



NATIONAL OPTICAL  
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OBSERVATORY

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**MONSOON  
PARTS LIST  
IR Acquisition Transition WHIRC**

**Dwg No.: MNSN-EL-04-4012 Rev: A1  
Next Assembly: MNSN-EL-04-0012**

LTR	DESCRIPTION	ECR	DATE	BY	APPRVD
--	initial release		6-Jun-06	DMS	
-1	Resistor value updates, add note 3		7-Sep-06	DMS	pcm
A	add 1K & 20K resistors, change diode componet		6-Feb-06	DMS	mhunten
A1	corrections & additions item 11,12,13, 16, 23		9-Mar-07	dms	

NOTES

Parts List  
MONSOON IR Acquisition Transition WHIRC

Dwg#: MNSN-EL-04-4012  
7/5/2012

1. Parts can be crossed as long as the replacement is the same or an upgrade of the specified part.
2. Resistance values are in ohms, capacitance values are in uF (microfarads).
3. If 2 values appear on same item you may use either value. These parts may have stocking issues.

ITEM	Qty	RefDes	Value	Part Number	MFR	PN Digikey	Description
1	1			MNSN-EL-04-1012 Rev A			PCB Blank, IR Acquisition Transition WHIRC
2	2	D1, D2		1N4148	Fairchild	1N4148FS-ND	Diode, small signal DO-35
3	1	TB1		55558-4	Tyco/Amp	55558-4-ND	Con, power tap 10 pos with straight screw
7	1	P1		103311-7	Amp / Tyco	A26296-ND	Con, 34 pin RA walled header .1 center
5	8	C2, C7, C16, C19, C20, C23, C24, C26	0.01uF	ECJ-2VB1H103K	Panasonic	PCC103BNCT-ND	Cap, Cerc 0805 0.01uF 50V 10% X7R
6	9	C9, C10, C12, C15, C27, C28, C31, C33, C35	0.1uF	ECJ-1VB1E104K	Panasonic	PCC2277CT-ND	Cap, Cerc 0603 0.1uF 25V 10% X7R
7	4	C17, C18, C21, C22	0.1uF	ECJ-2YB1H104K	Panasonic	PCC1840CT-ND	Cap, Cerc 0805 0.1uF 50V 10% X7R
8	2	C1, C25	1.0uF	GRM216R61E105KA12D	Murata Electronics	490-1700-1-ND	Cap, Cerc 0805 1.0uF 25V 10% X5R
9	9	C8, C11, C13, C14, C29, C30, C32, C34, C36	2.2uF	ECJ-2FB1E225K	Panasonic	PCC2320CT-ND	Cap, Cerc 0805 2.2uF 25V 10% X5R
10	4	C3, C4, C5, C6	47uF	T495D476K020ASE175 593D476X9020D2T	Kemet Sprague	399-3202-2-ND	Cap, Tant 7343-31 47uF 20V 10% Low ESR
11	1	RJ3		064784 2B19F955F001-1-H 37081	ERNI Sullins	S3106-ND	Con, right angle female cPCI 95 pins RJ3 position
12	1	RJ4		064176 2AF1105F001-1-H	ERNI Sullins	S3101-ND	Con, right angle female cPCI 110 pin rJ1, rJ4 position
13	1	RJ5		064785 2B22F1105F001-1-H	ERNI Sullins	S3109-ND	Con, right angle female cPCI 110 pin rJ2, rJ5 position
14	1	JP5		not installed			Jumper, bus wire 20 awg ( user option)
15	1	P2		WTB36SOR9J	AirBorn		Con, 36 position Right Angle PCB MNT
16	4	JP1, JP2, JP3, JP4		4-103185-0 (made from)	Amp / Tyco	A26513-ND	Jumper, header strip 2 x 1 .1 center .025 sq posts (break to size from 40 pos strip)
17	1	JP6		4-103185-0 (made from)	Amp / Tyco	A26513-ND	Jumper, header strip 3 x 1 .1 center .025 sq posts (break to size from 40 pos strip)
18	2	U5, U6		LT4220IGN	Linear Technology		IC, Dual supply hot swap controller
19	9	U1, U2, U3, U4, U7, U8, U9, U10, U11		OP284ES	Analog Devices		IC, Dual precision Op Amp SOIC-8
20	6	R13, R48, R52, R54, R55, R60	0	ERJ-6GEY0R00V RC0805JR-070RL	Panasonic Yageo	P0.0ACT-ND 311-0.0ARCT-ND	Resistor, 0805 1/10W 5% 0 ohms Resistor, 0805 1/8W 5% 0 ohms
21	4	R8, R16, R49, R62	10	RC0805FR-0710RL	Yageo	311-10.0CRCT-ND	Resistor, 0805 1/10W 1% 10 ohms
22	22	R10, R22, R29, R30, R35, R36, R37, R42, R43, R46, R47, R57, R65, R66, R71, R72, R79, R80, R86, R87, R91, R92	1.0K	RC0805FR-071KL	Yageo	311-1.00KCRCT-ND	Resistor, 0805 1/10W 1% 1.0K
23	18	R23, R27, R28, R33, R34, R40, R41, R45, R64, R69, R70, R76, R77, R78, R83, R84, R85, R90	4.99K	RC0603FR-074K99L	Yageo	311-4.99KHCT-ND	Resistor, 0603 1/10W 1% 4.99K
24	2	R1, R7	12.7K	RC0805FR-0712K7L	Yageo	311-12.7KCRCT-ND	Resistor, 0805 1/8W 1% 12.7K
25	2	R15, R61	13.0K	RC0805FR-0713KL	Yageo	311-13.0KCRCT-ND	Resistor, 0805 1/8W 1% 13K
26	2	R21, R56	137K	RC0805FR-07137KL	Yageo	311-137KCRCT-ND	Resistor, 0805 1/8W 1% 137K
27	4	R17, R19, R20, R58	221K 220K	9T08052A2213FBHFT RR1220P-224-B-T5	Yageo Susumu Co.	9T08052A2213FBHFT-ND RR12P220KBCT-ND	Resistor, 0805 221K 1/8W 1% 50ppm' Resistor, 0805 220K 1/10W 0.1% 25ppm
28	2	R6, R53	36K	RC0805FR-0736KL	Yageo	311-36.0KCRCT-ND	Resistor, 0805 1/8W 1% 36K
29	2	R5, R50	39.2K	RG2012P-3922-B-T5	Susumu Co.	RG20P39.2KBTR-ND	Resistor, 0805 1/10W 0.1% 25ppm 39.2K
30	2	R18, R59	49.9K	RR1220P-4992-B-M-T5	Susumu Co.	RR12P49.9KBCT-ND	Resistor, 0805 1/10W 0.5% 25ppm 49.9K

31	4	R2, R3, R4, R51	54.9K 53.6K	9T08052A5492FBHFT RR1220P-5362-B-M-T5	Yageo Susumu Co.	9T08052A5492FBHFT-ND RR12P53.6KBCT-ND	Resistor, 0805 54.9K 1/8W 1% 50ppm Resistor, 0805 1/10W 0.1% 25ppm 53.6K
32	4	R9, R11, R12, R14	0.022	RL3720T-R022-F	Susumu Co.	RL37T.022FCT-ND	Resistor, 0815 0.022 ohm 1/2W 1%
33	4	L1, L2, L3, L4	100uH	8532-25L	Delevan	DN3225CT-ND	Inductor, SMT high current power 100uH 1.30 A max, .64 A incremental
34	4	Q1, Q2, Q3, Q4		IRFL4105	Internat'l Rectifier	IRFL4105CT-ND	MOSFET, hex/mos N-CH 55V 3.7A fast switching SOT-223
35	36	D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38		BAT54STA	Zetex, Inc	BAT54SCT-ND	Diode, schottky dual array 30V 200mA SOT-23
36	18	Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22		MMBT3906-7-F	Diodes, Inc.	MMBT3906-FDICT-ND	Transistor, PNP 40V 350 mW SOT-23
37	18	R24, R25, R26, R31, R32, R38, R39, R44, R63, R67, R68, R73, R74, R75, R81, R82, R88, R89	20.0K 20.0K	ERJ-6ENF2002V RC0805FR-0720KL	Panasonic Yageo	P20.0KCCT-ND 311-20.0KCRCT-ND	Resistor, 0805 1/8W 1% 20.0K Resistor, 0805 1/8W 1% 20.0K

Part Number	MFR	Description	Package Markings	COMMENTS
T495D476K020ASE175	Kemet	Cap, Tant 7343-31 47uF 20V 10% Low ESR	R+ 476 20 k	Low ESR value in pF voltage / kemet id
LT4220IGN	Linear Technology	IC, Dual supply hot swap controller	4220 4220I	
IRFL4105	Internat'l Rectifier	MOSFET, hex/mos N-CH 55V 3.7A fast switching SOT-223	FL4105	
BAT54STA BAT54S-7-F	Zetex, Inc Diodes, Inc	Diode, schottky dual array 30V 200mA SOT-23	L44 KL4	
MMBT3906-7	Diodes, Inc.	Transisor, PNP 40V 350 mW	K3N	