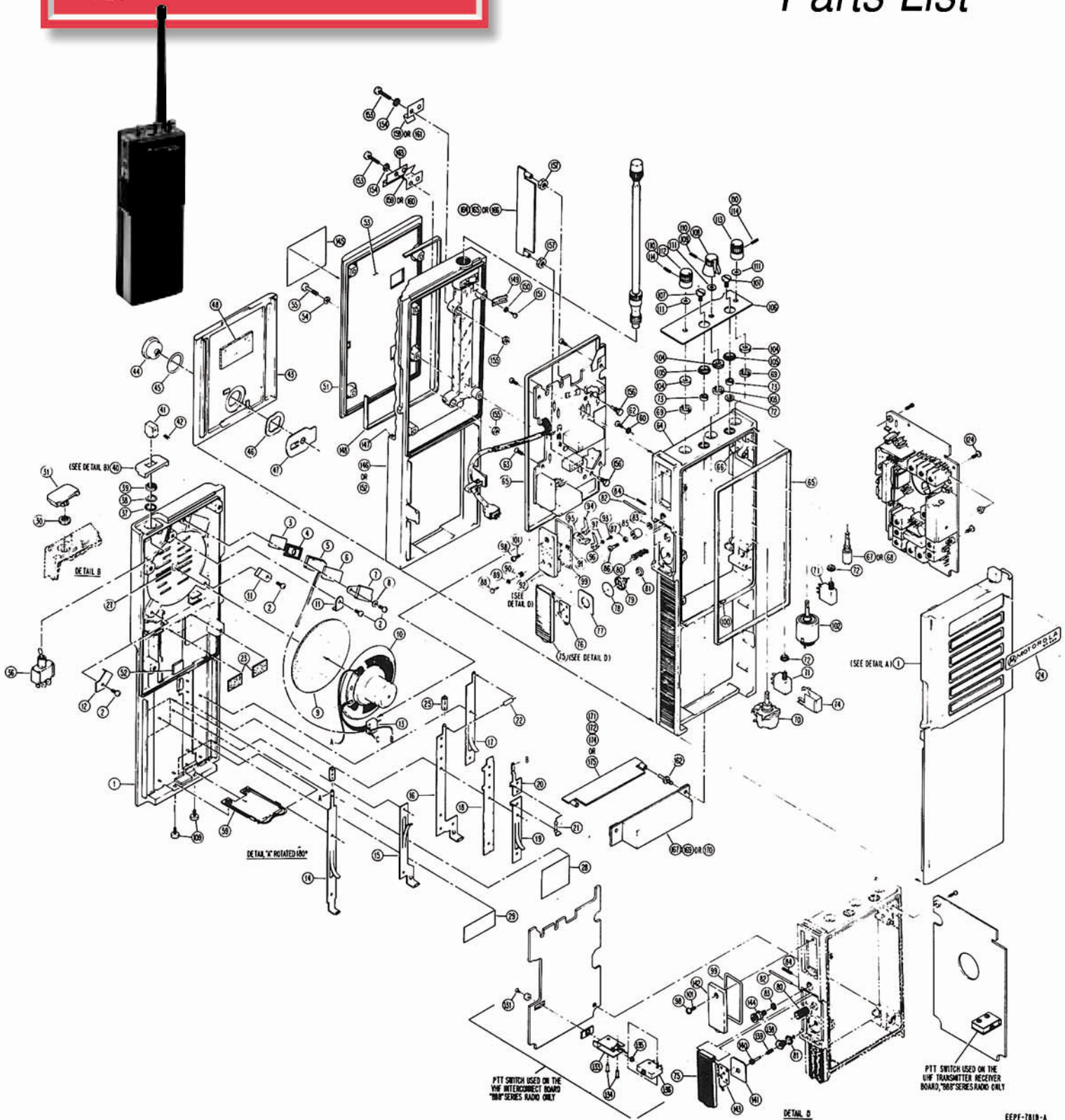




MOTOROLA

MT500 Series

Parts List



PTT SWITCH USED ON THE
VHF INTERCONNECT BOARD
"M" SERIES RADIO ONLY

PTT SWITCH USED ON THE
UHF TRANSMITTER RECEIVER
BOARD, "B" SERIES RADIO ONLY

DETAIL D

**MOTOROLA**

MT500 Series

Parts List

H23BBB, H33BBB, H23BBU, H33BBU, H24BBB, H34BBB, H24BBU, H34BBU

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1505660D01	Front Cover (Slimline Extended, Omni Extended)		1505039E01	Cover, Rear (Slimline Extended)
	1505633D01	Front Cover (Slimline Short, Omni Short)		1505699D01	Cover, Rear (Omni Short)
2	0300138651	Machine Screw (2-56 x 1/8" Phillips Pan Hd)	52	7505083E01	Pad (Omni Extended, Omni Short)
3	3505450B01	Felt, Mic	53	7505533F02	Pad (Omni Extended, Omni Short)
4	3282744J02	Mic Gasket (Slimline Extended, Omni Extended, Omni Short)	54	0484345A06	Washer Seal
5	5982575J02	Mic Cartridge	55	0305662D09	Screw, Captive (Slimline Extended, Slimline Short)
6	7582745J02	Pad Clamp		0305662D11	Screw, Captive (Omni Extended, Omni Short)
7	0705672D01	Mic Bracket	56	0300139444	Latch, Screw
8	0405314E01	Washer, Spring	57	1405359E01	Insulator, Contact (Slimline Extended, Slimline Short)
9	3505370C01	Cloth Felt Grille	59	NLN4181A	Latch Assembly (Slimline Extended, Slimline Short)
10	5005334D01	Speaker		NLN4182A	Latch Assembly (Omni Extended, Omni Short)
11	4205670D01	Clamp, Speaker	62	0300138661	Screw, Mach (2-56 x 3/16")
12	4205671D01	Clamp, Speaker	63	0300136666	Screw, Mach (2-56 x 1/4")
13	0105956C63	Recept, Conn Assembly, Short Frame	64	0705640D01	Frame, Extended (Slimline Extended, Omni Extended)
13	0105958C87	Recept, Conn Assembly, Extended Frame		0705547D01	Frame, Short (Slimline Short, Omni Short)
14	4205573A01	Strap, Contact Neg	65	3282172J11	Gasket, Frame (Slimline Extended, Slimline Short, Omni Short)
15	4205575A01	Contact, Sen		3205744J01	Gasket, Frame (Omni Extended)
16	4205283E01	Strap Contact Charge	66	4305661D01	Bushing, Cover mtg
17	4205576A01	Strap Contact	67	1805333E01	Pot Cermet Alternate
18	1405282E01	Contact	68		
19	4205269G01	Strap Contact Positive	69	0282653D03	Nut, Special
20	4205573A01	Strap Contact Positive	70	REX4060A	Potentiometer Control Switch
21	6505214E01	Fuse	71	0905786J01	Jack, Micro
22	4880388B70	Rectifier, Silicon	72	4305052E02	Bushing, Shoulder
23	1482392E05	Insulator Paper	73	0205050E01	Nut, Special
24	3305537E01	Name Plate	74	2605054E01	Shield, Antenna
27	1110019A88	Adhesive, Silicone Rubber	75	4505784D01	Lever
28	1300868710	Label, Patent	76	4105783D03	Spring, Actuator (PTT)
30	3205315E01	Gasket, Plug	77	RPX4217A	Gasket (PTT)
31	3805115E01	Plug, Cover	78	3905834K07	Contact, Disc (PTT)
36	4005061E01	Switch, Toggle, SPDT	79	3905195G01	Contact, Feed-thru (PTT)
37	3205082E01	Gasket, "O" Ring	80	3205082E02	Seal, "O" Ring
38	0405081E01	Washer, Special	81	4105267E01	Spring, Compression
39	0205050E03	Nut, mtg	82	2205084E01	Pin, Spring
40	1305057E07	Escutcheon, Switch	83	0405249E01	Washer, Insert
41	3605114E01	Knob, Switch	84	0305246E01	Screw, Set
42	0383174C04	Screw, Set	85	4305781D01	Insert, Threaded
43	1505697D01	Cover, Battery	86	4605154E01	Stud
44	3805908D01	Button	87	0405248E01	Washer, Stud
45	0405910D01	Washer	88	3905456F01	Pin, Contact
46	0405316E01	Washer Spring	89	3205082E03	Gasket, "O" Ring
47	5505907D01	Latch	90	4105424F03	Spring, Compression
48	7505083E01	Pad	91	4205463E02	Ring, Retaining
50	2605045E01	Shield, Antenna Tube (Slimline Extended, Slimline Short)			
51	1505698D01	Cover, Rear (Slimline Short)			
	1505943D01	Cover, Rear (Omni Extended)			

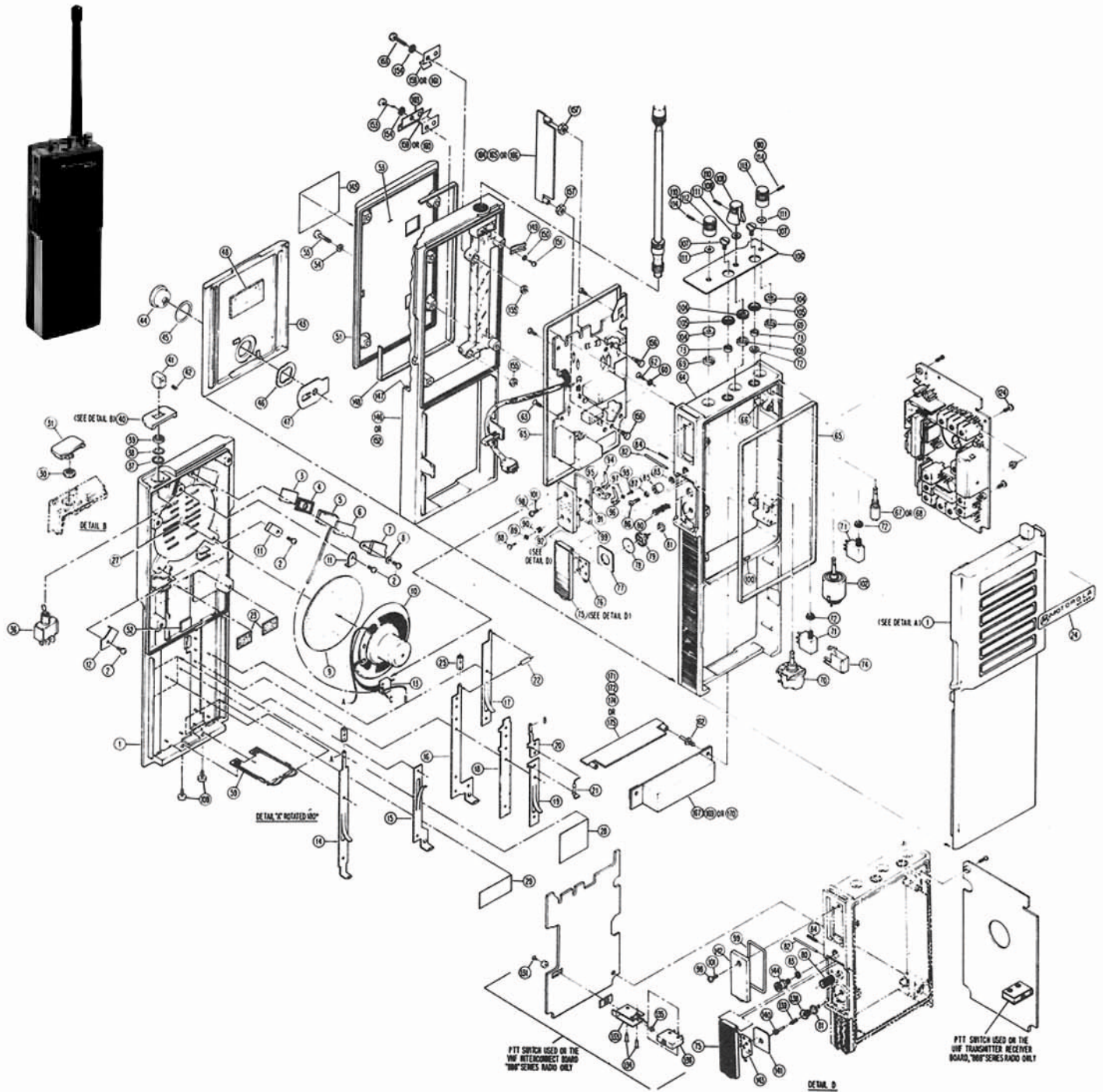
(Continued on page 71)



MOTOROLA

MT500 Series

Parts List



**MOTOROLA**

MT500 Series

Parts List

*(Continued from page 69)***H23BBB, H33BBB, H23BBU, H33BBU, H24BBB, H34BBB, H24BBU, H34BBU**

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
92	0905677D03	Receptacle	124	0482418B97	Washer, Teflon (Slimline Extended, Slimline Short)
93	0300139684	Screw (0-80 x 1/8" Fill Hd)	131	0300139939	Machine Screw (2-56 x 1/8" Fit Head)
94	4105197G03	Contact	133	0705261E01	Bracket, Switch
95	4605072E01	Block (Slimline Extended, Slimline Short, Omni Short, Omni Extended)	134	0505095E09	Eyelet
96	4105197G01	Contact	136	4005265E01	Switch, Micro
97	0400134190	Washer	138	0205250E01	Nut (PTT)
98	0300138651	Mach Screw (2-56 x 1/8" SST)	139	4105252E01	Spring (PTT)
99	3205661G01	Seal, "O" Ring	140	4705251E01	Actuator, (PTT)
100	1110019A88	Adhesive, RTU Silicone Rubber (Omni Extended, Slimline Short, Omni Short)	141	3205077E01	Gasket, Switch
101	1110019A63	Sealant Compound	142	1505212E02	Cover, Receptacle
102	4005120E01	Switch, Toggle (Slimline Short, Slimline Extended)	143	4105783D03	Spring, Actuator
	4005053E01	Switch, Rotary (Omni Extended)	144	RPX4072A	Stud, Heat Sink
	4005119E01	Switch, Rotary (Omni Short)	146	1505858D01	Housing, Sleeve (Omni Extended)
103	0282653D07	Nut, Special (Slimline Extended, Slimline Short)		1505651D01	Housing, Sleeve (Omni Short)
	0282653D05	Nut, Special (Omni Extended, Omni Short)	148	3282172J11	Gasket, Frame (Omni Extended, Omni Short)
104	7583562H02	Pad, Rubber	149	4205860D01	Clip, Antenna
105	4305051E01	Bushing, Insulator	150	0405314E03	Spring, Washer (Omni Extended, Omni Short)
106	1305621D05	Escutcheon (Slimline Extended, Slimline Short)	151	0305493F01	Machine Screw (2-56 x 3/16")
107	0310129A24	Screw, Jack		0305044E01	Screw, Special (Omni Extended, Omni Short)
108	3605114E01	Knob, Switch (Slimline Extended, Slimline Short)	153	0300115356	Machine Screw (2-56 x 3/16")
	3605254K05	Knob, Control (Omni Extended, Omni Short)	154	0400400139	Lock Washer (2 split)
109	0383174C04	Setscrew	155	0200115676	Nut (2 hex)
111	0482418B97	Washer, Teflon	156	4605798E01	Post, Guide
112	3605254K01	Knob, Volume	157	0205797E01	Nut
113	3605254K03	Knob, Squelch	158	4205445E04	Clip
114	0383174C02	Setscrew	159	4205445E03	Clip
119	0310129A24	Screw, Jack (Slimline Extended, Slimline Short)	160	4205445E02	Clip
120	7508356H01	Pad, Rubber (Slimline Extended, Slimline Short)	161	4205445E01	Clip
121	4305051E01	Bushing, Insulator (Slimline Extended, Slimline Short)	162	4605800E01	Screw, Guide (Omni Extended)
122	1305621D01	Escutcheon (Slimline Extended, Slimline Short)	165	NLN4645A	Tone PL Deck (Universal) (Omni Short, Omni Extended)
123	7583562H02	Pad, Rubber (Slimline Extended, Slimline Short)		NLN4644A	Tone PL Deck (Basic) (Omni Short, Omni Extended)
			167	NLN4211A	Optional Deck (Tone PL) (Omni Extended, Slimline Extended)
			169	NLN4961A	Optional Deck (Selective Call) (Omni Extended, Slimline Extended)



MOTOROLA

MT500 Series

Portable Accessories

CHARGERS

Single Unit Chargers

These units are capable of charging a battery in or out of the radio and automatically revert to a trickle charge rate when fully charged. The rapid charge battery must be used in rapid charger to attain the 1 hour charge rate. Visual indication when the battery is fully charged is provided by the rapid charger.

NLN4557B Slimline, Standard Charge, 117V AC

NLN4565B Slimline, Rapid Charge, 117V AC

NLN4561B Omni, Standard Charge, 117V AC

NLN4563B Omni, Standard Charge, 220V AC

NLN4569B Omni, Rapid Charge, 117V AC

NLN4571B Omni, Rapid Charge, 220V AC

Multiple Unit Chargers

These wall or rack mounted units can accommodate up to twelve batteries or radios.

NLN4562C Omni, Standard Charge, 117V AC

NLN4570C Omni, Rapid Charge, 117V AC

NLN4572C Omni, Rapid Charge, 220V AC



NLN4562C



NLN4557B



NLN4571B

CHARGERS

Mounting Bracket and Leg Kits for Multi-Unit Chargers

NLN5223A Standard Rate Chargers

NLN5222A Rapid Rate Chargers



NLN5223A

Vehicular Chargers

Under the dash mounted vehicular chargers are offered with similar features to the single unit charger, except without the rapid-charge capability. Connection of an external mobile antenna to the charger provides

increased radio range. An antenna adapter cable kit must be used to connect the radio antenna to the charger antenna jack during mobile operation. (Order separately).



NLN6691A

NLN6691A Slimline, Standard Charge, 6/12 VDC

NLN6892A Omni, Standard Charge, 6/12 VDC

Vehicular Antenna Adapter Cable

NKN6260A Vehicular Antenna Adapter Cable



NKN6260A

Power Cable Kits

NKN6150A 12V Input Cable

NKN6151A 12V (Lighter Receptacle Cable)



NKN6150A

Radio To Charger Antenna Cable

3083060A01 Radio To Charger Antenna Cable



MOTOROLA

MT500 Series

Portable Accessories

CHARGERS

Tuneup Cable

NKN6248A Tuneup Cable



NKN6248A

Power Amp Cable

NKN6300A Power Amp Cable, DC Negative Ground

Connector Dust Cover

NLN5411A Universal Model
Connector Dust Cover

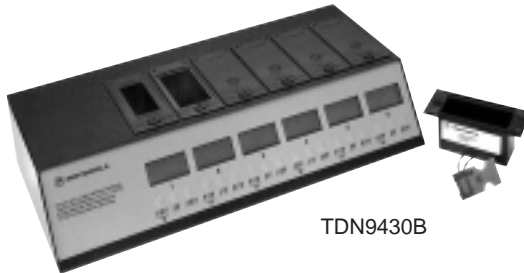


NLN5411A

RF Adapter Cable

NKN6247A RF Adapter Cable

BATTERY MAINTENANCE SYSTEM (BMS)



TDN9430B

Using interchangeable battery adapters (order separately), the BMS is capable of charging and discharging batteries, tracking battery voltage and capacity (mAh).

TDN9430B Six Station, 110V AC, 50/60 Hz

TDN9431B Six Station, 230V AC, 50/60 Hz

TDN9720B Six Station, 110V AC, 50/60 Hz,
CSA Approved

NDN4005B Three Station, 110V AC, 50/60 Hz

NDN4006B Three Station, 230V AC, 50/60 Hz

NDN4007B Three Station, 110 V AC, 50/60 Hz,
CSA Approved

TDN9432A Adapter, Universal Clip Lead

TDN9527A Adapter, Universal Dip Switch

TDN9439A Adapter, 15V, 500 mAh

BATTERY DISCHARGE TESTER

Tester determines a battery's delivered capacity by discharging a fully charged battery. 'LED' indicates cycle status by turning "ON" when fully charged battery is placed in adapter and "OFF" when discharge is complete. Plug-in adapters allow one console to discharge most batteries. No AC power source required (console is powered by discharging battery).



RLN4201B

RLN4201B Single Unit Battery Discharge Tester,
Requires Battery Adapter or Cable/Clip Lead

RLN4050A Battery Adapter, MT500 OMNI

RKN4041A Cable/Clip Lead, 15V

CARRYING ACCESSORIES

Carrying Cases

Standard carrying cases with snap-on/off perforated full covers provide maximum protection, yet permit audio to be heard clearly. T-strap covers permit easy access to all controls. (Radios with rigid loop antenna must use T-strap cover). Sturdy black leather construction. Heavy-duty snaps on integral belt loop permit quick attachment and release (fits belts up to 2½"). For over the shoulder carry, the adjustable sturdy black nylon carrying straps recommended.



NLN6778B

Standard Carrying Cases

NLN7064A Urethane Omni Long Housing
Case and Cover

NLN6778B Leather Omni Long Housing
Case and Cover

NLN7113A Urethane Omni Long Housing
Case and T-Strap



MOTOROLA

MT500 Series

Portable Accessories

CARRYING ACCESSORIES



NLN6846B

NLN6846B Leather Omni Long Housing Case and T-Strap

NLN6777B Leather Omni Short Housing Case and Cover

NLN6845B Leather Omni Short Housing Case and T-Strap

NLN6686B Leather Slimline Short Case and Cover



NLN6686B

NLN6803B Leather Slimline Short Case and T-Strap

NLN6738B Leather Slimline Long Case and Cover

NLN6844B Leather Slimline Long Case and T-Strap

Detachable Swivel Carrying Cases

(Note: Cover, T-Strap and belt loop must be ordered separately)

Swivel carrying cases attach to belt loop attachment by inverting radio. Radio swings freely on belt loop attachment, adjusting to body movements walking or sitting. Sewn belt loop attachment fits belts up to 2½".



1505276F02

0105953G53 Urethane Omni Long Housing Carry Case

1505276F03 Leather Omni Long Housing Carry Case

1505276F01 Leather Omni Short Housing Carry Case

1505276F02 Leather Slimline Short

1505276F04 Leather Slimline Long

CARRYING ACCESSORIES



NLN4789A

MT500 Unit ID Priority Scan Carrying Cases

NLN4789A Leather with swivel back, includes nylon hold down strap

NLN4787A Leather with standard back, includes nylon hold down strap

Touch Code Carrying Case

NLN5940A Omni, Slimline, Standard Back, includes nylon hold-down strap

NLN5941A Omni, Long, Standard Back, includes nylon hold-down strap

Button Back Cover

(not available with unit ID and priority scan)

NLN5546A Omni-Long Housing

NLN5440A Omni-Long, Multiple PL



NLN5440A

Radio can be worn on belt without carrying case by replacing conventional back cover on radio with a back cover having a permanent belt clip.

Back Cover with Belt Clip

NLN4743A Slimline, Long 3"

NLN4744A Omni, Long 3"

NLN4448A Slimline, Short 1½"

NLN4449A Slimline, Long 1½"

NLN4450A Omni, Short 1½"

NLN4451A Omni, Long 1½"



NLN4743A



NLN4449A



MOTOROLA

MT500 Series

Portable Accessories

CARRYING ACCESSORIES

Belt Loop

4205857B01 3", Leather Belt Loop



4205857B01

Swivel Belt Loop

4282421J06 2½", Swivel Belt Loop

Belt Loop Snap

NLN5442 Detachable Leather Belt Loop, Snap, 2½"

Full Covers

1582535J02 All Models, Leather

0105952G03 All Models, Urethane



1582535J02



4282534J01

T-Straps

4282534J01 Leather, All Models

0105952G04 Urethane, All Models



4205297G03

Hold Down Straps

4205297G03 Nylon, Standard Hold Down Strap

4205297G02 Nylon, Unit ID Hold Down Strap



4205297G02

CARRYING ACCESSORIES

Chest Pack

Chest pack keeps radio on chest for maximum hands-free operation. Ideal where body movements might expose radio to damage. Detachable straps go over shoulder and around wrist. (The basic model MT500 radio is suggested as the universal side connector is obstructed when the chest pack is used).

4284117H01 MT500 Basic



4284117H01

Belt

4200865599 All Models, 2" Leather



4200865599

Carrying Strap

4282608H03 All Models



4282608H03



MOTOROLA

MT500 Series

Portable Accessories

AUDIO ACCESSORIES



NSN6008A

All accessories listed are compatible with Universal models. Only the NSN6008 Lapel Speaker and the NSN6011 Earpiece are compatible with Basic models.

NSN6008A Lapel Speaker

5083693B04 Earpiece With Volume Control



5083693B04

5005178K01 Earpiece Without Volume Control

NMN6081A Speaker/Mic With Clip Back and Straight Cord

NMN6082A Speaker/Mic With Clip Back and Coil Cord

NMN6083A S.M.A. with Velcro Back (For UHF Models Only—Order Antenna Separately)

NMN6089A Speaker/Mic Quick Disconnect; Requires NLN4477A Adapter



NMN6082A

NLN8410A Velcro Patch Pin Attachment



NLN8410A

4205832A01 Epaulet Strap

NMN6050A Safety Helmet Headset/Microphone



NMN6050A

5084972H01 Earpiece Headset/Microphone

NLN4461A Required adapter for NMN6050A and 5084972H01

AUDIO ACCESSORIES

NMN6064A Noise Cancelling Headset/With Boom Mic (Requires NLN4477A)



NMN6064A

NMN6065A Noise Cancelling Headset/With Cup Mic (Requires NLN4477A)

NLN4477A Quick Disconnect Adapter for NMN6089A, NMN6065A, NMN6064A

Epaulet Strap

Black leather epaulet straps secure remote speaker microphones to epaulet of shirts or jackets and attach around cord. Allows reliable communications in hostile environments with Velcro or clip style strap.

RLN4294A Epaulet Strap, Velcro



RLN4294A

RLN4296A Epaulet Strap, Large Clip



RLN4296A

Ear Mike

Single unit microphone and speaker worn in the ear. Eliminates the need for handheld microphones or conventional headsets. Compact, rugged design allows use under hearing protectors and protective clothing. Order cable separately.

RMN4001B Ear Mike

0180359A40 Interface Cable for MT500

0180359A51 Optional PTT Ring Switch for RMN4001A

0180356B97 Optional PTT Ring Switch for RMN4001B Only



RMN4001B



0180359A51



MOTOROLA

MT500 Series

Antennas, Batteries

PORTABLE ANTENNAS

Heliflex

Heliflex antennas are especially practical where antenna height considerations are present because of their short and flexible design. Each antenna is tested and tuned to provide excellent reception and transmission. Each antenna is color coded on the connector indicating frequency.

- 8505195H0130-35 MHz
- 8505195H0235-40 MHz
- 8505195H0340-45 MHz
- 8505195H0445-50 MHz
- 8582283J05132-142 MHz
- 8582283J06142-150 MHz
- 8582283J01150-162 MHz
- 8582283J02162-174 MHz
- 8505146B03406-420 MHz
- 8505146B04450-470 MHz
- 8505146B05470-512 MHz



Collapsible

Collapsible antennas extend well above body shielding for good reception and transmission. Antenna is protected from damage by collapsing inside the radio.

- 8505509E01136-162 MHz



Flexible Whip

Each antenna is tested and tuned to give you maximum power and performance.

- NAE6050B406-512 MHz

NAE6050B

PORTABLE BATTERIES

Nickel-Cadmium

- Part Number: **NLN8232B***
- Volts: 15V
- Avg. MAH: 550
- Charge: Dual
- Radio style: Omni
- Dimensions: 2⁵/₁₆" x 2³/₁₆" x 1¹/₁₆"



NLN8232B

- Part Number: **NLN4463B**
- Volts: 15V
- Avg. MAH: 550
- Charge: Dual
- Radio style: Omni
- Dimensions: 2⁵/₁₆" x 2³/₁₆" x 1¹/₁₆"

- Part Number: **NLN4462B**
- Volts: 15V
- Avg. MAH: 275
- Charge: Rapid
- Radio style: Slimline
- Dimensions: 2⁵/₁₆" x 2³/₁₆" x 1¹/₁₆"

* Factory Mutual approved for Intrinsically Safe Models



MOTOROLA

MT500 Series

Tools, Service Aids

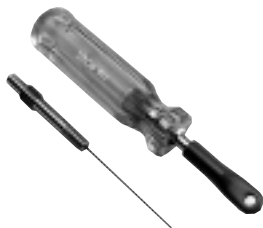
ALIGNMENT TOOLS/SERVICE TOOLS

Alignment Tools



NLN4605A Tuning Tool Kit, Consists of 6605142J01 VHF Power Amp Tuning Tool, 6605607E01 Channel Elements and tunable Coils Tuning Tool, 6683006J01, 0.06 Spline Wrench, and 6683006J02 Preselector Tuning Tool.

Service Tools



RSX4011A

RSX4011A Preselector Tuning and Power Amp Mounting Set Screw Wrench

RSX4031A Channel Element Pins Restriking Tool

5505717E01 Spanner Wrench

6680370B40 Spanner Screw Driver (functionally equivalent to 5505717E01)

5505717E01



SERVICE AIDS

RF Adapter Cable

Measure RF without a test set directly from the radio side connector of the MT500 Universal Model.

RTK4003A Test Cable, Connects to Radio Side Connector, Other End Terminated with BNC

NKN6247A Test Cable, Connects to Antenna Jack with Miniature Phone Plug, other End Terminated with BNC



RTK4003A

Radio Test Cable

Used with portable radio test set, RTX4005, for transmitter, receiver alignment and performance checks.

RTK4000A Test Cable, Universal MT500 (for performance testing with covers in place)

RTK4001A Test Cable, for all MT500's (testing done with covers removed)



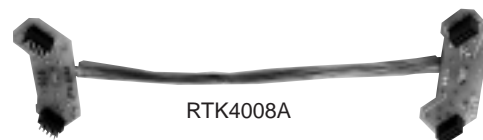
RTK4000A

Extender Cable

Allows transceiver board to be removed from interconnect board while operational for component level testing.

RTK4008A Extender Cable for VHF MT500

RTK4009A Extender Cable for UHF MT500



RTK4008A



MOTOROLA

MT500 Series

Service Aids, Manuals

SERVICE AIDS



RTL4066A

Interface Test Cable

RTL4066A Test Cable, Channel Scan Bypass

Channel Scan Priority Cable

RTK4024A Channel Scan Extender Cable



RTK4024A

Programming Software

RLN4027A Software, For Programming MDC600, MDC1200, EEA, ZVEI, and CCIR Formats, Also programs Unit I.D. (requires adapter board RTL5807A)

RTL5825A Adapter Board Required for RTL4820A, Software

SERVICE MANUALS

- 6881020C40 Digital Private-Line Deck Supplement Manual
- 6881012C55 Theory/Maintenance Manual
- 6881019C70 Touch-Code Option Supplement

25-54 MHz

- 6881012C50 Models H31BBB/BBU Operating Instructions
- 6881012C55 Models H31BBB/BBU Theory/Maintenance Manual
- 6881017C55 Models H31BBB/BBU 6W Service Manual

136-174 MHz

- 6881012C50 Models H23/H33BBB/BBU Operating Instructions
- 6881012C55 Models H23/H33BBB/BBU Theory/Maintenance Manual
- 6881012C56 Models H23/H33BBB/BBU 2W & 5W Service Manual
- 6881020C80 Model Z33BBU1152A Service Manual

SERVICE MANUALS

406-512 MHz

- 6881012C50 Models H24/H34BBB/BBU Operating Instructions
- 6881012C55 Models H24/H34BBB/BBU Theory/Maintenance Manual
- 6881012C58 Models H24/H34BBB/BBU 1.5W & 4W Service Manual
- 6881015C75 Model Z24BBU3154A Service Manual

IPTS Series

136-174 MHz

- 6881024C80 Models H33PTU 5W Instruction Manual
- 6881024C95 Models H33PTU 5W Operating Instructions

406-512 MHz

- 6881024C70 Models H34PUT 4W Instruction Manual
- 6881024C95 Models H34PUT 4W Operating Instructions

Power Amplifiers

136-174 MHz

- 6881020C85 Model N1275A 30-35W Power Amplifier for use with N1248A Converta-Com Consoles, Instruction Manual
- 6881020C90 Model N1274A 40W Power Amplifier for use with N1248A Converta-Com Consoles, Instruction Manual

Converta-Com

136-174 MHz, 406-512 MHz

- 6881013C35 Model N1248A Mobile Radio Console, Operating Instructions
- 6881013C40 Model N1248A Mobile Radio Console, Instruction Manual