

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) Following key numbers signify following producing or manufacturing agencies.

1. Signal Corps Laboratories, Fort Monmouth, N. J.
2. Wallace and Tiernan Products, Inc., Belleville, N. J.
3. Teletype Corporation, Chicago, Illinois.
4. L. C. Smith-Corona Typewriter Co., Syracuse, New York.
5. Fournier Institute, Chicago, Illinois.

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

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

Special notes on the items listed

(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(3) These machines were delivered in August 1938 and were in service until superseded by Item 7; then destroyed except for one in ASA museum.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) This machine 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 filed by U. S. Navy personnel to cover certain special features of this equipment.

(8) 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) 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) These were development models for Item No. 11.

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

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

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

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

(15) The State Department received 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, NDRC, Washington, 1946, pp 120--22. Developmental work done by Fournier Institute at no cost to the Government.

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

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Item No.	(See Note A) Nomenclature or Designation	(See Note B) Total Quantity Procured	(See Note C) 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	1	Exhibit No. 1	U.S. Patent #2,028,772, issued 28 Jan 36
2.	Converter M-134-T-2	2	Unknown	1	Exhibits Nos. 2 and 3	U.S. Patent Application #682,096, filed 25 July 33; in secrecy status
3.	Converter M-134 (SIGHIC)	12	\$2,135.	2	Exhibit No. 4	See Item #2
4.	Converter M-134-A (SIGMYC)	56	\$2,400.	2	Exhibits Nos. 5 and 6	See Item #2
5.	Keying Unit M-229	1	\$2,955.	1	None	Basic principles covered by appli- cation under Item 7
6.	Keying Unit M-229 (SIGG00)	75	\$500.	2	Exhibit No. 7	See Item #5
7.	Converter M-134-C (SIGABA)	3,330	\$1,567.	3	Exhibit No. 8	U.S. Patent Application #70,412, filed 23 March 36; in secrecy status. (Some have been filed by Navy)
8.	Converter M-161-C	2	\$12,132.	3	Exhibit No. 9	Covered under Item #7

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Item No.	Nomenclature or Designation (1)	Total Quantity Procured (2)	Unit Cost (3)	Prod. Agency or Manufacturer	Technical Literature (4)	Patent Status
9.	Special Cipher Unit (SIGAMUG)	1,375	\$210.	3	None	
10.	Converter M-228	2	\$6,417.50	1	None	U.S. Patent Application #443,320, filed 16 May 42; in secrecy status
11.	Converter M-228 (SIGCUM)	3,220	\$526.40	3	Exhibit No. 10	See under Item #10
12.	Converter M-294	1	\$20,000.	3	None	Cryptographic features covered by application under Item #10
13.	Converter M-294 (SIGNIN)	500	\$2300.	3	Exhibit No. 11	Cryptographic features covered by application under Item #10
14.	Converter M-325	2	\$3500.	4	None	U.S. Patent Application #549,086, filed 11 Aug 44; in secrecy status
15.	Converter M-325 (SIGFOY)	12,000	\$150.	4	Exhibit No. 12	See under Item #14
16.	Converter M-409	1	\$37,000	3	None	See under Item #7
17.	Rotors	8	Unknown	5	Exhibit No. 13	

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Item No.	Nomenclature or Designation (1) (See Note A)	Total Quantity Procured (2) (See Note B)	Unit Cost (3) (See Note C)	Producing Agency or Manufacturer (See Note D)	Technical Literature (4) (See Note E)	Patent Status (See Note F)
18.	Rotors					
	a. ABA type	431,500	\$6.66	3	None	None
	b. NIN type	8,000	\$13.80	3	None	Unknown
	c. FOY type	192,000	\$6.00	4	None	Unknown

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