

MOTOROLA

### **MITREK Series**

# Parts List

#### **CONTROL HEAD**

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REF.		
NO.	PART NO.	DESCRIPTION
1	0780101A01	Bracket, trunnion
2	0380162A01	Screw, trunnion pivot
3	0310903A97	Screw, housing rear
4	0310903B58	Screw, housing front
5	3380117A01	Name Plate, decal (MONITOR)
6	3680102A01	Pushbutton
7	4210128A22	"O" Ring, pushbutton
10	0180701T15	Housing, bottom
11	0480149A01	Washer, captive housing screws
13	0983396K03	Light Socket
14	6583376K01	Light Bulb, sub miniature wedge base
16	3680107A01	Knob, Volume and Squelch
17	3680107A02	Knob, 4 frequency
18	4210128A23	"O" Ring, Knobs
19	3280208A01	Gasket, to Isolate Light
20	0780158A01	Bracket, frequency switch
21	3280203B01	Gasket, housing
22	6180119A01	Lens
23	4210113A31	Retainer Ring, for bezel and lens
24	1580108A01	Housing, top
25	3280165A01	Adhesive Strip, for bezel
26	1380180A01	Bezel, plated mult. freq. weatherproof
	1380180A02	Bezel, plated 1 freq. weatherproof
	1380114A01	Bezel, unplated mult. freq. non-weatherproof
	1380114A02	Bezel, unplated 1 freq. non-weatherproof
27	3380116A01	Name Plate, 1 freq.
	3380116A02	Name Plate, multi freq.
	3380116A06	Name Plate, multi freq. busy light
28	0500007703	Rivet, strain relief bracket
29	0780100A02	Bracket, strain relief
30	0400007555	Washer, flat for strain relief bracket
31	0780159A01	Bracket, P.B. switch
32	4080127A01	Switch, pushbutton
33	3280038C01	Gasket, connector
34	0180703T51	Connector
35	1880126A01	Potentiometer, rotary squelch
36	4080111A01	Switch, rotary frequency
37	1880126A03	Potentiometer, rotary w/switch, off and volume

#### **MISCELLANEOUS TOOLS AND PARTS**

#### PART NO. DESCRIPTION

 5500893872
 Key

 RSX4028A
 Tool, spanner nut removable antenna relay

 0780023A01
 Reed, hold down

 7580173A01
 Pad, Compression, PL board

 6500086099
 Fuse, 7.5 amp 32 volt, 3AG

 6500061682
 Fuse, 25 amp 32 volt

#### HSN4002A SPEAKER

PART NO.	DESCRIPTION
0180703T06	Cable, Speaker
0780200E02	Bracket, trunnion
1382671M01	Bezel
1584981B01	Cover, base
3284564B01	Gasket
5084561B02	Speaker, 5 inch P.M.

#### HMN4000A MICROPHONE, (Weather Proof) HMN4001A MICROPHONE, (Non-Weather Proof)

PART NO.

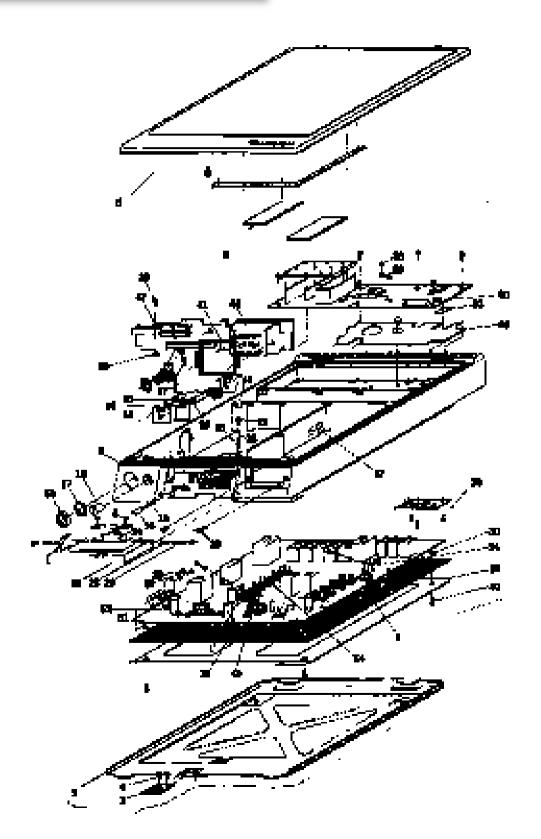
DESCRIPTION

0180701T27	Housing, rear
3083731M01	Cable and Connector
1582662M12	Housing, front (HMN4000A)
3282703B01	Gasket
3582652K01	Baffle
3884559B01	Button
3382599D01	Name Plate (HMN4001A)
4082263G01	Switch, (HMN4000A)
4082263G02	Switch, (HMN4001A)
4382706B01	Retainer, cartridge
4282702B02	Sleeve, switch (HMN4001A)
5982933C02	Cartridge, dynamic





# Parts List





# Parts List

#### LOW BAND RADIO ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION
1	0980028A01	Socket transistor
•		Socket, transistor
2	HLN4034C	Bottom Cover, assembly
4	0310906A05	Screw (3.5 x 6-FH-M) bottom cover latch
5	0180252J01	Top Cover, assembly
6	4680026A01	Stud Latch, top cover
8	7580178A01	Pad, compression
9	0180252J01	Housing, frame
10	4780027A01	Pushbutton, latch
13	4180029A01	Spring, latch
14	0780016A02	Bracket, lock slide
15	0780015A02	Support, lock slide
16	4180022A01	Spring, lock
17	0310936B15	Screw (3.5 x 13-FM-TH) holds lock
		slide
18	5584101B01	Lock
20	3280081A01	Gasket, lock support
21	4380150A01	Sleeve, cover release
23	5580002A01	Handle
24	0780113B01	Spring, torsion
26	4780021A01	Pin, pivot
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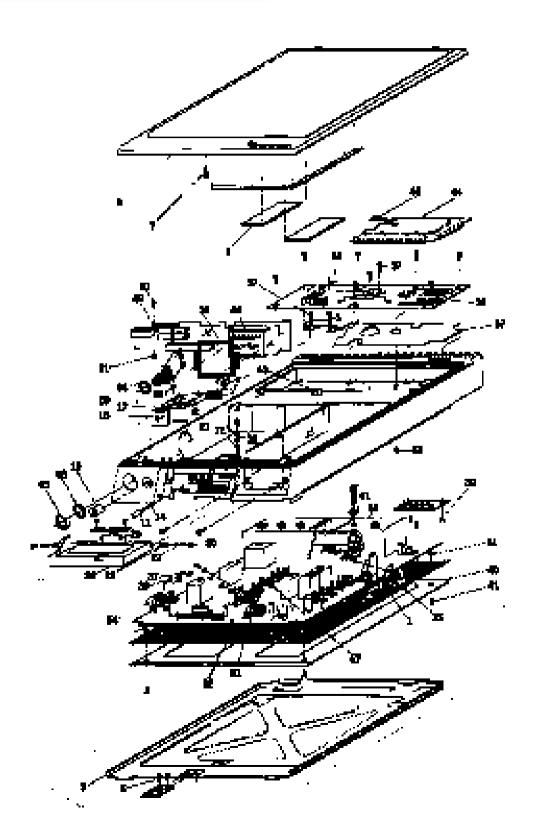
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REF.		
NO.	PART NO.	DESCRIPTION
28	4180175A01	Spring (3.05 MM OD), pivot
29	0310904A02	Screw (3.5 x 6-PH-M)
30	0480149A01	Washer, captivitate
31	3280074A02	Gasket, cable plug
34	1484391F01	Insulator Mica, transistor
35	0484180C01	Washer, shoulder (nylon)
36	0310905A01	Screw, (9.0 x 6-FIL-M), transistor
37	1483572K01	Insulator Mica, transistor
39	HLN4033B	Cover, bottom inner w/gasket
		(includes 1580004A01, cover, and
		3280129F01, gasket
40	0310906A19	Screw (3.5 x 13-FH-M), inner cover
41	4280013A01	Clip, coax (dress)
44	0180701T74	Conn. and Feed Through Caps
47	0780079A01	Bracket, IC board support
49	2910271A15	Pin, terminal
51	2880141H03	Plug, male (2.54 CTRS) (25 post)
54	2880096A01	Plug, male (3.96 CTRS) (4 post)
55	3280080A01	Gasket, antenna connector
56	0280006A01	Nut, spanner, antenna connector
57	0400114522	Washer, lock, antenna connector
58	1480077A01	Insulator, P.A. compartment
59	0780078A01	Bracket, thermal device
60	2980014A01	Clip, coax (terminal)
63	1480179A01	Insulator, mica





# Parts List



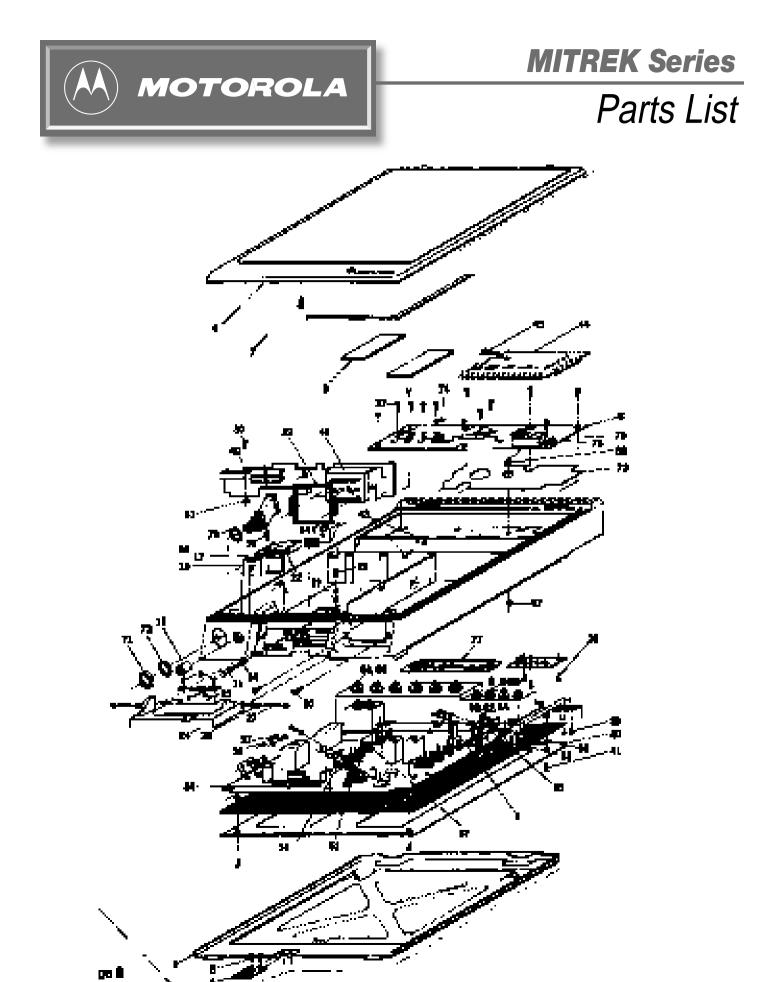


# Parts List

#### HIGH BAND RADIO ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION
1	2684716D01	Heatsink
3	HLN4034C	Bottom Cover, assembly
5	0310906A05	Screw (3.5 x 6-FH-M)
6	0180252J01	Top Cover, assembly
7	4680026A01	Stud, latch
9	7580178A01	Pad, compression
11	4780027A01	Push Button
14	4180029A01	Spring, latch
15	0780016A02	Bracket, lock slide
16	0780015A02	Support, lock slide
17	4180022A01	Spring, lock
18	0310936B15	Screw (3.5 x 13-FH-TH)
19	5584101B01	Lock
21	3280081A01	Gasket, lock support
22	4380150A01	Sleeve, cover release
24	5580002A01	Handle
25	0780113B01	Spring, torsion
27	4780021A01	Pin, pivot
29	4180175A01	Spring (3.05 MM OD)
30	0310904A02	Screw (3.5 x 6-PH-M)
31	0480149A01	Washer, captive
32	3280074A02	Gasket, cable plug
35	1484391F01	Insulator, mica
36	0484180C01	Washer, shoulder nylon

REF.		
NO.	PART NO.	DESCRIPTION
37	0310905A01	Screw (3.0 x 6-FIL-M)
39	2980014A01	Clip, coax (terminal)
40	HLN4033B	Cover, bottom inner w/gasket
		(includes 1580004A01, cover and
		3280129F01, gasket)
41	0310906A19	Screw (3.5 x 13-FH-M)
43	4280013A01	Clip, coax
44	2680211A01	Shield, PA
45	5584300B04	Handle, nylon
46	0180701T74	Conn. and Feed Through Caps
49	0780079A01	Bracket, IC board support
51	2910271A15	Pin, terminal
52	0980028A01	Socket, transistor
54	2880141H03	Plug, male (25 post)
57	2880096A01	Plug, male (4 post)
58	1580008A01	Housing
61	0280045A01	Nut, retainer M5x1
62	0200007003	Nut, 8-32 x 5/16 x 1/8 hex
64	3280080A01	Gasket, antenna connector
65	0280006A01	Nut, spanner
66	0400114522	Washer, lock
67	1480077A01	Insulator, PA
68	0780078A01	Bracket thermistar mounting



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### **MITREK Series**

# Parts List

#### UHF ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION
1	2684716D01	Heatsink
3	HLN4034C	Bottom Cover, assembly
5	0310906A05	Screw (3.5 x 6-FH-M)
6	0180252J01	Top Cover, assembly
7	0780015A02	Stud, latch
9	7580178A01	Pad, compression
11	4780027A01	Push Button
14	4180029A01	Spring, latch
15	0780016A02	Bracket, lock slide
16	0780015A01	Support, lock slide
17	4180022A01	Spring, lock
18	0310936B15	Screw (3.5 x 13-FH-TH)
19	5584101B01	Lock
21	3280081A01	Gasket, lock support
22	4380150A01	Sleeve, cover release
24	5580002A01	Handle
25	0780113B01	Spring, torsion
27	4780021A01	Pin, pivot
29	4180175A01	Spring (3.05 MM OD)
30	0310904A02	Screw (3.5 x 6-PH-M)
31	0480149A01	Washer, captive
32	3280074A02	Gasket, cable plug
35	1484391F01	Insulator, mica
36	0484180C01	Washer, shoulder
37	0310905A01	Screw (3.05 x 6-FIL-M)
39	0310936B06	Screw (3.5 x 8-FILM-TF)
40	HLN4033B	Cover, bottom inner w/gasket
		(includes 15-80004A01, cover)

REF.		
NO.	PART NO.	DESCRIPTION
41	0310906A19	Screw (3.5 x 13-FH-M)
43	4280013A01	Clip, coax
44	2680211A01	Shield, PA
45	5584300B04	Handle, nylon
46	0180701T74	Conn. and Feed Through Caps
49	0780079A01	Bracket, IC
51	2910271A15	Pin, terminal
52	0980028A01	Socket, transistor
54	2880141H03	Plug, male (2.54 CTRS) (25 post)
57	2880096A01	Plug, male (3.96 CTRS) (4 post)
60	4680009A01	Stud, coil M6x1
61	4680010A01	Stud, coil M8x1.25
62	0380012A03	Screw, set M6x1
63	0380256A01	Screw, set M8x1.75
64	0280045A03	Nut, retainer M6x1.0
65	0280045A02	Nut, retainer M8x1.25
67	0200007003	Nut, 8.32 x 5/6 x ¼ hex
68	0480083A01	Washer, stud device
70	3280080A01	Gasket, antenna connector
71	0280006A01	Nut, spanner
72	••••==	Washer, lock
73	14-80077A01	Insulator, PA
74	0780078A01	Bracket, thermal mount
75		Clip, coax (terminal)
76	0780157A01	Support, transistor PA
77	1580003A01	Housing, filter (harmonic)





# **MITREK Series** Mobile Accessories

#### **MOBILE MICROPHONES**



Microphones are equipped with an all transistor preamplifier which provides added clarity and increased communications efficiency. Choose a weather resistant model for adverse weather conditions or noise cancelling model for high noise environments.

HMN1015A Weatherproof Palm Microphone

TMN6116A Noise Cancelling Microphone

#### DTMF Encoder Microphone

When used in conjunction with a phone patch and base station radio, access to the public telephone network becomes possible. This eliminates the need for the mobile user to leave the vehicle when making telephone calls.



HMN1018B

HMN1018B Touch Code Microphone

#### HANDSETS



TMN6057A

Available for those who prefer the convenience and privacy of a telephone-type handset.

TMN6057A Handset

#### HANG-UP BOXES





TLN4505B

#### **SPEAKERS**



This 10 watt speaker is rated at 3.2 ohms and is designed for use with all MITREK series radios. Complete with universal mount, this compact speaker measures 5" W  $\dot{x}$  5" L  $\dot{x}$  2½" H and can be utilized in multiple installation applications.

HSN4009A

HSN4009A 10 Watt Speaker

Hang-up boxes are used with Private-Line and Digital Private-Line coded squelch radios to automatically place the radios in monitor (carrier squelch) mode when the microphone/handset is lifted off-hook. In addition, the hand-set hang-up boxes transfer audio from the mobile speaker to the handset receiver when lifted off-hook. Models containing a slide switch which places the radio in the monitor mode while still on-hook are also available.

HLN4024B Microphone

HLN4025A Microphone Hang-up Box with Slide Switch

TLN4698B Handset Hang-up Cradle, Private-Line

TLN4507A Handset Hand-up Cradle with Slide Switch

TLN4505B Handset Hang-up Cradle, Carrier Squelch

# Hang-up Box

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# **MITREK Series**

#### **CONTROL HEADS**

All control heads are high impact plastic, manufactured to take the toughest radio abuse. The large, recessed control knobs are plainly marked and easy to use. Both weather resistant and non-weather resistant control heads are available.

Carrier Squelch Control Heads

HCN4000A Weather Resistant (one frequency)

Private-Line, Digital Private-Line Control Heads without Visual Channel Monitor

HCN4003A Weather Resistant (four frequency)

#### POWER CABLES

A variety of cable kits are available for new installation or replacement applications.

#### Negative Ground Cable Kits

For use with 30, 40, 50, and 60 watt models HKN4004A Cable Kit, 10 feet (all models) HKN4000A Cable Kit, 17 feet (one frequency) HKN4001A Cable Kit, 17 feet (four frequency)

For use with 75, 100 and 110 watt models HKN4020A Cable Kit, 10 feet (all models) HKN4016A Cable Kit, 17 feet (one frequency) HKN4017A Cable Kit, 17 feet (four frequency) HKN4018A Cable Kit, 22 feet (all models) HKN4041A Cable Kit with High Power Fuse

#### **Positive Ground Cable Kits**

(kits fit both one and four frequency models) For use with 30, 40, 50, and 60 watt models **HKN4006A** Cable Kit, 17 feet

# Mobile Accessories

#### **INSTALLATION KIT**



Includes tapping screws, locking washer, crimp terminal, rubber grommet and nylon tie wraps for installing radio into vehicle.

HLN4022E Installation Kit

HLN4022E

#### **MOUNTING PLATE**

HLN4034C Bottom Mounting Plate

#### TIME-OUT TIMER



Prevents lock-up of a repeater or tie up of a channel. An alert tone is emitted and the transmitter is shut off after the transmission exceeds 60 seconds.

HLN4012A Time-out Timer

#### CABLE KIT

#### Transmit/Ignition Cable Kit

Allows the radio to be used in the standby (receive only) mode when ignition key is removed from vehicle.



HKN4007A Transmit/Ignition Switch Cable Kit

HKN4007A

#### RF PRE-AMPLIFIERS



Pre-amplifiers boost input in fringe areas for improved reception.

HLD4051A Pre-amplifier, 136-146 MHz HLD4052A Pre-amplifier, 146-174 MHz

HLD4051A





#### NOISE REDUCTION KITS

Reduces alternator and/or ignition noise which improves radio audio quality.

TLN8845A Ignition Noise Reduction Kit



#### **MITREK SYSTEMS•90 ACCESSORIES**



#### Single Housing

Consists of a single housing with standard trunnion which can accommodate one. one board option and one alternative control module.

THN6125A Single Housing

#### Alternate Control Module

Alternate control modules may be installed in an accessory housing and used as a substitute for the standard control head.

HLN1001A Alternate Control Module (four frequency)

# Mobile Accessories

#### **MITREK SYSTEMS•90 ACCESSORIES**

Mobile Paging Decoders



Mobile paging systems provide individual paging for two-way radio users. The paging system alerts the selected mobile in the svstem; decoders in each vehicle keep their receivers muted until a correctly coded call is received. Once received, the "Call"

light comes on and a brief beeping tone alerts the operator. Includes horn and light switches.

TLN1391A Quik-Call II Decoder Module, Individual Call

#### Channel-Scan Monitors



Priority and non-priority Channel-Scan monitors allow the radio operator to monitor up to four frequencies.

HLN1002A Channel-Scan Monitor, non-priority select (four frequencies)

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#### **MITREK SYSTEMS•90 ACCESSORIES**

#### Microphones and Handsets



Either a standard palm or noise cancelling microphone can be used with the MITREK SYSTEMS•90 radio. A handset which provides added privacy is also available.

TMN6054A Microphone, standard palm

TMN6116A Microphone, noise cancelling

TMN6054A

TMN6057A Handset

#### Hang-up Boxes

Three models are available which automatically place the radio in the monitor mode when the microphone/handset is lifted off-hook. This allows the operator to check for a clear channel before transmitting as required by the FCC.

HLN4188A Microphone Hang-up Box, Private-Line

TLN4505B Handset Hang-up Cradle, Carrier Squelch

TLN4504B Handset Hang-up Cradle, Private-Line



#### **MITREK SYSTEMS•90 ACCESSORIES**

Mobile Accessories

Speaker



This speaker is designed for SYSTEMS•90 applications. Speaker includes a trunnion bracket for mounting on firewall or dashboard.

HSN4010A Speaker

#### **Power Cables**

A variety of cable kits are available for new installation or replacement applications Multiple vehicles with power cables facilitates quick transfer of radios from one vehicle to another.

For 30, 40, 50 and 60 watt radios

HKN4008A Cable Kit, 17 feet, negative ground

For 75, 100 and 110 watt radios

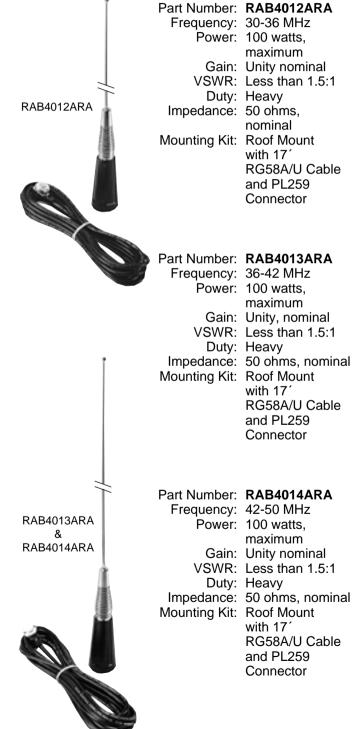
HKN4023A Cable Kit, 17 feet, negative ground HKN4041A Cable Kit, negative ground, with high power fuse





### Antennas, Service Tools

#### **MOBILE ANTENNAS**



maximum Gain: Unity nominal VSWR: Less than 1.5:1 nominal with 17' RG58A/U Cable and PL259 Connector

maximum Gain: Unity, nominal VSWR: Less than 1.5:1

> RG58A/U Cable and PL259 Connector

Power: 100 watts. maximum Gain: Unity nominal VSWR: Less than 1.5:1 Impedance: 50 ohms, nominal with 17 RG58A/U Cable and PL259 Connector

#### SERVICE TOOLS

Extractor Tool

Aids in removal of contact pins from connectors J3 and P3.

6680385A04 Extraction Tool



### Spanner Tool

Used to remove antenna relay locking nut. RSX4028A Spanner Tool

#### Tunina Tool

6680385A04

General purpose transmitter and receiver alignment tool. 6682977K01 Tuning Tool

TREESERSES.

6682977K01

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# Service Aids, Manuals

#### SERVICE AIDS



Radio Test Set Cables

Used with R1033. Radio Test Set. Connection to radio metering socket allows alignment of transmitter and receiver.

RTK4042A Radio Test Cable

Meter Panel Test Cable

Used with TEK5F Meter Panel. Allows metering of transmitter and receiver simultaneously through metering socket.

SKN6012B Radio Test Cable

#### Power and Control Cable

Used with RTC1000A Control Panel to simulate basic control head functions.

**TEKA48** Power and Control Cable



Please refer to the Test Equipment/ Shop Supplies Section of the Buyers Source Book for additional Service Aids and Service Tools.

#### **INSTRUCTION MANUALS**

#### **MITREK Mobiles/Base**

	25-54 MHz
6880100W79	30-50W Broadband Antenna Match
6881045E65	60W, 110W, 1-4 Frequencies, MITREK FM Radio
	T51JJA, T81JJA Series (AK Suffix)
6881040E80	MITREK Super Consolette Base Station L51JJB Series
6881045E65	60/110W, 1-4 Frequencies, FM Radio T51/81JJA Series (BK Suffix)

#### INSTRUCTION MANUALS

MITREK Mobiles/Base (cont'd)

136-174 MHz

	130-174 IVITIZ
6881045E70	40/60W, 75/110W, 1-4 Frequencies, FM Radio
	T43/53JJA Series (A Suffix)
	T63/JJA Series (A Suffix)
6881040E80	MITREK Super Consolette Base Station L43, L53JJB Series
6881045E70	40/60/75/110W, 134-176 MHz, 1-4 Frequencies, FM Radio T43/53/63/83JJA Series (B Suffix)
6881109E58	MITREK Control Scan Monitor
	403-512 MHz
6881045E75	30/50W, 75/110W, 1-4 Frequencies, FM Radio
6881040E80	MITREK Super Consolette Base Station L44, L54JJB Series
6881045E75	30/50/75/100W, 1-4 Frequencies, FM Radio T34/44/64/74JJA Series (B Suffix)
6881045E80	<i>806-870 MHz</i> 12/35W, 1-5 Frequencies, FM Radio Base Station Owner's Manual

#### Systems•90 Installation

6881109E57	MITREK Systems•90 Mobile Public Address
6881110E50	MITREK Systems•90 Accessory Group Installation Instructions

