



MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	1	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
1	BI-101-44	LAMP, INCANDESCENT		A-228		1	I1									
X	BS-100	SOLDER, SOFT														
1	CB-101	CAPACITOR, VARIABLE, AIR		A-229		1	C3									
2	CC21SL100K	CAPACITOR, FIXED, CERAMIC		A-938		2	C39,40									
1	CC21SL300K	CAPACITOR, FIXED, CERAMIC		A-938		1	C28									
2	CC21SL470K	CAPACITOR, FIXED, CERAMIC		A-938		2	C30,36									
2	CC-100-9	CAPACITOR, FIXED, CERAMIC		A-938		2	C4,11									
20	CC-100-16	CAPACITOR, FIXED, CERAMIC		A-938		20	C5,6,7,8,12,13,14,15 C18,19,22,23,24,25, C26,29,37,38,41,44									
1	CC-101-4	CAPACITOR, FIXED, CERAMIC		A-938		1	C42									
1	CF-100	COIL FORM		A-157		1										
4	CF-114-3	COIL FORM		A-928		1										
				A-929		1										
				A-930		1										
				A-931		1										
2	CI-109-18	CORE		A-157		2										
1	CI-109-19	CORE		A-931		1										
3	CI-109-6	CORE		A-928		1										
				A-929		1										
				A-930		1										
2	CM20D621G	CAPACITOR, FIXED, MICA		A-157		2	C20,21									

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK

MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	2	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
2	CM20E301G	CAPACITOR, FIXED, MICA		A-938		2	C31,33									
1	CM20E501G	CAPACITOR, FIXED, MICA		A-938		1	C32									
3	CM20E102G	CAPACITOR, FIXED, MICA		A-938		3	C1,9,16									
1	CM20C151J	CAPACITOR, FIXED, MICA		A-938		1	C34									
1	CT-104-1	CAPACITOR, VARIABLE, AIR		A-228		1	C43									
4	CU-101-1	FERRULE, INNER		CA-143 CA-144 CA-145		1 1 <b>2</b>										
4	CU-101-2	FERRULE, OUTER		CA-143 CA-144 CA-145		1 1 <b>2</b>										
5	CV11C450	CAPACITOR, VARIABLE, CERAMIC		A-229		5	C2,10,17,27,35									
12	EY-100-1	EYELET, FLAT FLANGE		A-136 A-1134		2 <b>8</b>										
2	EY-100-2	EYELET, FLAT FLANGE		A-323		2										
5	EY-101-1	EYELET, ROLLED		A-136 A-1134		5 <b>8</b>										
3	EY-102-1	GROMMET, ELASTIC		A-229		3										
4	EY-102-2	GROMMET, ELASTIC	FOR M3164	A-235		4										
1	FP-108-1	CAN		A-136		1										
4	FP-108-7	CAN		A-1134		<b>4</b>										



MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	3	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
1	FP-109	CLAMP, CRYSTAL		A-228		1										
3	FW04HBN	WASHER, FLAT		A-228		3										
X	GL-102	Q-MAX				X										
X	GL-103	CEMENT				X										
X	GL-104-2	LACQUER, INSULEX U85		A-157		X										
2	HA-102-1BN	HANDLES		A-228		1										
1	LD211/MS179	DIAL		A-236		1										
1	LD221/MS155	FRONT PANEL, R.F. HEAD		A-236		1										
1	LD312-3M/MS185	COVER, BOTTOM		A-228		1										
1	LD313-3M/MS184	COVER, TOP		A-236		1										
1	LD314-3M/MS164	CENTER CHASSIS		A-235		1										
2	LWI25LRN	LOCKWASHER, INT.														
8	LWS 02MRN	LOCKWASHER, SPLIT		A-229		8										
8	LWS 03MRN	LOCKWASHER, SPLIT		A-229		8										
58	LWS 04MRN	LOCKWASHER, SPLIT		A-228		8										
				A-229		30										
42	LWS 06MRN	LOCKWASHER, SPLIT		A-228		4										
				A-229		13										
				A-236		14										

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK

MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	4	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
1	MP-100-1	KNOB, INSTRUMENT		A-236		1										
1	MP-100-4	KNOB, INSTRUMENT		A-228		1										
1	MP-102-1	KNOB, INSTRUMENT		A-235		1										
1	MS-132	GROUND STRAP		A-137		1										
1	MS-155	PNL, FRONT	MACH	LD-221		1										
1	MS-163-1	HEAD FRAME (NO DWG.)	SEE A-318	A-318		1										
1	MS-164	CTR CHASSIS	MACH	LD-314-3M		1										
1	MS-165	FRONT SHIELD		A-229		1										
1	MS-166	CENTER SHIELD		A-229		1										
1	MS-167	REAR SHIELD		A-229		1										
1	MS-168	BRACKET		A-236		1										
1	MS-170	CRYSTAL BRACKET		A-228		1										
1	MS-179	DIAL BLANK		LD-211		1										
1	MS-184	COVER, TOP	MACH	LD-313-3M		1										
1	MS-185	COVER, BTM	MACH	LD-312-3M		1										
1	MS-186	SHIELD, XTAL CAP.		A-236		1										
1	MS-187	SHIELD, PLUG		A-236		1										
1	MS-191	SHIELD, TUNING CAP. (NO DWG.)	SEE A-323	A-323		1										
4	MS-192	GROUND STRIP		A-323		4										
2	MS-193	LENS CLAMP		A-228		2										
1	MS-342	SUPPORT, TRIMMER		A-229		1										
1	NP-134	NAME PLATE, PATENT				1										
1	NP-*** (SEE S-278)	NAME PLATE				1										
5	NT-101-4	NUT, STRAP		A-229		5										

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK

MATERIAL LIST		REV.											MODEL	ML-FFRD-3M		
													SHEET	5	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
2	NT-102	NUT, HEX		A-157		2										
7	NT-108-2	NUT, SPEED		A-318		7										
2	NT-108-3	NUT, SPEED				2										
6	NT-108-4	NUT, SPEED		A-319		6										
2	NT-108-8	NUT, SPEED		A-323		2										
8	NTH0256BN6	NUT, HEX		A-229		8										
19	NTH0440BN6	NUT, HEX		A-229		14										
12	NTH0440BN8	NUT, HEX		A-228		8										
				A-229		4										
35	NTH0632BN8	NUT, HEX		A-157		2										
				A-229		15										
				A-236		12										
1	PL-109	PLUG, MULTI-COAXIAL		A-325		1	P1									
1	<del>PM-181-L</del>	SHAFT LOCK		PM-415		1	(USE PM-415 FOR LEVER MODIFICATION)									
1	<del>PM-415</del>	SHAFT LOCK, MODIFIED		<del>A-228</del>		1										
2"	PX-100-1-085	INSULATION, SLEEVING		A-325		2"										
X	PX-100-1-118	INSULATION, SLEEVING		A-325		4"										
X	PX-104-1-034	INSULATION, SLEEVING		A-229		X										
X	PX-104-1-053	INSULATION, SLEEVING				X										
X	PX-104-1-066	INSULATION, SLEEVING				X										
X	PX-104-2-034	INSULATION, SLEEVING				X										

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK



MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	6	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
1	PX-105	BOARD, TERMINAL (NO DWG.)	USE A-131	A-131		1										
1	PX-113	LENS, DIAL		A-228		1										
2	RC20GF100K	RESISTOR, FIXED, COMPOSITION				2	R5,13									
4	RC20GF220K	RESISTOR, FIXED, COMPOSITION				4	R1,9,17,27									
1	RC20GF121K	RESISTOR, FIXED, COMPOSITION				1	R29									
2	RC20GF221K	RESISTOR, FIXED, COMPOSITION				2	R4,12									
1	RC20GF222K	RESISTOR, FIXED, COMPOSITION				1	R18									
1	RC20GF272K	RESISTOR, FIXED, COMPOSITION				1	R24									
2	RC42GF272K	RESISTOR, FIXED, COMPOSITION				2	R8,16									
2	RC20GF223K	RESISTOR, FIXED, COMPOSITION				2	R19,28									
2	RC20GF393K	RESISTOR, FIXED, COMPOSITION				2	R30,31									
2	RC20GF473K	RESISTOR, FIXED, COMPOSITION				2	R25,26									
4	RC20GF104K	RESISTOR, FIXED, COMPOSITION				4	R3,7,11,15									
2	RC20GF224K	RESISTOR, FIXED, COMPOSITION				2	R6,14									
5	RC20GF474K	RESISTOR, FIXED, COMPOSITION				5	R2,10,21,22,23									
1	RC32GF473K	RESISTOR, FIXED, COMPOSITION				1	R20									
30"	RG-58/U	CABLE, COAXIAL		CA-143 CA-144 CA-145												

MATERIAL LIST		REV.											MODEL	ML-FFRD-3M		
													SHEET	7	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
12	SC-107-1	LUG, SPADE		A-136		2										
				A-323		2										
				A-1134		8										
4	SFB0256SN3	SCREW, THREAD CUTTING	NPI02	A-228	NPI02	4										
2	SFB0440SN4	SCREW, THREAD CUTTING		A-236		2										
2	SLHC0832SN4	SCREW, SET		A-229		2										
2	SM-112	PIN, LOCK		A-228		2										
1	SM-122	BUSHING, DIAL		A-229		1										
2	SM-145	BUSHING, COIL MTG.		A-157		2										
1	SP-102	SPRING LOCK				1										
4	SC-131-0632BN7	SCREW, UNDERCUT, FLAT HEAD		A-938		4										
1	SCBP0256BN4	SCREW, MACHINE		A-229		1										
8	SCRPO348BN6	SCREW, MACHINE				8										
8	SCBP0440BN3	SCREW, MACHINE		A-229		8										
17	SCBP0440BN4	SCREW, MACHINE		A-229		14										
14	SCBP0440BN5	SCREW, MACHINE		A-228		3										
1	SCBP0440BN8	SCREW, MACHINE				1										
11	SCFP0440BN4	SCREW, MACHINE		A-229		10										
7	SCFP0440BN6	SCREW, MACHINE		A-228		2										
10	SCRPO440BN4	SCREW, MACHINE				10										

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK



MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	8	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
2	SCRPO440BN14	SCREW, MACHINE		A-229		2										
4	SCBP0632BN5	SCREW, MACHINE		A-229		4										
12	SCFP0632BN7	SCREW, MACHINE		A-229		2										
4	SCBP0632BN8	SCREW, MACHINE		A-228		2										
2	SCBP0632BN8	SCREW, MACHINE				2										
11	SCBP0632SN4	SCREW, MACHINE				11										
6	SCFP0632BN5	SCREW, MACHINE		A-229		6										
4	SCFP0632SN5	SCREW, MACHINE				4										
2	SCBP0440BN14	SCREW, MACHINE		A-229		2										
2	SLHCO832SN4	SETScrew		A-229		2										
X	MWC18(16)U0	WIRE, ELECTRICAL				X										
X	MWC20(7)U1	WIRE, ELECTRICAL				X										
5"	MWC20(7)U91	WIRE, INSULATED		A-325		5"										
X	MWC22(7)U1	WIRE, ELECTRICAL				X										
X	MWC22(7)U2	WIRE, ELECTRICAL				X										
X	MWC22(7)U6	WIRE, ELECTRICAL				X										
X	MWC22(7)U9	WIRE, ELECTRICAL				X										
X	MWC22(7)UPINK	WIRE, ELECTRICAL				X										
X	MWC24(7)SJ9	CABLE, INSULATED, SHIELDED W/JACKET				X										
1	SW-100	SWITCH, ROTARY				1	S1									

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK

MATERIAL LIST		REV.											MODEL	ML-FFRD-3M		
													SHEET	9	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
9	TE-102-2	TERMINAL, TURRET		A-228		1										
				A-229		3										
3	TE-104-1	TERMINAL, LOCKING		A-229		2										
12	TE-104-2	TERMINAL, LOCKING		A-229		12										
2	TE-108-6	STAND OFF		A-131		2										
4	TE-109-1	TERMINAL LUG		A-131		4										
1	TE-110-1	LUG, SOLDER		A-229		1										
9	TE-110-2	LUG, SOLDER		A-228		1										
				A-229		8										
1	TE-110-3	LUG, SOLDER		A-325		1										
1	TE-111-2	LUG, SOLDER		A-228		1										
3	TE-114-1	TERMINAL, FEED-THRU		A-229		3										
8	TE-115-1	TERMINAL, TURRET, MIDGET		A-229		8										
3	TE-116-2	LUG, SOLDER		A-228		1										
				A-229		2										
2	TE-117-1	STAND OFF		A-229		2										
23	TE-117-21	STAND-OFF, SPACER				23										
3	TE-146-4	COLLAR & LUGS		A-929		1										
				A-930		1										
				A-931		1										
5	TS-102-PO1	SOCKET, 7 PIN MINIATURE		A-229		5	XVI, 2, 3, 4, 5									

MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	10	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
5	TS-102-U02	SHIELD, TUBE		A-938		5	EVI,2,3,4,5									
1	TS-104-1	SOCKET, CRYSTAL		A-228		1	XYI									
1	TS-107-2	SOCKET, LENS		A-228		1	XI1									
20	WA-101-1	WASHER		A-229		20										
1	WA-102-5	WASHER		A-928		1										
16	WA-109-1	WASHER, FIBER				16										
1	WA-109-17	WASHER		A-928		1										
X	WI-101-2	CABLE, SHIELD, FLEXIBLE				X										
X	WI-104-4	WIRE, LITZ				X										
X	WI-104-541DSQS	WIRE, LITZ		A-157		X										
X	WI-106-15	WIRE, #34 DN				X										
X	WL-100-4	WIRE, BUSS BAR				X										
X	WL-100-6	WIRE, BUSS BAR				X										
X	WL-100-7	WIRE, BUSS		A-229		X										
X	WL-100-8	WIRE, BUSS		A-928		X										
X	WL-103-1	SHIELD, FLEXIBLE		CA-143		X										
				CA-144		X										
				CA-145		X										
4	6AG5	TUBE, ELECTRON				4	V1,2,4,5									
1	6AU6A	TUBE, ELECTRON				1	V3									

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK



MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	11	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION SUPPORTING DRAWINGS	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
1	A-131	BOARD, TERMINAL I.F.		A-157		1										
1	A-136	CASE, I.F.		A-157		1										
1	A-157	TRANSFORMER, ASSEMBLY		A-235		1	T4									
1	A-228	FRONT PANEL, SUB-ASSEMBLY		A-938		1										
1	A-229	MECHANICAL & ELECTRICAL SUB-ASSEMBLY		A-938		1										
1	A-235	CENTER CHAS ASSY	NO DWG	A-229		1										
1	A-236	MAIN ASSEMBLY		FFRD-3M		1										
1	A-318	HEAD FRAME ASSEMBLY		A-229		1										
1	A-323	SHIELD ASSEMBLY		A-236		1										
1	A-325	PLUG ASSEMBLY		A-229		1										
1	A-928	OSCILLATOR COIL		A-1010-1		1	L1									
1	A-929	TRANSFORMER, R.F.		A-1010-4		1	T2									
1	A-930	TRANSFORMER, MIXER		A-1010-2		1	T3									
1	A-931	TRANSFORMER, ANT.		A-1010-3		1	T1									
1	A-938	COMPONENT ASSY	NO DWG.	A-236		1	SEE TMC PHOTO #424									
1	A-1010-1	TRANSFORMER ASSEMBLY		A-235		1										

MATERIAL LIST		REV.	K L M										MODEL	ML-FFRD-3M		
													SHEET	12	OF	13
QUAN. PER UNIT	PART NO.	DESCRIPTION SUPPORTING DRAWINGS	REF.	ITEM LOCATION			REF. SYMBOLS AND/OR REMARKS									
				USED ON	USED TO MOUNT	QUAN.										
1	A-1010-2	TRANSFORMER ASSEMBLY		A-235		1										
1	A-1010-3	TRANSFORMER ASSEMBLY		A-235		1										
1	A-1010-4	TRANSFORMER ASSEMBLY		A-235		1										
4	A-1134	CAN ASSY		A-1010		4										
1	CA-143	CABLE ASSEMBLY		A-325		1										
1	CA-144	CABLE ASSEMBLY		A-325		1										
2	CA-145	CABLE ASSEMBLY		A-325		2	A3,A4									
1	CH-102	COMPONENT COLOR CODE		FFRD-3M		1										
1	CK-283	SCHEMATIC DIAGRAM		FFRD-3M		1										
X	LD-124	CHAS and COVER MARKING	FOR REF.			1										





MODEL

FFRD-3M

## REVISION SHEET

ML-A-936

DATE	REV.	PAGE	ITEM	DESCRIPTION	REMARKS	APP.
1/23/56	A	2	42	Was MS-1149-2 & FP-108-4	WDC 1/23/56	
4/17/56	A	3	61	Item 61 Reference (see S-278)	WDC } PLK } WDC	
5/8/56	A	6	170	Deleted	PLK } WDC	
"	A	6	169	Was 1. Req.	PLK } WDC	
5/18/56	B	6	155	Was A-173 None Req.	WDC 5/18/56	
"	B	2	42	Was "Use: FP-108-6" (See A-1134) added	WDC 5/18/56	
"	B	3	71.1	Added	WDC 5/18/56	
"	C	6	175.2	Added (Transferred from Page #3)	WDC 5/18/56	
6/7/56	A	1	14.1	Was 4 req.	3 JABE, PLK, ADJ	
"	A	1	13.1	Added		
6/27/56	D	6	166.1	A-1010-1 Added	JABE WDC	
"	D	6	166.2	A-1010-2 Added		
"	D	6	166.3	A-1010-3 Added		
"	D	6	166.4	A-1010-4 Added		
7/30/56	C	3	71.1	PM-115 transferred to supt. dwg.	WDC	
"	C	3	72	PM-181 transferred back from supt. d wg.	WDC	
11/9/56	A	4	98.1	SG-131-0632BC7 added	WDC	
1/21/57	A	5	137.	TE-117-21 quantity increased to 23	ADJ	
22/7/57	B	7	175.4	ID-312-3M added	ADJ	
"	B	7	175.5	ID-313-3M added		
"	B	7	175.6	ID-314-3M added		
9/16/57	C	2	40.	MS-126 deleted	JABE	
"	D	3	78.	PX-105 (No Drawing) Ref: A-131 added		
"	E	6	152.	A-135 deleted		
6-7-60	F	5	141	Changed TS-109 To TS-107-2, added symbol	16	
				EMN # 2421	16	
11/15/62	G	1	7709	Add 4 ea. EY-102-2		
3/15/63	H	5	8580	Chg. "SRIR" preface on wire part No's. to	"MWC"	16
				Add MWC24(7)SJ9		16
5/15/63	J	6	9053	Revised Per EMN 9053		16
2/24/64	K	ALL	10778	Revised ALL Sheets per EMN.		16
11/9/64	L	6	12846	Revised sheet 6 per EMN		WDC
3/1/65	M	B,4,11	13514	Revised sheets 3,4,11 per EMN		WDC