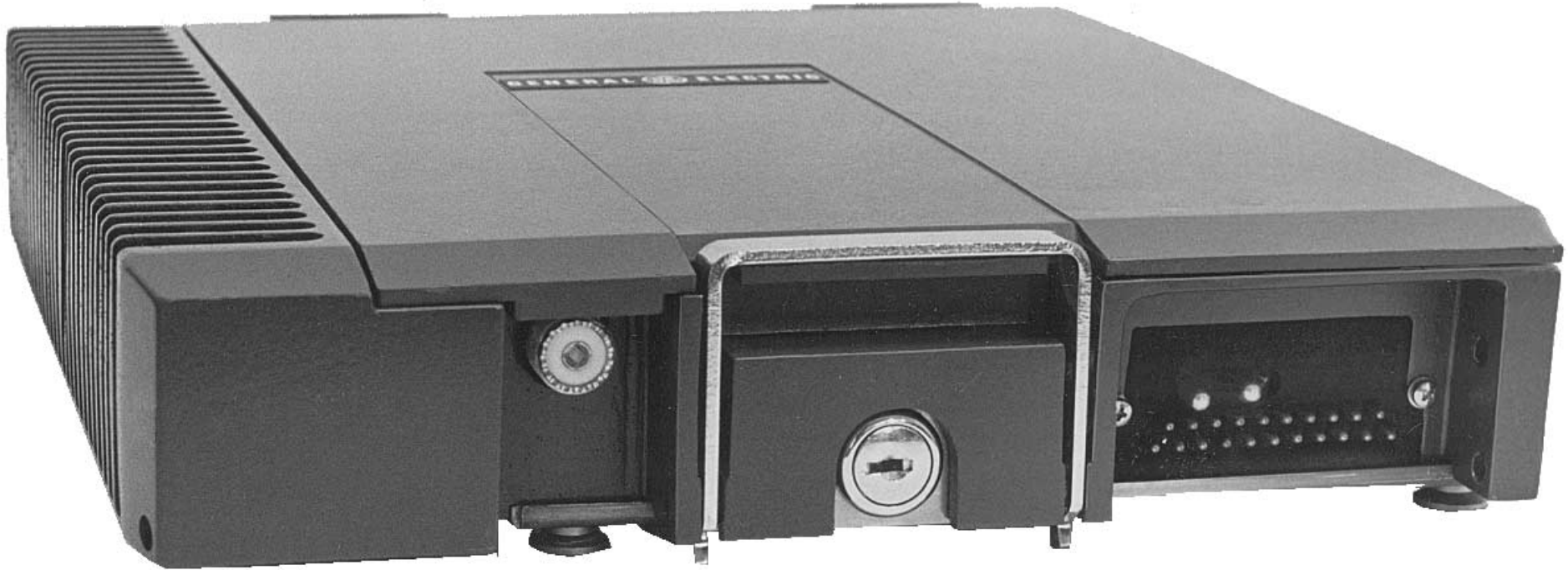


**DELTA S/SX**  
PRODUCT CODE N3



**PRODUCT PROGRAMMING**

ORDERING NUMBER	DESCRIPTION
TQ2310	Universal Radio Programmer
TQ2317	DELTA Radio Programming Software Prom
TQ2358	Radio Programming Cable for DELTA & RANGR
TQ3330	PC Programming Interface Module Kit (PC to Interface Module Cable, Interface Module)
TQ3331	PC Programming Cable (Interface Module to Radio)
TQ3334	PC Programming Software (5 1/4" Disks)
TQ4334	PC Programming Software (3 1/2" Disks)

# DELTA S/SX

## PRODUCT CODE N3

# PRODUCT NOMENCLATURE

Digits 1 & 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7, 8, 9	Digit 10	Digit 11
<b>Product Code</b>	<b>Transmit Freq. Range</b>	<b>Receive Frequency Range</b>	<b>Channel Spacing</b>	<b>Radio Type</b>	<b>RF Power Output</b>	<b>Frequency Capacity</b>	<b>Oscillator Stability</b>
<b>N3</b>	<b>B</b> 29.7-36 MHz (NB)	<b>B</b> 29.7-36 MHz (NB)	<b>1</b> 30 kHz	<b>N</b> Narrow Band	<b>035</b> 35 Watts	<b>S</b> Use GS Option	<b>A</b> Use EA Option
	<b>C</b> 36-42 MHz (NB)	<b>C</b> 36-42 MHz (NB)	<b>2</b> 25 kHz	<b>W</b> Wide Band	<b>040</b> 40 Watts	<b>T</b> 16 Channel	<b>B</b> 5 PPM
	<b>D</b> 42-50 MHz (NB)	<b>D</b> 42-50 MHz (NB)	<b>3</b> 20 kHz		<b>050</b> 50 Watts	<b>Y</b> Use GS Option	
	<b>G</b> 136-153 MHz	<b>G</b> 136-153 MHz	<b>4</b> 12.5 kHz		<b>060</b> 60 Watts	<b>Z</b> Use BZ Option	
	<b>H</b> 150.8-174 MHz (NB) 150-174 MHz (WB)	<b>H</b> 150.8-174 MHz (NB) 150-174 MHz (WB)			<b>065</b> 65 Watts		
	<b>R</b> 403-430 MHz (NB) 403-423 MHz (WB)	<b>P</b> 440-460 MHz (WB)			<b>075</b> 75 Watts		
	<b>S</b> 410-430 MHz (WB)	<b>R</b> 403-430 MHz (NB) 403-423 MHz (WB)			<b>080</b> 80 Watts		
	<b>T</b> 420-440 MHz (WB)	<b>S</b> 410-430 MHz (WB)			<b>090</b> 90 Watts		
	<b>U</b> 450-470 MHz	<b>T</b> 420-440 MHz (WB)			<b>100</b> 100 Watts		
	<b>V</b> 470-494 MHz (NB)	<b>U</b> 450-470 MHz			<b>110</b> 110 Watts		
	<b>W</b> 494-512 MHz (NB)	<b>V</b> 470-494 MHz (NB)					
		<b>W</b> 494-512 MHz (NB)					

# DELTA S/SX

## PRODUCT CODE N3

### PRODUCT NOMENCLATURE (CONT.)

STRUCTURED OPTIONS												
Option A	Option B	s Option C	s Option D	Option E	s Option F	s Option G	s Option M	s Option N	Option R	s Option T	Option V	s Option Y
Programming	Frequency Capacity	Option	Channel Guard	Stability	Transmit Fuse	Station Option	Mounting	Antenna	Receiver Type	2nd Osc. Crystal	Voice Guard	Alternate Reference Osc.
<b>0</b> Test Program Only	<b>0</b> STD. 16 Channels	<b>0</b> None	<b>0</b> None	<b>0</b> Standard ±5 PPM	<b>0</b> Standard	<b>0</b> Mobile	<b>0</b> Mounting Hardware	<b>0</b> None	<b>0</b> Standard	<b>0</b> Standard	<b>0</b> None	<b>0</b> Standard 13.2 MHz
<b>1</b> Custom Programmed	<b>Z</b> 32 Channels	<b>N</b> Mastr II Interface	<b>B</b> Tone & Digital	<b>A</b> ±2 PPM	<b>N</b> Delete Fuse	<b>S</b> Station	<b>N</b> Delete Mounting Hardware	<b>A</b> Antenna	<b>A<sup>^</sup></b> UHS Pre-Ampl.	<b>1</b> 1st Alternate	<b>G</b> Voice Guard	<b>T</b> Alternate 13.8 MHz
<b>2</b> S950 Download Narrow Band			<b>F<sup>^</sup></b> Tone Reject Filter	<b>S</b> ±2 PPM (CGE)					<b>B</b> Noise Blanker	<b>2</b> 2nd Alternate		
<b>3</b> S950 Download Wide Band										<b>3</b> 3rd Alternate		
										<b>4</b> 4th Alternate		

## LOW BAND

RADIO CONFIGURATION	FREQUENCY RANGE (MHz)	RF POWER	PACKAGE NUMBER	COMBINATION NUMBER
16 Channel Capacity with Channel Guard, 5 PPM Stability, No Noise Blanker	29-36	60W	N3A101	N3BB3NO60TB
	29-36	110W	N3A104	N3BB3N110TB
	36-42	60W	N3A102	N3CC3N060TB
	36-42	110W	N3A105	N3CC3N110TB
	42-50	60W	N3A103	N3DD3N060TB
	42-50	110W	N3A106	N3DD3N110TB

**DELTA S/SX**  
PRODUCT CODE N3

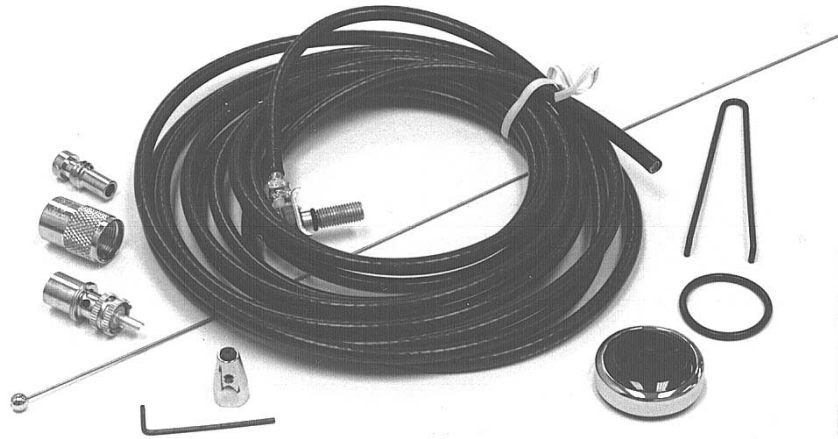
**HIGH BAND**

RADIO CONFIGURATION	FREQUENCY RANGE (MHz)	RF POWER	PACKAGE NUMBER	COMBINATION NUMBER
Narrow Band 16 Channel Capacity with Channel Guard, 5PPM stability, NO UHS	136-153	40W	N3A107	N3GG2W040TB
	150-174	40W	N3A108	N3HH2W040TB
	150-174	110W	N3A111	N3HH2W110TB
Wide Band 16 Channel Capacity with Channel Guard, 5PPM Stability, NO UHS	136-153	40W	N3A113	N3GG2W040TB
	150-174	40W	N3A114	N3HH2W040TB
	150-174	110W	N3A117	N3HH2W110TB

**UHF BAND**

RADIO CONFIGURATION	FREQUENCY RANGE (MHz)	RF POWER	PACKAGE NUMBER	COMBINATION NUMBER
Narrow Band 16 Channel Capacity with Channel Guard, 5 PPM Stability, NO UHS	403-430	50W	N3A119	N3RR2N050TB
	450-470	40W	N3A120	N3UU2N040TB
	450-470	110W	N3A127	N3UU2N110TB
	470-494	35W	N3A121	N3VV2N035TB
	470-494	90W	N3A128	N3VV2N090TB
	494-512	35W	N3A122	N3WW2N035TB
	494-512	80W	N3A129	N3WW2N080TB
Wide Band 16 Channel Capacity with Channel Guard, 5 PPM Stability, NO UHS	403-423	50W	N3A133	N3RR2W050TB
	410-430	50W	N3A139	N3SS2W050TB
	450-470	40W	N3A134	N3UU2W040TB
	450-470	100W	N3A137	N3UU2W100TB

**ANTENNA OPTIONS**



Option **N3AN1A**  
**19B209568P1**

High Band (VHF) Antenna (any power)  
UHF Band (up to 60 Watts)

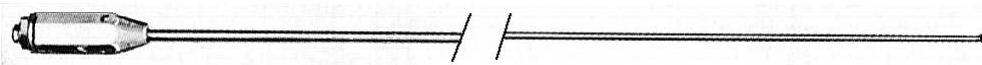
Option **N3ANIB**  
**19B209568P2**

UHF Band Antenna (80 Watts and Up) Same as  
19B209568P1, except cable is RG58 TPR.



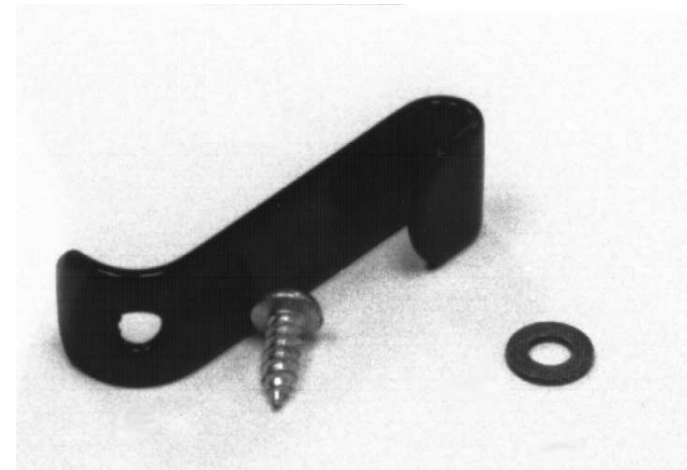
Option **N3AN1C**  
**19C307172P1**

Low Band Swivel Base (Standard)  
Used With 7491074P1 96" Whip and Adapter



**7491074P1**

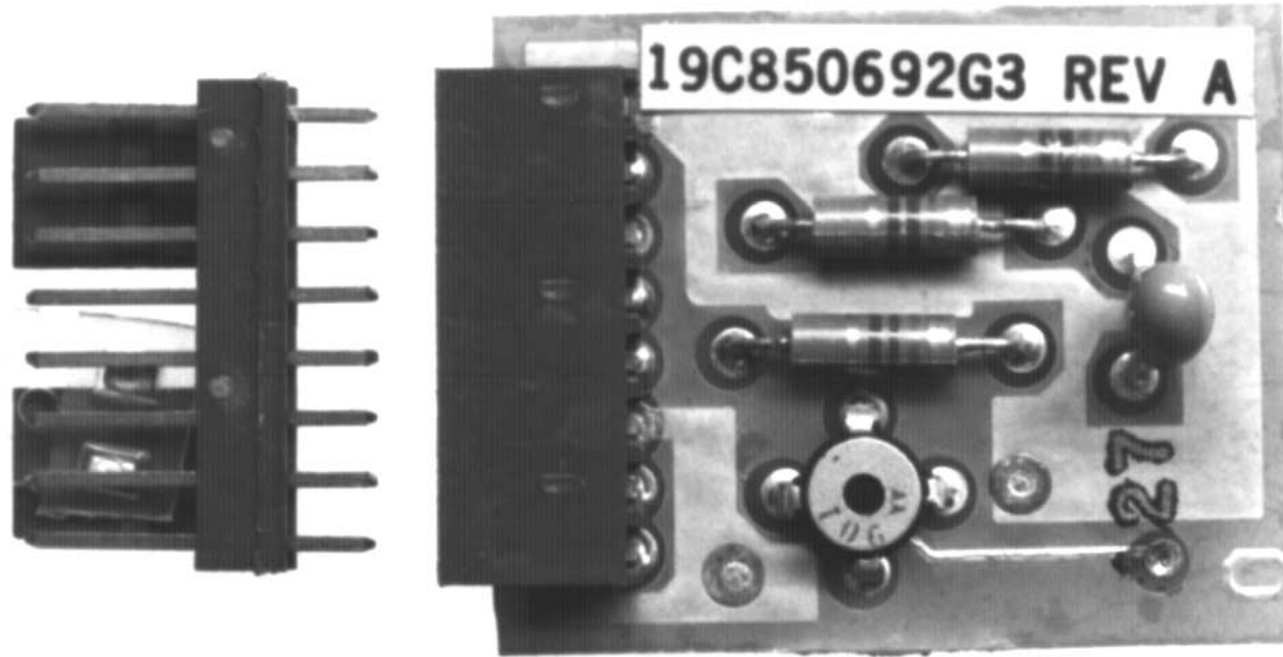
Low Band Antenna Whip with Adapter



**19A121577G1**

Low Band Antenna Hook - fastens in vehicle roof  
gutter to hold antenna rod.

**ACCESSORY OPTIONS**



**Option N3RA1D**  
**19C850692G3**

UHF Band Narrow Band Receiver Pre-Amplifier.  
Covers 450-470 MHz. (Shown)

**Option N3RA1E**  
**19C850692G4**

UHF Band Narrow Band Receiver Pre-Amplifier.  
Covers 470-494 MHz.

**Option N3RA1F**  
**19C850692G3**

UHF Band Narrow Band Receiver Pre-Amplifier.  
Covers 450-470 MHz. (Shown)

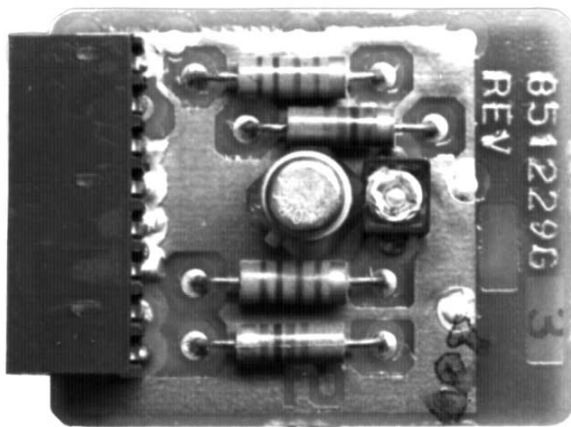
**Option N3RA1G**  
**19C850692G6**

UHF Band Wide Band Receiver Pre-Amplifier.  
Covers 403-440 MHz.

**Option M3RA1H**  
**19C850692G5**

UHF Band Wide Band Receiver Pre-Amplifier.  
Covers 440-470 MHz.

**ACCESSORY OPTIONS**

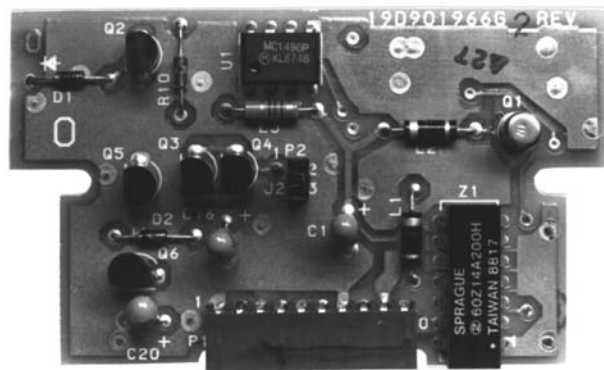


Option **N3RA1B**  
**19C851229G4**

High Band Wide Band Receiver Pre-Amplifier. Covers 136-153 MHz.

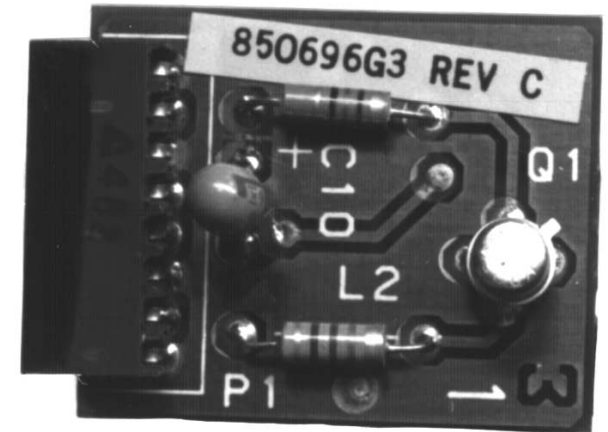
Option **N3RA1C**  
**19C851229G3**

High Band Wide Band Receiver Pre-Amplifier. Covers 150-174 MHz. (Shown)



Structured Option **RB**  
**19D901966G2**

Low Band Noise Blanker Board Assembly.



Option **N3RA1A**  
**19C850696G3**

High Band Narrow Band Receiver Pre-Amplifier. Covers 136-174 MHz.

**DELTA S/SX**  
PRODUCT CODE N3

**COMPLETE BOARD ASSEMBLIES**

FREQUENCY RANGE (MHz)	POWER LEVEL	TRANSMITTER RECEIVER/SYNTH BOARD ASSEMBLY PART NUMBER	TX-PA/ FRAME ASSEMBLY PART NUMBER	TX PA BOARD ASSEMBLY LESS TRANSISTORS PART NUMBER
<b>LOW BAND</b>				
29.7-36 MHz	60W	<b>19D901630G4</b>	<b>19D901207G3</b>	<b>19D901117G3</b>
36-42 MHz	60W	<b>19D901630G5</b>	<b>19D901207G2</b>	<b>19D901117G2</b>
42-50 MHz	60W	<b>19D901630G6</b>	<b>19D901207G1</b>	<b>19D901117G1</b>
29.7-36 MHz	100W	<b>19D901630G4</b>	<b>19D901207G6</b>	<b>19D901358G5</b>
36-42 MHz	100W	<b>19D901630G5</b>	<b>19D901207G5</b>	<b>19D901358G3</b>
42-50 MHz	100W	<b>19D901630G6</b>	<b>19D901207G4</b>	<b>19D901358G1</b>
<b>HIGH BAND NARROW BAND</b>				
136-153 MHz	40W	<b>19D901720G4</b>	<b>19D901865G3</b>	<b>19D901860G3</b>
150-174 MHz	40W	<b>19D901720G3</b>	<b>19D901865G2</b>	<b>19D901860G2</b>
150-174 MHz	110W	<b>19D901720G3</b>	<b>19D901865G1</b>	<b>19D901860G1</b>
<b>HIGH BAND WIDE BAND</b>				
136-153 MHz	40W	<b>19D901650G4</b>	<b>19D901865G3</b>	<b>19D901860G3</b>
150-174 MHz	40W	<b>19D901650G3</b>	<b>19D901865G2</b>	<b>19D901860G2</b>
159-174 MHz	110W	<b>19D901650G3</b>	<b>19D901865G1</b>	<b>19D901860G1</b>



**DELTA S/SX**  
PRODUCT CODE N3

**COMPLETE BOARD ASSEMBLIES**

FREQUENCY RANGE (MHz)	POWER LEVEL	TRANSMITTER RECEIVER/SYNTH BOARD ASSEMBLY PART NUMBER	TX-PA/ FRAME ASSEMBLY PART NUMBER	TX PA BOARD ASSEMBLY LESS TRANSISTORS PART NUMBER
<b>UHF BAND NARROW BAND</b>				
403-430 MHz	50W	19D901620G8	19D901790G5	19D901785G5
450-470 MHz	40W	19D901620G5	19D901790G3	19D901785G3
470-494 MHz	35W	19D901620G6	19D901790G4	19D901785G4
494-512 MHz	35W	19D901620G7	19D901790G4	19D901785G4
450-470 MHz	100W	19D901620G5	19D901790G1	19D901785G1
470-494 MHz	90W	19D901620G6	19D901790G2	19D901785G2
494-512 MHz	80W	19D901620G7	19D801790G6	19D901785G6
<b>UHF BAND WIDE BAND</b>				
403-423 MHz	50W	19D901620G15	19D901790G5	19D901785G5
410-430 MHz	40W	19D901620G19	19D901790G5	19D901785G5
450-470 MHz	35W	19D901620G13	19D901790G3	19D901785G3
450-470 MHz	100W	19D901620G13	19D901790G1	19D901785G1
<b>ALL BANDS</b>				
Option (CG) Board Extender Board (Mounts CG Board)		19D901775G2 19B800739G2		

**DELTA S/SX**  
PRODUCT CODE N3

**PROGRAMMED INTEGRATED CIRCUITS**

These Integrated Circuits contain product software. These part numbers should be used to order programmed replacements. (The part numbers shown in the maintenance manuals are for unprogrammed integrated circuits that do not contain product software.)

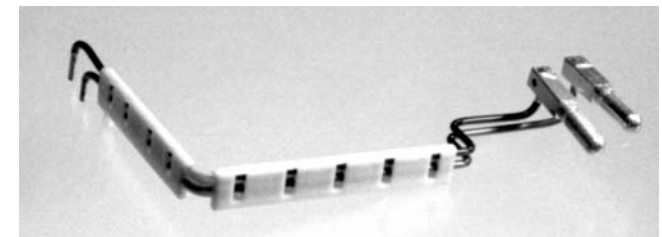
BAND	PART NUMBER	DESCRIPTION
LOW	<b>19C851591G3</b>	Microprocessor-Tin Pins-Soldered In
LOW	<b>19C851149G12</b>	Microprocessor-Gold Pins-Plug In
VHF/UHF		Narrow Band-Use Wide Band As Replacement
VHF/UHF	<b>19A703868G6</b>	Microprocessor-Programmed U/V Prom
	<b>19A703244P23</b>	Microprocessor-Masked Ram



19D900139P1  
Radio Mounting Plate



19D900447G8  
Connector Repair Kit. Replaces radio  
end of power/control cables

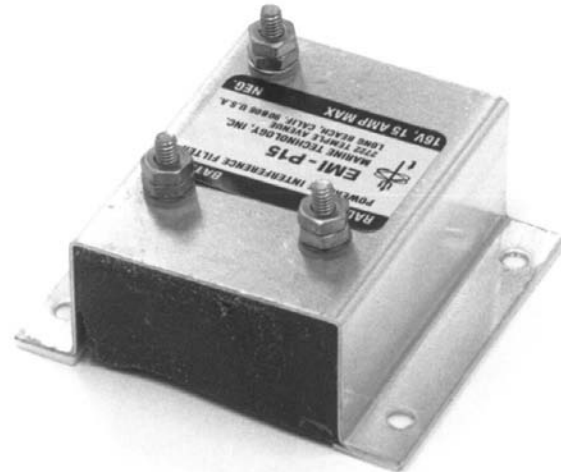


19D901654P1  
Power Pin & +A Bus assembly

**PROGRAMMED INTEGRATED CIRCUITS**



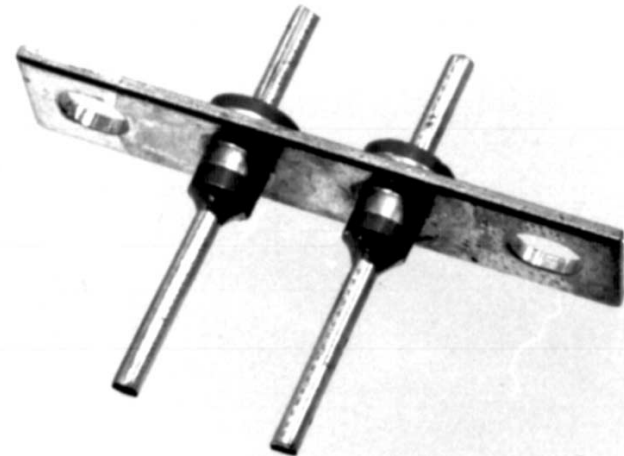
19B216021G4  
Replacement Fuse Box.  
Order Fuse Separately  
1R11P5-20 amp; 1R11P6-25 amp; 1R1197 -30 amp



19A148539G1  
Noise Filter Kit



19B800004P3  
Radio Key "GE 004"

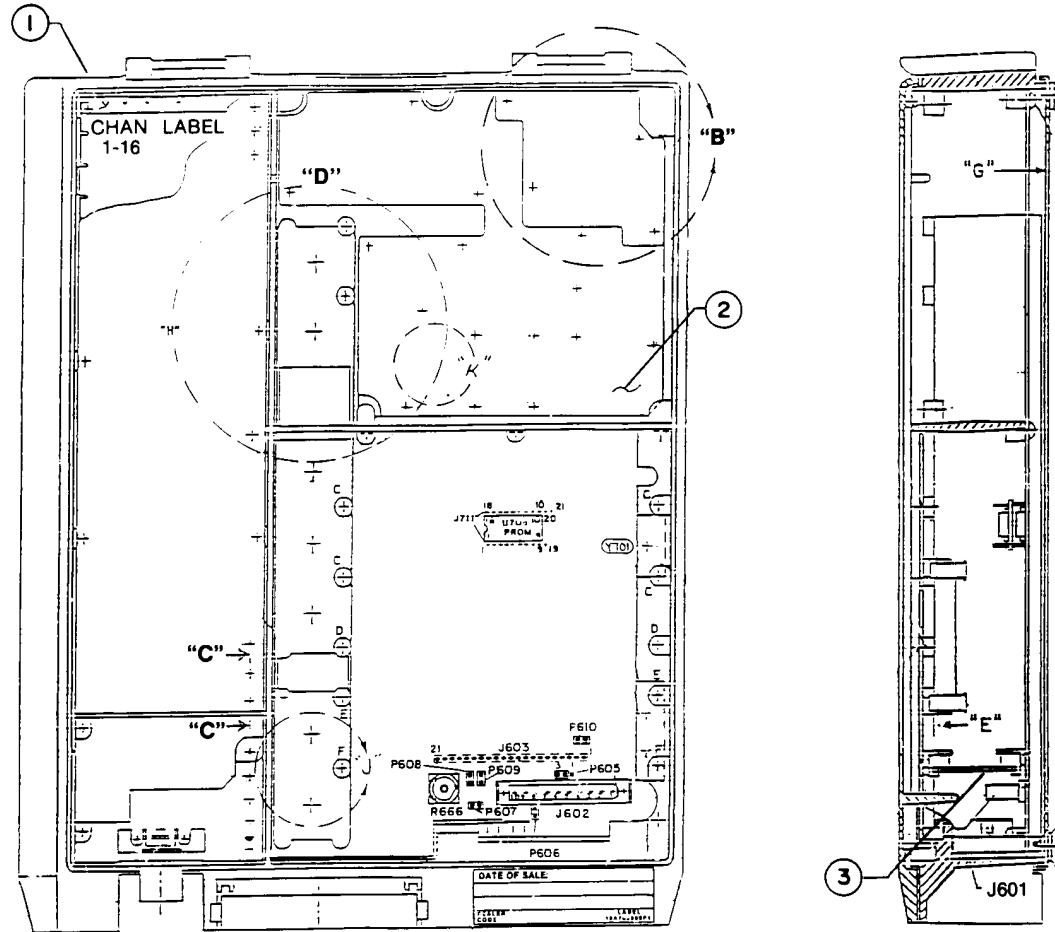


19A703218G1  
FL907 A+ Filter Assembly

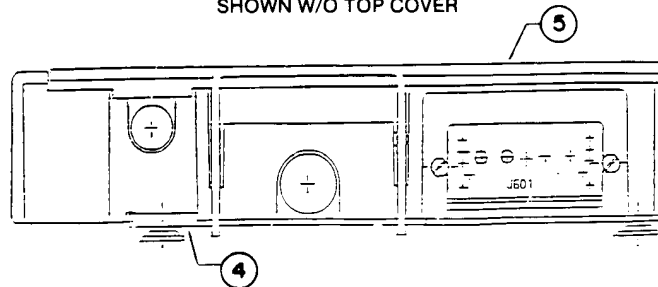
# DELTA S/SX

PRODUCT CODE N3

## MECHANICAL PARTS BREAKDOWN



BASIC RADIO  
SHOWN W/O TOP COVER



**DELTA S/SX**  
PRODUCT CODE N3

ITEM	PART NUMBER	DESCRIPTION
1	<b>19C850949G1</b>	PA Cover (ALL)
2	<b>19C850860P3</b>	Synchronizer, Top Cover (ALL)
3	<b>19B800739G2</b>	Extender Board (ALL)
4	<b>19B800686G4</b>	Bottom Cover (LB, HB-N/W Band)
	<b>19B800686G2</b>	Bottom Cover (UHF-NB)
5	<b>19C850708G3</b>	Top Cover (ALL)
N/A	<b>19D900139P1</b>	Base Plate (ALL)

**SERVICE ACCESSORIES**

**RECOMMENDED LIST OF ITEMS**

ORDERING NUMBER	DESCRIPTION
<b>TQ2317</b>	Radio Programming Software
<b>TQ2358</b>	Radio Programming Cable
<b>TQ2310</b>	Universal Radio Programmer
<b>TM1C</b>	4EX3A11 Metering Test Set & 19C850590G1 Delta Metering Cable
<b>ST2510</b>	Tuning Tool
<b>ST2518</b>	Tuning Tool
<b>19C850936G1</b>	Channel Guard Extender Board
<b>ST2304</b>	Torque Wrench Kit

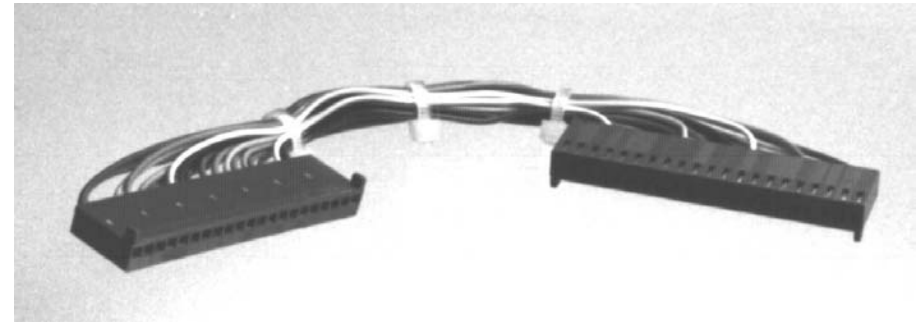
**DELTA S/SX**  
PRODUCT CODE N3

DESCRIPTION OF SERVICING ACCESSORIES



The **TM1C** ordering number includes both the 4EX3A11 Metering Test Set and the 19C850590G1 Delta Metering Cable, both of which may be ordered separately.

19C850936G1 Channel Guard Extender Board allows the testing and analysis of a DELTA Channel Guard Board plugged into the unit and "working".



**DELTA S/SX**  
PRODUCT CODE N3

**MAINTENANCE MANUALS**

BAND	DESCRIPTION	MANUAL # POSITIVE/ NEGATIVE GROUND	MANUAL # NEGATIVE GROUND ONLY
	<b>COMBINATION MANUAL</b>		
LOW	29-50 MHz Narrow Band	<b>LBI-31345</b>	<b>LBI-31563</b>
HIGH	136-174 MHz Wide Band 136-174 MHz Narrow Band	<b>LBI-31371</b> <b>LBI-31202</b>	<b>LBI-31564</b> <b>LBI-31565</b>
UHF	430-470 MHz Wide Band 430-470 MHz Narrow Band	<b>LBI-31416</b> <b>LBI-31194</b>	<b>LBI-31566</b> <b>LBI-31567</b>
	<b>SERVICE SECTION</b>		
LOW	29-50 MHz Narrow Band	<b>LBI-31346</b>	<b>LBI-31536</b>
HIGH	136-174 MHz Narrow Band 136-174 MHz Wide Band	<b>LBI-31203</b> <b>LBI-31372</b>	<b>LBI-31516</b> <b>LBI-31538</b>
UHF	430-470 MHz Wide Band 430-512 MHz Narrow Band	<b>LBI-31417</b> <b>LBI-31195</b>	<b>LBI-31540</b> <b>LBI-31511</b>
	<b>TRS BOARD</b>		
LOW	29-50 MHz Narrow Band	<b>LBI-31347</b>	<b>LBI-31535</b>
HIGH	136-174 MHz Narrow Band 136-174 MHz Wide Band	<b>LBI-31204</b> <b>LBI-31367</b>	<b>LBI-31517</b> <b>LBI-31537</b>
UHF	403-470 MHz Wide Band 403-512 MHz Narrow Band	<b>LBI-31418</b> <b>LBI-31196</b>	<b>LBI-31539</b> <b>LBI-31505</b>

**DELTA S/SX**  
PRODUCT CODE N3

	POWER AMPLIFIER		
LOW	29-50 MHz Radio, 60W 29-50 MHz Radio, 110W	<b>LBI-31348</b> <b>LBI-31381</b>	
HIGH	136-174 MHz Radio, 40W 136-174 MHz Radio, 60W 136-153 MHz Radio, 110W 150-174 MHz Radio, 110W	<b>LBI-38128</b> <b>LBI-31094</b> <b>LBI-38128</b> <b>LBI-38128</b>	<b>LBI-31028 Q</b>  <b>LBI-31028 Q</b> <b>LBI-31028 Q</b>
UHF	470-512 MHz Radio, 35W 450-470 MHz Radio, 40W 403-430 MHz Radio, 50W 470-512 MHz Radio, 65W 450-470 MHz Radio, 75W 494-512 MHz Radio, 80W 470-494 MHz Radio, 90W 450-470 MHz Radio, 100W	<b>LBI-31860</b> <b>LBI-31860</b> <b>LBI-31860</b> <b>LBI-31093</b> <b>LBI-31093</b> <b>LBI-31861</b> <b>LBI-31861</b> <b>LBI-31861</b>	<b>LBI-31023 S</b> <b>LBI-31023 S</b> <b>LBI-31200 S</b>  <b>LBI-31023 S</b> <b>LBI-31023 S</b> <b>LBI-31023 S</b>
ALL	Channel Guard	<b>LBI-31705</b>	

S Prior to 3/87  
Q Prior to 6/88