

MIL-HDBK-142A  
 NOTICE 1  
 27 APRIL 1970

MILITARY STANDARDIZATION HANDBOOK

GUIDED MISSILE TEST EQUIPMENT  
 FUNCTIONAL CATEGORIZATION SYSTEM

To All Holders of MIL-HDBK-142A

1. The following category of MIL-HDBK-142A has been revised and supersedes the category listed below:

NEW CATEGORY	DATE	SUPERSEDES CATEGORY	DATE
40	27 April 1970	40	28 March 1968
TABLE I and II	27 April 1970	TABLE I and II	28 March 1968

2. Retain this notice and insert before The Table of Contents.

3. Holders of MIL-HDBK-142A will verify that category changes indicated above have been entered and will destroy the previous notice (notice page only). The latest notice (notice page) will be retained as a check sheet. This issuance, together with appended category is a separate publication. Each notice is to be retained by stocking points until the Military Handbook is completely revised or cancelled.

FSC 4935

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CATEGORY 40: THE ADAPTIVE AND SUPPLEMENTARY DEVICES CATEGORY

40.1 RETRIEVAL INSTRUCTIONS.

40.1.1 GENERAL INSTRUCTIONS. There are three simple steps to be followed in retrieving the delineations contained in this test function category, and they can be summarized as follows: First, define the FUNCTIONAL CODE NUMBER which identifies the category in which data on the required item is located. Second, refer to the ADAPTIVE DEVICES-TABLE OF DELINEATIONS section of this document to determine which delineations are applicable to the code number defined in Step 1. Third, locate the applicable delineations which are indexed by CATEGORIZATION INDEX NUMBER in the ADAPTIVE DEVICES-DELINEATIONS section of this document.

40.1.2 DETAILED INSTRUCTIONS. Detailed instructions on following this three-step procedure are given below, along with examples of typical functional requirements which can be met by the items for which data is stored in this Functional Categorization System.

STEP 1. Define the FUNCTIONAL CODE NUMBER which identifies the category in which data on the required item is located. The FUNCTIONAL CODE NUMBER is always a three-digit number and is defined by specifying the functional capability of the required item in terms of:

- a. PERFORMANCE FACTOR-----FIRST DIGIT
- b. CONTROLLED PARAMETER-----SECOND DIGIT
- c. CHARACTERISTIC FACTOR-----THIRD DIGIT

The digits for the FUNCTIONAL CODE NUMBER are selected from Figure 4 on the next page.

EXAMPLE: The user has a requirement for a time delay circuit which:

- a. Transfers a signal without changing its waveform----FIRST DIGIT = 2
  - b. Controls the basic parameter of time-----SECOND DIGIT = 2
  - c. Delays the input signal for a given time-----THIRD DIGIT = 6
- The FUNCTIONAL CODE NUMBER = 2.2.6

STEP 2. Refer to the ADAPTIVE DEVICES-TABLE OF DELINEATIONS and locate the one which is identified by the FUNCTIONAL CODE NUMBER defined in STEP 1. The CATEGORIZATION INDEX NUMBERS listed therein identify technical delineations on items which the required functional capabilities. For FUNCTIONAL CODE NUMBER 2.2.6, one CATEGORIZATION INDEX NUMBER will be found: 400056.

STEP 3. Locate the applicable documentation by searching the ADAPTIVE DEVICES-DELINEATIONS section of this document. The CATEGORIZATION INDEX NUMBERS found in STEP 2 identify the applicable delineation forms. The CATEGORIZATION INDEX NUMBER appears in the upper right hand corner of the delineation form.

40.1.3 SPECIAL INSTRUCTIONS. The example used in the three-step retrieval procedure outlined above requires that three specific characteristics be defined in

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order to retrieve documentation applicable to the type of item desired. By referring to Figure 4, it can be seen that it is possible to leave one or two digits of the FUNCTIONAL CODE NUMBER undefined by specifying an "open capability" for a particular classification level. As the following examples shown, this feature allows for either broadening or narrowing the scope of documentation which can be retrieved.

**EXAMPLE 1:** The user has a requirement for a device which amplifies the input voltage, and he is not concerned with whether there is a change of basic waveform. Therefore, he would define the FUNCTIONAL CODE NUMBER 0.1.1. This would lead to the retrieval of documentation stored in the two signal transfer Performance Factor Categories, the Controlled Parameter Category of amplitude, and the voltage Characteristic Factor Category.

**EXAMPLE 2:** The user has a requirement for an amplifier which will not change the basic waveform of the input signal, but he is not concerned with whether it amplifies current or voltage; therefore, he would define the FUNCTIONAL CODE NUMBER 2.1.0. This would lead to the retrieval of all documentation for voltage and current amplifiers which will transfer a signal without changing its basic waveform.

Levels of Classification		
Performance Factor Functional Capabilities	Controlled Parameter Functional Capabilities	Characteristic Factor Functional Capabilities
<div style="border: 1px solid black; padding: 2px; display: inline-block;">First Digit</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Second Digit</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Third Digit</div>
<u>Select:</u> 0. Open Capability  1. Signal Transfer with Change of Basic Waveform  2. Signal Transfer without Change of Basic Waveform  3. Signal Dissipation	<u>Select:</u> 0. Open Capability  1. Amplitude  2. Time	<u>Select:</u> 0. Open Capability  1. Voltage  2. Current  3. Concurrent or Series Pulse Group  4. Duration  5. Frequency  6. Delay

Figure 4. Digit Choices for Functional Code Numbers in the Adaptive and Supplementary Devices Category

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TABLE OF DELINEATIONS

FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
0.0.1	400001	400035	400078	400103
	400002	400036	400079	400104
	400003	400037	400080	400105
	400004	400038	400081	400106
	400005	400039	400082	400107
	400006	400040	400083	400108
	400007	400041	400084	400109
	400008	400042	400085	400110
	400009	400043	400086	400111
	400010	400044	400087	400112
	400020	400045	400088	400113
	400021	400046	400089	400114
	400022	400047	400090	400115
	400023	400048	400091	400116
	400024	400049	400092	400117
	400025	400051	400094	400118
	400026	400052	400095	400119
	400027	400071	400096	400120
	400028	400072	400097	400121
	400029	400073	400098	400122
	400030	400074	400099	400123
	400031	400075	400100	400124
	400032	400076	400101	400125
	400033	400077	400102	400126
	400034			

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## TABLE OF DELINEATIONS

FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
0.0.2	400093	400127	400128	
0.0.3	400011			
0.0.4	400012	400013	400014	
0.0.5	400015	400017	400019	400020
	400016	400018		
0.0.6	400056			

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TABLE OF DELINEATIONS

FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
0.1.0	400001	400036	400080	400105
	400002	400037	400081	400106
	400003	400038	400082	400107
	400004	400039	400083	400108
	400005	400040	400084	400109
	400006	400041	400085	400110
	400007	400042	400086	400111
	400008	400043	400087	400112
	400009	400044	400088	400113
	400020	400045	400089	400114
	400021	400046	400090	400115
	400022	400047	400091	400116
	400023	400048	400092	400117
	400024	400049	400093	400118
	400025	400051	400094	400119
	400026	400052	400095	400120
	400027	400071	400096	400121
	400028	400072	400097	400122
	400029	400073	400098	400123
	400030	400074	400099	400124
	300031	400075	400100	400125
	400032	400076	400101	400126
	400033	400077	400102	400127
	400034	400078	400103	400128
	400035	400079	400104	

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## TABLE OF DELINEATIONS

FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
0.1.1	400001	400035	400078	400103
	400002	400036	400079	400104
	400003	400037	400080	400105
	400004	400038	400081	400106
	400005	400039	400082	400107
	400006	400040	400083	400108
	400007	400041	400084	400109
	400008	400042	400085	400110
	400009	400043	400086	400111
	400020	400044	400087	400112
	400021	400045	400088	400113
	400022	400046	400089	400114
	400023	400047	400090	400115
	400024	400048	400091	400116
	400025	400049	400092	400117
	400026	400051	400094	400118
	400027	400052	400095	400119
	400028	400071	400096	400120
	400029	400072	400097	400121
	400030	400073	400098	400122
	400031	400074	400099	400123
	400032	400075	400100	400124
	400033	400076	400101	400125
	400034	400077	400102	400126

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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
0.1.2	400093	400127	400128	
0.1.3	No Items			
0.2.0	400010	400013	400016	400019
	400011	400014	400017	400020
	400012	400015	400018	400056
0.2.1	400010			
0.2.3	400011			
0.2.4	400012	400013	400014	
0.2.5	400015	400017	400019	400020
	400016	400018		
0.2.6	400056			
1.0.0	400001	400012	400073	400084
	400002	400013	400074	400085
	400003	400014	400075	400086
	400004	400015	400076	400087
	400005	400016	400077	400088
	400006	400017	400078	400089
	400007	400018	400079	400090
	400008	400019	400080	400091
	400009	400020	400081	400092
	400010	400071	400082	400093
	400011	400072	400083	



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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
1.0.1	400001	400009	400077	400085
	400002	400010	400078	400086
	400003	400071	400079	400087
	400004	400072	400080	400088
	400005	400073	400081	400089
	400006	400074	400082	400090
	400007	400075	400083	400091
	400008	400076	400084	400092
1.0.2	400151			
1.0.3	400011			
1.0.4	400012	400013	400014	
1.0.5	400015	400017	400019	400020
	400016	400018		
1.1.0	400001	400009	400078	400086
	400002	400071	400079	400087
	400003	400072	400080	400088
	400004	400073	400081	400089
	400005	400074	400082	400090
	400006	400075	400083	400091
	400007	400076	400084	400092
	400008	400077	400085	400093

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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
1.1.1	400001	400009	400078	400086
	400002	400071	400079	400087
	400003	400072	400080	400088
	400004	400073	400081	400089
	400005	400074	400082	400090
	400006	400075	400083	400091
	400007	400076	400084	400092
	400008	400077	400085	
1.1.2	400093			
1.1.3	No Items			
1.2.0	400010	400013	400016	400019
	400011	400014	400017	400020
	400012	400015	400018	
1.2.1	400010			
1.2.3	400011			
1.2.4	400012	400013	400014	
1.2.5	400015	400017	400019	400020
	400016	400018		

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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
2.0.0	400020	400042	400085	400107
	400021	400043	400086	400108
	400022	400044	400087	400109
	400023	400045	400088	400110
	400024	400046	400089	400111
	400025	400047	400090	400112
	400026	400048	400091	400113
	400027	400049	400092	400114
	400028	400051	400093	400115
	400029	400052	400094	400116
	400030	400056	400095	400117
	400031	400074	400096	400118
	400032	400075	400097	400119
	400033	400076	400098	400120
	400034	400077	400099	400121
	400035	400078	400100	400122
	400036	400079	400101	400123
	400037	400080	400102	400124
	400038	400081	400103	400125
	400039	400082	400104	400126
	400040	400083	400105	400127
	400041	400084	400106	400128

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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
2.0.1	400020	400041	400084	400106
	400021	400042	400085	400107
	400022	400043	400086	400108
	400023	400044	400087	400109
	400024	400045	400088	400110
	400025	400046	400089	400111
	400026	400047	400090	400112
	400027	400048	400091	400113
	400028	400049	400092	400114
	400029	400051	400094	400115
	400030	400052	400095	400116
	400031	400074	400096	400117
	400032	400075	400097	400118
	400033	400076	400098	400119
	400034	400077	400099	400120
	400035	400078	400100	400121
	4000036	400079	400101	400122
	4000037	400080	400102	400123
	4000038	400081	400103	400124
	4000039	400082	400104	400125
	4000040	400083	400105	400126
2.0.2	400151	400127	400128	

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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
2.0.6	400056			
2.1.0	400020	400042	400086	400108
	400021	400043	400087	400109
	400022	400044	400088	400110
	400023	400045	400089	400111
	400024	400046	400090	400112
	400025	400047	400091	400113
	400026	400048	400092	400114
	400027	400049	400093	400115
	400028	400051	400094	400116
	400029	400052	400095	400117
	400030	400074	400096	400118
	400031	400075	400097	400119
	400032	400076	400098	400120
	400033	400077	400099	400121
	400034	400078	400100	400122
	400035	400079	400101	400123
	400036	400080	400102	400124
	400037	400081	400103	400125
	400038	400082	400104	400126
	400039	400083	400105	400127
	400040	400084	400106	400128
	400041	400085	400107	

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FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
2.1.1	400020	400041	400084	400106
	400021	400042	400085	400107
	400022	400043	400086	400108
	400023	400044	400087	400109
	400024	400045	400088	400110
	400025	400046	400089	400111
	400026	400047	400090	400112
	400027	400048	400091	400113
	400028	400049	400092	400114
	400029	400051	400094	400115
	400030	400052	400095	400116
	400031	400074	400096	400117
	400032	400075	400097	400118
	400033	400076	400098	400119
	400034	400077	400099	400120
	400035	400078	400100	400121
	400036	400079	400101	400122
	400037	400080	400102	400123
	400038	400081	400103	400124
	400039	400082	400104	400125
	400040	400083	400105	400126
2.1.2	400053	400127	400128	
	400054			
	400093			
2.2.0	400056			

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TABLE OF DELINEATIONS

FUNCTIONAL CODE NUMBER	CATEGORIZATION INDEX NUMBER			
2.2.4	400055			
2.2.6	400056			
3.0.0	400050	400060	400064	400068
	400057	400061	400065	400069
	400058	400062	400066	400070
	400059	400063	400067	

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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector, Radio Frequency  
 B. FSN 4935-979-0889 C. P/N 9136769  
 D. Mfr. Code Number Western Electric Co.  
 E. Categorization Index No. 400C01  
 F. Missile System Nike-Hercules (Imp.)  
 G. Next Assembly P/N 8036066

II. Characteristics

A. Principal Function Detection  
 B. Input Signal 220 cps voltage  
 C. Output Signal D. C. voltage proportional to the amplitude of the input.  
 D. Functional Description

This unit will produce a negative DC voltage output proportional to the amplitude of the input signal. Two amplifiers precede the detecting element.

Note: Contains its own power supply

III. Operating Voltage(s)

A. AC 120 V, 400 cps  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 9 3/8; Width 8 1/2; Depth 5  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly XX

V. Reference Sources

Army TM 9-1430-250-20/6 & TM 9-1430-256-20/3

Functional Code Numbers: 111



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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

- A. Federal Nomenclature Detector, Radio Frequency  
 B. FSN 4935-811-6945 C. P/N GS 59013  
 D. Mfr. Code Number 64959, 92663  
 E. Categorization Index No. 400002  
 F. Missile System Titan WS - 107A - 2  
 G. Next Assembly IF Servo Components Test Set AN/GRM - 41

II. Characteristics

- A. Principal Function Amplification and Detection of 60 mc signal  
 B. Input Signal Modulated 60 mc signal  
 C. Output Signal Demodulated signal  
 D. Functional Description

This unit consists of two relay controlled circuits, a cathode follower circuit, and a detector IF amplifier circuit. The amplifier detector provides amplification of 60 mc signal. Its gain is 19 db and bandwidth is 8 mc.

Note: \_\_\_\_\_

III. Operating Voltage(s)

- A. AC 120V, 400 cps  
 B. DC +150 V, -250 V, -28 V

IV. Mechanical Characteristics

- A. Dimensions (inches): Height 3.46; Width 19; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted X; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

- AF TO 33D9 - 98-3-2  
AF Drawing No. G - 303224, G-303212, and G - 293840

Functional Code Numbers: 111

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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector, Radio Frequency  
 B. FSN. 4935-588-5135 C. P/N 1026481-501  
 D. Mfr. Code Number 02767 & 49671  
 E. Categorization Index No. 400003  
 F. Missile System Titan WS107A-1  
 G. Next Assembly P/N 1023020-501

II. Characteristics

A. Principal Function Demodulation  
 B. Input Signal Modulated 400 cps voltage  
 C. Output Signal Modulation  
 D. Functional Description

This unit removes the 400 cps carrier from the modulated signal through the use of a bridge type demodulator.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 400 cps reference voltage  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

A.F. T.O. 31X2-2-16-2 and T.O. 31X2-2-16-4

A.F. Dwg Nos. 10280501 and 1026481

Functional Code Numbers: III

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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector, AF-RF, Phase Sensitive  
 B. FSN 4935-801-2429 C. P/N 27-48489-501  
 D. Mfr. Code Number 05342  
 E. Categorization Index No. 400004  
 F. Missile System Titan WS107A-1  
 G. Next Assembly P/N: 27-58117-502 and 503

II. Characteristics

A. Principal Function Demodulation of 400 cps signal  
 B. Input Signal Modulated 400 cps voltage, 0-30 vrms  
 C. Output Signal In phase and quadrature components of the modulation  
 D. Functional Description

This detector consists of two identical full-wave bridge type demodulators. One demodulator operates on the in-phase component of the signal and the other operates on the quadrature component. Through its operation, the 400 cps carrier frequency is removed from the signal; the output signal of each demodulator is representative of the modulation impressed on the 400 cps input signal.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 110 V 400 cps (for reference)  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

AF TO 31X2-31-2-4 and TO 31X2-31-2-12  
AF Dwg. Nos. 27-48489, 27-48486, and 27-58117

Functional Code Numbers: 111

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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector, I.F.  
 B. FSN 4935-732-8018 C. P/N 9984886  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400005  
 F. Missile System Nike-Hercules (Imp.)  
 G. Next Assembly P/N 9143034

II. Characteristics

A. Principal Function Detection  
 B. Input Signal 1 to 200 mc signal  
 C. Output Signal D.C. voltage proportional to the amplitude of the input.  
 D. Functional Description

This detector utilizes a semiconductor diode, IN475, to detect both modulated and unmodulated r.f. signals. It contains a RCL filtering network which removes high frequency components from the pulsating D.C. output.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC N.A.

IV. Mechanical Characteristics

A. Dimensions (inches): Height 3/4"; Width 3-9/16; Depth \_\_\_\_\_  
 B. Configuration: Portable X; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg. No 9984886

Functional Code Numbers: 111

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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector R.F.  
B. FSN 4935-778-0301 C. P/N 8036066  
D. Mfr. Code Number 00000  
E. Categorization Index No. 400006  
F. Missile System Nike-Hercules (Imp.)  
G. Next Assembly P/N 9139115

II. Characteristics

A. Principal Function Amplify and demodulate  
B. Input Signal Modulated R.F. (see note)  
C. Output Signal D.C. voltage proportional to the amplitude of the input modulation.  
D. Functional Description

The input R.F. enters the unit through a waveguide connection which contains an adjustable vane for level control. The signal is then detected by a semiconductor diode, amplified and then filtered. The output is D.C.

Note: Signal Frequency is classified - see TM 9-1430-250-20/6

III. Operating Voltage(s)

A. AC 120 V, 400 cps  
B. DC -28 V

IV. Mechanical Characteristics

A. Dimensions (inches): Height 6 15/16; Width 14 7/8; Depth 14 3/8  
B. Configuration: Portable       ; Rack Mounted       ; Built into Next Assembly X

V. Reference Sources

MICOM Dwg. No. 9993775

Functional Code Numbers: 111

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ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

- A. Federal Nomenclature Detector, Radio Frequency
- B. FSN 4935-699-2381 C. P/N 8156699
- D. Mfr. Code Number 00000
- E. Categorization Index No. 4000007
- F. Missile System Nike-Ajax, -Hercules, -Hercules (Imp.)
- G. Next Assembly P/N 9008074

## II. Characteristics

- A. Principal Function Detection
- B. Input Signal R.F. signal (See Note)
- C. Output Signal Pulsating D.C.
- D. Functional Description

This unit is basically a waveguide into which a semiconductor device, IN23B, has been mounted as the detecting element. This diode will convert either a modulated or unmodulated radio frequency signal into an unfiltered, pulsating dc voltage.

Note: Input Signal Frequency is Classified - See TM 9-1430-250-20/6

## III. Operating Voltage(s)

- A. AC N.A.
- B. DC N.A.

## IV. Mechanical Characteristics

- A. Dimensions (inches): Height 3 1/2; Width 2 13/16; Depth 1 1/4
- B. Configuration: Portable X; Rack Mounted       ; Built into Next Assembly

## V. Reference Sources

MICOM Dwg. No. 8156699

Functional Code Numbers: 111

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector, Radio Frequency  
B. FSN 4935-583-1526 C. P/N 9157156 and 420 A  
D. Mfr. Code Number 00000, 28480  
E. Categorization Index No. 400008  
F. Missile System Nike-Ajax, -Hercules, and -Hercules (Imp.): Bullpup  
G. Next Assembly P/N 9980830

II. Characteristics

A. Principal Function Detection  
B. Input Signal 10 m to 12.5 gc signal  
C. Output Signal pulsating Dc  
D. Functional Description  
This unit detects either modulated or unmodulated radio frequency signals in the range from 10mc to 12.5gc. The detecting element is a modified IN26 diode.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
B. DC N.A.

IV. Mechanical Characteristics

A. Dimensions (inches): Height 3; Width 3/4; Depth \_\_\_\_\_  
B. Configuration: Portable X; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg No. 9157156 and Navy Dwg. 420A  
AF Dwg. 420A

Functional Code Numbers: 111

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

- A. Federal Nomenclature Detector, Audio Frequency  
 B. FSN 4935-726-0593 C. P/N 30665-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400009  
 F. Missile System Minuteman  
 G. Next Assembly Programmer Fault Locates test Center AN/GJM-19

II. Characteristics

- A. Principal Function Demodulation  
 B. Input Signal Modulated 400 cps voltage  
 C. Output Signal D.C. voltage  
 D. Functional Description

This unit consists of two 400 cps detectors, both of which one identical except that one has feedback provisions. A 400 cps voltage is used to control bridge type detecting networks. The detector removes the 400 cps component from the modulated input signal and provides an output which is a full wave rectification of the modulation.

Note: \_\_\_\_\_

III. Operating Voltage(s)

- A. AC 25 V, 400 cps control voltage  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

- A. Dimensions (inches): Height 6 1/4; Width 6; Depth 3/4  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

- A.F. T.O. 33D9-74-12-14; Dwg No. 30665-315 and 30667-315

Functional Code Numbers: 111



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Comparator  
 B. FSN 4935-345-8018 C. P/N 10107267  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 4000010  
 F. Missile System Hawk  
 G. Next Assembly SNL & 122-05; P/N 10107284

II. Characteristics

A. Principal Function Comparison of Frequency modulated signals  
 B. Input Signal Frequency modulated signals  
 C. Output Signal DC voltage  
 D. Functional Description

Data on this unit is classified. For information pertaining to this unit, see the reference sources listed below.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 3 11/32; Width 5.381; Depth 3.350  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manual TM 9-4935-501-12/3  
MICOM Dwg. No. 10107267

Functional Code Numbers: **121**

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Converter, Digital to Digital  
 B. FSN 4935-829-6736 C. P/N 9980038  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400011  
 F. Missile System Nike-Ajax, -Hercules, -Hercules (Imp.)  
 G. Next Assembly SNL J748-1: P/N's 9998468 & 9998500

II. Characteristics

A. Principal Function to convert 10 line Digital information to 4 Line  
Digital information.  
 B. Input Signal 9 line ground or no ground  
4 line ground or -28 volt  
 C. Output Signal \_\_\_\_\_  
 D. Functional Description

The digital to digital converter converts 10-line digital information to 4-line digital information by applying ground potential to switching crystal diodes. Application of ground to an input indicates a unit, no ground is a zero. At the output, a ground is also a unit, but a zero is represented by a -28 volt output.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -28V

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.26"; Width 3.94"; Depth 3.46"  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manual TM 9-4940-252-34/3 &  
TM 9-4940-252-35/2

Functional Code Numbers: 123

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Comparator, Signal  
 B. FSN 4935-797-9550 C. P/N 9980158  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 4000012  
 F. Missile System Nike Ajax, -Hercules, & -Hercules (Imp.)  
 G. Next Assembly SNL J784-01: P/N 9991367

II. Characteristics

A. Principal Function Comparing phase shifts  
 B. Input Signal 500 kc reference pulse & positive input pulses  
 C. Output Signal DC error voltages  
 D. Functional Description

This unit compares the relationship between two input pulses, one of which is a reference pulse. This comparison is done by comparing the difference in the phase angle between a reference sine wave and a damped sine wave both of which are generated in the unit from the input pulses. The reference sine wave is developed from the reference pulse, inverted and shifted ninety degrees. The sine wave developed from the input pulse is compared against the reference sine wave in a transformer. Phase angle differences other than ninety degrees will develop positive or negative voltages depending on the direction of phase shift.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 6.3V, 29A, 400 cps  
 B. DC -250V, +250V

IV. Mechanical Characteristics

A. Dimensions (inches): Height 5.50; Width 8.500; Depth 3.062  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-34/3 & TM 9-4940-252-35/2  
MICOM Dwg No. 9980158

Functional Code Numbers: 124

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

- A. Federal Nomenclature Detector, Radio Frequency  
 B. FSN 4935-590-2686 C. P/N 9005350  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 40000713  
 F. Missile System Nike-Ajax -Hercules  
 G. Next Assembly SNI Y004-3 & Y039 P/N 8009400

## II. Characteristics

- A. Principal Function Detects Phase difference  
 B. Input Signal Two input signals of the same frequency  
 C. Output Signal Square wave  
 D. Functional Description

This unit compares the phase relationship of its two input signals and generates a square wave output whose magnetude is proportional to the phase difference.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

- A. AC 6.3 V, 400 cps  
 B. DC -250 V, +250 V, +150 V

## IV. Mechanical Characteristics

- A. Dimensions (inches): Height 3 3/8; Width 5 1/8; Depth 13 5/32  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

MICOM Dwg. No. 9005350

Functional Code Numbers: 124

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

- A. Federal Nomenclature Detector, Radio Frequency  
 B. FSN 4935-622-1649 C. P/N 9009270  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400014  
 F. Missile System Nike-Hercules, -Hercules (Imp.)  
 G. Next Assembly P/N 9141141 and 8158832

II. Characteristics

- A. Principal Function Phase Comparison  
 B. Input Signal Two R.F. Signals of same frequency  
 C. Output Signal square wave whose magnitude is proportional to the phase relationship of the input signals.  
 D. Functional Description

This unit compares the phase relationship between two r.f. signals and produces an output signal which is in the form of a low frequency square wave whose magnitude is proportional to the difference in the phase relationship between the two input signals.

Note: \_\_\_\_\_

III. Operating Voltage(s)

- A. AC 6.3 V. 400 cps  
 B. DC -250 V. +250 V. +250 V

IV. Mechanical Characteristics

- A. Dimensions (inches): Height 3 3/8; Width 5 1/8; Depth 13 5/36  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

MICOM Dwg. No. 9009270

Functional Code Numbers: 124

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

- A. Federal Nomenclature Frequency Converter and Amplifier  
 B. FSN 4935-887-9025 C. P/N 9988588  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400015  
 F. Missile System Nike-Ajax, -Hercules, & -Hercules (Imp.)  
 G. Next Assembly SNL J752: P/N 8514680

II. Characteristics

- A. Principal Function Converts 60 mc signals to 50 mc signals  
 B. Input Signal 60 mc pulses or CW signals  
 C. Output Signal 50 mc signal  
 D. Functional Description

This unit modulates the 60 MC input signal with a 100 MC voltage supplied by a crystal controlled oscillator. The 50 MC output is selected by a tuned grid circuit in the amplifier which follows the modulator. The converter has a bandwidth of  $\pm 2MC$  about the center frequency of 60 MC.

Note: \_\_\_\_\_

III. Operating Voltage(s)

- A. AC 6.3V, 400 cps  
 B. DC +150V

IV. Mechanical Characteristics

- A. Dimensions (inches): Height 4.82"; Width 9"; Depth 3.68"  
 B. Configuration: Portable X; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Department of the Army Technical Manual TM 9-4940-251-34 and TM-9-4940-251-35  
MICOM Dwg No. 9988588

Functional Code Numbers:

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

- A. Federal Nomenclature Multiplier, Frequency  
 B. FSN 4935-970-1088 C. P/N 9995918  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400016  
 F. Missile System Nike -Ajax, -Hercules, -Hercules (Imp.)  
 G. Next Assembly SNL J784; P/N 9995828

II. Characteristics

- A. Principal Function Frequency Multiplication  
 B. Input Signal 9 to 18 mc  
 C. Output Signal 18 to 36 mc, 36 to 72 mc  
 D. Functional Description

This unit contains two frequency doubler stages. Output signals can be taken from either the first stage or the second stage. Adjustments of the frequency and the gain of each of the stages can be externally controlled by applying control voltages to operate relays in the unit.

Note: This unit supersedes 9993907, superseded by 9991366

III. Operating Voltage(s)

- A. AC 6.3 V 400 cps  
 B. DC 250, -250, -28V

IV. Mechanical Characteristics

- A. Dimensions (inches): Height 6.36; Width 8.500; Depth 3.062  
 B. Configuration: Portable       ; Rack Mounted       ; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-34/2 & TM 9-4940-252-35/1  
MICOM Dwg. No. 9995918

Functional Code Numbers: 125

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Conterber, Waveform  
 B. FSN 4935-628-7092 C. P/N 8198117  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400017  
 F. Missile System Corporal II  
 G. Next Assembly SNL Y003: P/N 8132759

II. Characteristics

A. Principal Function Signal Conversion  
 B. Input Signal Amplitude Modulated Pulses  
 C. Output Signal DC Voltages proportional to the modulation  
frequency of the input signal  
 D. Functional Description

This unit contains two separate channels and produces DC voltages proportioned to the frequency of modulation.

Note: Further information is classified; see reference sources listed below

III. Operating Voltage(s)

A. AC 6.3  
 B. DC +150, -150

IV. Mechanical Characteristics

A. Dimensions (inches): Height approx. 8 5/8; Width approx. 10 1/2; Depth app. 1 3/4  
 B. Configuration: Portable       ; Rack Mounted       ; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manuals TM 9-5039-7-40 & TM 9-5039-3-35

Functional Code Numbers: 125



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Detector, Audio Frequency  
 B. FSN 4935-678-0202 C. P/N 9062532  
 D. Mfr. Code Number 00000, 81541  
 E. Categorization Index No. 4000018  
 F. Missile System Hawk  
 G. Next Assembly P/N 9083518

II. Characteristics

A. Principal Function Frequency detector  
 B. Input Signal 0-50 cps signal  
 C. Output Signal D. C. voltage  
 D. Functional Description

This detector converts changes in the frequency of its input voltage into a pulsating DC output voltage whose magnitude is proportional to the change in the input frequency.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1 3/16; Width 1 17/32; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly y

V. Reference Sources

MICOM Dwg. No. 9062532

Functional Code Numbers: **125**

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

- A. Federal Nomenclature Detector, Radio Frequency  
 B. FSN 4935-448-0151 C. P/N D24092  
 D. Mfr. Code Number 42498  
 E. Categorization Index No. 400019  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

- A. Principal Function Demodulation of FM signal  
 B. Input Signal 200 kc FM signal  
 C. Output Signal Modulation  
 D. Functional Description

This detector will demodulate a signal with a 200 kc carrier frequency. The input of the detector employs a limiter to remove any possible amplitude modulation. The input signal is amplified and then applied to a ratio detector. Output can be taken either from the ratio detector output or from a cathode follower.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

- A. AC 6.3 V 60 cps  
 B. DC 150 V

## IV. Mechanical Characteristics

- A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

National Company Dwg. 25168 and Air Force Dwg. No. 24092

Functional Code Numbers: 125

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Frequency Divider  
 B. FSN 4935-0173 C. P/N 9993752  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400020  
 F. Missile System Nike-Ajax, -Hercules, and -Hercules (Imp.)  
 G. Next Assembly SNL J784-01: P/N 9997862

II. Characteristics

A. Principal Function Frequency division  
 B. Input Signal Negative pulses 25 to 2.5 u sec. with a prf. of  
2000 to 20,000 cps.  
 C. Output Signal negative pulses  
 D. Functional Description

This circuit will divide the input frequency by 10,000 & 1000. Frequency division is accomplished by beam-switching tubes and binary tube circuits. The unit also contains an amplifier which amplifies the negative input pulses and feeds it to output terminals.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 6.3V 400 cps  
 B. DC -250Vdc +150Vdc regulated

IV. Mechanical Characteristics

A. Dimensions (inches): Height 3.062"; Width 8.500"; Depth 6.68"  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-34/3 and TM 9-4940-252-35/2  
MICOM Dwg. No. 9993752

Functional Code Numbers: **125 211**

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Attenuator  
 B. FSN 4935-751-9172 C. P/N 10046705  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400021  
 F. Missile System Hawk  
 G. Next Assembly SNL J756-22: P/N 10046507

## II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 0 to 50 mc signal  
 C. Output Signal Attenuated Input  
 D. Functional Description

This unit has an input and output impedance of 50 ohms. Attenuation is from 0 to 132 db in steps of 1db. Average power is 0-5 watts and maximum insertion loss is .4db.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 3 3/8"; Width 2 13/16"; Depth 7 7/8"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

MICOM Dwg. No. 10046705

Functional Code Numbers; 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Regulator, Voltage  
 B. FSN 4935-612-3042 C. P/N 9007765  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400022  
 F. Missile System Nike-Ajax. -Hercules & -Hercules (Imp.)  
 G. Next Assembly SNL J751: J752: J782: P/N 9137757: 9983978: 9983982

II. Characteristics

A. Principal Function Provides voltage regulation  
 B. Input Signal +320 Vdc  
-320 Vdc  
 C. Output Signal +250 Vdc 300 Ma maximum  
-250 250 ma maximum  
 D. Functional Description

The unit is a electronically controlled tube type power supply regulator.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 6.3V, 400 cps  
 B. DC +320V, -320V, +250V, -250V, -550V

IV. Mechanical Characteristics

A. Dimensions (inches): Height 6 3/4"; Width 8 1/4"; Depth 9"  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manual TM 9-4940-250-34 &  
TM 9-4940-250-35 MICOM Dwg. No. 9007765

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-734-5364 C. P/N 9179359  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400023  
 F. Missile System Hawk  
 G. Next Assembly SNL's J756-24, & Y121-00; P/N's 10065033 & 9196262

II. Characteristics

A. Principal Function Amplify Audio Signals  
 B. Input Signal Audio Signal  
 C. Output Signal Amplified Input  
 D. Functional Description

This amplifier, which uses three transistors, has an operating range of 1 to 20 cps. Its input impedance is 1M ohm and its output impedance is 1 2,000 ohms. The input signal is direct coupled to the base of the input transistor, and the output is taken directly off the collector of the output transistor. There are no adjustment controls.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +75V

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2 3/16; Width 7/8; Depth 7/8  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly y

V. Reference Sources

MICOM Dwg. No. 9177359

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Fixed  
 B. FSN 4935-845-1962 C. P/N 9157256  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400024  
 F. Missile System Nike-Ajax, -Hercules, & -Hercules (Imp.)  
 G. Next Assembly SNL J784-01: P/N 9990830

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 1300 to 1600 mc signal  
 C. Output Signal Slightly attenuated Input  
 D. Functional Description

This unit is an L band medium power waveguide type isolator. Minimum isolation is 20 db, maximum is 40 db. Peak power is 10 kw and average power is 25 w. The insertion loss is 1db maximum and the maximum V.S.W.R. is 1.20.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.812"; Width 1.875"; Depth 12"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg. No. 9157256

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-589-8196 C. P/N 9163182  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400025  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J740-02 J740-04: PN 9113367

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 10 mc to 480 mc signal  
 C. Output Signal Attenuated Input  
 D. Functional Description

This unit has a 50 ohm output impedance and a variable input impedance. Attenuation is continuously variable from +7DBM to -127DBM. It has a flat frequency response from 10 mc to 480 mc.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1"; Width 2 3/4"; Depth 55 1/2"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

\_\_\_\_\_  
 MICOM Dwg No. 9163182

Functional Code Numbers: 211



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator  
 B. FSN 4935-712-8388 C. P/N 9975610  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400026  
 F. Missile System Redstone  
 G. Next Assembly SNL J762: PN 9143034

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 0 to 500 mc  
 C. Output Signal Attenuated Input  
 D. Functional Description

This unit has a nominal input and output impedance of 90ohms It is designed for attenuation from 0 to 101 db. Maximum power is  $\frac{1}{2}$ w. Insertion loss at low frequencies is 0 db; at 250 mc it is .1 db and at 500 mc it is 2 db. The unit attenuation accuracy at full attenuation is .5 db at 250 mc and 1.2 db from 250 to 500 mc.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2.06"; Width 9.62"; Depth 2.24"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

\_\_\_\_\_  
 MICOM Dwg No. 9975610

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Attenuator, Fixed  
 B. FSN 4935-887-1451 C. P/N 9157186  
 D. Mfr: Code Number 00000  
 E. Categorization Index No. 400027  
 F. Missile System Nike-Hercules (Imp.)  
 G. Next Assembly SNL J784-01: PN 10167087

## II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 2 to 200 mc signal  
 C. Output Signal attenuated input  
 D. Functional Description

This unit is an in line insertion type attenuator with a 72 ohm input and output impedance. It is designed for a frequency range of 2 to 200 mc with an attenuation of -6 db  $\pm$ 0.1 db.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height .753  $\pm$ .015"; Width 3/4"; Depth 3.46  $\pm$ .040"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

\_\_\_\_\_  
 MICOM DWG NO. 9157186

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio or Radio Frequency  
 B. FSN 4935-739-6721 C. P/N 9176829  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400028  
 F. Missile System Hawk  
 G. Next Assembly SNL's J756-24, Y121-00: PN's 10065033 & 9196262

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Audio or Radio Frequency Signal  
 C. Output Signal Amplified Input  
 D. Functional Description

This unit is a transistorized audio or radio frequency amplifier. It has a band width of 2 to 200 kc  $\pm$  1 db, a voltage gain of 20, and external terminals for adjusting feedback. The input impedance is 3,000 ohms and the output impedance is 5,000 ohms. There are no internal adjustment controls.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC + 20V

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth 3.5  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

MICOM Dwg No. 9176829

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Converter, Waveform  
 B. FSN 4935-712-8462 C. P/N 9980088  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400029  
 F. Missile System Nike-Ajax - Hercules, - Hercules (Imp.)  
 G. Next Assembly SNL 784-01: PN 9980218

## II. Characteristics

A. Principal Function Converts sawtooth wave into sweep voltages  
 B. Input Signal Positive sawtooth wave and negative gate voltage  
 C. Output Signal Positive going and negative going sweep voltage  
 D. Functional Description

This unit receives the sawtooth input, clamps it at ground potential with a gated switching tube. The gate voltage is in sync with the sawtooth waveform and is applied to the control grid of the switching tube.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 6.3 V 400 cps  
 B. DC -100 V, -250 V, +250 V, +150 V

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 5.90; Width 8.500; Depth 3.062  
 B. Configuration: Portable       ; Rack Mounted       ; Built into Next Assembly x

## V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-34/3, TM 9-4940-252-35/2  
MICOM Dwg No. 9980088

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Regulator, Voltage  
 B. FSN 4935-509-2700 C. P/N 8948058  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400030  
 F. Missile System Redstone  
 G. Next Assembly SNL Y180-1 PN 10382551

II. Characteristics

A. Principal Function Regulates A-C Line Voltage  
 B. Input Signal 90-130 VAC 50-60 cycles  
 C. Output Signal 110-120-VAC 50-60 cycles

D. Functional Description

Regulation line or load: 0.1%  
 Response Time: 0.1 sec.  
 Distortion: 3% max.  
 Power factor load range: 1-0.7 Lag.  
 Phase: single  
 Volt-amperes 0-1000

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 90-130 VAC 50-60 cycles single phase  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 8 1/4; Width 17 1/4; Depth 11  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Sorensen & Company, Inc. 1961 Power Supply & Handbook Catalog.  
MICOM Dwg No. 8948058

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Regulator, Voltage  
 B. FSN 4935-712-8538 C. P/N 9016405  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400031  
 F. Missile System Nike Ajax, -Hercules, -Hercules (Imp.)  
 G. Next Assembly SNL J784: PN 9980823

II. Characteristics

A. Principal Function Voltage regulation  
 B. Input Signal 120 V 400 cps +20 cps  
 C. Output Signal 120 V 400 cps +20 cps  
 D. Functional Description

This regulator consists basically of a regulator transformer, two magnetic amplifiers, and variable resistor which adjusts the output voltage. This unit provides regulation of the 120V, 400 cps power by a means of buck or boost regulation. Fluctuation of the supply causes the amplifiers to conduct and supply current to the secondary windings of the regulating transformer to either buck or boost the primary winding to bring the series output to the proper load setting. An input or operating voltage is needed.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 14.750 ; Width 10.0 ; Depth 5.65  
 B. Configuration: Portable \_\_\_\_\_ ; Rack Mounted \_\_\_\_\_ ; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-34/3 & TM 9-4940-252-35/2  
MICOM Dwg No. 9016405

Functional Code Numbers: 2 11

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-797-0890 C. P/N 9136556  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400032  
 F. Missile System Nike Hercules (Imp.)  
 G. Next Assembly SNL Y171: PN 9141718

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal Radio Frequency Pulses  
 C. Output Signal Attenuated Input  
 D. Functional Description

Further information is classified: See reference sources listed below.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Department of the Army Technical Manuals TM9-1430-250-20/6 & TM 9-1430-256-20/3  
MICOM Dwg 9136556

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-987-8999 C. P/N 9144759  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400033  
 F. Missile System Nike Hercules (Imp.)  
 G. Next Assembly SNL Y172-00

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 8500 mc to 9600 mc  
 C. Output Signal Attenuated Input  
 D. Functional Description

This unit is a solenoid operated attenuator with two operating positions that is designed for frequencies of 8500 mc to 9600 mc. In the attenuate position, the attenuation is 10 db with a VSWR of 1.20. In the other position, the insertion loss is a maximum of 0.25 db.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC A current of 2.75 amps is needed to operate the solenoid

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 9144759

Functional Code Numbers; 211



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-755-2984 C. P/N 9168080  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400034  
 F. Missile System Hawk  
 G. Next Assembly SNL J756-23: PN 10108313

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 8.2 to 12.4 Kmc  
 C. Output Signal Attenuated input  
 D. Functional Description  
 Frequency Range: 8.2 to 12.4 Kmc  
 Attenuation: 0.5 to 20 db  
 VSWR: 1.15 maximum  
 Connections: VG-39/U modified as shown on MICOM Dwg No. 9168080

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC N. A.

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2.187; Width 2.781; Depth 3.250  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 9168080

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-805-3641 C. P/N 9187748  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400035  
 F. Missile System HAWK  
 G. Next Assembly SNL Y122-3: PN 9195302

## II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal X Band frequencies  
 C. Output Signal Attenuated input  
 D. Functional Description  
 Attenuation: .5 to 20 db  
 Insertion Loss: .5 db  
 Operating Frequency Range: X Band

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height Approx 5 ; Width approx 2½ ; Depth App 5½  
 B. Configuration: Portable \_\_\_\_\_ ; Rack Mounted \_\_\_\_\_ ; Built into Next Assembly x

## V. Reference Sources

Department of the Army Technical Manual TM 9-4935-501-12/3  
MICOM Dwg No. 9187748

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-894-3153 C. P/N 9975621  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400036  
 F. Missile System Nike Hercules (Imp)  
 G. Next Assembly SNL J029-4E: PN 9143034

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 1.12 to 1.70 kmc  
 C. Output Signal Attenuated input  
 D. Functional Description  
 Attenuation: 0 to 20 db  
 Frequency range: 1.12 to 1.70 kmc  
 Insertion loss: 0.5 db  
 VSWR: 1.12  
 Connectors: mates with UG 417 A/U

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 10.531; Width 30; Depth 14.124  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg No. 9975621

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator and Plate (Installation)  
 B. FSN 4935-994-9983 C. P/N 9195302  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400037  
 F. Missile System Hawk  
 G. Next Assembly SNL Y122-03: PN 9083518 & 9065280

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal X Band Frequencies  
 C. Output Signal Attenuated Input  
 D. Functional Description  
 Attenuation: .5 to 20 db  
 Insertion Loss: .5 db  
 Operating Frequency Range: X Band

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height Approx 4.2 ; Width Approx 1.6 ; Depth Approx 5.2  
 B. Configuration: Portable \_\_\_\_\_ ; Rack Mounted \_\_\_\_\_ ; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manual TM 9-4935-501-12/3  
MICOM Dwg No. 9195302

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Fixed  
 B. FSN 4935-981-4882 C. P/N 9997091  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400038  
 F. Missile System Nike Hercules (Imp)  
 G. Next Assembly SNL Y206-00: PN 9143034

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 1.3 to 1.6 kmc  
 C. Output Signal Attenuated Input  
 D. Functional Description  
 Frequency Range: 1.3 to 1.6 kmc  
 VSWR: 1.35  
 Attenuation: 10 db  
 Impedance: 50 Ohms

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height .781; Width .781; Depth 8.250  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 9997091

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-860-7375 C. P/N 10051081  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400039  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J740-03, -05 & Y139-00: PN 9165981

## II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal N ± 250 mc  
 C. Output Signal Attenuated input  
 D. Functional Description  
 Attenuation: 0 to 20 db  
 Frequency: N ± 250 mc  
 VSWR: 1.10 Max. at N Freq.  
 Connectors: MS 90055-600A

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC N.A.

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 1 17/32; Width 2 3/4; Depth 3/4  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

MICOM Dwg No. 10051081Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-978-4282 C. P/N 10056166  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400040  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J740-02: PN 8902509

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 34 to 36 kmc signal  
 C. Output Signal Attenuated input  
 D. Functional Description  
 1. Attenuation: 0 to 10 db  
 2. Frequency range: 34-36 kmc  
 3. Insertion loss: 0.20 db  
 4. VSWR: 1.25  
 5. Power range: 20 watts average  
                   40 kw peak  
 6. Connectors:  
     Input: MS90055-600A  
     Output: MS90057-599

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 3; Width 6; Depth 1.25  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 10056166

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Dividèr, Voltage, Capacitive  
 B. FSN 4935-534-1974 C. P/N 8034051  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400041  
 F. Missile System Nike Ajax, -Hercules, - Hercules (Imp.)  
 G. Next Assembly SNL J29-4B, J29-4D: PN 8169465

## II. Characteristics

A. Principal Function Voltage divider  
 B. Input Signal 10 kc and above, 2000 volt max.  
 C. Output Signal Same frequency, one one-hundredth to voltage  
 D. Functional Description

This unit is a test probe which is designed to be used with the Hewlett-Packard Voltmeter, Model 410B, (PN 8169465).

Accurach: plus or minus 1%

Division Ratio: 100 to 1

Max. Voltage: 2000 V

Frequency Range: 10 kc and above

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

Hewlett-Packard catalogue (1959)  
MICOM Dwg No. 8034051

Functional Code Numbers: 211



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Comparator, Voltage  
 B. FSN 4935-604-9956 C. P/N 8151750  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400042  
 F. Missile System Nike Hercules  
 G. Next Assembly SNL J029-4B, J751: PN 8156684 & 8156685

II. Characteristics

A. Principal Function Supplies  $\pm$  100 and -100 volt reference voltage  
 B. Input Signal None  
 C. Output Signal  $\pm$ 100 volts at 20 ma and -100 volts at 10 ma  
 D. Functional Description

This unit compares a portion of its  $\pm$ 100 volt output against a 10 volt reference cell. Voltage deviations are chopped, amplified, and compared in a detector which then in turn applies an error correction voltage to the grids of parallel cathode followers. The resulting change in current flow corrects the voltage deviation. The -100 volt circuit is similar in operation to the  $\pm$ 100 volt circuit except that the  $\pm$ 100 volt output is used for its reference.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 6.3 V, 115 V, 60 cps  
 B. DC  $\pm$ 250 V, -250 V

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-250-35 & TM 9-4940-250-34

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Regulator, Voltage  
 B. FSN 4935-707-9869 C. P/N 8157186  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400043  
 F. Missile System Nike Ajax, - Hercules, -Hercules (Imp.)  
 G. Next Assembly SNL J752: PN 8514590, 8514370 & 8514120

## II. Characteristics

A. Principal Function Voltage regulation  
 B. Input Signal -550 V, -250, -320 V  
 C. Output Signal -200 volts at a max. of 250 milliamperes  
 D. Functional Description

This unit is a series-type regulator consisting of two amplifiers, two cathode followers, two series-regulators and a cold cathode regulator tube. Any change in the -200 V output is amplified by the amplifiers and cathode followers. The amplified signal is placed on the control grids of the series regulators. This causes the conduction of the regulators to increase or decrease depending on the polarity of the signal. This causes the plate-to-cathode resistance to change which restores the output to -200 V.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 6.3 V 400 cps  
 B. DC -550 V, -250 V, -320 V

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 5 3/8; Width 9; Depth 5  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-250-34 & TM 9-4940-250-35  
MICOM Dwg No. 8157156

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Waveguide Assembly  
 B. FSN 4935-303-8047 C. P/N 8171359  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400044  
 F. Missile System Nike Ajax, -Hercules, & -Hercules (Imp.)  
 G. Next Assembly SNL Y30, J783-00, J752: PN 9008074

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 8500 MC to 9600 MC  
 C. Output Signal Attenuated input  
 D. Functional Description

Attenuation: 0.5 to 31 db

Insertion Loss: 0.5 db

Aver. Power: 0.502 W

Note: Supersedes 8007796

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 8171359

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator Assembly  
 B. FSN 4935-561-7996 C. P/N 8172888  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400045  
 F. Missile System Nike Hercules  
 G. Next Assembly SNL Y030-00: PN 8520434, 8172883

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 8500 to 9600 MC  
 C. Output Signal Attenuated input  
 D. Functional Description

This unit is a solenoid operated attenuator with two operating positions for frequencies from 8500 MC to 9600 MC. With the solenoid activated: The attenuation is 45.0 db min., the V.S.W.R not greater than 1.12. Insertion loss with the solenoid deactivated is between 0.35 & 0.10 db.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height app. 5; Width app. 4.9; Depth app. 6.1  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 8172888

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator Subassembly  
B. FSN 4935-583-7774 C. P/N 8197278  
D. Mfr. Code Number 00000  
E. Categorization Index No. 400046  
F. Missile System Corporal II  
G. Next Assembly SNL Y056-1: PN SG-100/MSM-4

II. Characteristics

A. Principal Function Attenuation  
B. Input Signal 430 mc to 480 mc  
C. Output Signal Attenuated input

D. Functional Description

This unit will vary the magnitude of the output signal from 1 to 100,000 microvolts with approximately a .8 volt input by mechanically changing the distance between two resistors used as an inductance couple.

Impedance: 50 ohms nominal

Output connection: UG-21B/U

VSWR: Less than 1.5

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2 5/16; Width 2 3/8; Depth App. 67/8  
B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manual TM 9-9504-39  
MICOM Dwg No. 8197278

Functional Code Numbers: 211

MIL-HDEK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-788-1200 C. P/N 9082363  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400047  
 F. Missile System Hawk  
 G. Next Assembly SNL Y121-00, J756-24: PN 9189263 & 10047168

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal per code "A" (see note)  
 C. Output Signal Attenuated input  
 D. Functional Description

Attenuation: 1.0 to 20.0 db per Code "A"  $\pm 125$  mc/sec.

VSWR: 1.25 per Code "A"  $\pm 125$  mc/sec.

Note: Code "A" as specified on Ordnance Dwg No. C10105207

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1 5/8"; Width 1 5/8"; Depth 2 1/2"  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 9082363

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
B. FSN 4935-775-9968 C. P/N 9082531  
D. Mfr. Code Number 00000  
E. Categorization Index No. 400048  
F. Missile System Hawk  
G. Next Assembly SNL J756-24, Y121-00: PN 10047168, 9189266

II. Characteristics

A. Principal Function Attenuation  
B. Input Signal Per code "A" (see note)  
C. Output Signal Attenuated input  
D. Functional Description

VSWR: 2.0 at 0.7 MA coil current

Frequency range: as per Code "A"  $\pm$ 125 MC

Insertion loss: max; 0.5 db at 3.0 MA coil current  
min; 7.7 db at 0.0 MA coil current

Note: Code "A" specified on Ordance Dwg 10105207

III. Operating Voltage(s)

A. AC N.A.  
B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2.235; Width 2.235; Depth 2.250  
B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 9082531

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Attenuator, Variable  
 B. FSN 4935-778-8806 C. P/N 9114091  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400049  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J740-01: PN 9132301

II. Characteristics

A. Principal Function Attenuation  
 B. Input Signal 34.0 KMC to 35.5 KMC  
 C. Output Signal Attenuated input  
 D. Functional Description

Frequency range: 34.0 KMC to 35.5 KMC Modulated freq. DC to 70 KC

VSWR: 1.50 max. over modulation frequency range and RF frequency range

Loss: Positive coil current; 1 decibel max. negative coil current; 25 decibel min.

Connection: RG-96/U waveguide, mounting holes mate with type UG-599/U flange.

DC coil resistance: 21 ohms  $\pm 10\%$

Continuous power dissipation: 1 watt aver. peak operating power 1 KW

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.813"; Width 1.813"; Depth 1.241"  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

MICOM Dwg No. 9114091

Functional Code Numbers: 211



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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Load, High Power  
 B. FSN 4935-772-9992 C. P/N 9171949  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400050  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly SNL J29, J756: PN 9074491

II. Characteristics

A. Principal Function Dummy Load  
 B. Input Signal As per Code "A"  
 C. Output Signal N.A.  
 D. Functional Description

Power dissipation: At 25°C Aver. 250 W  
Peak 250 KW

V.S.W.R.: 1.03 max.

Connections: To type UG135/U waveguide flange

Note: Code "A" specified on Dwg No. 10105207

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1 5/8; Width 10 5/32; Depth 2 15/32  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Department of the Army Technical Manual TM 9-4935-506-35/1  
MICOM Dwg No. 9171949

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-285-3727 C. P/N 9157696  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400051  
 F. Missile System Nike Hercules & Imp.  
 G. Next Assembly SNL J784-2: PN 10184776

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal 50 cps to 90 mc signal  
 C. Output Signal amplified input  
 D. Functional Description

Frequency Range: 50 cps to 90 mc  
 Gain: 40 db  $\pm$  1 db  
 Rise Time: Less than 4 nsec and overshoot less than 5%  
 Input Impedance: 1 megohm paralleled by 15 pf.  
 Output Impedance: 75 ohms  
 Distortion: Less than 5%.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 115  $\pm$  10 V, 60-400 Hz  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 3.25; Width 6.50; Depth 8.00  
 B. Configuration: Portable X; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

MICOM Dwg Nos. 9157696, 10185532

Functional Code Numbers: 211  
 297

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Regulator, Electrical  
 B. FSN 4935-974-1416 C. P/N 9978393  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400052  
 F. Missile System Nike Hercules  
 G. Next Assembly SNL J753-28 PN 9978585

II. Characteristics

A. Principal Function Voltage Regulation  
 B. Input Signal 100 to 130 volt, 400 cps  
 C. Output Signal 120 volts, 400 cps  
 D. Functional Description

This unit produces a 120 volt output with an input of 100 to 130 volts.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC N.A.

IV. Mechanical Characteristics

A. Dimensions (inches): Height 10; Width 9; Depth 5  
 B. Configuration: Portable X; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg No. 9978393

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier; Power Supply  
 B. FSN 4935-647-3176 C. P/N 8096616  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400053  
 F. Missile System Redstone  
 G. Next Assembly SNL.Yf35-05: PN 10368732

## II. Characteristics

A. Principal Function Amplification of signals to drive penmotors  
 B. Input Signal Signal to be recorded  
 C. Output Signal Amplified input signal  
 D. Functional Description

This unit is a two channel amplifier containing two balanced differential amplifiers especially designed to drive penmotors (see note), a preamplifier to amplify the input signal to one of the channels, and a self-contained power supply. Both amplifiers have compensated gain controls and stylus positioning controls. Balanced input signals appearing at the input of the amplifiers will be amplified, but the output will not change voltage levels. Only an unbalanced input will provide an output.

Note: Penmotors are not contained in this unit.

## III. Operating Voltage(s)

A. AC 115V, 60 cps  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 10 1/2; Width 9 3/8; Depth 7 1/2  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

Department of the Army Technical Manual TM 9-4935-350-14/2  
MICOM Dwg No. 8096616

Functional Code Numbers: 212

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-337-8953 C. P/N 8130076  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400054  
 F. Missile System Corporal  
 G. Next Assembly SNL Y53-00: PN 8130031 & 8501950

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Audio Frequency  
 C. Output Signal Amplified input  
 D. Functional Description

This unit can receive signals from a microphone and/or telephone circuit through separate input transformers. The microphone input is amplified and can be used to drive either the external telephone circuit through the telephone circuit input connections or an output amplifier which has a low impedance transformer output. An input from the telephone circuit input can also be amplified by the output amplifier.

Note: This unit has its own power supply

III. Operating Voltage(s)

A. AC 120 VAC  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 13 1/2; Width 17 7/10; Depth 14 1/16  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manuals TM 9-5076-35 & TM 9-5076-12  
MICOM Dwg No. 8130076

Functional Code Numbers: 212.

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Mixer  
 B. FSN 4935-593-8387 C. P/N 9983582  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400055  
 F. Missile System Nike Ajax, -Hercules and -Hercules (Imp.)  
 G. Next Assembly SNL J784-01 PN 9983584

## II. Characteristics

A. Principal Function to pass and amplify an input when a gate is applied.  
 B. Input Signal A. C. signal  
 C. Output Signal amplified input  
 D. Functional Description

This unit will pass an input signal only when a gating voltage is applied to a coincident type circuit. The input signal is amplified before being applied to the coincident circuit.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 6.3V, 400 cps.  
 B. DC +250V; +150V; -28V.

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 5.56"; Width 1.5"; Depth 8.5  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-34/3 and TM 9-4940-252-35/2:  
MICOM Dwg No. 9983582

Functional Code Numbers: 224

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Network, Pulse Delay  
 B. FSN 4935-446-2983 C. P/N 10054802  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400056  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J740-01: PN 10055486

II. Characteristics

A. Principal Function Pulse Delay  
 B. Input Signal Pulse  
 C. Output Signal Delayed input  
 D. Functional Description

This unit achieves a pulse delay of  $\frac{1}{2}$  micro seconds through the use of passive networks. Nominal distortion is 2%.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2  $\frac{1}{2}$ "; Width 2  $\frac{9}{16}$ "; Depth 12  $\frac{11}{16}$ "  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manual TM 9-4935-404-14/10  
MICOM Dwg No. 10054802

Functional Code Numbers: 226

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-816-7021 C. P/N 9113324  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400057  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J029-07 & J740-02, -04: PN 9113317, 8902507, 8902509

II. Characteristics

A. Principal Function Absorption of R. F. Power  
 B. Input Signal R. F. Signal  
 C. Output Signal N.A.  
 D. Functional Description  
 1. Impedance - 50 ohms impedance at ambient up to 40°C.  
 2. Power Dissipation, 20 watts Nominal.  
 3. VSWR - Less than 1.15 up to 4000 mc.  
 4. Connector - Type N Male, Screw type.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N A  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 4 1/2"; Width 1 5/8"; Depth 1 5/8"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg No. 9113324

Functional Code Numbers: 300



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-986-9742 C. P/N 9172499  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400058  
 F. Missile System Hawk  
 G. Next Assembly SNL J756-27: PN 9189387

II. Characteristics

A. Principal Function To simulate loading effects which are normally pre-  
sented to a radar modulator by the magnetron.  
 B. Input Signal Radar Pulse  
 C. Output Signal N.A.  
 D. Functional Description

This unit uses twelve 600 ohm wire-wound resistors connected in parallel and provide a termination of 50 ohms. Power dissipation is 4500 watts. Peak load voltage is 12 kilovolts.

Note: An adjustable output for monitoring is provided

III. Operating Voltage(s)

A. AC 115V. 400 cps for operation of blower motor  
 B. DC N.A.

IV. Mechanical Characteristics

A. Dimensions (inches): Height 13 5/8"; Width 14"; Depth 30"  
 B. Configuration: Portable x; Rack Mounted       ; Built into Next Assembly       

V. Reference Sources

Department of the Army Technical Manual TM 9-4935-515-35  
MICOM Dwg No. 9172499

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-604-8546 C. P/N 9980056  
 D. Mfr. Code Number \_\_\_\_\_  
 E. Categorization Index No. 400059  
 F. Missile System Nike Hercules (Imp.)  
 G. Next Assembly SNL J784-01: PN 9997843

II. Characteristics

A. Principal Function Provides a continuous variable load for testing power supplies.  
 B. Input Signal N.A.  
 C. Output Signal N.A.  
 D. Functional Description

This circuit provides a load capacity of 0-440 ma. The circuits of the dummy load consist of four electron tubes which serve as variable loads. The loading is varied by applying a variable bias to the control grids. (The unit does not contain the bias supply).

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 6.3V 400 cps 4.8A  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 3 06"; Width 8.50"; Depth 6.62"  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted x; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Department of the Army Technical Manual TM 9-4940-252-34/3  
MICOM Dwg No. 9980056 TM 9-4940-252-35/2

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-813-2526 C. P/N 9113320  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400060  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J029-07, J740-02-04 PN 8902507, 8902509

II. Characteristics

A. Principal Function Absorption of R.F. Power  
 B. Input Signal R.F. Signal  
 C. Output Signal N.A.  
 D. Functional Description  
 1. Impedance - 50 ohms  
 2. Power Dissipation -  $\frac{1}{2}$  watt  
 3. VSWR - Less than 1.08 to 2000 mc  
           Less than 1.13 to 4000 mc  
 4. Connector - Mates with any General Radio Company  
               Type 874 coaxial connector.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 2 3/4"; Width 13/16"; Depth 13/16"  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg No. 9113320

Functional Code Numbers: 300

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-444-9674 C. P/N 8901925  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400061  
 F. Missile System Lacrosse  
 G. Next Assembly SNL's J740-05 & J029-07; PN 8902505

## II. Characteristics

A. Principal Function Dummy Load  
 B. Input Signal 117 VAC  
 C. Output Signal N.A.  
 D. Functional Description

This unit may be used to test any 500 VA or 1000 VA inverter and generator with an input of 28 VDC and an output of 117 VAC, 400 cps. It permits the input voltage and current to be measured and the output voltage and frequency to be measured at no-load, half-load, and full-load conditions.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

Department of the Army Technical Manual TM 9-4935-401-14/1  
MICOM Dwg No. 8901925

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-533-3311 C. P/N 8155914  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400062  
 F. Missile System Nike Ajax, Hercules  
 G. Next Assembly SNL J029-4B, J752, J783: PN 8150590

II. Characteristics

A. Principal Function Variable load  
 B. Input Signal B/ voltage, audio frequency signal, and bias voltage  
 C. Output Signal N.A.  
 D. Functional Description

This unit is used as a variable load impedance for testing low voltage power supplies. Jacks are provided to read the load current and connections to internally located plate resistors and cathode are supplied to have various load conditions. There are jacks for an audio frequency signal input and negative grid bias input to vary the load.

Note: This unit supersedes 8157074

III. Operating Voltage(s)

A. AC 6.3  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 17 5/8; Width 23 5/8; Depth 6 17/32  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-251-34, TM 9-4940-251-35  
MICOM Dwg No. 8155914

Functional Code Numbers: 300

MIL-HB&amp;K-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-829-6733 C. P/N 9980084  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400063  
 F. Missile System Nike Ajax, Hercules, Hercules (Imp.)  
 G. Next Assembly SNL J784-01 PN 9997843

## II. Characteristics

A. Principal Function Variable load  
 B. Input Signal Positive or negative voltage, variable frequency sine wave, variable bias voltage  
 C. Output Signal N.A.  
 D. Functional Description

This unit provides a variable load for testing power supplies from 0-440 milliamperes capacity. A variable bias voltage is applied to the grids of the load tubes to vary the load offered to the supply. A variable frequency sine wave can be applied to check the ripple response of the power supply.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 6.3 V, 4.8 A, 400 cps  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 6.62; Width 8.500; Depth 3.062  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

Department of the Army Technical Manuals TM 9-4940-252-35/2 & TM 9-4940-252-34/3  
MICOM Dwg No. 9980084

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-630-1919 C. P/N 8895054  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400064  
 F. Missile System Corporal II  
 G. Next Assembly SNL J29-3D, J739-26: PN 8199320

II. Characteristics

A. Principal Function Dummy Load  
 B. Input Signal RF Signal  
 C. Output Signal N.A.  
 D. Functional Description  
 Impedance: 150 ohms

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1 5/32; Width 1 5/32; Depth 3 1/4  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

\_\_\_\_\_  
 MICOM Dwg No. 8895054

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-444-9675 C. P/N 8901926  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400065  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J029-7 J740-5; PN 8902508

II. Characteristics

A. Principal Function Variable load  
 B. Input Signal Power supply voltage  
 C. Output Signal N.A.  
 D. Functional Description

This unit consists of four electron tubes which form the load. The bias is generated internally and is adjustable to control the load. Two meters are contained in the unit, one reading per cent of error, and the other indicating the per cent of load.

Power dissipation: peak 140 W  
 nominal 40 W

Note: Power supply contained in unit

III. Operating Voltage(s)

A. AC 120 V 400 cps  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 10.468; Width 19.00; Depth 14 1/2  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted x; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Department of the Army Technical Manual TM 9-4035-403-14/1  
MICOM Dwg No. 8901926

Functional Code Numbers: 300



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-778-0380 C. P/N 9071390  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400066  
 F. Missile System Hawk  
 G. Next Assembly SNL J029, J756: PN 9074493 & 9074491

II. Characteristics

A. Principal Function Magnetron Dummy Load  
 B. Input Signal High voltage  
 C. Output Signal N.A.  
 D. Functional Description

This unit, which simulates a magnetron, contains four parallel resistors to dissipate the modulator output power. Total resistance is 7 Kilohms. Filament current is dissipated by a one ohm resistor. Meters are provided on the unit to read plate voltage, plate current, and filament current. A blower is installed to cool the resistors.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 115V 400 cps  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 14 15/32 ; Width 12 15/16 ; Depth 19 1/2  
 B. Configuration: Portable x ; Rack Mounted \_\_\_\_\_ ; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Department of the Army Technical Manuals TM 9-4935-506-35/1 & TM 9-4935-504-34  
MICOM Dwg No. 9071390

Functional Code Numbers: 300

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-838-2660 C. P/N 9975747  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400067  
 F. Missile System Nike Hercules (Imp.)  
 G. Next Assembly SNL J762, J29; PN 9985436

## II. Characteristics

A. Principal Function Dummy Load  
 B. Input Signal rf signal  
 C. Output Signal N.A.  
 D. Functional Description  
 Impedance: 51 ohms  
 Peak power: 500 mw  
 Peak current: 3 amp.  
 Voltage rating: 1000 VDC Peak, 7 Vrms

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height .562; Width .562; Depth 1.24  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

\_\_\_\_\_  
 MICOM Dwg No. 9975747  
 \_\_\_\_\_

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935' ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-839-5718 C. P/N 9984876  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400068  
 F. Missile System Nike Hercules (Imp.)  
 G. Next Assembly SNL J762, J29: PN 9985436

II. Characteristics

A. Principal Function Dummy Load  
 B. Input Signal dc to 3000 mc  
 C. Output Signal N.A.  
 D. Functional Description  
     Impedance: 75 ohms  
     Power Dissipation: Aver. 1 w  
                           Peak 1 kw

Note: Resistor type

III. Operating Voltage(s)

A. AC N.A.  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height .687; Width .687; Depth 1.325  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg. No. 9984876  
 Functional Code Numbers: 300

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-794-9977 C. P/N 10051591  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400069  
 F. Missile System Lacrosse  
 G. Next Assembly SNL J740: PN 10053170

## II. Characteristics

A. Principal Function Dummy Load  
 B. Input Signal 26.5 to 40.0 Kmc signal  
 C. Output Signal N.A.  
 D. Functional Description  
 1. Frequency Range: 26.5-40.0 Kmc  
 2. Power:  
     Average: 50 W  
     Peak: 22 Kw at 26.5 Kmc  
         31 Kw at 40 Kmc  
 3. VSWR: 1.15 max.  
 4. Connector: UG 599/U

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC N.A.  
 B. DC N.A.

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 1; Width 1; Depth 3 31/32  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

MICOM Dwg No. 10051591

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Dummy Load, Electrical  
 B. FSN 4935-345-8015 C. P/N 10064047  
 D. Mfr. Code Number 00000  
 E. Categorization Index No. 400070  
 F. Missile System Hawk  
 G. Next Assembly SNL J756-23, J756-24: PN 9189382, 9189383 & 9189384

II. Characteristics

A. Principal Function Power Dissipation  
 B. Input Signal Radio Frequencies  
 C. Output Signal N.A.  
 D. Functional Description

This unit terminates a coaxial line with a series load and provides a connection to measure the potential across the load.

Impedance: (nominal) 51 ohms

Power Rating: 2 watts

Connections: BNC series Tee input  
Male BNC output

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC N.A.  
 B. DC N.A.

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1 1/8; Width 2 3/32; Depth App 1/2  
 B. Configuration: Portable x; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Department of the Army Technical Manual TM 9-4935-506-35/3  
MICOM Dwg No. 10064047

Functional Code Numbers: 300

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-475-5125 C. P/N 1951459  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400071  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly PN 1950024

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Signal to be squared  
 C. Output Signal 0 or -12 volts  
 D. Functional Description

The input to this unit is amplified and clamped to 0 and -12 volt levels.

Note: The assembly is mounted on a printed circuit board.

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +6; -12

IV. Mechanical Characteristics

A. Dimensions (inches): Height .573; Width 2.866; Depth 3.658  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Navy Dwg Nos. 1951459 & 1951402

Functional Code Numbers: 111

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-475-5121 C. P/N 1950960  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400072  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly PN 1950018

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Signal from reader  
 C. Output Signal 0 or -12 volts  
 D. Functional Description

This unit is a transistorized level switch having three independent channels. A current drawn from the base of the input PNP transistor on any particular channel will cause the output voltage to be -12 volts. If the input current stops flowing, the output will switch to 0 volts. Because of the Schmitt Trigger in the channel, the output will never be at any potential except 0 or -12 volts.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -12

IV. Mechanical Characteristics

A. Dimensions (inches): Height .617; Width 4.380; Depth 7.015  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Navy Dwg No. 1950960

Functional Code Numbers: 111

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-475-5104 C. P/N 1950753  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400073  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly PN 1950026

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplifies a signal of input greater than +120 volts or less than -210 volts.  
 D. Functional Description

This is a high input impedance amplifier. The input has a +210 volt threshold level before the unit amplifies. Similarly, the output has a 160 volt threshold before current flows. The unit contains 23 transistors which are mounted on a printed circuit card.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +200; -200

IV. Mechanical Characteristics

A. Dimensions (inches): Height .630; Width 14.845; Depth 4.121  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Navy Dwg Nos. 1950753 & 1952022

Functional Code Numbers: 111



MIL-HDBK-142A  
27 April 1970

FSC 4935' ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Photoelectric  
 B. FSN 4935-475-1778 C. P/N 10018098  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400074  
 F. Missile System Sergeant  
 G. Next Assembly PN 10018008

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal 0 or 30 volts.  
 D. Functional Description

This unit is a fourteen channel photoelectric amplifier. A "high" logic level voltage on the input to a particular channel turns on the common emitter output transistor to that channel which makes the output 0 volts. A "low" logic level voltage on the input turns the output transistor off and the output potential becomes 30 volts in series with 2.7K.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +30; -30

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth x  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

MICOM Dwg No. 10018098.  
TM 9-4935-304-35P/2

Functional Code Numbers: 111 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier Assembly  
 B. FSN 4935-067-3559 C. P/N 35145-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400075  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a four channel amplifier assembly. Each channel has three transistors; two in an inverting common emitter configuration and the third in the emitter follower configuration. The input impedance is approximately 30 K. The channels do not invert.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +6; -12

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Dwg Nos. 35145-315, 35146-315, 35147-315 & 35148-315

Functional Code Numbers: 111 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Column  
 B. FSN 4935-793-2292 C. P/N 2104803  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400076  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified Input  
 D. Functional Description \_\_\_\_\_

This is a four channel gating amplifier. Each stage has two transistors in a direct coupled Darlington configuration. The collectors of the output transistors are connected to pins; the unit is assembled on a printed circuit card.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +12; -32

IV. Mechanical Characteristics

A. Dimensions (inches): Height .530; Width 5.500; Depth 5.937  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Navy Dwg No. 2104803

Functional Code Numbers: 111 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-886-9959 C. P/N 1951242  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400077  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly PN 1950024

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal 0 or -12 volts  
 D. Functional Description

This unit is a three transistor switching amplifier. The input to the base of a common emitter PNP transistor is amplified. Inverting and non-inverting outputs are available. The output impedance when the particular output transistor is in the "off" state is 1K. The output impedance when the same transistor is in the "on" state is on the order of 20 ohms.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +6; -12

IV. Mechanical Characteristics

A. Dimensions (inches): Height .573; Width 2.866; Depth 3.658  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Navy Dwg Nos. 1951242 & 1951398

Functional Code Numbers. 111 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-857-1464 C. P/N 1950551  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400078  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly PN 1950024

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal 0 or -12 volts  
 D. Functional Description

This is a clamping type switching amplifier with inverting and non-inverting outputs. The input is amplified and inverted by a common emitter transistor and is again inverted by another common emitter transistor. A complementary output is available.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +6; -12

## IV. Mechanical Characteristics

A. Dimensions (inches): Height Not available; Width 2.886; Depth 3.658  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

## V. Reference Sources

Navy Dwg Nos. 1950551 & 1951398

Functional Code Numbers: 111 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
 B. FSN 4935-972-4271 C. P/N 12582-707  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400079  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal -25 or +10 volts  
 D. Functional Description \_\_\_\_\_

This unit is a 10 channel electronic control amplifier. Each channel has two stages of common emitter amplifier transistors. Each amplifier is identical to each other. The amplifiers do not invert.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +25; +10; -5; -25; -35

## IV. Mechanical Characteristics

A. Dimensions (inches): Height .250; Width 4.00; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Dwg No. 12582-707

Functional Code Numbers: 111 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Reset  
B. FSN 4935-726-0601 C. P/N 30760-315  
D. Mfr. Code Number 94756  
E. Categorization Index No. 400080  
F. Missile System \_\_\_\_\_  
G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
B. Input Signal -10 volts or 0 volts  
C. Output Signal -12 volts or 0 volts  
D. Functional Description

This unit is a three channel amplifier. The three channels are identical. Each channel has five diode-coupled inputs. A -10 volt level on any one of the inputs produces a -12 volt output signal. A 0 volt input produces a 0 volt output.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
B. DC +6; -12

IV. Mechanical Characteristics

A. Dimensions (inches): Height Not avail.; Width Not avail.; Depth Not avail  
B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Dwg Nos. 30760-315 & 30762-315  
Functional Code Numbers: 111 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
 B. FSN 4935-021-0380 C. P/N 34426-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400081  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal -5 or -120 volts  
 D. Functional Description

This unit is an assembly of 20 neon lamp driver transistors. In operation, a level input reverse biases the normally saturated driver transistor. The output pin then changes voltage from -5 to -120 volts (nominal) in series with 100K. 10 auxiliary resistors are included in this assembly.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -120; -25; -5

## IV. Mechanical Characteristics

A. Dimensions (inches): Height .141; Width 3.99; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Dwg Nos. 34426-315 & 34427-315  
DD-146

Functional Code Numbers: 111 211



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-022-9470 C. P/N 34471-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400082  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal +10 or -25 volts  
 D. Functional Description

This unit is a ten channel amplifier intended primarily for switching purposes. Each channel contains two stages of transistor amplification. The first stage is a PNP common emitter amplifier biased in the "off" state. The output PNP transistor is also in the "off" state which provides +10 volts to the output terminal. A negative signal on the input will turn on the input transistor which will subsequently turn on the output transistor. The output voltage will then be -25 volts. This assembly requires five power supplies.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -35; -25; -5

IV. Mechanical Characteristics

A. Dimensions (inches): Height .14; Width 3.99; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Dwg No. 34471-315 & 34472-315  
DD-146

Functional Code Numbers: 111 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Cable Rec.  
 B. FSN 4935-022-9476 C. P/N 34483-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400083  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal -10 or 0 volts  
 D. Functional Description

This unit is an 8 channel switching amplifier. Each channel has a differential pair input with the inputs biased at about -8 volts. The output of each half of the differential pair is connected to the input of a common emitter transistor which performs an on-off switching action which is dependent upon the input signal.

The unit requires 4 power supplies of different voltages.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +2; -5; -10; -25

IV. Mechanical Characteristics

A. Dimensions (inches): Height Not avail.; Width 3.99; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Dwg Nos. 34483-315 & 34484-315

Functional Code Numbers: 111 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
 B. FSN 4935-021-0385 C. P/N 36306-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400084  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal +10 or -25 volts  
 D. Functional Description

This unit is a four channel electronic control amplifier. A current drawn from the input of any channel switches the output of that channel to a level of +10 volts. Upon removal of the input current drain, the output switches to a level of -25 volts. This unit requires 5 power supplies.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +25; +10; -3; -25; -35

IV. Mechanical Characteristics

A. Dimensions (inches): Height .125; Width 3.99; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 36306-315 & 36307-315

Functional Code Numbers: 111 211  
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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Logic Driver  
 B. FSN 4935-466-4039 C. P/N 57651-501  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400085  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal -10 or 0 volts  
 D. Functional Description  
 This unit is a 20 channel logic driver. The output voltage moves in the same sense as the input current. If a current is drawn from the base of the common emitter input switching transistor, the output potential will be at -10 volts. If the current input signal stops, the output voltage will rise to 0 volts.

Note: This is a P.C. card which requires a 40 terminal P.C. connector.

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +10; -3; -25

IV. Mechanical Characteristics

A. Dimensions (inches): Height Not avail.; Width 3.99; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Air Force Drawings No. 57651-501 & 57652-501

Functional Code Numbers: 111 211

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MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
B. FSN 4935-033-9140 C. P/N 58606-501  
D. Mfr. Code Number 94756  
E. Categorization Index No. 400086  
F. Missile System \_\_\_\_\_  
G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
B. Input Signal Logic levels  
C. Output Signal NIXIE tube drive signal  
D. Functional Description

This is a 16 channel NIXIE driver amplifier. Each channel has a one NPN transistor driver.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
B. DC +150; +35; -5; -25

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width 3.99; Depth 8.00  
B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 58606-501 & 58608-501

Functional Code Numbers: 111 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
 B. FSN 4935-722-2145 C. P/N 60120-305  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400087  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a 16 channel control amplifier. Each channel has an emitter follower input which amplifies the input current. This signal is then fed to a common emitter transistor. One inversion occurs from the input to the output of each amplifier.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +12; -12

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 60120-305 & 60122-305

Functional Code Numbers: 111 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
B. FSN 4935-875-5752 C. P/N 60330-305  
D. Mfr. Code Number 94756  
E. Categorization Index No. 400088  
F. Missile System \_\_\_\_\_  
G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
B. Input Signal \_\_\_\_\_  
C. Output Signal 0 or -10 volts  
D. Functional Description

This unit is an array of 21 independent common emitter PNP amplifiers. An input several volts less than 0 volts at the input of a particular channel will start to turn on the transistor. If the input is of a low enough level, the output will be 0 volts, the output will fall to signal, or with the signal greater than 0 volts, the output will fall to -10 volts. An NPN version of this amplifier can be found in P/N 60335-305.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
B. DC +10; -10

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width 5.5; Depth 5.937  
B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 60330-305 & 60332-305

Functional Code Numbers: 111 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
 B. FSN 4935-876-7506 C. P/N 60335-305  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400089  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal -10 or 0 volts.  
 D. Functional Description

This unit is an array of 21 independent common emitter NPN amplifiers. An input greater than -7 volts at the input of a particular channel will start to turn on the transistor. If the input is of a high enough level, the output will be -10 volts. Upon removal of the input, or with a signal less than -10 volts, the output will rise to 0 volts. A PNP version of this amplifier can be found in P/N 60330-305.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +10; -10

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width 5.5; Depth 5.937  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Air Force Drawings No. 60335-305 & 60337-305

Functional Code Numbers: 111 211



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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Assembly  
 B. FSN 4935-649-9882 C. P/N 7752-850154  
 D. Mfr. Code Number 03953  
 E. Categorization Index No. 400090  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal 0 or -12 volts  
 D. Functional Description  
 This unit is an eight channel amplifier that is designed to handle rectangularly shaped signals. The input impedance is approximately 100 K. After the input emitter follower there are two common emitter amplifiers which provide inverting and non-inverting outputs.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +6; -12; -25

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 7752-850154 & 7752-850194

Functional Code Numbers: 111 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Assembly  
 B. FSN 4935-898-3667 C. P/N 7862198  
 D. Mfr. Code Number 99974  
 E. Categorization Index No. 400091  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N's 7858690 & 7862723

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Logic levels  
 C. Output Signal Amplifier input  
 D. Functional Description

This unit is a four stage transistor amplifier used for signal switching purposes. The stages are capacitively coupled and the output is inverted in sense from the input. The output stage is an emitter follower which offers a low output impedance.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Air Force Drawings No. 7862196 & 7862198

Functional Code Numbers: 111 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Assembly  
 B. FSN 4935-771-9782 C. P/N 7914475  
 D. Mfr. Code Number 99974  
 E. Categorization Index No. 400092  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 7909530

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a four stage transistor amplifier used for signal switching purposes. The stages are capacitively coupled and the output is inverted in sense from the input. The output stage is an emitter follower which offers a low output impedance.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

V. Reference Sources

Air Force Drawings No. 7914474 & 7914475

Functional Code Numbers: 111 211  
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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier Assembly, Isolation  
 B. FSN 4935-739-0136 C. P/N 30985-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400093  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal -10 volt pulse  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a four channel switching type amplifier. Each channel's function normally is to pass a -10 volt squared pulse without inversion. The output rise time is less than 0.3 microseconds and the output fall time is less than 0.6 microseconds.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +6; -12

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly \_\_\_\_\_

## V. Reference Sources

Air Force Drawings No. 30985-315 & 30987-315

Functional Code Numbers: 112 212

MIL-HDBK-142A  
27 April 1970

ESC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Assembly  
 B. FSN 4935-974-8718 C. P/N 12584-707  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400094  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal -3 or -28 volts  
 D. Functional Description \_\_\_\_\_

This unit is a 10 channel, transistorized electronic control amplifier. Each channel contains four forward biased switching transistors in the common emitter configuration.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -3; -10; -28

IV. Mechanical Characteristics

A. Dimensions (inches): Height .44; Width 4.00; Depth 8.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 12584-707

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-928-3724 C. P/N 10177230  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400095  
 F. Missile System Hawk  
 G. Next Assembly P/N 10176670

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal  
 C. Output Signal Amplified input  
 D. Functional Description

This unit contains two independent amplifiers. The first is a D.C. differential amplifier. The second is a two stage amplifier arranged in the Darlington configuration. Both are contained in the same package.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC 25 ± 5%, 17 ± 5%

## IV. Mechanical Characteristics

A. Dimensions (inches): Height .88; Width 1.62; Depth 1.5  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

MICOM Drawing No. 10176670

Functional Code Numbers: 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Operational  
 B. FSN 4935-952-6728 C. P/N 10211636  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400096  
 F. Missile System Redeye  
 G. Next Assembly P/N 10211425

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

General purpose operational amplifier with one inverting and one non-inverting input.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +15; -15

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.125; Width 1.125; Depth .625  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

MICOM Drawing No. 10211636

Functional Code Numbers: 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-970-0873 C. P/N 10611547-9  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400097  
 F. Missile System Pershing  
 G. Next Assembly P/N 10610200-29

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description \_\_\_\_\_

This is a six stage band pass amplifier. The unit is a transistorized and is assembled on a plug-in printed circuit card. The output stage is an emitter follower which provides a low driving impedance.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +12; -15

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

MICOM Drawings No. 10611547, 10611569, 10611240  
DATM 9-4935-377-34/2 & DATM 9-4935-377-34/3

Functional Code Numbers: 211



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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Video  
 B. FSN 4935-924-4493 C. P/N 10211903  
 D. Mfr. Code Number 18876  
 E. Categorization Index No. 400098  
 F. Missile System Redeye  
 G. Next Assembly P/N 10124123

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal 0 to -2 volt pulse  
 C. Output Signal -7 to 0 volt pulse and  
-8 to 0 volt pulse  
 D. Functional Description

This amplifier transforms a nominal 0 to -2 volt squared pulse to a -7 to 0 volt and -8 to 0 volt pulse of the same duration. The two outputs are available at two separate terminals. This unit is assembled on a plug-in printed circuit card.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC ~~+150 Regulated and -28~~ \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.38; Width 6.12; Depth 6.81  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

MICOM Drawing No. 10211903

Functional Code Numbers: 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-895-9738 C. P/N 1642590-101  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400099  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 1723439-1

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal 125 amperes average peak current  
 C. Output Signal \_\_\_\_\_  
 D. Functional Description

This unit is a magnetic amplifier. The peak average primary current is 125 amperes. The amplifier operates from 70 volts AC and normally drives a relay load.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 70 @ 60 Hz.  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height 3.688; Width 4.312; Depth 4.50  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Navy Drawing No. 1642590

Functional Code Numbers: 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-475-5111 C. P/N 1950789  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400100  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 1950024

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplifier input  
 D. Functional Description

This unit is a transistorized medium input impedance amplifier (approximately 100 K). After 5 stages of gain, the signal is capacitively coupled to a transformer output. The assembly is mounted on a printed circuit card.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height .623; Width 2.866; Depth 3.248  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-731-1899 C. P/N 2112237  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400101  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N-1885960

II. Characteristics

A. Principal Function Magnetic Amplification  
 B. Input Signal 1 to 4 amperes = I<sub>IN</sub>  
 C. Output Signal E<sub>o</sub> = 10 I<sub>IN</sub>  
 D. Functional Description

This magnetic comparator amplifier has a self-contained DC-AC inverter and full wave bridge rectifier. The unit requires a DC power source of between 26 and 30 volts. The input load current may vary from 1 to 4 amperes. The output is a rectified DC current varying in the ratio of  $E_o = 10 I_{IN}$ .

The output is capable of delivering 40 volts at 10 ma to the load circuit. Short circuit protection is provided.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +28

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.00; Width 2.875; Depth 4.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Navy Drawing No. 2112237

Functional Code Numbers: 211

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27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-793-4517 C. P/N 2243157PC1  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400102  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 2199853 & 2409522

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified Input  
 D. Functional Description

This is an AC coupled servo amplifier. The transistorized unit has a push-pull stage driving an output transformer.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -30

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.15; Width 1.170; Depth .910  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Navy Drawing No. 2243157

Functional Code Numbers: 211

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ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-592-0371 C. P/N 2247614  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400103  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 61A19J501, 2105100 & 2261685

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This is a tube type, tuned R.F. amplifier. The frequency is 150.390 MHz  
 $\pm$  200 KHz and the gain is greater than 20 db.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC 6.3  
 B. DC +150

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Navy Drawing No. 2247614

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier  
 B. FSN 4935-886-8250 C. P/N 2049289  
 D. Mfr. Code Number 10001  
 E. Categorization Index No. 400104  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 8117782

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit contains one AC differential amplifier with power supply bypass capacitors placed in a none pin package. The unit contains two transistors.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +150

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.375; Width Not Avail.; Depth 2.00  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Navy Drawing No. 2049289

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-895-5739 C. P/N 327N3533012-019  
 D. Mfr. Code Number 38957  
 E. Categorization Index No. 400105  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 327N3513000 & 327N3533000

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a dual channel, direct coupled, transistor control amplifier. There are three gain-producing stages per channel. Potentiometers are employed for feedback control.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Drawings No. 327N3533001 & 327N3533012

Functional Code Numbers: 211



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Subassembly  
 B. FSN 4935-087-9682 C. P/N 54987-707-11  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400106  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 54948-707

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description \_\_\_\_\_

This unit is a two stage direct coupled amplifier mounted on a printed circuit card. Eleven nodes are connected to the printed circuit card pins for any required external connections.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 0.62; Width 1.50; Depth 2.60  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 54987-707

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Alternating  
 B. FSN 4935-972-6970 C. P/N 804E2303077-009  
 D. Mfr: Code Number 38597  
 E. Categorization Index No. 400107  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a 3 transistor AC coupled amplifier. It has a regulator for the input power supply. The input has a 0.2 uf capacitor connected to circuit common. The output is an emitter follower with an approximate output impedance of 1 K.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +26

## IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Drawing No. 804E2303077

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Dual Channel  
 B. FSN 4935-970-7501 C. P/N PD 800S0024-009  
 D. Mfr. Code Number 38597  
 E. Categorization Index No. 400108  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 327N1972000

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal A. C. Signal  
 C. Output Signal Amplified input  
 D. Functional Description

This is a dual channel D.C. operational amplifier. The open loop D.C. gain is 250,000 minimum and the open loop A.C. gain is 30,000 minimum at 0.1 Hz. The amplifier is assembled on a printed circuit board.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 40 @ 400 Hz  
 B. DC +22.5; -22.5

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width 5.75; Depth 5.25  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. PD80S0024

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic  
 B. FSN 4935-766-0532 C. P/N 27-65384-501  
 D. Mfr. Code Number 14170  
 E. Categorization Index No. 400109  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 27-38124

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a four stage, transformer coupled control amplifier.  
The amplifier is designated to operate at 400 Hz.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +28; +25

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 27-65384 & 27-65388

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970.

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Electronic Control  
 B. FSN 4935-841-6917 C. P/N 2-00042-202  
 D. Mfr. Code Number 03848  
 E. Categorization Index No. 400110  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is an electronic control amplifier mounted to fit an octal socket. It features greater than 500 K input impedance and less than 500 ohms output impedance.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +36; -5.5

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.843; Width 1.359; Depth 1.562  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 2-00042-202

Functional Code Numbers: 211

MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

- A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-987-2493 C. P/N 02218-707  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400111  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 02226-107 & 02206-707

## II. Characteristics

- A. Principal Function Amplification  
 B. Input Signal Amplified input  
 C. Output Signal \_\_\_\_\_  
 D. Functional Description

This unit is a three stage transistor audio amplifier with a potentiometer for gain control. The components are mounted on a printed circuit board.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

- A. AC \_\_\_\_\_  
 B. DC +25; -25

## IV. Mechanical Characteristics

- A. Dimensions (inches): Height .450; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Drawing No. 02218-707

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-991-1483 C. P/N 02231-707  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400112  
 F. Missile System P/N 02226-707  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Audio Frequency Signal  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a two stage audio frequency amplifier. It employs three transistors - - two for the differential circuit and one for an output amplifier. The output terminal is capacitively coupled to the output of the last stage. The components mount on a printed circuit board.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height 4.06; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 02231-707

Functional Code Numbers: 211

MIL-HDEK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-987-2496 C. P/N 02262-707  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400113  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 02226-707

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This is a transistor power amplifier. The amplifier is direct coupled and has two stages of gain. The circuit, which is mounted on a printed circuit card, employs four transistors.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +30; -30

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.110; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 02262-707

Functional Code Numbers: 211



MIL-HDBK-142A

27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

## I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-842-0496 C. P/N 30625-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400114  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

## II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This is a 100 milliwatt transistorized D.C. amplifier. One of the inputs is capacitively coupled. The other is coupled directly to the base of a transistor. The assembly is mounted on a plug-in printed circuit card.

Note: \_\_\_\_\_

## III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +25; -25

## IV. Mechanical Characteristics

A. Dimensions (inches): Height .75; Width 5.37; Depth 5.51  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

## V. Reference Sources

Air Force Drawings No. 30625-315 & 30627-315  
DD-146

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-735-8930 C. P/N 30630-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400115  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a transistorized chopper amplifier. The D.C. input signal is chopped by a chopper transistor network that operates from 400 Hz. The signal is then amplified and filtered. The output impedance is approximately 5 K.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC 6v at 400 Hz  
 B. DC +25; -25

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 30630-315 & 30632-315

Functional Code Numbers:

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-841-3917 C. P/N 30820-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400116  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal D.C. to 15 Hz  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a DC to 15 Hz amplifier. It contains 4 transistors and has 2 watts power output capability. The output stage is oriented in a push-pull configuration. Each of the two inputs has an impedance of 23,000 ohms. The output impedance is 1000 ohms.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +50; -50

IV. Mechanical Characteristics

A. Dimensions (inches): Height 5.37; Width 5.50; Depth .75  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 30820-315 & 30822-315

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-736-2881 C. P/N 30825-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400117  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This is a four transistor amplifier. The input has 6 discrete inputs for gain control. The main power supply input to this amplifier is regulated by means of a zener diode on the board.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC \_\_\_\_\_

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 30825-315 & 30827-315

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-840-7095 C. P/N 30920-315  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400118  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal Audio frequency input  
 C. Output Signal Amplified input  
 D. Functional Description  
 This unit is a single channel transistorized audio frequency amplifier. Its normal frequency range is 50 to 20,000 Hz. It has 210,000 ohms input impedance and 4600 ohms output impedance. Tone control and gain control adjustments are available.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +50; -50

IV. Mechanical Characteristics

A. Dimensions (inches): Height .75; Width 5.5; Depth 5.375  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Air Force Drawings No. 30920-315 & 30922-315  
DD-146

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Stage Power  
 B. FSN 4935-722-2200 C. P/N 64635-305  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400119  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit converts one 400 Hz push-pull set of signals to two push-pull sets of signals. The inputs are connected to a transformer primary. The secondary excites two push-pull driver stages.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +28

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 64635-305 & 6437-305

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Section, Control  
 B. FSN 4935-723-2382 C. P/N 68968-305  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400120  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description \_\_\_\_\_

This is a 5 transistor amplifier with capacitively coupled stages. The output stage is in the common collector configuration.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +26

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 68968-305

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Section, Control  
 B. FSN 4935-723-2383 C. P/N 68969-305  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400121  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description  
 This unit is a capacitively coupled 5 transistor amplifier for a servo-mechanism. The input impedance is approximately 10 K. The components are mounted on a 15 pin printed circuit board.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +26

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 68969-305

Functional Code Numbers: 211



MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Driver  
 B. FSN 4935-726-4679 C. P/N 64655-305  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400122  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal 400 Hz signal  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a 400 Hz driver amplifier stage. Connections are available for the feedback control input to the interstage transformer driver transistors. The output is from two transistors in a push-pull configuration.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC Not Available

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 64655-305 & 64657-305

Functional Code Numbers: 211

MIL-HDEK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
 B. FSN 4935-897-0878 C. P/N 65319-507  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400123  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is a control amplifier. The stages are capacitively coupled and the gain is adjustable by a potentiometer on the input. The components are mounted on a printed circuit card.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +28

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly x

V. Reference Sources

Air Force Drawing No. 85319-507

Functional Code Numbers:

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Audio Frequency  
B. FSN 4935-686-8167 C. P/N 68967-305  
D. Mfr. Code Number 94756  
E. Categorization Index No. 400124  
F. Missile System \_\_\_\_\_  
G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
B. Input Signal \_\_\_\_\_  
C. Output Signal Amplified input  
D. Functional Description

This is a transistorized control amplifier. The unit is mounted on a plug-in printed circuit card.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
B. DC +26; -26

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.50; Width 5.4; Depth 6.3  
B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 68967-305  
DD-146

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Subassembly  
 B. FSN 4935-833-7941 C. P/N 27-48346-501  
 D. Mfr. Code Number 14170  
 E. Categorization Index No. 400125  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly P/N 27-58117, 27-58708, 27-58895, 27-58333

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Amplified input  
 D. Functional Description

This unit is an 8 transistor D.C. amplifier. There are two D.C. inputs and one A.C. input available to the user.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +50; +25; -25; -50

IV. Mechanical Characteristics

A. Dimensions (inches): Height 1.051; Width 4.98; Depth 5.20  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 27-48343 & 27-48346  
DD-146

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier Assembly  
 B. FSN 4935-987-2492 C. P/N 09187-707  
 D. Mfr. Code Number 94756  
 E. Categorization Index No. 400126  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal 4.8 KHz square wave  
 C. Output Signal 25 volt p-p square wave  
 D. Functional Description

This assembly converts a 4.8 KHz input square wave to a 25 volt peak to peak square wave of the same frequency. One transformer and four switching transistor are used.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC -14

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width 4.5; Depth 5.0  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 09187-707 & 00593-707

Functional Code Numbers: 211

MIL-HDBK-142A  
27 April 1970

FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Current Logic  
 B. FSN 4935-877-4691 C. P/N 804E2950047-009  
 D. Mfr. Code Number 38597  
 E. Categorization Index No. 400127  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Same voltage as input but lower impedance  
 D. Functional Description

This is a single transistor emitter follower amplifier. The voltage gain is approximately unity. The four components are mounted on a printed circuit board.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +28V

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawing No. 804E2950047

Functional Code Numbers: 212

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FSC 4935 ELECTRICAL-ELECTRONIC TESTING EQUIPMENT CATEGORIZATION  
ADAPTIVE AND SUPPLEMENTARY DEVICES DELINEATION

I. Item Identification

A. Federal Nomenclature Amplifier, Direct Current  
 B. FSN 4935-682-7599 C. P/N 7871825  
 D. Mfr. Code Number 99974  
 E. Categorization Index No. 400128  
 F. Missile System \_\_\_\_\_  
 G. Next Assembly \_\_\_\_\_

II. Characteristics

A. Principal Function Amplification  
 B. Input Signal \_\_\_\_\_  
 C. Output Signal Same voltage as the input but lower impedance  
 D. Functional Description

This unit is a dual channel D.C. amplifier. Each channel has unity voltage gain. The channels are identical except for one selected resistor in each.

Note: \_\_\_\_\_

III. Operating Voltage(s)

A. AC \_\_\_\_\_  
 B. DC +21V; -5V

IV. Mechanical Characteristics

A. Dimensions (inches): Height \_\_\_\_\_; Width \_\_\_\_\_; Depth \_\_\_\_\_  
 B. Configuration: Portable \_\_\_\_\_; Rack Mounted \_\_\_\_\_; Built into Next Assembly X

V. Reference Sources

Air Force Drawings No. 7871825 & 7871826

Functional Code Numbers: 212

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27 April 1970

CUSTODIANS:

Army-MI  
Navy-OS  
Air Force-70

PREPARING ACTIVITY:

Army-MI

REVIEW ACTIVITIES:

Army  
Navy  
Air Force

DOD PROJECT NUMBER:

4935-0033



TABLE I

## CROSS REFERENCE BY FEDERAL STOCK NUMBER

FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
018-9837	9157515	20	200005	067-3559	35145-315	40	400075
019-3029	10167755	20	200004	070-0595	G366341	20	200024
021-0380	34426-315	40	400081	072-9210	263373-9	30	300104
021-0385	36306-315	40	400084	073-2015	9991839	10	100028
022-9470	34471-315	40	400082	075-5327	11065982	10	100053
022-9476	34483-315	40	400083	075-5328	11065981	30	300048
025-3513	8026510	30	300027	075-5344	11065983	10	100052
033-9140	58606-501	40	400086	075-5345	11065984	10	100051
034-7088	NA5-15203	10	100044	075-5346	11065985	10	100050
034-7866	8026545	20	200100	075-5347	11065986	10	100049
045-6480	9993750	20	200071	075-5348	11065987	10	100047
045-9865	9986044	30	300118	075-9127	11065988	10	100048
053-2551	10167172	30	300043	078-4364	10395325	30	300047
056-0160	10108007	40	400044	081-6745	5-92502-002	10	100056
060-9847	10-20938-3	10	100043	081-9511	5-92632-207	20	200013
064-6467	9993989	20	200070	083-8245	9993860	20	200047

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## CROSS REFERENCE BY FEDERAL STOCK NUMBER

FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
085-6745	10596589-7	10	100096	308-2719	8011125	30	300008
086-4132	10607235-1	30	300042	308-2720	8011126	30	300070
086-6035	4-05063-201	30	300006	308-2721	8011127	30	300009
086-6038	5-92485-000	30	300017	308-2722	8011129	30	300019
086-7422	9999486	20	200134	308-2723	8011130	30	300016
086-8418	9995803	20	200093	308-2725	8011183	30	300079
087-2830	5-93330-001	10	100046	308-2761	8011182	30	300072
087-9482	5-00133-007	10	100055	308-2861	8125153	20	200131
089-9682	54987-707-11	40	400106	308-4183	8125008	20	200028
202-1011	PS2-10447-1	20	200111	316-8904	8130057	20	200007
285-3727	9157696	40	400051	316-8906	8130061	20	200022
303-8047	8171359	40	400044	316-8910	8103460	30	300030
308-2703	8007722	30	300024	328-5932	10105119	30	300025
308-2716	8011121	30	300073	328-6065	10105120	20	200133
308-2717	8011123	30	300071	331-0615	8023747	20	200003
308-2718	8011124	30	300074	331-2200	8021480	10	100067

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
337-8608	8011212	30	300045	440-3242	9139938	20	200079
337-8625	8150101	20	200117	440-9640	PS640900219-1	20	200002
337-8953	8130076	40	400054	441-2072	8157362	30	300029
337-8962	8104153	30	300011	441-2104	9143322	20	200056
337-8969	8130035	20	200031	441-2105	9142834	20	200119
337-9081	8125318	30	300010	444-9674	8901925	40	400061
343-8196	8130775	30	300085	444-9675	8901926	40	400065
345-8015	10064047	40	400070	446-2983	10054802	40	400056
345-8018	10107267	40	400010	446-6045	8151770	30	300028
388-9658	802064	30	300106	446-6084	9138256	20	200064
391-1509	8015692	10	100030	446-6085	9140030	30	300041
439-8211	8153130	20	200042	446-6123	8151360	20	200082
439-8212	8156967	20	200081	448-0151	D24092	40	400019
439-8213	8514340	20	200118	466-4039	57651-501	40	400085
439-8220	8151260	20	200054	472-8890	9154976	20	200053
440-1625	8151850	30	300080	475-1778	10098098	40	400074

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
475-5104	1950960	40	400073	534-1981	8221859	30	300075
475-5111	1950789	40	400100	534-3533	8153480	20	200107
475-5121	1950960	40	400072	535-3537	8514360	20	200060
475-5125	1951459	40	400071	535-3539	8514370	20	200085
475-5386	8514550	20	200112	535-4603	9003047	30	300089
509-2700	8948058	40	400030	535-9758	9003317	30	300037
510-6629	8174004	30	300015	546-8408	8157315	30	300093
510-6630	8174005	30	300001	561-7996	8172888	40	400045
510-6631	8174006	30	300012	563-3499	9000007	20	200122
522-0665	8155140	20	200098	569-1756	8171572	20	200049
522-0716	8514650	20	200065	578-7471	PC101405-1	10	100085
522-0842	9980822	20	200124	580-0730	8181393	30	300097
523-9819	8221863	30	300020	583-1526	9157156	40	400088
533-3311	8155914	40	400062	583-7774	8197278	40	400046
534-1974	8034051	40	400041	583-9372	8501891	10	100068
534-1980	8221862	30	300035	583-9937	8501930	10	100029

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
585-3544	85Q1880	30	300112	604-9956	8151750	40	400042
585-9464	8501903	10	100031	605-4733	8021576	30	300117
588-5135	1026481-501	40	400003	612-3042	9007765	40	400022
589-8196	9163182	40	400025	613-8832	9004247	20	200063
589-8288	9155237	20	200132	617-0122	8504903	10	100069
589-8289	8156577	30	300111	617-0431	4525A205-029-100	10	100084
590-2686	9005350	40	400013	617-0840	8501931	10	100071
592-0371	2247614	40	400103	617-1079	8504869	10	100072
593-8131	9154965	20	200094	618-2157	9171914	30	300013
593-8387	9983582	40	400055	620-9323	9032951	30	300032
604-8387	8151460	20	200055	621-3301	8158147	30	300039
604-8683	9980705	20	200075	622-1649	9009270	40	400014
604-8912	9980221	20	200043	625-5988	8898043	30	300110
604-8913	9980223	20	200045	628-6961	8501918	10	100066
604-8991	9980767	20	200057	628-6988	8501939	10	100057
604-9276	8627625	10	100082	628-6999	8522168	30	300109
604-9666	8151340	20	200058	628-7092	8198117	40	400017

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
630-1919	8895054	40	400064	653-8925	435A954-004-100	30	300068
630-6434	8501923	20	200041	655-2528	8501935	10	100016
632-3231	8501932	20	200029	671-5081	2062085	10	100040
632-6694	8504872	10	100017	677-0195	9065773	30	300088
633-0607	8504880	30	300094	677-0459	8504957	30	300090
646-8448	9007869	20	200116	677-1009	8501924	10	100015
647-0373	8048630	30	300021	677-1087	9114001	10	100002
647-0413	9950028	30	300103	677-1429	8504893	30	300113
647-0467	8501942	30	300084	678-0202	9062532	40	400018
647-0471	8898042	30	300083	679-0816	9064317	10	100060
647-1877	8501917	30	300092	679-2300	8504892	10	100006
647-1897	8898044	20	200035	679-2301	8504902	10	100014
647-3148	9968328	30	300002	679-5270	8504926	10	100075
647-3176	8096616	40	400053	682-7599	7871825	40	400128
649-9882	7752-850154	40	400090	682-8973	9136410	20	200108
652-1231	PS640900171-1	20	200032	683-1190	9953383	10	100004

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
683-5464	9952780	10	100073	712-8538	9016405	40	400031
684-5558	132820	30	300099	712-9217	G290572-1	20	200023
686-4840	7900241	10	100045	712-9222	7900259	30	300067
686-5451	2068	10	100083	722-2066	30700-315	20	200027
686-8167	68967-305	40	400124	722-2145	60120-305	40	400087
688-5604	GS59017	10	100087	722-2200	64635-305	40	400119
688-5605	GS59010	10	100086	723-2382	68968-305	40	400120
688-9138	21115-305	20	200020	723-2383	68969-305	40	400121
690-4628	8158111	30	300119	726-0593	30665-315	40	400009
691-2539	8900910	20	200019	726-0601	30760-315	40	400080
699-2381	8156699	40	400007	726-4679	64655-305	40	400122
705-8820	9133806	30	300098	730-7411	9981050	10	100007
707-9869	8157186	40	400043	730-7448	9986045	30	300086
707-9893	9142999	30	300038	731-1899	2112237	40	400101
712-8367	9133588	20	200001	731-8677	9198589	20	200040
712-8388	9975610	40	400026	732-7820	9980154	20	200105
712-8462	9980088	40	400029	732-8018	9984886	40	400005

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
733-4789	9154994	20	200052	756-2165	9133583	30	300091
733-4865	10046531	20	200010	766-0532	27-65384-501	40	400109
734-5364	9177339	40	400023	768-2300	6559057	20	200017
735-8930	30630-315	40	400115	771-9782	7914475	40	400092
736-0380	9983568	20	200102	772-9992	9171949	40	400050
736-2881	30825-315	40	400117	773-6896	9143388	20	200120
737-0523	10046501	20	200006	774-6235	9140601	20	200109
783-1434	9158797	30	300023	774-6236	9140745	20	200066
739-0136	30985-315	40	400093	774-8238	9968575	30	300003
739-2265	9157911	30	300095	774-9390	9140520	20	200091
739-6721	9176829	40	400028	774-9404	8095982	10	100027
739-6756	10045200	20	200059	775-0198	9140517	20	200096
751-8601	9166702	10	100063	775-0206	9140531	20	200104
751-9145	10046503	20	200008	775-9011	9083518	30	300087
751-9172	10046705	40	400021	775-9968	9082531	40	400048
755-2984	9168080	40	400034	776-1823	9126101	10	100076

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
778-0301	8036066	40	400006	788-2919	9189605	10	100062
778-0380	9071390	40	400066	788-2931	9188364	20	200038
778-0415	9140245	10	100011	788-2954	10 46917	20	200036
778-0542	10351916	30	300078	789-1143	8139221	20	200011
778-8806	9114091	40	400049	790-4651	9172265	30	300007
783-6779	9160329	10	100077	790-4767	9188063	10	100058
783-6783	9158764	10	100089	790-4768	9188058	10	100022
784-9734	PS837030040-1	30	300033	790-4770	9188053	20	200033
784-7737	PS837000039-1	30	300004	790-4771	9188062	10	100025
786-4062	10011346	10	100078	790-7938	9140269	10	100094
787-7342	9196218	10	100059	790-7939	9140503	10	100012
787-7343	9188060	10	100024	791-0099	10368725	30	300108
787-7362	9188025	10	100081	791-1468	8901590	10	100092
788-1200	9082363	40	400047	791-8188	9188059	10	100023
788-2889	9188066	30	300026	792-5317	9188050	20	200037
788-2890	9188061	10	100026	792-6291	8901928	10	100061
788-2891	9188055	30	300031	792-8259	9114086	10	100093

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
793-1954	9143938	20	200137	797-7332	9154974	20	200088
793-1960	9141288	10	100013	797-9498	9160806	20	200106
793-2292	2104803	40	400076	797-9537	9980120	20	200101
793-4517	2243157PC1	40	400102	797-9540	9980158	40	400012
793-7868	9114085	10	100090	798-4896	8998060	10	100009
793-7869	9114087	10	100091	798-4897	10381793	30	300036
794-8712	9143324	20	200115	799-1032	9980153	20	200113
794-9977	10051591	40	400069	801-2429	27-48489-501	40	400004
796-4036	9113327-158	30	300046	803-4435	10054621	30	300096
796-9595	9160626	30	300040	803-4491	10105118	20	200136
796-9621	9154918	20	200078	805-3641	9187748	40	400035
797-0889	9136769	40	400001	806-0934	9988562	20	200025
797-0890	9136556	40	400032	806-1026	9988567	20	200062
797-0947	9154943	20	200077	806-3012	GA10660	10	100088
797-0948	9154930	20	200083	811-6945	GS59013	40	400002
797-7208	9154846	20	200121	812-2696	PS640900215-1	20	200026
797-7331	9154969	20	200089	813-2526	9113320	40	400060

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
815-0117	9175363	30	300018	829-7502	9154772	20	200090
816-6808	10368744	30	300022	829-7575	9968457	30	300102
816-7021	9413324	40	400057	833-7661	24MS088P001	30	300005
817-9806	8997997	10	100001	833-7941	27-48346-501	40	400125
818-0932	2007-6-900CPS	20	200016	838-2660	9975747	40	400067
818-9008	8095509	10	100003	839-5718	9984876	40	400068
819-0242	8096652	30	300014	840-5287	9952924	10	100010
821-3763	0048023	10	100032	840-7095	30920-315	40	400118
821-3838	0300021	10	100036	841-3917	30820-315	40	400116
826-7075	24MS087P001	30	300034	841-6917	2-00042-202	10	400110
829-6733	998084	40	400063	842-0496	30625-315	40	400114
829-6736	9980038	40	400011	845-1962	9157256	40	400024
829-6745	9980222	20	200044	855-8270	10105522	30	300069
829-6746	9980482	20	200076	856-3405	10379173	30	300107
829-7480	8151070	20	200080	857-1464	1950551	40	400078
829-7501	9154982	20	200095	858-3321	10062289	10	100095

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
858-3346	10062274	10	100079	877-4691	804E2950047-009	40	400127
858-8347	10053862	10	100018	886-1242	10036826	10	100005
859-2509	10053860	20	200034	886-8250	2049289	40	400104
859-2513	10053861	20	200018	886-9959	1951242	40	400077
860-2400	9986043	30	300082	887-1451	9157186	40	400027
860-7375	10051081	40	400039	887-9025	9988588	40	400015
861-1505	10046505	20	200135	893-2016	9981031	20	200103
861-5956	27-30129-3	10	100070	894-3153	9975621	40	400036
864-2952	9083371	30	300081	894-9660	10046508	20	200021
874-3337	9981298	10	100065	895-5739	327N3533012-019	40	400105
875-0870	9141950	10	100019	895-6536	9156025	10	100021
875-0883	9976276	20	200009	895-9738	1642590-101	40	400099
875-5752	60330-305	40	400088	896-9641	1942412	30	300077
875-9785	9989519	20	200015	897-0878	65319-507	40	400123
875-9803	9142169	10	100020	898-3667	7862198	40	400091
876-7506	60335-305	40	400089	924-4493	10211903	40	400098

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FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
928-3724	10177230	40	400095	962-7772	9991107	20	200073
950-9630	5-92632-107	20	200012	962-7776	9991179	20	200030
952-4421	10577152-39	30	300114	962-8233	9998208	10	100064
952-6728	10211636	40	400096	963-7054	0083023	10	100038
953-0094	9995997	20	200069	967-9165	9995819	20	200114
953-0097	9997744	20	200014	968-6508	1007022	10	100033
955-6583	804E4100000-009	30	300044	968-6509	1007023	10	100034
956-8021	1960980-4	10	100039	968-6510	1007021	10	100042
960-8721	9996176	20	200087	970-0173	9993752	40	400020
960-8723	9991184	20	200126	970-0873	10611547-9	40	400097
961-3755	9995869	30	300100	970-1087	9996225	20	200099
961-3814	9998430	20	200067	970-1088	9995918	40	400022
961-4184	9991185	20	200123	970-7501	PD8050024-009	40	400095
961-6132	1361020	10	100035	972-2583	9989359	10	100074
962-7760	9997863	20	200039	972-4271	12582-707	40	400079
962-7761	9997968	20	200068	972-6970	804E2303077 009	40	400107

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## CROSS REFERENCE BY FEDERAL STOCK NUMBER

FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	FSN 4935-	PART NUMBER	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
974-1416	9978393	40	400052	978-4282	10056166	40	400040
974-8718	12584-707	40	400094	981-4882	9997091	40	400038
974-9588	9995859	20	200130	981-4888	9952944	10	100097
974-9617	9995953	20	200086	986-0222	9975988	20	200061
974-9618	9995903	20	200092	986-8899	0083024	10	100041
975-6480	5-93411-201	10	100054	986-9742	9172499	40	400058
975-8530	9993786	20	200127	987-2492	09187-707	40	400126
975-8531	9993864	20	200084	987-2493	02218-707	40	400111
975-8532	9993933	20	200128	987-2496	02262-707	40	400113
977-0923	9995818	20	200129	987-3170	9991714	10	100080
977-5567	9993862	20	200048	987-6987	0083026	10	100037
977-5568	9993858	20	200046	987-8705	9996505	30	300115
977-5570	9993462	20	200072	987-8999	9144759	40	400033
977-8955	9950958	10	100008	991-1483	02231-707	40	400112
978-0637	10018708	20	200051	991-6635	9993241	20	200097
978-4201	8955981	30	300105	992-4503	9989793	20	200110
				994-9983	9195302	40	400037

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TABLE II  
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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
D24092	448-0151	40	400019	4-05063-201	086-6035	30	300006
G290572-1	712-9217	20	200023	5-00133-007	087-9482	10	100055
G366341	070-0595	20	200024	5-92485-000	086-6038	30	300017
GA10660	806-3012	10	100088	5-92502-002	081-6745	10	100056
GS59013	811-6945	40	400002	5-92632-107	950-9630	20	200012
GS59017	688-5604	10	100087	5-92632-207	081-9511	20	200013
GS59019	688-5605	10	100086	5-93330-001	087-2830	10	100046
GS59057	768-2300	20	200017	5-93411-201	975-6480	10	100054
NA5-15203	034-7088	10	100044	10-20938-3	060-9847	10	100043
PC101405-1	578-7471	10	100085	27-30129-3	861-5956	10	100070
PS2-10447-1	202-1011	20	200111	27-48346-501	833-7941	40	400125
PS640900171-1	652-1231	20	200032	27-48489-501	801-2429	40	400004
PS640900215-1	812-2696	20	200026	27-65384-501	766-0532	40	400109
PS640900219-1	440-9640	20	200002	2007-6-900CPS	818-0932	20	200016
PS837000039-1	784-7737	30	300004	2068	868-5451	10	100083
PS837000040-1	784-7734	30	300033	7752-850154	649-9882	40	400090
2-00042-202	841-6917	40	400110	02218-707	987-2493	40	400111

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
02231-707	991-1483	40	400112	35145-315	067-3559	40	400075
02262-707	987-2496	40	400113	36306-315	021-0385	40	400084
09187-707	987-2492	40	400126	54987-707-11	087-9682	40	400106
12582-707	972-4271	40	400079	57651-501	466-4039	40	400085
12584-707	974-8718	40	400094	58606-501	033-9140	40	400086
21115-305	688-9138	20	200020	60120-305	722-2145	40	400087
30625-315	842-0496	40	400114	60330-305	875-5752	40	400088
30630-315	735-8930	40	400115	60335-305	876-7506	40	400089
30665-315	726-0593	40	400009	64635-305	722-2200	40	400119
30700-315	722-2066	20	200027	64655-305	726-4679	40	400122
30760-315	726-0601	40	400080	65319-507	897-0878	40	400123
30820-315	841-3917	40	400116	68967-305	686-8167	40	400124
30825-315	736-2881	40	400117	68968-305	723-2382	40	400120
30920-315	840-7095	40	400118	68969-305	723-2383	40	400121
30985-315	739-0136	40	400093	132820	684-5558	30	300099
34426-315	021-0380	40	400081	263373-9	072-9210	30	300104
3471-315	022-9470	40	400082	0048023	821-3763	10	100032



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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
0083023	963-7054	10	100038	1960980-4	956-8021	10	100039
0083024	986-8899	10	100041	2049289	886-8250	40	400104
0083026	987-6987	10	100037	2062085	671-5081	10	100040
0300021	821-3838	10	100036	2104803	793-2292	40	400076
1007021	968-6510	10	100042	2112237	731-1899	40	400101
1007022	968-6508	10	100033	2243157PC1	793-4517	40	400102
1007023	968-6509	10	100034	2247614	592-0371	40	400103
1026481-501	588-5135	40	400003	7862198	898-3667	40	400091
1361020	961-6132	10	100035	7871825	682-7599	40	400128
1624590-101	895-9738	40	400099	7900241	686-4840	10	100045
1942412	896-9641	30	300077	7900259	712-9222	30	300067
1950551	857-1464	40	400078	7914475	771-9782	40	400092
1950753	475-5104	40	400073	8007722	308-2703	30	300024
1950789	475-5111	40	400100	8011121	308-2716	30	300073
1950960	475-5121	40	400072	8011123	308-2717	30	300071
1951242	886-9959	40	400077	8011124	308-2718	30	300074
1951459	475-5125	40	400071	3011125	308-2719	30	300008

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
8011126	308-2720	30	300070	8095982	774-9404	10	100027
8011127	308-2721	30	300009	8096616	647-3176	40	400053
8011129	308-2722	30	300019	8096652	819-0242	30	300014
8011130	308-2723	30	300016	8103460	316-8910	30	300030
8011182	308-2761	30	300072	8104153	337-8962	30	300011
8011183	308-2725	30	300079	8125008	308-4183	20	200028
8011212	337-8608	30	300045	8125153	308-2861	20	200131
8015692	391-1509	10	100030	8125318	337-9081	30	300010
8020264	388-9658	30	300106	8130035	337-8969	20	200031
8021480	331-2200	10	100067	8130057	316-8904	20	200007
8021576	605-4733	30	300117	8130061	316-8906	20	200022
8023747	331-0615	20	200003	8130076	337-8953	40	400054
8026510	025-3513	30	300076	8130775	343-8196	30	300085
8026545	034-7866	20	200100	8139221	789-1143	20	200011
8034051	534-1974	40	400041	8150101	337-8625	20	200117
8036066	778-0301	40	400006	8151070	829-7480	20	200080
8048630	647-0373	30	300021	8151260	439-8220	20	200054
8095509	818-9008	10	100003	8151340	604-9666	20	200058

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
8151360	446-6123	20	200082	8171359	303-8047	40	400044
8151460	604-8387	20	200055	8171572	569-1756	20	200049
8151750	604-9956	40	400042	8172888	561-7996	40	400045
8151770	446-6045	30	300028	8174004	510-6629	30	300015
8151850	440-1625	30	300080	8174005	510-6630	30	300001
8153130	439-8211	20	200042	8174006	510-6631	30	300012
8153480	535-3533	20	200107	8181393	580-0730	30	300097
8155140	522-0665	20	200098	8197278	583-7774	40	400046
8155914	533-3311	40	400062	8198117	628-7092	40	400023
8156577	589-8289	30	300111	8221862	534-1980	30	300035
8156699	699-2381	40	400007	8221863	523-9819	30	300020
8156967	439-8212	20	200081	8221859	534-1981	30	300075
8157186	707-9869	40	400043	8501880	585-3544	30	300112
8157315	446-8408	30	300093	8501891	583-9372	10	100068
8157362	441-2072	30	300029	8501903	585-9464	10	100031
8158111	690-4628	30	300119	9004247	613-8832	20	200050
8158147	621-3301	30	300039	8501917	647-1877	30	300092

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
8501918	628-6961	10	100066	8504957	677-0459	30	300090
8501923	630-6434	20	200041	8514340	439-8213	20	200118
8501924	677-1009	10	100015	8514360	535-3537	20	200060
8501930	583-9937	10	100029	8514370	535-3539	20	200085
8501931	617-0840	10	100071	8514550	475-5386	20	200112
8501932	632-3231	20	200029	8514650	522-0716	20	200065
8501935	655-2528	10	100016	8522168	628-6999	30	300109
8501939	628-6988	10	100057	8627625	604-9276	10	100082
8501942	647-0467	30	300084	8895054	630-1919	40	400064
8504869	617-1079	10	100072	8898042	647-0471	30	300083
8504872	632-6694	10	100047	8898043	625-5988	30	300110
8504880	633-0670	30	300094	8898044	647-1897	20	200035
8504892	679-2300	10	100006	8900910	691-2539	20	200019
8504893	677-1429	30	300113	8901590	791-1468	10	100092
8504902	679-2301	10	100014	8901925	444-9674	40	400061
8504903	617-0122	10	100069	8901926	444-9675	40	400065
8504926	679-5270	10	100075	8901928	792-6291	10	100061

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
8948058	509-2700	40	400030	9071390	778-0380	40	400066
8955981	978-4201	30	300105	9082363	788-1200	40	400047
8997997	817-9806	10	100001	9082531	775-9968	40	400048
8998060	798-4896	10	100009	9083371	864-2952	30	300081
9000007	563-3499	20	200122	9083518	775-9011	30	300087
9003047	535-4603	30	300089	9113320	813-2526	40	400060
9003317	535-9758	30	300037	9113324	816-7021	40	400057
9004247	613-8832	20	200063	9113327	796-4036	30	300046
9005350	590-2686	40	400013	9114001	677-1087	10	100002
9007765	612-3042	40	400022	9114085	793-7868	10	100090
9007869	646-8448	20	2000 <sup>16</sup>	9114086	792-8259	10	100093
9009270	622-1649	40	4000 <sup>14</sup>	9114087	793-7869	10	100091
9016405	712-8538	40	400031	9114091	778-8806	40	400049
9032951	620-9323	30	300032	9126101	776-1823	10	100076
9062532	678-0202	40	400018	9133583	756-2165	30	300091
9064317	679-0816	10	100060	9133588	712-8367	20	200001
9065773	677-0195	30	300088	9133806	705-8820	30	300098

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
9136410	682-8973	20	200108	9142834	441-2 05	20	200119
9136556	797-0890	40	400032	9142999	707-9893	30	300038
9136769	797-0889	40	400001	9143033	789-2963	30	300116
9138256	446-6084	20	200064	9143322	441-2104	20	200056
9139938	440-3242	20	200079	9143324	794-8712	20	200115
9140030	446-6085	30	300041	9143388	773-6896	20	200120
9140245	778-0415	10	100011	9143938	793-1954	20	20 137
9140269	790-7938	10	100094	9144759	987-8999	40	400033
9140503	790-7939	10	100012	9154772	829-7502	20	200090
9140517	775-0198	20	200096	9154846	797-7208	20	200121
9140520	774-9390	20	200091	9154918	796-9621	20	200078
9140531	775-0206	20	200104	9154930	797-0948	20	200083
9140601	774-6235	20	200109	9154943	797-0947	20	200077
9140745	774-6236	20	200066	9154965	593-8131	20	200094
9141288	793-1960	10	100013	9154969	797-7331	20	200089
9141950	875-0870	10	100019	9154974	797-7332	20	200088
9142169	875-9803	10	100020	9154976	472-8890	20	200053

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
9154982	829-7501	20	200095	9168080	755-2984	40	400034
9154994	733-4789	20	200052	9171914	618-2157	30	300013
9155237	589-8288	20	200132	9171949	772-9992	40	400050
9156025	895-6536	10	100021	9172265	790-4651	30	300007
9157156	583-1526	40	400008	9172499	986-9742	40	400058
9157186	887-1451	40	400027	9175363	815-0117	30	300018
9157256	845-1962	40	400024	9176829	739-6721	40	400028
9157515	018-9837	20	200005	9177359	734-5364	40	400023
9157696	285-3727	40	400051	9187748	805-3641	40	400035
9157911	739-2265	30	300095	9188025	787-7362	10	100081
9158764	783-6783	10	100089	9188050	792-5317	20	200037
9158797	738-1434	30	300023	9188053	790-4770	20	200033
9160329	783-6779	10	100077	9188055	788-2891	30	300031
9160626	796-9595	30	300040	9188058	790-4768	10	100022
9160806	797-9498	20	200106	9188059	791-8188	10	100023
9163182	589-8196	40	400025	9188060	787-7343	10	100024
9166702	751-8601	10	100063	9188061	788-2890	10	100026

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
9188062	790-4771	10	100025	9968575	774-8238	30	300003
9188063	790-4767	10	100058	9975610	712-8388	40	400026
9188066	788-2889	30	300026	9975621	894-3153	40	400036
9188364	788-2931	20	200038	9975747	838-2660	40	400067
9189605	788-2919	10	100062	9975988	986-0222	20	200061
9195302	994-9983	40	400037	9976276	875-0883	20	200009
9196218	787-7342	10	100059	9978393	974-1416	40	400052
9198589	731-8677	20	200040	9980038	829-6736	40	400011
9950028	647-0413	30	300103	9980056	604-8546	40	400059
9950958	977-8955	10	100008	9980084	829-6733	40	400063
9952780	683-5464	10	100073	9980088	712-8462	40	400029
9952924	840-5287	10	100010	9980120	797-9537	20	200101
9952944	981-4888	10	100097	9980153	799-1032	20	200113
9953383	683-1190	10	100004	9980154	732-7820	20	200105
9968245	875-9978	30	300101	9980158	797-9540	40	400012
9968328	647-3148	30	300002	9980221	604-8912	20	200043
9968457	829-7575	30	300102	9980222	892-6745	20	200044

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
9980223	604-8913	20	200045	9988562	806-0934	20	200025
9980482	829-6746	20	200076	9988567	806-1026	20	200062
9980705	604-8683	20	200075	9988588	887-9025	40	400015
9980767	604-8991	20	200057	9989359	972-2583	10	100074
9980774	593-8191	20	200074	9989519	875-9785	20	200015
9980822	522-0842	20	200124	9989793	992-4503	20	200110
9981031	893-2016	20	200103	9991107	962-7772	20	200073
9981050	730-7411	10	100007	9991179	962-7776	20	200030
9981298	974-3337	10	100065	9991184	960-8723	20	200126
9983568	736-0380	20	200102	9991185	961-4184	20	200123
9983582	593-8387	40	400055	9991714	987-3170	10	100080
9983651	593-8182	20	200125	9991839	073-2015	10	100028
9984876	839-5718	40	400068	9993241	991-6635	20	200097
9984886	732-8018	40	400005	9993462	977-5570	20	200072
9986043	860-2400	30	300082	9993486	086-7422	20	200134
9986044	045-9865	30	300118	9993750	045-6480	20	200071
9986045	730-7448	30	300086	9993752	970-0173	40	400020

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
9993786	975-8530	20	200127	9996225	970-1087	20	200099
9993858	977-5568	20	200046	9996505	987-8705	30	300115
9993860	083-8245	20	200047	99997091	981-4882	40	400038
9993862	977-5567	20	200048	9997744	953-0097	20	200014
9993864	975-8531	20	200084	9997863	962-7760	20	200039
9993933	975-8532	20	200128	9997968	962-7761	20	200068
9993989	064-6467	20	200070	9998209	962-8233	10	100064
9995803	086-8418	20	200093	9998430	961-3814	20	200067
9995818	977-0923	20	200129	10011346	786-4062	10	100078
9995819	967-9165	20	200114	10018098	475-1778	40	400074
9995859	974-9588	20	200130	10018708	978-0637	20	200051
9995869	961-3755	30	300100	10036826	886-1242	10	100005
9995903	974-9618	20	200092	10045200	739-6756	20	200059
9995918	970-1088	40	400016	10046501	737-0523	20	200006
9995953	974-9617	20	200086	10046503	751-9145	20	200008
9995997	953-0094	20	200069	10046505	861-1505	20	200135
9996176	960-8721	20	200087	10046508	894-9660	20	200021

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PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
10046531	733-4865	20	200010	10105522	855-8270	30	300069
10046705	751-9172	40	400021	10107267	345-8018	40	400010
10046917	788-2954	20	200036	10167172	053-2551	30	300043
10051081	860-7375	40	400039	10167755	019-3029	20	200004
10051591	794-9977	40	400069	10177230	928-3724	40	400095
10053860	859-2509	20	200034	10211636	952-6728	40	400096
10053861	859-2513	20	200018	10211903	924-4493	40	400098
10053862	858-8347	10	100018	10351916	778-0542	30	300078
10054621	803-4435	30	300096	10368725	791-0099	30	300108
10054802	446-2983	40	400056	10368744	816-6808	30	300022
10056166	978-4282	40	400040	10379173	856-3405	30	300107
10062274	858-3346	10	100079	10381793	798-4897	30	300036
10062289	858-3321	10	100095	10395325	078-4364	30	300047
10064047	345-8015	40	400070	10577152-39	952-4421	30	300114
10105118	803-4491	20	200136	10596589-7	085-6745	10	100096
10105119	328-5932	30	300025	10607235-1	086-4132	30	300042
10105120	328-6065	20	200133	10611547-9	970-0873	40	400097

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TABLE II  
CROSS REFERENCE BY PART NUMBER

PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER	PART NUMBER	FSN 4935-	CATEGORY NUMBER	CATEGORIZATION INDEX NUMBER
11065981	075-5328	30	300048				
11065982	075-5327	10	100053				
11065983	075-5344	10	100052				
11065984	075-5345	10	100051				
11065985	075-5346	10	100050				
11065986	075-5347	10	100049				
11065987	075-5348	10	100047				
11065988	075-9127	10	100048				
245MS087P001	826-7075	30	300034				
245MS088P001	833-7661	30	300005				
327N3533012-019	895-5739	40	400105				
435A954-004-100	653-8925	30	300068				
804E410000-009	955-6583	30	300044				
804E2303077-009	972-6970	40	400107				
804E2950047-009	877-4691	40	400127				