TSEC/HL-2
AN ELECTRO-MECHANICAL CODE CONVERTER DESIGNED TO PROVIDE SEMI-AUTOMATIC ENCRYPTION/DECRIPTION OF TELETYPewriter TRAFFIC WHEN USED IN CONJUNCTION WITH THE HL-1B IN THE AN/SGA-3 CONFIGURATION. IT TRANSFORMS THE OUTPUT OF THE ASSOCIATED CIPHER MACHINE (KL-47) INTO THE STANDARD 5 LEVEL TELETYPewriter CODE WHICH IS THEN FED INTO THE ASSOCIATED TELETYPewriter EQUIPMENT TO PRODUCE ENCRYPTED OR DECRYPTED COPY AS DESIRED. THE ASSOCIATED TELETYPewriter EQUIPMENT PRODUCES PAGE COPY OR PERFORATED TAPE OR BOTH. IN THE ENCRYPTER MODE A SPACE IS AUTOMATICALLY INSERTED BETWEEN EACH FIVE LETTER CODE GROUP. TWO CARRIAGE RETURNS AND A LINE FEED ARE AUTOMATICALLY INSERTED AFTER THE TENTH CODE GROUP OF EACH LINE. IN THE DECRYPTER MODE IT SEARCHES FOR A SPACE AFTER THE 60TH CHARACTER OF EACH LINE WHERE IT INSERTS TWO CARRIAGE RETURNS AND A LINE FEED. IF NO SPACE APPEARS BEFORE THE 69TH CHARACTER, THESE CHARACTERS ARE AUTOMATICALLY INSERTED ANYWAY. OPERATING SPEED IS 50 BAUD (75 WPM).

THE AN/SGA-3 IS DESIGNED EXPRESSLY FOR SHIPBOARD USE.

STATUS
APPROVED FOR SERVICE USE. (OPNAVINST 0255.1 OF 5 FEB 1957 REFERENCES) SPARE PARTS SUPPORT ESF

TRAINING
A 1 WEEK COURSE IS CONDUCTED AT PORTSMOUTH AND MARE ISLAND. CLASSES CONVENE EVERY 6 WEEKS WITH QUOTAS CONTROLLED BY SUPERS. PREREQUISITE IS COMPLETION OF AN/BDA-3 - KL-67 COURSE. A SECRET CLEARANCE IS REQUIRED WHILE IN TRAINING.

CRYPTOSYSTEM
CURRENTLY USED ONLY WITH THE KL-47 (ADONIS/POLLUX)

CLASSIFICATION
EQUIPMENT: UNCLASSIFIED KEYING MATERIAL: NOT APPLICABLE TRAFFIC: SEE KL-67 SECTION

PUBLICATIONS
MAINTENANCE: KAM-44 (UNCLASSIFIED) OPERATING: KAO-54 (CONFIDENTIAL-CRYPTO)

PROCUREMENT
UNIT COST
(COST IN THOUSANDS)

<table>
<thead>
<tr>
<th>UNIT COST</th>
<th>PAST</th>
<th>FY 1963</th>
<th>FY 1964</th>
<th>FY 1965</th>
<th>FY 1966</th>
<th>FUTURE</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>$3,000 AVERAGE</td>
<td></td>
<td></td>
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<tr>
<td>602</td>
<td>1,807</td>
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PHYSICAL CHARACTERISTICS

<table>
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<tr>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>WEIGHT</th>
<th>VOLTAGE</th>
<th>POWER</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 1/4 IN</td>
<td>15 IN</td>
<td>20 7/8 IN</td>
<td>62 LBS</td>
<td>115 (50 CPS)</td>
<td>200 WATTS</td>
<td>PROVIDE IS MADE FOR SHELF MOUNTING IN THE AN/SGA-3 CONFIGURATION</td>
</tr>
</tbody>
</table>

DISTRIBUTION
SEE AN/SGA-3 SECTION