AN/SGA-3
A CONFIGURATION OF TELETYPewriter AND ANCILLARY EQUIPMENT DESIGNED EXPRESSLY FOR SHIPBOARD USE TO PROVIDE FOR AUTOMATIC OFF-LINE ENCRYPTION AND DECRYPTION OF TELETYPewriter TRAFFIC. THE CRYPTOGRAPHIC KEYING VARIABLES ARE DETERMINED BY THE SETTING OF THE ROTOR MAZE OF THE ASSOCIATED CIPHER MACHINE, PERFORATED TAPE PREVIOUSLY PREPARED FROM INCOMING RADIO TELETYPewriter OR CW CIRCUITS IS FED INTO THE TAPE READER WHICH ACTUATES THE PRE-SET CIPHER MACHINE, OUTPUT OF THE CIPHER MACHINE IS CONVERTED INTO TELETYPewriter CODE SIGNALS BY THE CODE CONVERTER WHOSE OUTPUT PROVIDES PULSES WHICH ARE USED TO PRODUCE A PAGE COPY OR A REPERFORATED TAPE OR BOTH. THE SPEED OF OPERATION IS 50 BAUD.

THE COMPLETE CONFIGURATION CONSISTS OF THE FOLLOWING COMPONENTS:

1 - HL-1B (TAPE READER)
1 - HL-2 (CODE CONVERTER)
1 - TT-159/UG (MODEL 14 TYPING REPERFORATOR)
1 - TT-234/SGA-3 (MODEL 28 PAGE PRINTER)
1 - PP-1767/UG (POWER SUPPLY)

ASSOCIATED CIPHER MACHINE:
1 - KL-47 (LITERAL CIPHER MACHINE)

STATUS
APPROVED FOR SERVICE USE (OPNAVINST 0551.12 OF 5 FEB 1957 REFERS) SPARE PARTS SUPPORT - ESO

TRAINING
A 5 WEEK COURSE IS CONDUCTED AT CRF PORTSMOUTH AND MARE ISLAND. COURSE INCLUDES KL-47, HL-1, HL-2 AND AN/SGA-3.

CRYPTOSYSTEM
ADONIS/POLLUX (DETERMINED BY ASSOCIATED CIPHER MACHINE.)

CLASSIFICATION
EQUIPMENT: WITHOUT ASSOCIATED CIPHER MACHINE - UNCLASSIFIED
KEYING MATERIAL: ALL CLASSIFICATIONS
TRAFFIC: ALL CLASSIFICATIONS

PUBLICATIONS
MAINTENANCE: HL-1B: AFRAG-1267, AMSP 599 (BOTH CONFIDENTIAL-CRYPTO) HL-21: RAM-44 (FOR OFFICIAL USE ONLY)
OPERATING: HL-1B: AMSP 599, KAO-49 (BOTH CONFIDENTIAL-CRYPTO)
HL-21: KAO-54 (CONFIDENTIAL-CRYPTO)

NOTE - THESE ARE NO PUBLICATIONS COVERING THE AN/SGA-3 CONFIGURATION AS A WHOLE,

PROCUREMENT
SEE PAGES PERTAINING TO COMPONENT EQUIPMENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>WEIGHT</th>
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<tbody>
<tr>
<td>HL-1B</td>
<td>11 1/2 IN</td>
<td>10 3/8 IN</td>
<td>10 1/2 IN</td>
<td>29 1/2 LBS</td>
</tr>
<tr>
<td>HL-2</td>
<td>6 1/4 IN</td>
<td>15 IN</td>
<td>20 7/8 IN</td>
<td>62 LBS</td>
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<tr>
<td>TT-159/UG</td>
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<td>21 1/2 IN</td>
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<tr>
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<td>18 1/2 IN</td>
<td>120 LBS</td>
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<tr>
<td>PP-1767/UG</td>
<td>7 IN</td>
<td>16 1/2 IN</td>
<td>6 1/2 IN</td>
<td>32 LBS</td>
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<tr>
<td>KL-47</td>
<td>11 1/4 IN</td>
<td>14 1/4 IN</td>
<td>10 1/2 IN</td>
<td>50 LBS</td>
</tr>
</tbody>
</table>

TOTAL 363 1/2 LBS

POWER REMARKS
INSTALLATION PLANS RE 67022138 AND RE 6702139 PROVIDE FOR SHELF MOUNTING OF THE HL-2 AND SECURING THE CRYPTO DEVICE IN A TYPE II SAFELOCKER.

CORRECTED TO 4/26/62 ORIGINAL
AN/SQA-3: SYSTEM BLOCK DIAGRAM

TAPE

TAPE READER
(HL-1B)

LITERAL
CIPHER
MACHINE
KL-47

MODEL 14 TYPING
REPERFORATOR
(TT-159/UG)

CODE
CONVERTER
(HL-2)

MODEL 28
PAGE PRINTER
(TT-234/SGA-3)

PAGE COPY

REPERF TAPE

CORRECTED TO 3/21/60