DESCRIPTION
A complex electronic cryptosecurity equipment which provides for full duplex speech security over landlines or long-distance HF radio circuits of the fleet commanders operations voice net. Alternate- nately, it can provide from one to five full duplex teletypewriter channels or one full duplex facsimile channel. Teletypewriter input is from any standard teletypewriter operation at 45.5 or 75 baud, facsimile input is from the standard facsimile transceiver (AN/TCX-2). Voice input is from a special handset up to six of which may be used with the equipment. The vocoder has eight spectrum channels and one pitch channel. Its output of AM pulses is time-multiplexed and digitalized into an 8 level binary code at 1500 baud. The crypt unit is an electro-mechanical geared timing mechanism (GTM) using a photoelectric system with shadow-mask key disks. One spare GTM is provided with each KO-6A installation. The self-contained 1500 baud frequency division multiplex transmission system consists of six 250 baud frequency shift key information channels and one sync channel, the required bandwidth is 3 KC.

STATUS
IN USE. Present planning is to replace all present KO-6A installations with HY-2/KG-13 secure voice combinations as soon as these new equipments become available. (See page 8-3)

TRAINING
FORMAL MAINTENANCE TRAINING IS MANDATORY. SCHOOL CONDUCTED AT LACKEYLAND AFB. (NAVPERS 91769.0 REFS) EACH KO-6A REQUIRES 4 TRAINED OPERATORS (WHEN 2 EQUIPMENTS ARE COLOCATED, 8 OPERATORS ARE SUFFICIENT.)

CRYPTOSYSTEM
PHOEBE (CRYPTO PERIOD = 8 HOURS)

CLASSIFICATION
EQUIPMENT: SECRET-CRYPTO (SECRET-CRYPTO CLEARANCE IS REQUIRED FOR BOTH EXTERNAL AND INTERNAL VIEWING)
KEYING MATERIAL: SECRET-CRYPTO
TRAFFIC: ALL CLASSIFICATIONS (FOR TOP SECRET AND SPECIAL CATEGORY TRAFFIC CSPM 1C, 1-50 REFS)

PUBLICATIONS
MAINTENANCE: KAM-27, KAM-28, KAM-29 (ALL SECRET-CRYPTO)
OPERATION: KAO-10 (SECRET-CRYPTO)

PROCUREMENT
UNIT COST: $50,000
(COST IN THOUSANDS)

<table>
<thead>
<tr>
<th>QTY</th>
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FYE 1963 FYE 1964 FYE 1965 FYE 1966

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FUTURE TOTAL

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<tbody>
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<td>950</td>
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PHYSICAL CHARACTERISTICS
(CONSISTS OF SIX UNITS)

<table>
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<tr>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>WEIGHT</th>
<th>VOLTAGE</th>
<th>POWER</th>
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<tbody>
<tr>
<td>33 1/2 IN</td>
<td>26 IN</td>
<td>17 1/2 IN</td>
<td>2429 LBS</td>
<td>115</td>
<td>3500 WATTS</td>
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</table>

MOUNTING CABINETS ARE PROVIDED SUITABLE FOR DECK MOUNTING WITH 2 UNITS STACKED IN EACH OF 3 BAYS.

TEST EQUIPMENT
(REQUIRED ON FULL TIME BASIS)

Oscilloscope, Dumont SM200A or OS-864U (modified for dual input) or Hewlett-Packard model 156A (AN/USM-105V)
Audio oscillator, Hewlett-Packard model 2001 or HP-202A, TS-382/U SERIES EQUIP.
Vacuum tube voltmeter, RCA WY-87A or AN/USM-3L
AC electronic voltmeter, Ballantine model 300B or ME-74/U
Multimeter, Simpson model 260 or AN/PSN-4A, (ME-4U)
Berkeley EUM model 64N or FR-87/U

NOTE: A TOTAL OF 30 KO-6A'S ARE IN USE WITHIN THE NAVY. 2 OF THESE ARE ON LOAN FROM THE ARMY, 1 IS ON LOAN FROM THE AIR FORCE AND 1 HAS BEEN SUPPLIED BY NSA.