

3 May 1966

Cog Service: USN FSN:

ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-1)

Functional Class:

USA

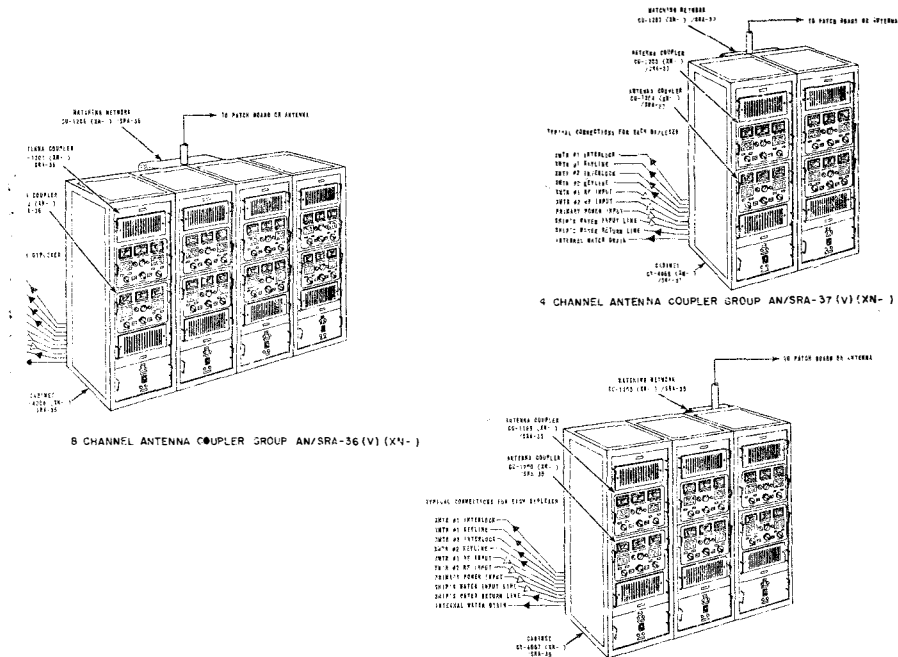
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Deco Electronics, Inc., (22729).



ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-1)

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-35(V)(XN-1) is designed for shipboard use. The multicoupler permits two or more transmitters to operate simultaneously into a single broadband antenna and provides; (1) a coupling path of prescribed efficiency between each transmitter and a common antenna; (2) isolation between transmitters; (3) a tunable bandpass filter to suppress harmonic and spurious transmitter output; (4) line flattening by which an antenna whose impedance presents as much as a 3 to 1 voltage standing wave ratio can be transformed to acceptable lower VSWR load for the transmitter.

No field changes in effect at time of preparation (6 December 1965).

RELATION TO OTHER EQUIPMENT:

AN/SRA-35(V)(XN-1) is similar to AN/SRA-36(V)(XN-1) in appearance and function except for the different frequency ranges in which they operate.

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**ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-1)**

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**EQUIPMENT REQUIRED BUT NOT SUPPLIED:**

(1) Nonelectric Multimeter AN/PSM-4; (2) Electronic voltmeter AN/USM-116; (1) Oscilloscope AN/USM-140K; (1) Electronic Counter Hewlett-Packard Model 524C or equiv; (1) Frequency Converter Hewlett-Packard 524A or equiv; (1) Signal Generator Hewlett-Packard Model 606A or equiv; (2) Dry Cell (1.5 v) BA30; (1) RF Cable Adapter Andrew No. 22R or equiv; (1) Fixed Flange RF Connector Andrew No. 15840 or equiv; (1) RF Inner Connector Andrew No. 15093 or equiv; (1) Gas Barrier Andrew No. 1762A or equiv; (1) Male to Male Connector Adapter Andrew No. 23187 or equiv; As required RF Cables RG-218/U, RG-270/U, RG-288/U; As required Electrical Cables TTHFWA-2, DSGA-3; (12) Coaxial Connector UG-154A/U; (6) Coaxial Connector UG-155B/U.

**TECHNICAL CHARACTERISTICS:**

FREQUENCY RANGE: 2 to 6 mc.

TUNING BAND: One band, continuously variable across the frequency range of each coupler group.

TYPE OF FREQUENCY CONTROL: Manual.

POWER RATING: Each antenna coupler, 5 kw RF average, 10 kw RF peak.

INPUT IMPEDANCE: 50 ohms nominal.

OUTPUT IMPEDANCE: 50 ohms nominal.

INSERTION LOSS: Not greater than 2 db.

ISOLATION BETWEEN CHANNELS: (Spaced 5% in frequency) 35 to 40 db nominal.

**ELECTRICAL CHARACTERISTICS OF REQUIRED ANTENNA**

VSWR: 3 to 1 or less relative to 50 ohms across the frequency range.

ANTENNA AVERAGE POWER HANDLING CAPABILITY: 30 kw.

TEMPERATURE OPERATING RANGE: 5 deg C (41 deg F) to 45 deg C (113 deg F).

PRIMARY POWER INPUT: 115 v ac, 60 cycles, single ph.

FRESH WATER COOLING REQUIREMENTS: 150 psig max surge; 6 gpm/diplexer min flow; 35 deg C (95 deg F) max inlet temperature; 10 psi max pressure drop across heat exchanger.

HEAT DISSIPATION: 2 kw max per coupler drawer.

FOR USE WITH TRANSMITTERS: Any transmitter with RF output between 500 watts and 5 kw average and up to 10 kw peak within the frequency range.

ANTENNA PEAK POWER HANDLING CAPABILITY: 360 kw.

**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Antenna Coupler Group AN/SRA-35(V)(XN-1) includes:		54 x 73 x 87	2470
3	Cabinet Electrical Equipment CY-4067/SRA-35(XN-1)		28-3/4 x 38 x 73	300
3	Antenna Coupler CU-1199/SRA-35(XN-1)		24 x 28 x 32	250
3	Antenna Coupler CU-1200/SRA-35(XN-1)		24 x 28 x 32	250
1	Impedance Matching Net CU-1205/SRA-35(XN-1)		16 x 16 x 37-1/2	70
2	Technical Manual NAVSHIPS 94838			

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**ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-1)**

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**REFERENCE DATA AND LITERATURE:**

NAVSHIPS 94838: Technical Manual for Antenna Coupler Groups AN/SRA-35(V)(XN-1), AN/SRA-35(V)(XN-2), AN/SRA-36(V)(XN-1), AN/SRA-36(V)(XN-2), AN/SRA-37(V)(XN-1), AN/SRA-37(V)(XN-2).

**TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:**

TUBES: Not required.

CRYSTALS: Not required.

SEMI-CONDUCTORS: (42) 1N67A (27) 1N538 (12) 1N676 (6) 1N751A (6) 1N2326 (9) MZ20T5  
(18) 2N489 (12) 2N1479

**SHIPPING DATA**

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
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**PROCUREMENT DATA**

PROCURING SERVICE: USN  
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Deco Electronics, Inc.	Washington, D. C.	N0bsr 87401	

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4 May 1966

Cog Service: USN FSN:

ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-2)  
Functional Class:

USA

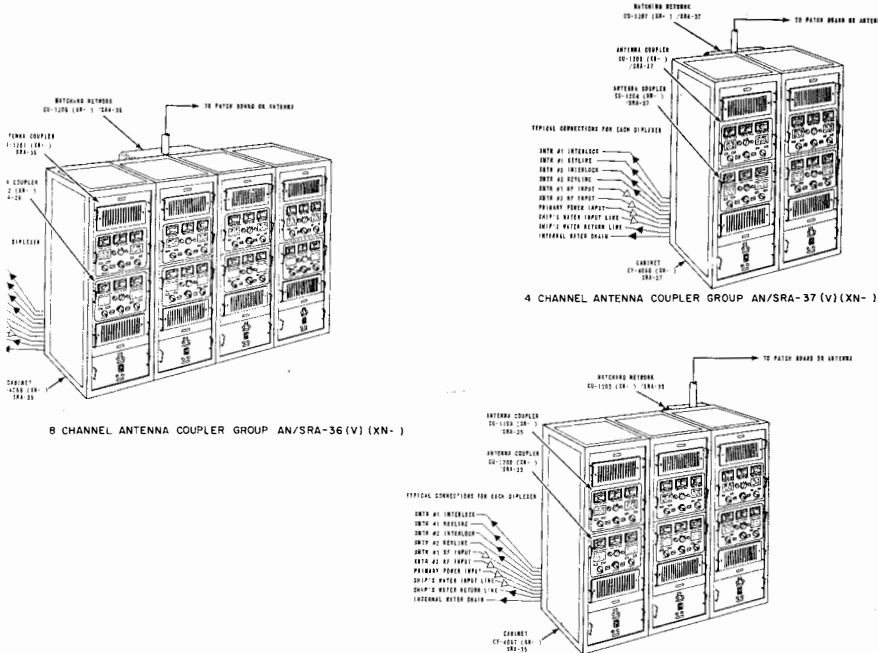
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Deco Electronics, Inc., (22729).



ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-2)

**FUNCTIONAL DESCRIPTION:**

Antenna Coupler Group AN/SRA-35(V)(XN-2) is designed for shipboard use. The multicoupler permits two or more transmitters to operate simultaneously into a single broadband antenna and provides: (1) A coupling path of prescribed efficiency between each transmitter and a common antenna; (2) Isolation between transmitters; (3) A tunable bandpass filter to suppress harmonic and spurious transmitter output; (4) Line flattening by which an antenna whose impedance presents as much as a 3 to 1 voltage standing wave ratio can be transformed to acceptable lower VSWR load for the transmitter.

No field changes in effect at time of preparation (6 December 1965).

**RELATION TO OTHER EQUIPMENT:**

AN/SRA-35(V)(XN-2) is similar to AN/SRA-36(V)(XN-2) in appearance and function except for the different frequency ranges in which they operate.

1.1 AN/SRA-35(V)(XN-2): 1

**ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-2)**

**EQUIPMENT REQUIRED BUT NOT SUPPLIED:**

(1) Nonelectronic Multimeter AN/PSM-4; (2) Electronic Voltmeter AN/USM-116; (1) Oscilloscope AN/USM-140K; (1) Electronic Counter Hewlett-Packard Model 524C or equiv; (1) Frequency Converter Hewlett-Packard 524A or equiv; (1) Electronic Counter Hewlett-Packard Model 524C or equiv; (1) Signal Generator Hewlett-Packard Model 606A or equiv; (2) Dry Cell (1.5 v) BA30; (1) RF Cable Adapter Andrew No. 22R or equiv; (1) Fixed Flange RF Connector Andrew No. 15840 or equiv; (1) RF Inner Connector Andrew No. 15093 or equiv; (1) Gas Barrier Andrew No. 1262A or equiv; (1) Male to Male Connector Adapter Andrew No. 23187 or equiv; As required RF Cables RG-218/U, RG-270/U, RG-288/U; As required Electrical Cables TTHFWA-2, DSGA-3; (12) Coaxial Connector UG-154A/U; (6) Coaxial Connector UG-155B/U; (1) Directional RF Wattmeter Bird ThruLine No. 4610 or equiv.

**TECHNICAL CHARACTERISTICS:**

FREQUENCY RANGE: 2 to 6 mc.

TUNING BAND: One band, continuously variable across the frequency range of each coupler group.

TYPE OF FREQUENCY CONTROL: Manual.

POWER RATING: Each antenna coupler, 5 kw RF average 10 kw RF peak.

INPUT IMPEDANCE: 50 ohms nominal.

OUTPUT IMPEDANCE: 50 ohms nominal.

INSERTION LOSS: Not greater than 2 db.

ISOLATION BETWEEN CHANNELS: (Spaced 5% in frequency) 35 to 40 db nominal.

**ELECTRICAL CHARACTERISTICS OF REQUIRED ANTENNA**

VSWR: 3 to 1 or less relative to 50 ohms across the frequency range.

ANTENNA AVERAGE POWER HANDLING CAPABILITY: 30 kw.

TEMPERATURE OPERATING RANGE: 5 deg C (41 deg F) to 45 deg C (113 deg F).

PRIMARY POWER INPUT: 115 v ac, 60 cycles, single ph.

FRESH WATER COOLING REQUIREMENTS: 150 psig max surge; 6gpm/diplexer min flow; 35 deg C (95 deg F) max inlet temperature; 10 psi max pressure drop across heat exchanger.

HEAT DISSIPATION: 2 kw max per coupler drawer.

FOR USE WITH TRANSMITTERS: Any transmitter with RF output between 500 watts and 5 kw average and up to 10 kw peak within the frequency range.

ANTENNA PEAK POWER-HANDLING CAPABILITY: 360 kw.

**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Antenna Coupler Group AN/SRA-35 (V)(XN-2) includes:		54 x 73 x 87	2470
3	Cabinet Electrical Equipment CY-4067/SRA-35(XN-2)		28-3/4 x 38 x 73	300
3	Antenna Coupler CU-1199/SRA-35(XN-2)		24 x 28 x 32	250
3	Antenna Coupler CU-1200/SRA-35(XN-2)		24 x 28 x 32	250
1	Impedance Matching Net CU-1205/SRA-35(XN-2)		16 x 16 x 37-1/2	70

1.1 AN/SRA-35(V)(XN-2): 2

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**ANTENNA COUPLER GROUP AN/SRA-35(V)(XN-2)**

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QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
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2	Technical Manual NAVSHIPS 94838			
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**REFERENCE DATA AND LITERATURE:**

NAVSHIPS 94838: Technical Manual for Antenna Coupler Groups AN/SRA-35(V)(XN-1), AN/SRA-35(V)(XN-2), AN/SRA-36(V)(XN-1), AN/SRA-36(V)(XN-2), AN/SRA-37(V)(XN-1), AN/SRA-37(V)(XN-2).

**TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:**

TUBES: Not required.

CRYSTALS: Not required.

SEMI-CONDUCTORS: (42) 1N67A (27) 1N538 (12) 1N676 (6) 1N751A (6) 1N2326 (9) MZ20T5  
(18) 2N489 (12) 2N1479

**SHIPPING DATA**

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
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**PROCUREMENT DATA**

PROCURING SERVICE: USN  
SPEC &/OR DWG:

DESIGN COG: USN. BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Deco Electronics, Inc.,	Washington, D. C.	NObsr 87401	

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6 May 1966  
Cog Service: USN FSN:

ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-1)  
Functional Class:

USA

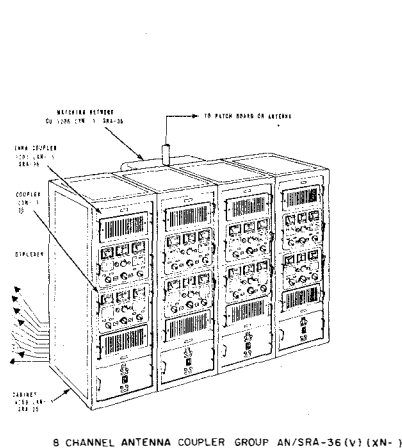
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USAF

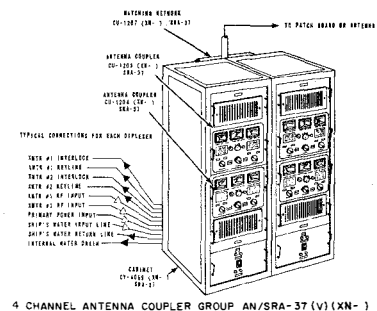
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Used by

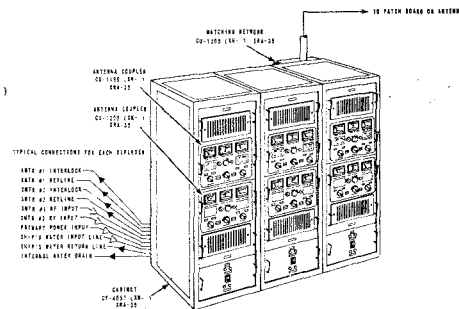
MANUFACTURER'S NAME/CODE NUMBER: Deco Electronic, Incorporated, (22729).



8 CHANNEL ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-1)



4 CHANNEL ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-1)



ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-1)

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-36(V)(XN-1) is designed for shipboard use. The multicoupler permits two or more transmitters to operate simultaneously into a single broadband antenna and provides: (1) A coupling path of prescribed efficiency between each transmitter and a common antenna; (2) Isolation between transmitter; (3) A tunable bandpass filter to suppress harmonic and spurious transmitter output; (4) Line flattening by which an antenna whose impedance presents as much as a 3 to 1 voltage standing wave ratio can be transformed to acceptable lower VSWR load for the transmitter.

No field changes in effect at time of preparation (7 December 1965).

RELATION TO OTHER EQUIPMENT:

AN/SRA-36(V)(XN-1) is similar to AN/SRA-37(V)(XN-1) in appearance and function except for the different frequency ranges in which they operate.

**ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-1)**

**EQUIPMENT REQUIRED BUT NOT SUPPLIED:**

(1) Nonelectric Multimeter AN/PSM-4; (2) Electronic Voltmeter AN/USM-116; (1) Oscilloscope AN/USM-140K; (1) Electronic Counter Hewlett-Packard 524C or equiv; (1) Frequency Converter Hewlett-Packard 524A or equiv; (1) Signal Generator Hewlett-Packard 606A or equiv; (2) Dry Cell (1.5 volt) BA30; (1) RF Cable Adapter Andrew No. 22R or equiv; (1) Fixed Flange RF Connector Andrew No. 15840 or equiv; (1) RF Inner Connector Andrew No. 15093 or equiv; (1) Gas Barrier Andrew No. 1262A or equiv; (1) Male to Male Connector Adapter Andrew No. 23187 or equiv; (1) Directional RF Wattmeter Bird ThruLine No. 4610 or equiv; As required RF Cables RG-218/U; RG-270/U, RG-288/U; As required Electrical Cables TTHFWA-2, DSGA-3; (16) Coaxial Connector UG/154A/U; (8) Coaxial Connector UG-155B/U.

**TECHNICAL CHARACTERISTICS:**

FREQUENCY RANGE: 4 to 12 mc.  
 TUNING BAND: One band, continuously variable across the frequency range of each coupler group.  
 TYPE OF FREQUENCY CONTROL: Manual.  
 POWER RATING: Each antenna coupler, 5 kw RF average 10 kw RF peak.  
 INPUT IMPEDANCE: 50 ohms nominal.  
 OUTPUT IMPEDANCE: 50 ohms nominal.  
 INSERTION LOSS: Not greater than 2 db.  
 ISOLATION BETWEEN CHANNELS: (Spaced 5% in frequency) 35 to 40 db nominal.  
 ELECTRICAL CHARACTERISTICS OF REQUIRED ANTENNA  
 VSWR: 3 to 1 or less relative to 50 ohms across the frequency range.  
 ANTENNA AVERAGE POWER HANDLING CAPABILITY: 40 kw.  
 ANTENNA PEAK POWER HANDLING CAPABILITY: 640 kw.  
 TEMPERATURE OPERATING RANGE: 5 deg C (41 deg F) to 45 deg C (113 deg F).  
 PRIMARY POWER INPUT: 115 v ac, 60 cycles, single ph.  
 FRESH WATER COOLING REQUIREMENTS: 150 psi maximum surge; 6 gpm/diplexer minimum flow; 35 deg C (95 deg F); maximum inlet temperature; 10 psi; maximum pressure drop across heat exchanger.  
 FOR USE WITH TRANSMITTERS: Any transmitter with RF output between 50 watts and 5 kw average and up to 10 kw peak within the frequency range.  
 HEAT DISSIPATION: 2 kw maximum per coupler drawer.

**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Antenna Coupler Group AN/SRA-36 (V)(XN-1) includes:		56 x 73 x 116	3370
4	Cabinet Electrical CY-4068/SRA-36(XN-1)		28-3/4 x 38 x 73	300
4	Antenna Coupler CU-1201/SRA-36(XN-1)		24 x 28 x 32	250
4	Antenna Coupler CU-1202/SRA-36(XN-1)		24 x 28 x 32	250
1	Impedance Matching Net CU-1206/SRA-36(XN-1)		18-x 34-3/4 x 35	170
2	Technical Manual NAVSHIPS 94838			

1.1 AN/SRA-36(V)(XN-1): 2



**ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-1)**

**REFERENCE DATA AND LITERATURE:**

NAVSHIPS 94838: Technical Manual for Antenna Coupler Groups AN/SRA-35(V)(XN-1), AN/SRA-35(V)(XN-2), AN/SRA-36(V)(XN-1), AN/SRA-36(V)(XN-2), AN/SRA-37(V)(XN-1), AN/SRA-37(V)(XN-2).

**TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:**

TUBES: Not required.

CRYSTALS: Not required.

SEMI-CONDUCTORS: (42) 1N67A (27) 1N538 (12) 1N676 (6) 1N751A (6) 1N2326 (9) MZ20T5  
(18) 2N489 (12) 2N1479

**SHIPPING DATA**

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
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**PROCUREMENT DATA**

PROCURING SERVICE: USN  
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Deco Electronic, Inc.	Washington, D. C.	Nobsr 87401	

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6 May 1966

ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-2)

Cog Service: USN FSN:

Functional Class:

USA

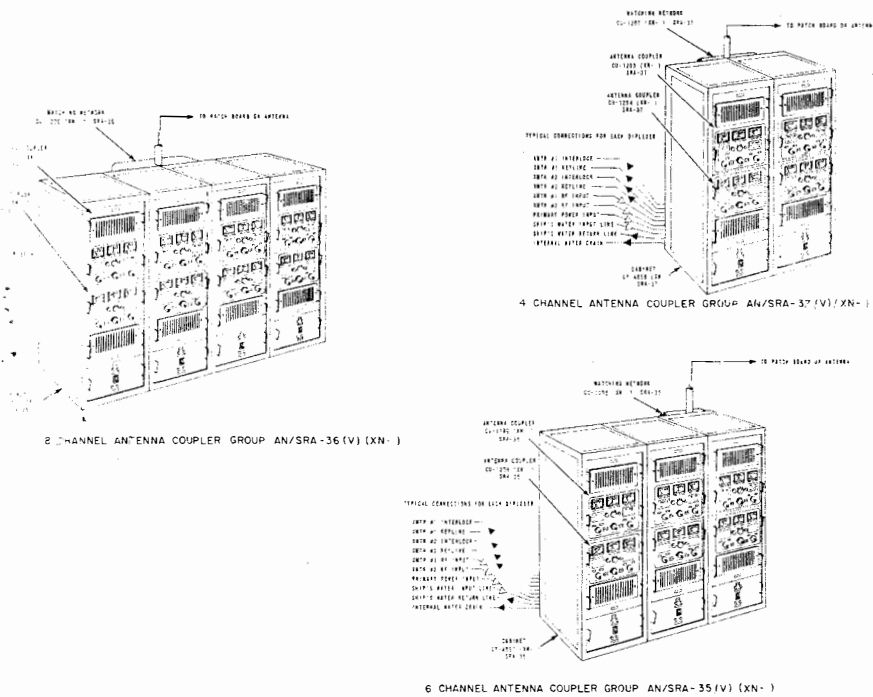
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Deco Electronics, Incorporated, (22729).



ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-2)

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-36(V)(XN-2) is designed for shipboard use. The multicoupler permits two or more transmitters to operate simultaneously into a single broadband antenna and provides: (1) A coupling path of prescribed efficiency between each transmitter and a common antenna; (2) Isolation between transmitters; (3) A tunable bandpass filter to suppress harmonic and spurious transmitter output; (4) Line flattening by which an antenna whose impedance presents as much as a 3 to 1 voltage standing wave ratio can be transformed to acceptable lower VSWR load for the transmitter.

No field changes in effect at time of preparation (7 December 1965).

RELATION TO OTHER EQUIPMENT:

AN/SRA-36(V)(XN-2) is similar to AN/SRA-37(V)(XN-2) in appearance and function except for the different frequency ranges in which they operate.

**ANTENNA COUPLER GROUP AN/SRA-36(V)(XN-2)**

**EQUIPMENT REQUIRED BUT NOT SUPPLIED:**

(1) Nonelectric Multimeter AN/PSM-4; (2) Electronic Voltmeter AN/USM-116; (1) Oscilloscope AN/USM-140K; (1) Electronic Counter, Hewlett-Packard 524C or equiv; (1) Frequency Converter Hewlett-Packard 525A or equiv; (1) Signal Generator Hewlett-Packard 606A or equiv; (2) Dry Cell (1.5 v) BA30; (1) RF Cable Adapter Andrew No. 22 or equiv; (1) Fixed Flange RF Connector Andrew No. 15840 or equiv; (1) RF Interconnector Andrew No. 15093 or equiv; (1) Gas Barrier Andrew No. 1262A; (1) Male to Male Connector Adapter Andrew No. 231870 or equiv; (1) Directional RF Wattmeter Bird ThruLine No. 4610 or equiv; (As required) RF Cables UG-218/U, RG-270/U, RG-288/U; As required Electrical Cables TTHFW-2, DSGA-3; (8) Coaxial Connector UG-154A/U; (4) Coaxial Connector UG-155B/U.

**TECHNICAL CHARACTERISTICS:**

FREQUENCY RANGE: 4 to 12 mc.

TUNING BAND: One band, continuously variable across the frequency range of each coupler group.

TYPE OF FREQUENCY CONTROL: Manual.

POWER RATING: Each antenna coupler, 5 kw RF average 10 kw RF peak.

INPUT IMPEDANCE: 50 ohms nominal.

OUTPUT IMPEDANCE: 50 ohms nominal.

INSERTION LOSS: Not greater than 2 db.

ISOLATION BETWEEN CHANNELS: (Spaced 5% in frequency) 35 to 40 db nominal.

**ELECTRICAL CHARACTERISTICS OF REQUIRED ANTENNA**

VSWR: 3 to 1 or less relative to 50 ohms across the frequency range.

ANTENNA AVERAGE POWER HANDLING CAPABILITY: 40 kw.

ANTENNA PEAK POWER HANDLING CAPABILITY: 640 kw.

TEMPERATURE OPERATING RANGE: 50 deg C (41 deg F) to 45 deg C (113 deg F).

PRIMARY POWER INPUT: 115 v ac, 60 cycles, single ph.

FRESH WATER COOLING REQUIREMENTS: 150 psi maximum surge; 6 gpm/dilexer minimum flow; 35 deg C (95 deg F); maximum inlet temperature; 10 psi: maximum pressure drop across heat exchanger.

FOR USE WITH TRANSMITTERS: Any transmitter with RF output between 50 watts and 5 kw average and up to 10 kw peak within the frequency range.

HEAT DISSIPATION: 2 kw maximum per coupler drawer.

**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Antenna Coupler Group AN/SRA-36(V)(XN-2) includes:		56 x 73 x 116	3370
4	Cabinet Electrical Equipment CY-4068/SRA-36(XN-2)		28-3/4 x 38 x 73	300
4	Antenna Coupler CU-1201/SRA-36(XN-2)		24 x 28 x 32	250
4	Antenna Coupler CU-1202/SRA-36(XN-2)		24 x 28 x 32	250
1	Impedance Matching Net CU-1206/SRA-36(XN-2)		18 x 34-3/4 x 35	170

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**ANTENNA COUPLER GROUP AN/SRA-(V)(XN-2)**

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QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
2	Technical Manual NAVSHIPS 94838			

**REFERENCE DATA AND LITERATURE:**

NAVSHIPS 94838: Technical Manual for Antenna Coupler Groups AN/SRA-35(V)(XN-1), AN/SRA-35(V)(XN-2), AN/SRA-36(V)(XN-1), AN/SRA-36(V)(XN-2), AN/SRA-37(V)(XN-1), AN/SRA-37(V)(XN-2).

**TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:**

TUBES: Not required.

CRYSTALS: Not required.

SEMI-CONDUCTORS: (42) 1N67A (27) 1N538 (12) 1N676 (6) 1N751A (6) 1N2326 (9) MZ20T5  
(18) 2N489 (12) 2N1479

**SHIPPING DATA**

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
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**PROCUREMENT DATA**

PROCURING SERVICE: USN. DESIGN COG: USN, BuShips  
SPEC &/OR DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Deco Electronics, Inc.	Washington, D. C.	N00sr 87401	

13 May 1966

Cog Service: USN FSN:

ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-1)

Functional Class:

USA

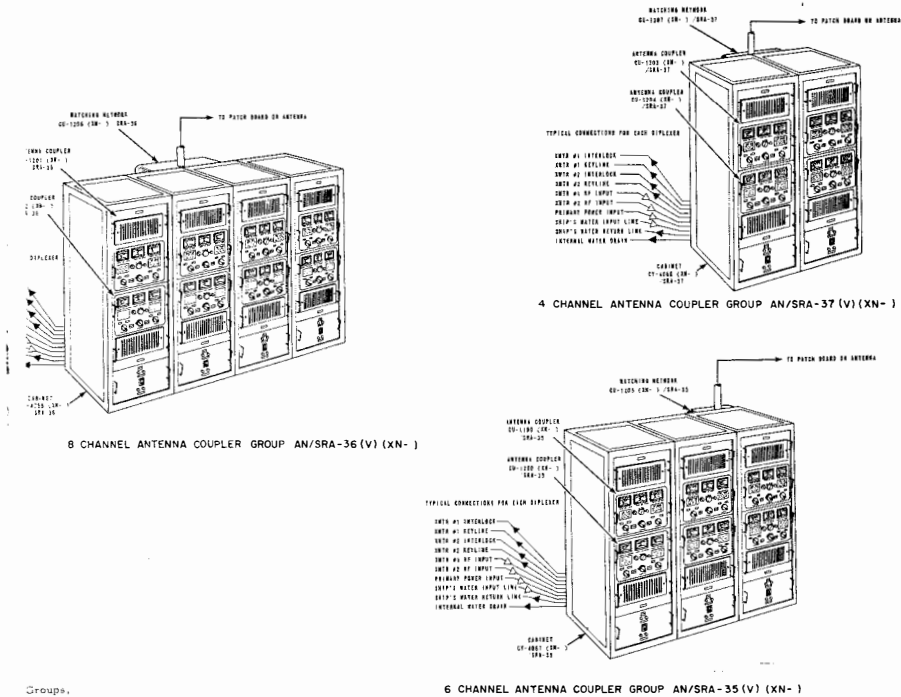
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Deco Electronics, Incorporated, (22729).



Groups.

ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-1)

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-37(V)(XN-1) is designed for shipboard use. The multicoupler permits two or more transmitters to operate simultaneously into a single broadband antenna and provides: (1) A coupling path of prescribed efficiency between each transmitter and a common antenna; (2) Isolation between transmitter; (3) A tunable bandpass filter to suppress harmonic and spurious transmitter output; (4) Line flattening by which an antenna whose impedance presents as much as a 3 to 1 voltage standing wave ratio can be transformed to acceptable lower VSWR load for the transmitter.

No field changes in effect at time of preparation (7 December 1965).

RELATION TO OTHER EQUIPMENT:

AN/SRA-37(V)(XN-1) is similar to AN/SRA-35(V)(XN-1) and AN/SRA-36(XN-1) in appearance and function except for the different frequency ranges in which they operate.

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## ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-1)

### EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Nonelectric Multimeter AN/PSM-4; (2) Electronic Voltmeter AN/USM-116; (1) Oscilloscope AN/USM-140K; (1) Counter Electronic Hewlett-Packard Model 524C or equiv; (1) Frequency Converter Hewlett-Packard Model 524A or equiv; (1) Signal Generator Hewlett-Packard Model 606A or equiv; (2) Dry Cell (1.5 volt) BA-30; (1) RF Cable Adapter Andrew No. 22R or equiv; (1) Fixed Flange RF Connector Andrew 15840 or equiv; (1) RF Inner Connector Andrew No. 15093 or equiv; (1) Gas Barrier Andrew No. 1262A or equiv; (1) Male to Male Connector Adapter Andrew No. 23187 or equiv; (1) Directional RF wattmeter Bird ThruLine No. 4610 or equiv; As required RF Cables RG-218/U; RG-270/U, RG-288/U; As required Electrical Cable TTHFWA-2, DSGA-3; (8) Coaxial Connector UG-154A/U; (4) Coaxial Connector UG-154A/U; (4) Coaxial Connector UG-155B/U.

### TECHNICAL CHARACTERISTICS:

FREQUENCY RANGE: 10 to 30 mc.

TUNING BAND: One band, continuously variable across the frequency range of each coupler group.

TYPE OF FREQUENCY CONTROL: Manual.

POWER RATING: 5 kw RF average, 10 kw RF peak ea antenna coupler.

INPUT IMPEDANCE: 50 ohms nominal.

OUTPUT IMPEDANCE: 50 ohms nominal.

INSERTION LOSS: Not greater than 2 db.

ISOLATION BETWEEN CHANNELS: (Spaced 5% in frequency) 35 to 40 db nominal.

#### ELECTRICAL CHARACTERISTICS OF REQUIRED ANTENNA

VSWR: 3 to 1 or less relative to 50 ohms across the frequency range.

ANTENNA AVERAGE POWER HANDLING CAPABILITY: 20 kw.

ANTENNA PEAK POWER HANDLING CAPABILITY: 160 kw.

TEMPERATURE OPERATING RANGE: 5 deg C (41 deg F) to 45 deg C (113 deg F).

PRIMARY POWER INPUT: 115 v ac, 60 cycles, single ph.

FRESH WATER COOLING REQUIREMENTS: 150 psig maximum surge, 6 gpm/diplexer minimum flow, 35 deg C (95 deg F) maximum inlet temperature, 10 psi maximum pressure drop across heat exchanger.

FOR USE WITH TRANSMITTERS: Any transmitter with RF output between 500 watts and 5 kw average and up to 10 kw peak within the frequency range.

HEAT DISSIPATION: 2 kw maximum per coupler drawer.

8 COAXIAL CONNECTOR: UG-154A/U.

4 COAXIAL CONNECTOR: UG-155B/U.

### MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Antenna Coupler Group AN/SRA-37 AN/SRA-37(V)(XN-1) includes:		52 x 58 x 73	1700
2	Cabinet Electrical Equipment CY-4069/SRA-37(XN-1)		28-3/4 x 38 x 73	300
2	Antenna Coupler CU-1203/SRA-37(XN-1)		24 x 28 x 32	250

1.1 AN/SRA-37(V)(XN-1): 2

**ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-1)**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
2	Antenna Coupler CU-1204/SRA-37(XN-1)		24 x 28 x 32	250
1	Impedance Matching Net CU-1207/SRA-37(XN-1)		14 x 32 x 34-3/4	100
2	Technical Manual NAVSHIPS 94838			

**REFERENCE DATA AND LITERATURE:**

NAVSHIPS 94838: Technical Manual for Antenna Coupler Groups AN/SRA-35(V)(XN-1), AN/SRA-35(V)(XN-2), AN/SRA-36(V)(XN-1), AN/SRA-36(V)(XN-2), AN/SRA-37(V)(XN-1), AN/SRA-37(V)(XN-2).

**TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:**

TUBES: Not required.

CRYSTALS: Not required.

SEMI-CONDUCTORS: (42) 1N67A (27) 1N538 (12) 1N676 (6) 1N751A (6) 1N2326 (9) MZ20T5  
(18) 2N489 (12) 2N1479

**SHIPPING DATA**

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
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**PROCUREMENT DATA**

PROCURING SERVICE: USN  
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Deco Electronics, Inc.	washington, D. C.	NObsr 87401	

399

16 May 1966

ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-2)

Cog Service: USN FSN:

Functional Class:

USA

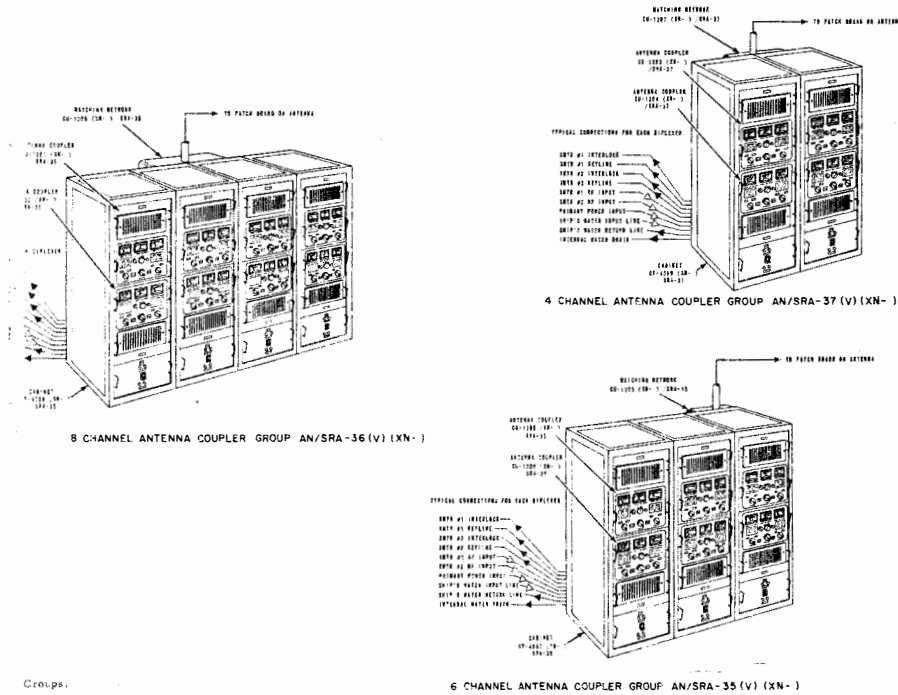
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Deco Electronics, Incorporated, (22729).



ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-2)

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-37(V)(XN-2) is designed for shipboard use. The multicoupler permits two or more transmitters to operate simultaneously into a single broadband antenna and provides: (1) A coupling path of prescribed efficiency between each transmitter and a common antenna; (2) Isolation between transmitter; (3) A tunable bandpass filter to suppress harmonic and spurious transmitter output; (4) Line flattening by which an antenna whose impedance presents as much as a 3 to 1 voltage standing wave ratio can be transformed to acceptable lower VSWR load for the transmitter.

No field changes in effect at time of preparation (7 December 1965).

RELATION TO OTHER EQUIPMENT:

AN/SRA-37(V)(XN-2) is similar to AN/SRA-35(V)(XN-2) and AN/SRA-36(V)(XN-2) in appearance and function except for the different frequency ranges in which they operate.

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**ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-2)**

**EQUIPMENT REQUIRED BUT NOT SUPPLIED:**

(1) Nonelectric Multimeter AN/PSM-4; (2) Electronic Voltmeter AN/USM-116; (1) Oscilloscope AN/USM-140K; (1) Electronic Counter Hewlett-Packard No. 524C or equiv; (1) Frequency Converter Hewlett-Packard No. 524A or equiv; (1) Signal Generator Hewlett-Packard No. 606A or equiv; (2) Dry Cell (1.5 volt) BA30; (1) RF Cable Adapter Andrew No. 22R or equiv; (1) Fixed Flange RF Connector Andrew No. 15840 or equiv; (1) RF Inner Connector Andrew No. 15093 or equiv; (1) Gas Barrier Andrew No. 1262A or equiv; (1) Male to Male Connector Adapter Andrew No. 23187 or equiv; (1) Directional RF Wattmeter Bird ThruLine No. 4610 or equiv; (As required) RF Cables RG-218/U, RG-270/U, RG-288/U; (As required) Electrical Cables TTHFWA-2, DSGA-3; (8) Coaxial Connector UG-154A/U; (4) Coaxial Connector UG-155B/U.

**TECHNICAL CHARACTERISTICS:**

FREQUENCY RANGE: 10 to 30 mc.

TUNING BAND: One band, continuously variable across the frequency range of each coupler group.

TYPE OF FREQUENCY CONTROL: Manual.

POWER RATING: 5 kw RF average, 10 kw RF peak ea antenna coupler.

INPUT IMPEDANCE: 50 ohms nominal.

OUTPUT IMPEDANCE: 50 ohms nominal.

INSERTION LOSS: Not greater than 2 db.

ISOLATION BETWEEN CHANNELS: (Spaced 5% in frequency) 35 to 40 db nominal.

**ELECTRICAL CHARACTERISTICS OF REQUIRED ANTENNA**

VSWR: 3 to 1 or less relative to 50 ohms across the frequency range.

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ANTENNA PEAK POWER HANDLING CAPABILITY: 160 kw.

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HEAT DISSIPATION: 2 kw maximum per coupler drawer.

8 COAXIAL CONNECTOR: UG-154A/U.

4 COAXIAL CONNECTOR: UG-155B/U.

**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Antenna Coupler Group AN/SRA-37 (V)(XN-2) includes:		52 x 58 x 73	1700
2	Cabinet Electrical Equipment CY-4069/SRA-37(XN-2)		28-3/4 x 38 x 73	300
2	Antenna Coupler CU-1203/SRA-37(XN-2)		24 x 28 x 32	250
2	Antenna Coupler CU-1204/SRA-37(XN-2)		24 x 28 x 32	250

**ANTENNA COUPLER GROUP AN/SRA-37(V)(XN-2)**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Impedance Matching Net CU-1207/SRA-37(XN-2)		14 x 32 x 34-3/4	100
2	Technical Manual			

**REFERENCE DATA AND LITERATURE:**

NAVSHIPS 94838: Technical Manual for Antenna Coupler Groups AN/SRA-35(V)(XN-1), AN/SRA-35(V)(XN-2), AN/SRA-36(V)(XN-1), AN/SRA-36(V)(XN-2), AN/SRA-37(V)(XN-1), AN/SRA-37(V)(XN-2).

**TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:**

TUBES: Not required.

CRYSTALS: Not required.

SEMI-CONDUCTORS: (42) 1N67A (27) 1N538 (12) 1N676 (6) 1N751A (6) 1N2326 (9) MZ20T5  
(18) 2N489 (12) 2N1479

**SHIPPING DATA**

PKGS	VOLUME (CU FT)	WEIGHT (LBS)

**PROCUREMENT DATA**

PROCURING SERVICE: USN  
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Deco Electronics, Inc.	Washington, D. C.	Nobsr 87401	