

117

Doc. No. : SH11G-PG-035

Rev. : 0

Date : 26.03.91

TRAVELLER GENERAL PRODUCT SPECIFICATIONS

- A. Battery Requirement : 1.5V (size 'AAA' or 'AM-4') X 3 pcs
Alkaline type recommended
- B. Operating Voltage : 3.3 - 5.1 VOLTS
- C. Current Consumption : a) Normal mode at V.Batt = 4.5V
4mA typical (scanning)
1.5mA (with one LED on)
20mA max
b) Memory mode at V.Batt = 4.5V
2uA max
30uA max
- D. Power Consumption : 90mW max
- E. System Clock Frequency : 1.7MHz +/- 15% (V.Batt = 4.5V)
(EXTERNAL : RC)
0.85MHz +/- 15% (INTERNAL)

PREPARED BY : Y W Shum
Y W Shum

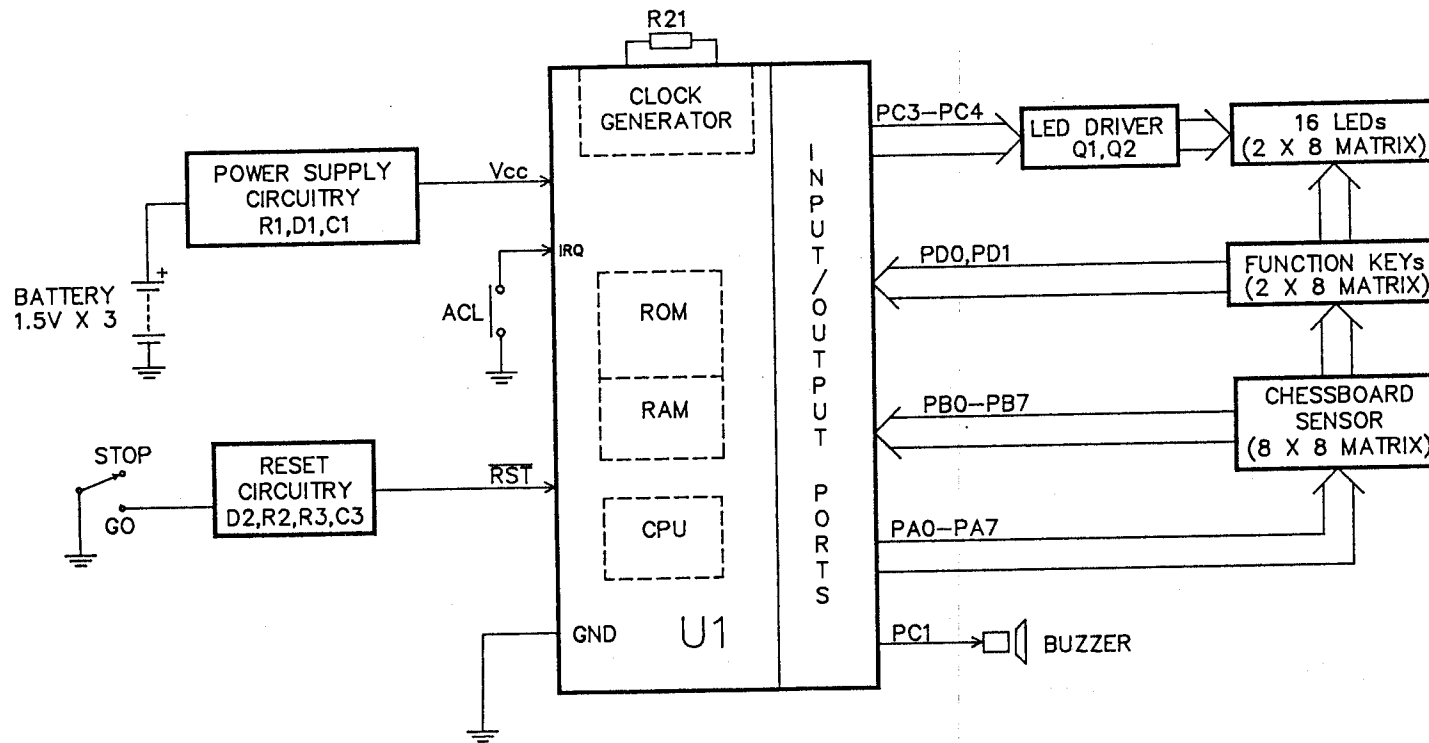
APPROVED BY : [Signature]

DIST : QAM, ASSEMBLER (C) S HV1

file:gpSSH11G

ORIGINAL

REVISION			
DATE	DESCRIPTION	ECN NO.	REV. NO.



APPROVALS	DATE	Saitek Ltd.	
DRAWN <i>[Signature]</i>	30/11/90	BLOCK DIAGRAM	
R.D. <i>[Signature]</i>	2/12/90	TITLE:	TRAVELLER
E.D. <i>[Signature]</i>	7.12.90	148	CHESS COMPUTER
Q.A. <i>[Signature]</i>	4/12/90	DWG. NO.	SHG - PE - 025
			REV. 0

PROJECT : TRAVELLER (SH11G)

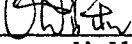
Doc.No. : SH11G-PS-036


Rev. : 0

Date : 26.03.91

ADJUSTMENT PROCEDURE

- OBJECT : To adjust system clock frequency.
- EQUIPMENT NEEDED : Frequency counter or Oscilloscope capable of frequency up to 10 MHz.
- SYSTEM CLOCK FREQUENCY : 1.7MHz +/- 15% (V.BATT = 4.5V) at PIN42 of U1 (oscillating frequency)
0.85MHz +/- 15% (INTERNAL)
- PROCEDURE : 1. Disassemble unit by removing screws (8) on cabinet base.
2. Power on unit (V.Batt = 4.5V)
3. Place probe of counter/scope at pin 42 of U1. If frequency measured is out of specified range (1.445 - 1.955 MHz), replace R21 or R23 until counter/scope reading is within specification.
4. Reassemble unit.

PREPARED BY : 
Y W Shum

APPROVED BY : 

DIST : QAM, ASSEMBLER (C) S. HV]

file:gpsdh1a

Traveller Trouble Shooting Chart

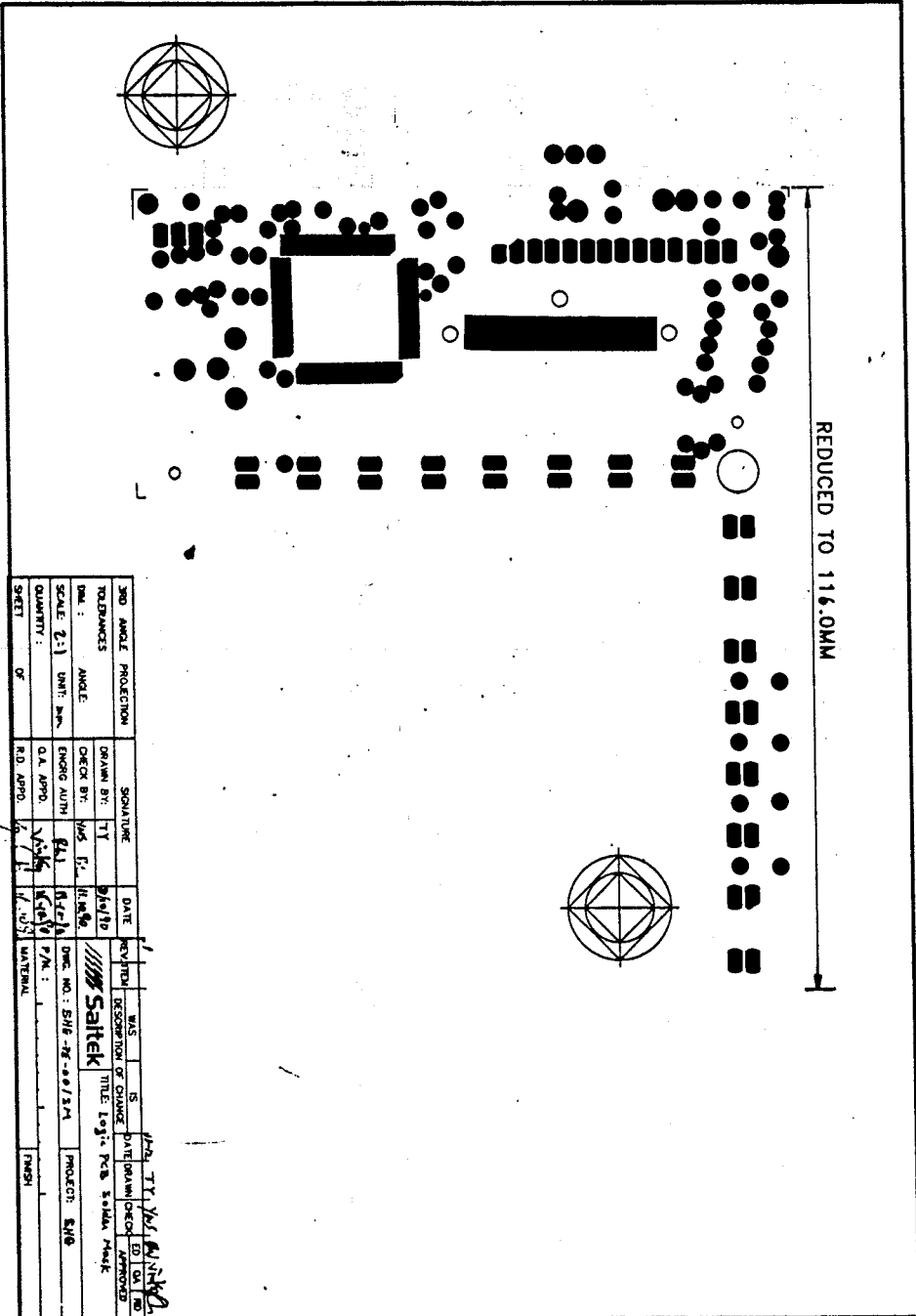
29/5/91

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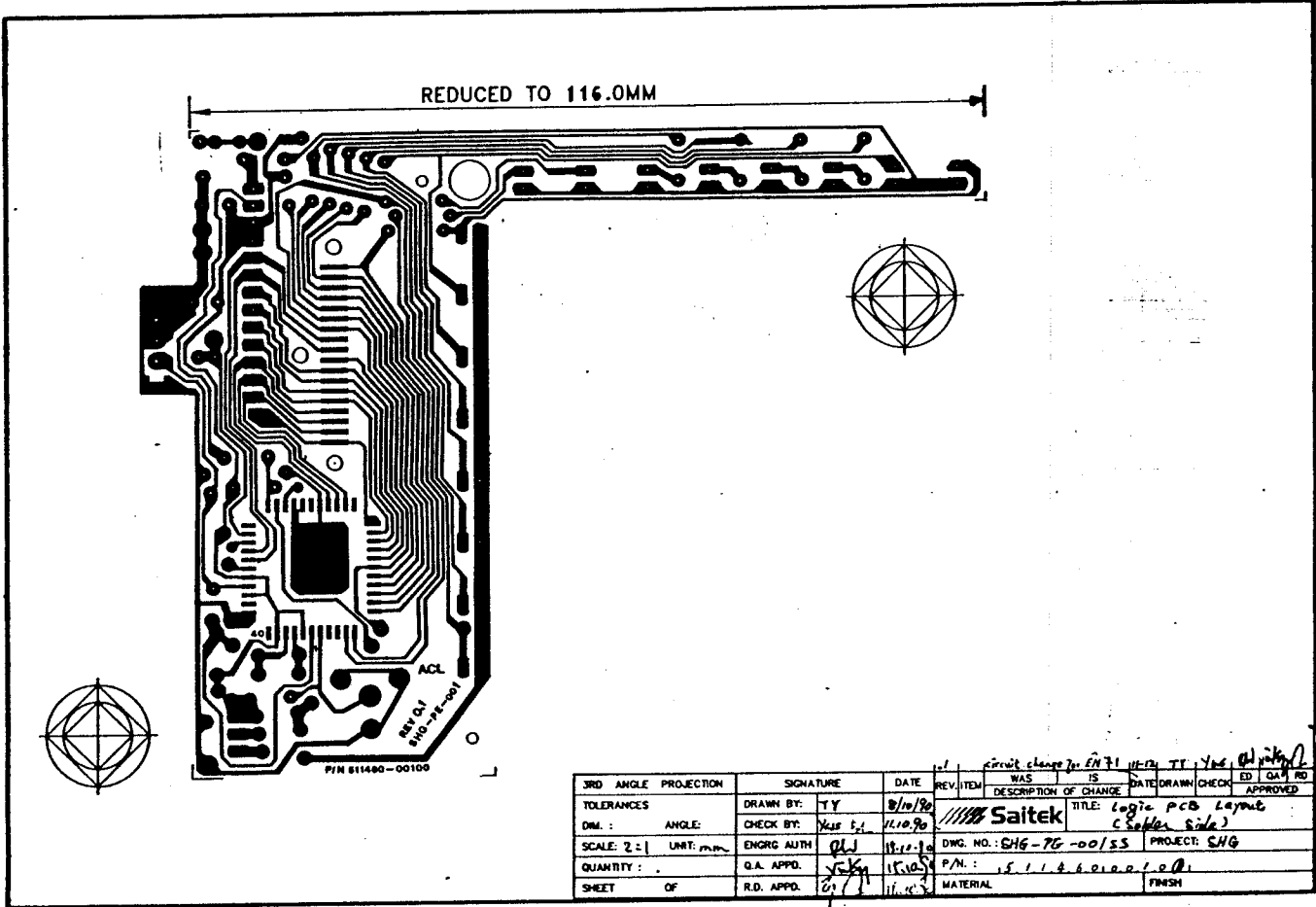
SYMPTOMS		POSSIBLE CAUSES
Unit will not turn on	1. i) ii) iii) 2. 3.	Check Vcc for 3.3V to 4.5V If Vcc is not within this range : Dead or weak batteries Broken connections in battery wiring Defective power supply circuit - check R1,D1,C1 No clock signal : Look for 1.7 MHz +/- 15% (Vcc=4.5V) at U1 pin 42, if not check R21 Defective U1
LED(s) missing	1. 2. 3.	Look for broken traces on PCB Defective LED(s) Defective U1
LED position '1' to LED position '8' all missing		Check R5,R6,R9,Q1
LED position 'A' to LED position 'H' all missing		Check R7,R8,R10,Q2
LEDs turn on when they should not	1. 2.	Short circuits on PCB Defective U1
No sound	1. 2. 3. 4.	Broken wirings from beeper to PCB Defective beeper Defective D3,D4 Defective U1, (Check U1, pin 30 for pulses output when 'SOUND ON')

FILENAME : \ED#27\TSC

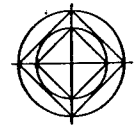
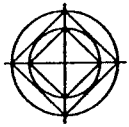
SYMPTOMS		POSSIBLE CAUSES
No response or improper response to function keys and chessboard	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 	Loose contacts or misalignment between sensor and PCB traces Broken traces or short circuits on PCB or sensor Check logic 'HIGH' at U1 pin 13-17, 19-21, 32, 33 when no key is pressed Defective rubber pad Defective U1
No memory function	<ol style="list-style-type: none"> 1. 2. 	Dead or weak batteries Defective U1
Excessive current drain Current > 20mA when 'ON' Current > 30uA when 'MEMORY'	<ol style="list-style-type: none"> 1. 2. 3. 4. 	Components wiring or PCB trace short-circuited Contaminations and / or foreign particles on PCB Capacitor leakage - Check C1, C2 Defective U1
Generates illegal moves	<ol style="list-style-type: none"> 1. 2. 	Batteries exhausted Defective U1



3RD ANGLE PROJECTION	SIGNATURE	DATE	REVISION	DATE	NO.	BY	APPROVED
TOLERANCES	DRAWN BY: TY	20/10/18	1	20/10/18	1	TY	TY
DWG. ANGLE	CHECK BY: VAS	21/10/18	2	21/10/18	2	VAS	VAS
SCALE 2:1	ENGRG AUTH: SAJ	22/10/18	3	22/10/18	3	SAJ	SAJ
QUANTITY:	D.A. APPD. VAS	23/10/18	4	23/10/18	4	VAS	VAS
SHEET	NO. APPRO. 6/18	23/10/18	5	23/10/18	5	VAS	VAS
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REDUCED TO 116.0MM



P/N 811480-00100

3RD ANGLE PROJECTION	SIGNATURE	DATE	REV.	ITEM	DESCRIPTION OF CHANGE	DATE	DRAWN	CHECK	ED	QA	NO
TOLERANCES	DRAWN BY: TY	8/10/90									
DM :	CHECK BY: XLS	8/10/90			Saitek						
SCALE: 2=1	ENGRG AUTH: QJ	8/10/90									
QUANTITY :	Q.A. APPD: SK	8/10/90									
SHEET OF	R.D. APPD: GJ	8/10/90									

1 circuit change for EN 71 (EN 71 TT) Yes (initials)

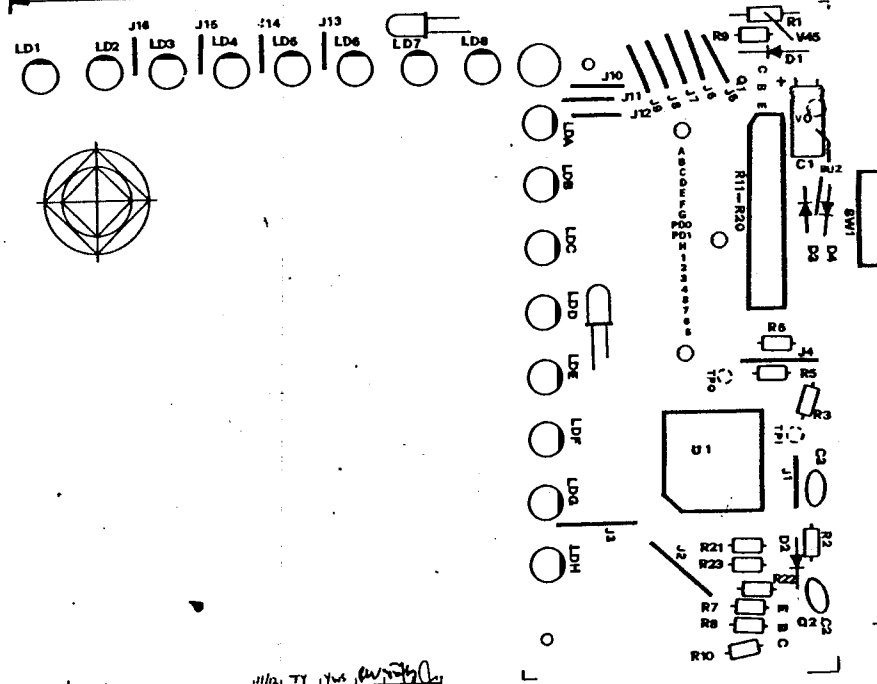
TITLE: Logic PCB Layout (Solder Side)

DWG. NO.: EN6-75-00155 PROJECT: EN6

P.N.: 1511460100100

MATERIAL FINISH

REDUCED TO 1:10.0MM



3RD ANGLE PROJECTION	SIGNATURE	DATE	REV	ITEM	WAS	IS	DATE	DRAWN	CHECK	ED	QA	NO
TOLERANCES	DRAWN BY: TY	8/19/90										
DIM. :	CHECK BY: YWS BY	11/10/90			Saltek							
SCALE: 2:1	ENGRG AUTH: [Signature]	12/01/90			DWG. NO: 346-76-00101							
QUANTITY :	Q.A. APPD: [Signature]	12/01/90			P.N. :							
SHEET OF	R.D. APPD: [Signature]	12/01/90			MATERIAL							

11/10 TY YWS [Signature]

TITLE: Logic PCB Component Layout

PROJECT: RMF

DATE: 11/10/90

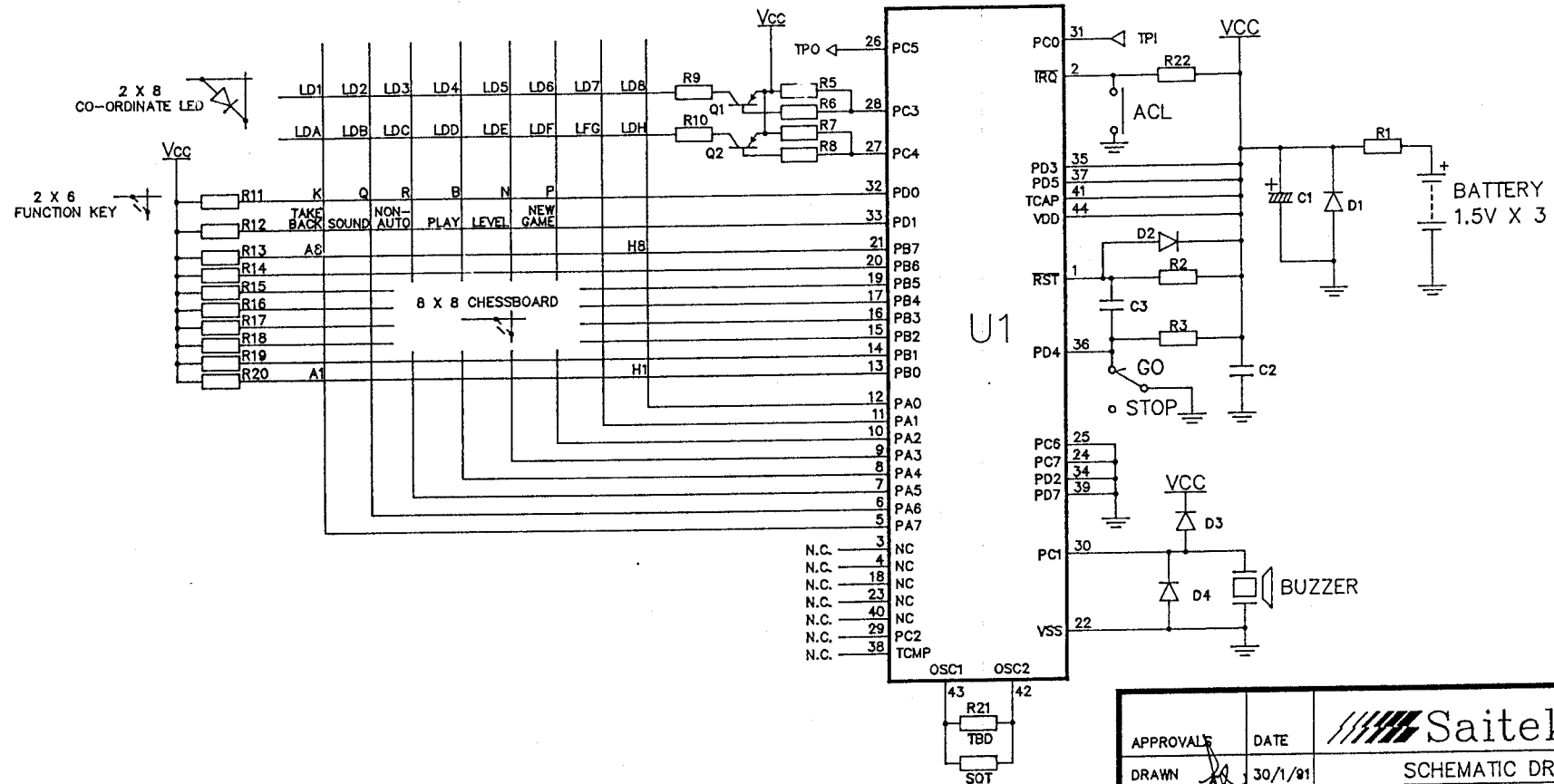
DATE: 12/01/90

DATE: 12/01/90

DATE: 12/01/90

ORIGINAL

REVISION			
DATE	DESCRIPTION	ECN NO.	REV. NO.
24/1/91	CHANGE ART. NO. FROM 146 TO 117 (REF : PI-478)	-	0.1



APPROVALE	DATE	Saitek Ltd.	
DRAWN	30/1/91	SCHEMATIC DRAWING	
R.D.	20/1/91	TITLE: TRAVELLER	
E.D.	30.1.91	117 CHSS COMPUTER	
Q.A.	20.1.91	DWG. NO. SHG - PE - 024	REV. 0.1

SAITEK

BILL OF MATERIALS

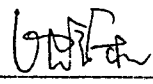
PROJECT : SH116 (TRAVELLER)
 ART. NO. : 117
 SHIP VER. : CH, D, E, EP, EV, F, FIN, I, NL, SCI, SUK, DK
 REVISION : 1.31

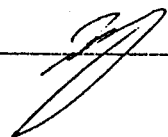
FILENAME : \ED103\SH116

REVISION HISTORY

<u>REVISION</u>	<u>DATE</u>	<u>BY</u>	<u>DESCRIPTION OF CHANGES</u>
1	08.04.91	Y.W. SHUM	New Release, delete R23.
1.1	15.04.91	Y.W. SHUM	Create ship ver : CH, D, E, EP, F, FIN, I, NL, SCI.
1.2	28.05.91	Y.W. SHUM	Add U1's alternate, change parts & update consumer leaflet.
1.31	16.01.92	Y.W. SHUM	Add version : SUK, Adjust Cost; Update consumer leaflets, Manuals.

<u>RELATED DOCUMENTS</u>	<u>REV</u>
Schematic dwg : SHG-PE-024	0

Prepared BY : 
 Y.W. SHUM

Approved by :  EM

Distribution :
 +1.00 [] BD1, MMM; QAM, Store, Assembler [C']
 +0.10 [X] MMM; QAM, Store, Assembler [C] |
 +0.01 [X] BD1, MMM

Date issue : 23 JAN 1992

CHG MOD: NW=new component; * =desc/PN/Ref changed +/-cost up/down; C/NC=consigned/non-consigned +/-QTY up/down

991170-11EV - SH116, EV TRAVELLER

Rev : 1.3.1

Level	Item	Chg	Stock Code	Rev	Cons	Description	Qty	Per Reference
1			981170-00000	1		UNIT ASSEMBLY, FOR SH116	1.000	
2			911170-00001	1		GUTS ASSEMBLY - LOGIC	1.000	
3	1		511170-00110			PCB LOGIC S.S, PAPER PHENOLIC, REV.0.3	1.000	
3	2	-	860550-40B12	RC		MICROPROCESSOR, SX11.B12H, PLCC	.000	U1(ALT)
3	3	+	860600-42BC1	RC		MICROPROCESSOR, SX11.B12I, PLCC	1.000	U1
3	4	-	670290-12GB0	RC		TRANSISTOR, PNP, 9012, G, CENTRE B	2.000	Q1, Q2
3	5	-	660001-11003	RC		LED, RED, DOME, D=3MM, TOSHIBA, TLR124	16.000	LD1-8, A-H
3	6		654001-20000			DIODE, RECTIFIER, 1N4001	1.000	D1
3	7		65414B-10000			DIODE, SWITCHING, 1N414B	3.000	D2-4
3	8		612405-51102			RESISTOR, FIXED C-FILM, 24, 5%, 1W	1.000	R1
3	9		617535-21102			RESISTOR, FIXED C-FILM, 75K, 5%, 1/8W	1.000	R2
3	10		611045-21102			RESISTOR, FIXED C-FILM, 100K, 5%, 1/8W	1.000	R3
3	11		611035-21102			RESISTOR, FIXED C-FILM, 10K, 5%, 1/8W	5.000	R5-8, R22
3	12		611025-21102			RESISTOR, FIXED C-FILM, 1K, 5%, 1/8W	2.000	R9, R10
3	13		611035-32111	RC		RESISTOR, ARRAY C-FILM, 10KX10, 5%, 1/4W, 11	1.000	R11-R20
3	14	-	617525-21102			RESISTOR, FIXED C-FILM, 7K5, 5%, 1/8W	1.000	R21(SOT)
3	15		621067-01616			CAPACITOR, E-CAP, 10UF, +80-20%, 16V, L.L	1.000	C1
3	16		62104M-01611			CAPACITOR, C-CAP, 0.1UF, +/-20%, 16V	2.000	C2, C3
3	17		521170-00230			SWITCH, 1P2T, FOR SH116, YSC#M1X2P6RG3	1.000	SW1
3	18		000050-60155			JUMPER, L=6MM, LL=15MM, D=0.5MM	4.000	J13-16
3	19		000050-80155			JUMPER, L=8MM, LL=15MM, D=0.5MM	9.000	J1, J5-12
3	20		000051-20155			JUMPER, L=12MM, LL=15MM, D=0.5MM	3.000	J2-4
3	21		000010-00100			ACL, RESET CONTACT, D=10MM, CR STEEL	1.000	
2			961170-00000	1		CASING & PACKING ASSEMBLY, FOR SH116	1.000	
3	22		000130-00270			BUZZER, D=27MM	1.000	
3	23		251170-00800	RC		RUBBER, KEY PAD, NON-CONDUCTIVE, RED	1.000	
3	24		311170-00200	RC		SENSOR, CHESSBOARD, OPEN, SH116	1.000	
3	25		311170-01000	RC		SENSOR SEPARATOR, SH116	1.000	
3	26		291140-00900	RC		FOAM RUBBER FRICTION PAD, SHC	1.000	
3	27		250000-00151	RC		RUBBER ROD, 29X2.9X2.8MM, COMPRESS KE951U	1.000	
3	28		221170-01200	RC		METAL, B-CONT, A, PH. BRONZE, NI-PLATED, SH116	1.000	
3	29		221170-01700	RC		METAL, B-CONT, B, PH. BRONZE, NI-PLATED, SH116	1.000	
3	30		221170-01800	RC		METAL, B-CONT, C, PH. BRONZE, NI-PLATED, SH116	1.000	
3	31		221170-01900	RC		METAL, B-CONT, D, PH. BRONZE, NI-PLATED, SH116	1.000	
3	32		221140-01500	RC		METAL, B-CONT, COM, PH. BRONZE, NI-PLATED, SHC	1.000	
3	33		000068-06043			STRAND WIRE, GREY, L=60MM, E=3.5MM, AWG2B	2.000	BUZZER
3	34		000062-05043			STRAND WIRE, RED, L=50MM, E=3.5MM, AWG2B	1.000	V45 TO B+
3	35		000062-02543			STRAND WIRE, RED, L=25MM, E=3.5MM, AWG2B	1.000	BAT. CONT
3	36		000060-05043			STRAND WIRE, BLACK, L=50MM, E=3.5MM, AWG2B	1.000	V0 TO B-
3	37		000073-11124			SCREW, S/T, +BIND, M2.0X6MM, A	7.000	CABINET
3	38		000073-11114			SCREW, S/T, +BIND, M2.0X5MM, A	1.000	CAB(TOP LEFT)
3			951170-00000	1		CABINET SET, FOR SH116(NCO)	1.000	
4	39		211170-00500	RC		PLASTIC, T. COVER, ACRYLIC, CLEAR	1.000	
4	40		211170-00300	RC		PLASTIC, T. CAB, ABS, BLACK, TAMPO PRINT, RED	1.000	
4	41		211170-00400	RC		PLASTIC, B. CAB, ABS, BLACK	1.000	
4	42		211170-00600	RC		PLASTIC, BATT. LID, ABS, RED	1.000	
4	43		211170-00700	RC		PLASTIC, CHESSPIECE COMP. LID, ABS, RED	1.000	

SAITEX

PRODUCT COSTING - SAITEX BOM FORMAT

Run
Prog:

991170-11EV - SH116, EV TRAVELLER

Rev : 1.31

Level	Item	Chg	Stack Code	Rev	Cons	Description	Qty	Per Reference
3			241170-15200	1		CHESSMEN SET, FOR SH116, 150+151	1.000	
4	44		241140-15010	RC		CHESSMEN, SHC, 20, L. GREY, SMALL PIN	1.000	
4	45		241140-15110	RC		CHESSMEN, SHC, 20, PURPLE RED, SMALL PIN	1.000	
3	46		360000-00200			LABEL, FOR SERIAL NO, ADHESIVE	1.000	
3	47		370000-XXXX	RC		LABEL, COMMON, CUSTOMER LABELS	1.000	
3	48		461170-03300			ACCESSORY, BUBBLE BAG, 250X140MM FOR SH116	1.000	MAIN UNIT
3	49		000122-50160			POLYBAG, 250X160X0.045MM	1.000	MANUAL
3	50		451170-02800			CARTON, FOR SH116, 20PCS/CTN	.050	
1			971170-00EV	1		OPTIONS ASSEMBLY, EV	1.000	
2	51	+	331170-02700	RC		RATING PLATE, FOR SH116, PVC, SWL, CN	1.000	
2	52	+	411170-41101	RC		MANUAL, FOR SH116, E/G/F/D, SWL	1.000	
2	53	+	430002-01000	RC		LEAFLET, LET'S PLAY CHESS, E, SWL	1.000	
2	54	+	430016-01002	RC		LEAFLET, CONSUMER 1991 REV. 2, E, SWL, ALL	1.000	
2	55	-	421170-61100	RC		GIFTBOX, FOR SH116, E/G/F/D/S/I, SWL	1.000	
2	56		430004-51000	RC		CARD, WARRANTY, E/G/F/D/S, SWL, CHESS	1.000	

Specification	Rev	Description	Type	Status	Reference	Date introduced	Last maintained	Last cost
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971170-00CH	01	OPTIONS ASSEMBLY,CH,FOR SH116	M	F		12/04/91	17/01/92	RML
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Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1			331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	*		411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1			430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	*		430018-03003			00 SS LEAFLET,CONSUMER 1992,F,SWL	1.000000		EACH	
1	*		430017-02002			00 SS LEAFLET,CONSUMER 1991,REV.2,G,SWL,ALL	1.000000		EACH	
1			421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1			430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00D	01	OPTIONS ASSEMBLY,D,FOR SH116	M	F		12/04/91	17/01/92	RML
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Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1			331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	*		411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1			430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	*		430017-02002			00 SS LEAFLET,CONSUMER 1991,REV.2,G,SWL,ALL	1.000000		EACH	
1			421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1			430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00DK	01	OPTIONS ASSEMBLY,DK,FOR SH116	M	F		03/09/91	04/09/91	RML
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Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1			331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1			411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1			430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1			430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	
1			430014-07000			00 SS LEAFLET,CONSUMER,DANISH,SWL	1.000000		EACH	
1			421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	

971170-00E	01	OPTIONS ASSEMBLY,E,FOR SH116	M	F		12/04/91	17/01/92	RML
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Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1			331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	*		411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1			430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	*		430020-05002			00 SS LEAFLET,CONSUMER 1991 REV.2,S,SWL,ALL	1.000000		EACH	
1			421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1			430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

Specification Rev Description Type Status Reference Date introduced Last maintained Last costed

971170-00EP 01 OPTIONS ASSEMBLY,EP,FOR SH116 M F 12/04/91 17/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Waste
1	005		331170-02700	00	SS	RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	* 010		411170-41101	00	SS	MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430030-03002	00	SS	BOOK,RULES OF CHESS,FRENCH,SWL	1.000000		EACH	
1	* 014		430020-05002	00	SS	LEAFLET,CONSUMER 1991 REV.2,S,SWL,ALL	1.000000		EACH	
1	015		421170-61100	00	SS	GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000	00	SS	CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00EV 01 OPTIONS ASSEMBLY,EV M F 06/02/91 15/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Waste
1	005		331170-02700	00	SS	RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	* 010		411170-41101	00	SS	MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430002-01000	00	SS	LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	* 014		430016-01002	00	SS	LEAFLET,CONSUMER 1991 REV.2,E,SWL,ALL	1.000000		EACH	
1	015		421170-61100	00	SS	GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000	00	SS	CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00F 01 OPTIONS ASSEMBLY,F,FOR SH116 M F 12/04/91 17/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Waste
1	005		331170-02700	00	SS	RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	* 010		411170-41101	00	SS	MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430030-03002	00	SS	BOOK,RULES OF CHESS,FRENCH,SWL	1.000000		EACH	
1	* 014		430018-03002	00	SS	LEAFLET,CONSUMER 1991 REV.2,F,SWL,ALL	1.000000		EACH	
1	015		421170-61100	00	SS	GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000	00	SS	CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00FIN 01 OPTIONS ASSEMBLY,FIN,FOR SH116 M F 12/04/91 17/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Waste
1	005		331170-02700	00	SS	RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	* 010		411170-41101	00	SS	MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430006-09000	00	SS	LEAFLET,RULES OF CHESS,FINNISH	1.000000		EACH	
1	* 014		430016-01002	00	SS	LEAFLET,CONSUMER 1991 REV.2,E,SWL,ALL	1.000000		EACH	
1	015		421170-61100	00	SS	GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000	00	SS	CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00I 01 OPTIONS ASSEMBLY,I,FOR SH116 M F 12/04/91 17/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Waste
1	005		331170-02700	00	SS	RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	010		411170-04100	00	SS	MANUAL,FOR SH116,ITALIAN,SWL	1.000000		EACH	

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Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1	012		430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	* 014		430015-04001			00 SS LEAFLET,CONSUMER 1991,ITALIAN,SWL,ALL	1.000000		EACH	
1	015		421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00NL 01 OPTIONS ASSEMBLY,NL,FOR SH116 M F 12/04/91 17/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1	005		331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	* 010		411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	* 014		430019-06001			00 SS LEAFLET,CONSUMER 1991,DUTCH,SWL,ALL	1.000000		EACH	
1	015		421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

971170-00SCI 01 OPTIONS ASSEMBLY,SCI,SH116 M F 12/04/91 17/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1	005		331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	* 010		411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	* 013		430016-01002			00 SS LEAFLET,CONSUMER 1991 REV.2,E,SWL,ALL	1.000000		EACH	
1	014		430026-01001			00 SS CARD,ACCESSORY ORDER,E,SCI	1.000000		EACH	
1	015		421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	

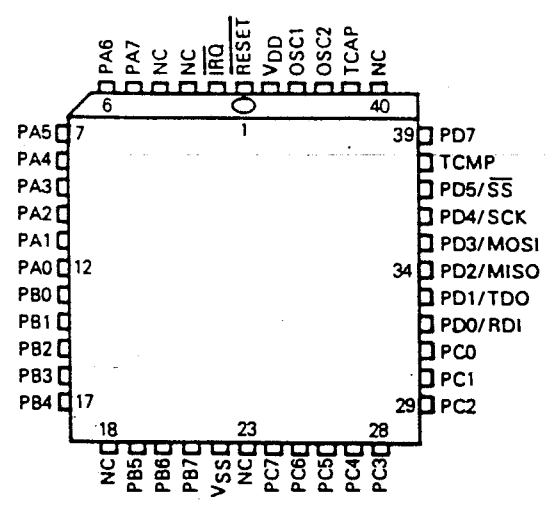
971170-00SUK 01 OPTIONS ASSEMBLY,SUK NW M F 09/01/92 09/01/92 RML

Level	Line	Typ	Component	Rev	Sp	Description	Qty per	Min. qty	Unit	Wast
1	005		331170-02700			00 SS RATING PLATE,FOR SH116,PVC,SWL,CN	1.000000		EACH	
1	010		411170-41101			00 SS MANUAL,FOR SH116,E/G/F/D,SWL	1.000000		EACH	
1	012		430016-01002			00 SS LEAFLET,CONSUMER 1991 REV.2,E,SWL,ALL	1.000000		EACH	
1	014		430002-01000			00 SS LEAFLET,LET'S PLAY CHESS,E,SWL	1.000000		EACH	
1	015		421170-61100			00 SS GIFTBOX,FOR SH116,E/G/F/D/S/I,SWL	1.000000		EACH	
1	020		430004-51000			00 SS CARD,WARRANTY,E/G/F/D/S,SWL,CHESS	1.000000		EACH	
1	025		430063-01000			00 SS ADDENDUM,E,FOR SUKL SHIPPMENT,HELP LINE	1.000000		EACH	

End of report

MC68HSC05C8

44-LEAD PLCC PACKAGE



NOTE: Bulk substrate tied to VSS.







8. SH11G FUNCTIONAL TEST PROCEDURE

Insert three AAA batteries into the battery compartment.
Slide the ON/OFF switch to "I".

<u>PURPOSE</u>	<u>PROCEDURE</u>	<u>OBSERVATION</u>
1. QC test mode	- Press and hold PLAY then press ACL	- Beep sound - LEDs scan A1, B2, ... H8
	- Hold the PLAY key until LEDs scan to H8	- Beep sound - LEDs rescan as above - Row "1", "3", "6", "8" and column "B" LED turns on
	- Press function key as show in Table 1	- See Table 1
	- Press 64 square	- The corresponding LEDs turn on with beep sound
2. Reset unit	- Press ACL	- Beep sound - LEDs scan A1, B2, ... H8 - Row 1 LED turns on
3. Check multimove	- Press NONAUTO	
	- Press F2, F4, E7, E5 G2, G4	- Row 8 LED turns on
4. Check checkmate	- Press PLAY	- D8 square LEDs turn on
	- Press D8 square	- H4 square LEDs turn on
	- Press H4 square	- High-low-low-high sound - Row 1 LED turns on - Column G, H LEDs blinks

5. Check memory
- Slide the ON/OFF switch to "0"
 - All LEDs turn off
 - Press NEWGAME twice
 - LEDs are still off
 - Slide the ON/OFF switch to "1"
 - Column G, H LEDs blinks
 - Row 1 LED turns on
6. Test finished
- Slide the ON/OFF switch to "0"
 - All LEDs turn off
 - Remove batteries

Table 1

Function key	Chessboard LEDs to be on	Function key	Chessboard LEDs to be on
	A1	NEWGAME	A2
	B1	LEVEL	B2
	C1	PLAY	C2
	D1	NONAUTO	E2
	E1	SOUND	F2
	F1	TAKEBACK	D2

Note: Beep sound is given out for each key press.