



GENERAL:

This revision outlines changes that have occurred since the printing of your instruction manual. Use this information to correct your manual.

INSTRUCTION MANUAL AFFECTED:

68P81082E10-O

MSF 5000 UHF Digital Capable Stations
 Instruction Manual

REVISION DETAILS:

The *MSF 5000* models covered in this manual have been revised necessitating a model suffix change from "A" to "B." The changes affect the mechanical hardware needed to mount the PA to the "Universal" cabinet rails. A small cast in pin, on the outside of the PA heat sink has been replaced by a screwed on metal bracket.

The Item Breakdown Chart included in this SMR shows the structures for the new PA tanapas. The following table is a summary of the 75 W and 110 W UHF PA tanapa changes.

PA Description	PA (in "A" Models)	PA (in "B" Models)
110 W PA, 403-435 MHz (single circulator)	TTE1451A	TLE2511A
110 W PA, 435-475 MHz (single circulator)	TTE1452A	TLE2512A
75 W PA, 403-435 MHz (single circulator)	TTE1501A	TLE2521A
75 W PA, 435-475 MHz (single circulator)	TTE1502A	TLE2522A
110 W PA, 435-475 MHz (triple circulator)	TTE1462A	TLE2532A
75 W PA, 435-475 MHz (triple circulator)	TTE1512A	TLE2542A

ATTACHMENTS:

1. Remove the existing Model Complement Chart and Item Breakdown Chart, pages xiii and xiv, and replace with the attached revised charts.
2. On page 12 of Maintenance section 68P81083E14-O, make a notation indicating that all parts listings are obsolete, then insert the updated parts lists pages attached to this SMR.

MODEL COMPLEMENT CHART FOR MSF5000 SECURE SMARTNET REPEATER, SECURE REPEATER STATIONS AND SECURE BASE STATIONS

NOTE: THIS ITEM NUMBER IS A MODEL SERIES. SPECIFIC MODEL DEPENDS UPON CARRIER FREQUENCY.

LEGEND:

- = ONE ITEM SUPPLIED
- 2 = TWO ITEMS SUPPLIED
- * = REFER TO ITEM BREAKDOWN CHART
- ** = EARLY 'B' VERSIONS MAY CONTAIN THE TUE197D RF TRAY, TLN3043B SSCB AND TRN7019A WATTMETER

TEPS-47322-B

MODEL							DESCRIPTION	
	C44CXB5109BT	C64CXB5109BT	C74CXB5109BT	C24CXB7106BT	C34CXB7106BT	C44CXB7106BT		
							DESCRIPTION	
	●	●	●				40W SECURE SMARTNET REPEATER STATION	
	●	●	●				75W SECURE SMARTNET REPEATER STATION	
							100W SECURE SMARTNET REPEATER STATION	
				●			6W SECURE REPEATER STATION	
				●			15W SECURE REPEATER STATION	
				●			40W SECURE REPEATER STATION	
				●			75W SECURE REPEATER STATION	
				●			110W SECURE REPEATER STATION	
					●		6W SECURE BASE STATION	
					●		15W SECURE BASE STATION	
					●		40W SECURE BASE STATION	
					●		75W SECURE BASE STATION	
					●		110W SECURE BASE STATION	
	●						ITEM	
							DESCRIPTION	
	●						TFE6591A FILTER, LOW-PASS: 403-475 MHZ	
	●						THN6663A 26" UNIVERSAL CABINET FRAME	
	●						TKN8305A CABLE, LINE INTERFACE	
							TKN8315A CABLE, BASIC BASE	
							TKN8487A CABLE, WATTMETER	
							TKN8498B CABLE, 25' TRUNK CONTROL	
							TKN8499A CABLE, STATION RECEIVER	
							TKN8500C CABLE, TTRC SYSTEM	
							TKN8543A CABLE, 12-POSITION	
							TKN8598A CABLE, INTERCONNECT BOARD	
							TKN8674A CABLE 12' RF N MALE TO N FEMALE	
							TKN8870A CABLE RF N MALE TO N FEMALE	
							TLN2490A* JUNCTION BOX	
							TLN3059B** SECURE CAPABLE STATION CONTROL BOARD MODULE	
							TLN3112A* TTRC ANALOG MODULE	
							TLN3114A* TTRC LOGIC MODULE	
							TPN1186A* 500W POWER SUPPLY	
							TRN5208A ANTENNA SWITCH	
					2	2	2	TRN5352A PLUG, RF CONNECTOR
			2	2	2	2	2	TRN5353A PLUG, AUXILIARY CONNECTOR
								TRN5355A PLUG, BATTERY CONNECTOR
								TRN5427A 110 VAC POWER CORD
								TRN5525A TUNING TOOL
								TLE5910A** UHF WATTMETER
								TRN7039A HARDWARE, CONTROL
								TRN7040A ESCUTCHEON, TTRC
								TRN7200A UNIVERSAL TRAY HARDWARE
								TRN7201A UNIVERSAL PA/PS HARDWARE
								TRN7225A UNIVERSAL UHF RF TRAY PANEL HARDWARE
								TRN7249A UNIVERSAL RAILS LABEL KIT
								TRN7250A LOW POWER 10A FUSE AND CABLE
								TRN7252A UHF/800/900 UNIVERSAL PERIPHERAL HARDWARE
								TRN9512A COAX N-TYPE ADAPTER
								TLE2510A POWER AMPLIFIER, 110W UHF BASIC: (SEE NOTE)
								TLE2520A POWER AMPLIFIER, 75W UHF BASIC: (SEE NOTE)
								TTE1520A* POWER AMPLIFIER, 40W UHF BASIC: (SEE NOTE)
								TTE1540A* POWER AMPLIFIER, 15W UHF BASIC: (SEE NOTE)
								TTE1590A* ISOLATION NETWORK: (SEE NOTE)
								TUE2000A** RF TRAY: (SEE NOTE) **

ITEM BREAKDOWN CHART
FOR MSF5000
SECURE SMARTNET REPEATER,
SECURE REPEATER STATIONS
AND SECURE BASE STATIONS

LEGEND:
● = ONE ITEM SUPPLIED
2, 3, 4 = MULTIPLE ITEMS SUPPLIED
* = REFER TO ITEM BREAKDOWN CHART

DESCRIPTION	MODEL	TLE2231A	TLE2232A	TLN2490A	TLN3043B	TLN3059B	TLN3112A	TLN3114A	TPN1186A	TRE1321B	TRE1322B	TLE2511A	TLE2512A	TTE1471B	TTE1472B	TLE2521A	TLE2522A	TTE1521A	TTE1522A	TTE1541A	TTE1542A	TTE1591A	TTE1592A	TUE1971A	TUE1972A	TUE2001A	TUE2002A	TUE2011A	TUE2012A	
IPA, 403-435 MHZ	TLE2231A	●																												
IPA, 435-475 MHZ	TLE2232A		●																											
JUNCTION BOX	TLN2490A			●																										
SSCB MODULE	TLN3043B				●																									
SSCB MODULE	TLN3059B					●																								
TTRC ANALOG MODULE	TLN3112A						●																							
TTRC LOGIC MODULE	TLN3114A							●																						
POWER SUPPLY, 500W	TPN1186A								●																					
RECEIVE VCO, 403-435 MHZ	TRE1321B									●																				
RECEIVE VCO, 435-475 MHZ	TRE1322B										●																			
110W PA, 403-435 MHZ	TLE2511A											●																		
110W PA, 435-475 MHZ	TLE2512A												●																	
TRANSMIT VCO, 403-435 MHZ	TTE1471B													●																
TRANSMIT VCO, 435-475 MHZ	TTE1472B														●															
75W PA, 403-435 MHZ	TLE2521A															●														
75W PA, 435-475 MHZ	TLE2522A																●													
40W PA, 403-435 MHZ	TTE1521A																	●												
40W PA, 435-475 MHZ	TTE1522A																		●											
15W PA, 403-435 MHZ	TTE1541A																			●										
15W PA, 435-475 MHZ	TTE1542A																				●									
ISOLATION NETWORK, 403-435 MHZ	TTE1591A																					●								
ISOLATION NETWORK, 435-475 MHZ	TTE1592A																						●							
RF TRAY, 403-435 MHZ INT REF	TUE1971A																							●						
RF TRAY, 435-475 MHZ INT REF	TUE1972A																								●					
RF TRAY, 403-435 MHZ INT REF	TUE2001A																									●				
RF TRAY, 435-475 MHZ INT REF	TUE2002A																										●			
RF TRAY, 403-435 MHZ EXT REF	TUE2011A																											●		
RF TRAY, 435-475 MHZ EXT REF	TUE2012A																												●	

**MSF 5000 STATION HARDWARE,
CABINET, AND CABLING KITS PARTS LISTS**

THN6663A Universal LP Notched 26" Frame Cabinet

PL-11721-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0310943J41	SCREW, tapping: TT8x1.25x16; 8 used
	0310943J45	SCREW, tapping: TT8x1.25x40; 2 used
	0310943M09	SCREW, tapping: TT3X0.5X6
	0400647583	WASHER, non-metallic
	0782891T05	FRAME, 26" universal rail: (notched); 2 used
	1482935N01	INSULATOR, cover
	1582821N01	HOUSING, plastic, bottom
	1582821N02	HOUSING, plastic, top
	1582832N15	COVER, cabinet wraparound
	1582833N13	DOOR, cabinet
	5583616B01	LOCK: with 2 keys and mounting hardware
	7582154D17	PAD: 2 used

TKN8305A/TKN8492A Wireline Interface Cable

PL-8261-B

REF. SYMBOL	PART NO.	DESCRIPTION
		cable assembly:
W1601	3084225N01	includes P901 & P1602 (TKN8305A)
	3084225N04	includes P901 & P1602 (TKN8492A)

TKN8315A Base Station Cable

PL-8278-B

REF. SYMBOL	PART NO.	DESCRIPTION
		cable assembly:
W900	0180752D92	DC antenna switch
		includes:
P500	1583142M10	HOUSING, connector: 3-contact
P504	1584860K02	HOUSING, connector: 2-contact
	2984706E06	TERMINAL, contact (2 used)
	3000844810	CABLE, 2-conductor (17.5" used)
	3982717M01	CONTACT, receptacle (2 used)
	4210217A02	STRAP, tie: .091x3.62" (2 used)

TKN8487A Wattmeter Cabling

PL-10068-C

REF. SYMBOL	PART NO.	DESCRIPTION
		connector:
P2602,03 P2610,11	2882365D02	plug, coaxial
		cable:
W2602	3000859004	coaxial: includes P2602 & 10 (48" lg)
	3000859004	coaxial: includes P2603 & 11 (48" lg)
		non-referenced item:
	4210217A02	STRAP, tie: .091x3.62" lg (9 used)

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PARTS LISTS (Cont'd)

TKN8498B 25' Trunk Control External I/O PL-11200-A
 TKN8501B 50' Trunk Control External I/O
 TKN8502B 75' Trunk Control External I/O

REF. SYMBOL	PART NO.	DESCRIPTION
P(central)	-	connector: consist of:
	1510759A03	HOUSING, connector (15-contact)
	3984257L01	CONTACT, plug (12 used)
	1582486M02	HOUSING, cable support
	5582511M01	LOCK, connector
P3	-	consist of:
	1510759A01	HOUSING, connector (25-contact)
	1582486M04	HOUSING, cable support
	3910184A70	CONTACT, plug (19 used)
	6483945R01	STRIP, commoning
		cable, 6 twisted pairs:
W(central)	3082669M01	25' lg (TKN8498B)
	3082669M01	50' lg (TKN8501B)
	3082669M01	75' lg (TKN8502B)
		non-referenced item:
	0180723E91	CABLE ASSEMBLY includes:
	1510183B07	HOUSING, connector, plug: 1-contact
	2984706E05	TERMINAL, contact
	3910184A70	CONTACT, plug

TKN8499A Station Receiver Cable PL-10634-O

REF. SYMBOL	PART NO.	DESCRIPTION
J8	2887317C03	connector: PLUG, coaxial
P11	0983213K01	RECEPTACLE, N type
		cable:
W801	3084173E01	COAXIAL (34" used)

TKN8500C Secure Smartnet System Cable PL-11699-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0383959R01	SCREW, machine: 4-40x.25 (2 used)
	3084259T01	CABLE ASSEMBLY (includes 2 connectors)

TKN8543A Trunking Cable PL-11228-B

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0182787T01	CABLE ASSEMBLY (with connectors)
	0383959R01	SCREW, machine: 4-40x.25 (2 used)

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PARTS LISTS (Cont'd)

TKN8598A Interconnect Board Cable Kit

PL-11463-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0184923R02	CABLE ASSEMBLY, 5-conductor (w/connectors)
	3083734T01	CABLE ASSEMBLY, 7-conductor (w/connectors)

TKN8599A SSCB Power Cable

PL-11464-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced item:
	3083733T01	CABLE ASSEMBLY, 5-conductor (w/connectors)

TKN8674A RF Cable, 12"

PL-11738-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced item:
	0112004C02	CABLE ASSEMBLY: (with N type plug & receptacle connectors)

TKN8870A RF Cable

PL-11739-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0180752D53	CABLE ASSEMBLY, includes:
	0983213K01	CONNECTOR, receptacle: N type
	2884476G01	CONNECTOR, plug: N type
	3084173E01	CABLE, coaxial: 6" lg

TKN8980A CABLE, network

PL-8657-O

REF. SYMBOL	PART NO.	DESCRIPTION
		cable assembly:
W501	0180780D04	input
		includes:
P501	2884476G01	CONNECTOR, plug, N type
	3084173E01	CABLE, coaxial (20.38" used)
	3388083C02	DECAL, color strip (red)
	4383152N02	BUSHING, cable

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PARTS LISTS (Cont'd)

TRN5352A Rf Connector Plastic Plug PL-8240-C
 TRN5353A Outlet Connector Plastic Plug
 TRN5355A Battery Connector Plastic Plug

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	3883666N01	CAP, rf port hole (TRN5352A)
	3883665N01	CAP, auxiliary hole (TRN5353A)
	3883664N01	CAP, battery hole (TRN5355A)

TRN5427A 110V Power Cord PL-11755-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced item:
	3082933N01	LINE CORD (with connectors)

TRN5525A Tuning Tool Kit PL-8243-C

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0180763D22	CABLE ASSEMBLY, filter clip probe includes:
	2883099K01	CONNECTOR, plug: BNC type
	3083794C01	CABLE, coaxial (24" long)
	4284010N01	PROBE, clip
	0180765D49	CABLE ASSEMBLY, channel tuning includes:
	0984279D01	CONTACT, receptacle (2 used)
	1484277D40	HOUSING, connector: 26-contact
	3010288B02	CABLE, 24 stranded wire (2.5" long)
	5483865R01	LABEL, bar code: 1/4"x216ft (white)
	5484246T01	LABEL, bar code: 6.6x10.2 millimeters
	6682977K03	TOOL, tuning alignment
	6683137C01	TOOL, alignment
	6684089N01	TOOL, tuning (wrench)
	6684974L01	TOOL, tuning

TRN7039A Control Hardware PL-11225-A

REF. SYMBOL	PART NO.	DESCRIPTION
	1382456T01	BEZEL, station control
	1583186N01	HOUSING, control
	1584078N01	COVER, dust
	3683144N02	KNOB, control (2 used)
	4783154N01	BAR, control support

PARTS LISTS (Cont'd)

TRN7040A TTRC Escutcheon

PL-11222-O

REF. SYMBOL	PART NO.	DESCRIPTION
	1383115N08	non-referenced item: BEZEL, control

TRN7200A Universal Hardware Tray

PL-11497-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0310943M34	SCREW, tapping: TT6x1x10; 4 used
	0383498N04	SCREW, tapping: M4x0.7x7; 8 used
	0383498N08	SCREW, tapping: M6x1.0x10; 8 used
	0400847649	WASHER, insulating: 3/4x17/64x1/16; 4 used
	0782888T01	BRACKET, universal slide: 2 used
	4583042T03	SLIDE, 9" universal steel: 2 used
	5484423N01	TAG, shipping

TRN7201A Universal PA/PS Hardware Kit

PL-11498-A

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0383498N08	SCREW, tapping: M6x1.0x10 (20 used)
	0782889T01	BRACKET, universal PA/PS (2 used)
	0782890T01	BRACKET, PS tab left
	0782890T02	BRACKET, PS tab right

TRN7221A VHF RF Tray Panel Universal Hardware

TRN7225A UHF RF Tray Panel Universal Hardware

PL-11551-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0310943M34	SCREW, tapping: TT5x1x10; 4 used
	0310943M62	SCREW, tapping: TT3.5x0.6x13; 3 used
	0400847649	WASHER, insulating: 3/4x17/64/1/16; 4 used
	0482418B89	WASHER, insulating: 3 used
	1482753T01	INSULATOR, slide protector
	4210217A02	STRAP, white tie: .091x3.62; 10 used
	4210217A04	STRAP, black tie: 0.184x7.31; 2 used
	4210217A10	STRAP, white tie: 0.184x7.78; 5 used
	4284245N01	CLIP, natural wire tie: 2 used
	4284245N02	CLIP, red wire tie
	5583354M01	HANDLE, power supply: 2 used
	6482628T06	PANEL, radio tray (TRN7221A)
	6482628T02	PANEL, radio tray (TRN7225A)

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PARTS LISTS (Cont'd)

TRN7249A Label, universal rails

PL-11626-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	3383748N01	NAMEPLATE, FCC
	5482834R01	LABEL, warning (shipping)
	5482834R02	LABEL, warning (station feet)
	5482834R03	LABEL, warning (station door)
	5482834R04	LABEL, warning (pa deck)
	5484023T01	LABEL, FCC PART15
	5484665N01	LABEL, vco cover

TRN7250A Low Power 10A Fuse & Labels

PL-11700-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	3882892N01	CAP, fuse
	5483918N01	LABEL, interconnect housing outlet
	5483919N01	LABEL, fuse
	5483922N01	LABEL, AC power
	6500138179	FUSE, 10A; 250V

TRN7252A Station Hardware, UHF/800/900 MHz

PL-11627-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	0310943J09	SCREW, tapping: T13x0.5x6
	0383498N08	SCREW, tapping: M6x1.0x10 (13 used)
	0784105T01	BRACKET, coaxial switch
	0784201T01	BRACKET, peripheral
	4200075826	CLIP, mounting

TRN9512A Straight Coaxial N-Type Adapter

PL-11720-O

REF. SYMBOL	PART NO.	DESCRIPTION
		non-referenced items:
	4210217A04	STRAP, tie: .184x7.31" lg
	5882764A01	ADAPTER, coaxial

