhaust Systems #E-1-206-1 and E-1-206-2 located on Prom Deck frame 206 Port and Starboard. Rheostat located on: Fan Room #9, Prom Aft. Deck.

3. Summer Operation (Air Conditioning):

Supply and Exhaust systems shall operate at reduced speeds (Rheostats marked)

Automatic Dampers:

<u>DAMPER NO.</u>	<u>POSITION</u>	<u>CFM</u>
113	Closed	0
114	Closed	0
115	Open	3125
116	Open	8170
117	P. Open	870

4. Winter Operation:

Supply and Exhaust Systems listed above shall be operated at 2/3 speed when heating is required.

5. Stand-By Operation (Summer - No Air Conditioning):

Supply and Exhaust systems listed in item 2 shall operate full speed.

Automatic dampers Item (3) become reverse acting.

6. AC UNIT MOTOR DATA:

MFG: ILG HP: 2 RPM: 1300 VOLTAGE: 230 DC
AMPS: 8.2

7. CONTROLLER DATA:

HP: 2 MFG: Clark Controller VOL: 230 DC MODEL:
TYPE: 25NHI