~~SECRET~~

Item No.	(See Note A) Nomenclature or Designation	(See Note B) Total Quantity Procured	Unit Cost	(See Note D) Prod. Agency or Manufacturer	(See Note E) Technical Literature	(See Note F) Patent Status
1	Converter M-134-T-1	1	Unknown	~~Signal Corps Labs., Ft. Monmouth, N.J.~~ 1	Exhibit No. 1	U.S. Patent #2,028,772 issued 28 Jan 36
2	Converter M-134-T-2	2	Unknown	~~Signal Corps Labs.~~ 1	~~None~~ Exhibits Nos. 2 and 3	See Item #2
3	Converter M-134 (SIGHIC)	12	$2,135.	~~Wallace & Tiernan Prods., Inc, Belleville, N.J.~~ 2	Exhibits Nos.	U.S. Patent Application #682,096 in secrecy status (interchange of ideas) filed 25 July 33
4	Converter M-134-A (SIGMYC)	56	$2,400	2	Exhibits Nos.	See Item #2
5	Keying Unit M-229	1	$2,955	~~Signal Corps Labs~~ 1		Basic principle ~~None~~ covered by application under Item 7
6	Keying Unit M-229 (SIGGOO)	75	$500	~~Wallace & Tiernan Products, Inc.~~ 2	Exhibits Nos.	See Item #5
7	Converter M-134-C (SIGABA)	3,330	$1,567	~~Teletype Corps.~~ Chicago, Ill. 3	Exhibit	Army: U.S. Pat. Application No. 70,412 filed 13 March 36 in secrecy status Navy: (Some have been filed; details not known)
8	Converter M-161-C	2	$12,132	~~#~~ 3	Exhibit	Covered under Item 7
~~9~~	~~Converter MX-218/U (SIGLASE)~~	~~3~~	~~Unknown~~	~~ASA~~ 5	~~None~~	~~Covered under Item 7~~
~~10~~	~~Pluggable rotor ($IGHEK)~~	~~7,000~~	~~$26~~	~~L.C. Smith-Corona Typewriter Co, Syracuse, N.Y.~~ 4	~~Exhibit~~	?

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REF ID:A273728

Item No.	Nomenclature or Designation (1)	Total Quantity Procured (2)	Unit Cost (3)	Prod. Agency or Manufacturer	Technical Literature (4)	Patent Status	Notes
9	Special Cipher Unit (SIGAMUG)	1,375	$210	~~Teletype Corp.~~ 3	Exhibits Nos	● [illegible] two	(15)
10	Converter M-228	2	$6,417.50	~~Signal Corps Labs.~~ 1	None	See under Item 10	(16)
11	Converter M-228	3,220	$526.40	~~Teletype Corp.~~ 3	Exhibit	U.S. Pat. Application No. 443,320 in secrecy status	(17)
12	Converter M-294	1	$20,000	3	None	Cryptographic features covered by application under Item 11.	(18)
13	Converter M-294 (SIGNIN)	500	$2300	3	Exhibit	Cryptographic features covered by application under Item No. 10	(19)
14	Converter M-325	2	$3,500	~~L.C. Smith-Corona Type.~~ 4	None	U.S. Pat. Application No. 549,086 in secrecy status	(20)
15	Converter M-325 (SIGFOY)	12,000	$150	4	Exhibit	See under Item 14	(21)
16	Converter M-409	1	$37,500	3	None	See under Item #7	(22)
17	Rotors	8	Unknown	6	Exhibit		
18	Rotors a. AGN b. MIK " c. FOY "	?	?	3	~~Exhibit~~		

General Notes on Data

(A) Long title is given first, followed by short title (when one was assigned).

(B) The total quantity may have been procured under one or more contracts.

(C) Where two or more contracts were involved, the unit cost is the average of unit costs of the separate contracts.

(D) [Attached]

(E) Only such technical literature and/or manuals as contain information describing the equipment are included.

(F)

(1) Item 1 was purely an experimental model and was never put into service; available in ASA museum. Cost of development unknown but might be obtained from old records of Signal Corps Laboratories.

(2) The two machines constituting Item 2 were pilot models for Item 3; available in ASA museum. Cost of development unknown but might be obtained from old records of Signal Corps Laboratories.

(3) These machines were delivered in August 1938 and were in service until superseded by Item 6; then destroyed except for one in ASA museum.

(4) These machines incorporated some minor modifications in Item 3. Eight machines were purchased from the War Department by the State Department. All 56 machines were in service for several years.

(5) This served as pilot model for Item 6; available in ASA museum.

(6) Keying Unit M-229 replaced the key-tape transmitter of Items 3 and 4 and served as controlling element for stepping the rotors.

7 (~~11~~) This machine ~~was~~ constituted the principal one used by Army and Navy for intra and inter-service high and medium-echelon classified communications. Preliminary models and pre-production models developed by Teletype Corp; available in Navy museum. It is believed that certain patent applications have been

8 (~~12~~) These were experimental models constructed in an attempt to produce a smaller and lighter version of Converter M-134-C; available in ASA museum.

9 (~~13~~) These were experimental models embodying modifications in Converter M-134-C so as to make the latter cryptographically equivalent to Intem No. ____ and Item No. ____; available in museum.

Special Notes on the items listed

filed by U.S. Navy personnel to cover certain special features of this equipment.

(D) Following key numbers signify following producing or manufacturing agencies:

1. Signal Corps Laboratories, Fort Monmouth, N.J.
2. Wallace and Tiernan Products, Inc., Belleville, New Jersey.
3. Teletype Corporation, Chicago, Illinois
4. L.C. Smith-Corona Typewriter Co., Syracuse, New York.
5. Army Security Agency (formerly Signal Security Agency, Signal Intelligence Service, etc.)
6. Fournier Institute, Chicago, Illinois.

(F) Under "Patent Status" are given only data relative to any patents or patent applications filed by U.S. employees covering ~~the or applicable to~~ the specific item or applicable to specific features thereof.

10 (~~14~~) This item was designed for emergency use with Item 7 in case of physical compromise of Converter M-134-C, current rotors and key-lists, until new rotors and key-lists could be issued. Although produced in quantity and issued, it was never used since the emergency never occurred.

9 (~~15~~) These Special Cipher Units, were purchased from the Navy. They made Converter M-134-C (Item No. 7) utilizable for Combined Communications (with British only) as one version of a cryptographic machine designated as the CCM (Combined Cipher Machine).

10 (~~16~~) These were development models for Item No. 11.

11 (~~17~~) These machines were employed for on-line and off-line teletype and radioteletype communications; machines available in ASA museum

12 (~~18~~) Development model, followed by an additional development model before standardizing; available in ASA museum

13 (~~19~~) These were delivered too late to be employed during actual hostilities; now in storage. A few were used in service tests.

14 (~~20~~) Development model, followed by an additional development model before standardizing, available in ASA museum.

15 (~~21~~) The State Department purchased 1000 of these machines, put a number of them into service for a short period. The Army used them briefly in service tests but the machine was never used extensively because of poor performance.

(16) Developmental model; available in ASA museum.

(17) This item was the one forming the subject matter of Project C-52, Contract OEMsr-542, of Office of Scientific Research and Development, National Defense Research Council, Division 13. See Vol. 3 of Summary Technical Report of Division 13, NDRC, Washington, 1946, pp. 120-22. Developmental work done by Fourmier Institute at no cost to the Government.

(18) Rotors of several types were made. The type used with Hdms 2, 3, and 4 were Enigma Style, not reversible or invertible; other rotors were all of invertible type.