

KENWOOD

Document Copyrights

Copyright 2006 by Kenwood Corporation. All rights reserved.

No part of this manual may be reproduced, translated, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, for any purpose without the prior written permission of Kenwood.

Disclaimer

While every precaution has been taken in the preparation of this manual, Kenwood assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. Kenwood reserves the right to make changes to any products herein at any time for improvement purposes.

RAPID CHARGER

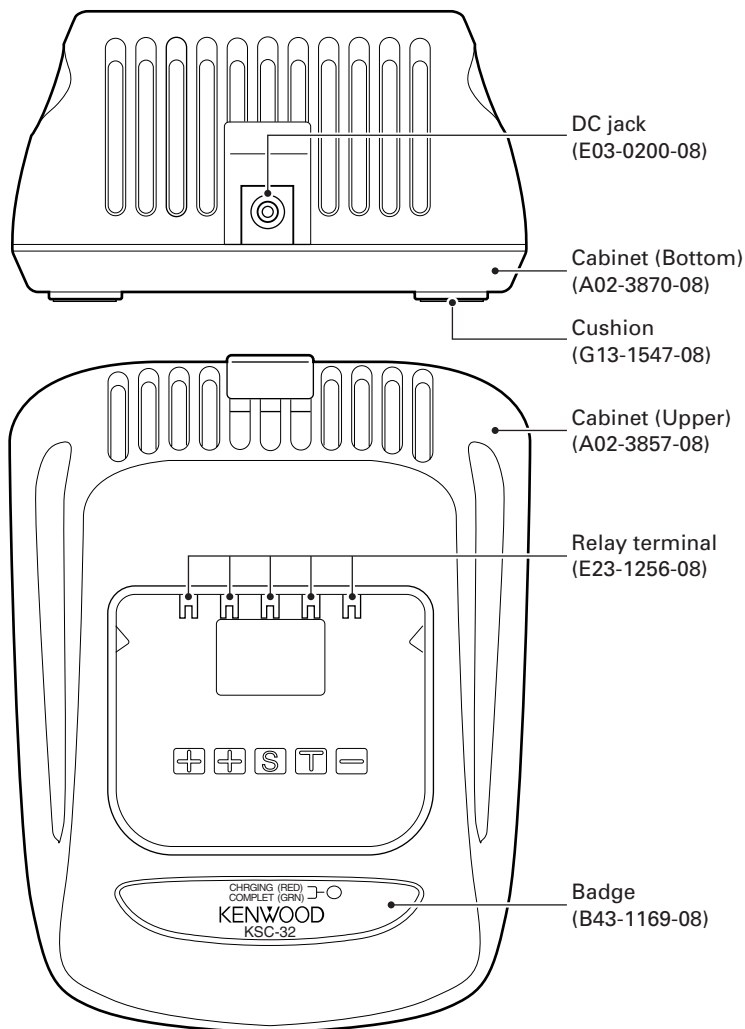
KSC-32

SERVICE MANUAL

REVISED

KENWOOD

© 2004-12 PRINTED IN JAPAN
B51-8693-10 (N) 194

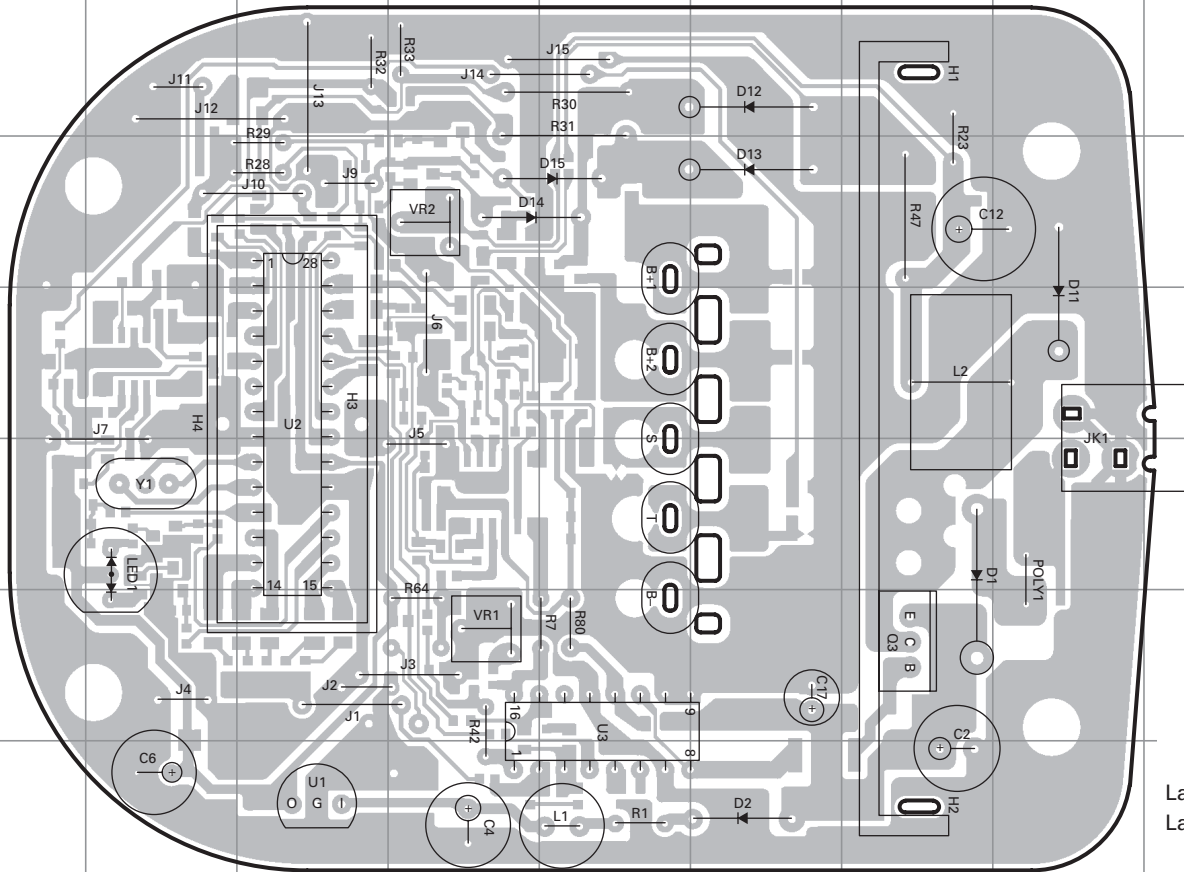


CONTENTS

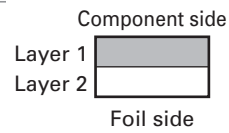
PC BOARD	2
SCHEMATIC DIAGRAM	3
FLOW CHART	5
PARTS LIST	BACK COVER
SPECIFICATIONS	BACK COVER

KSC-32 PC BOARD

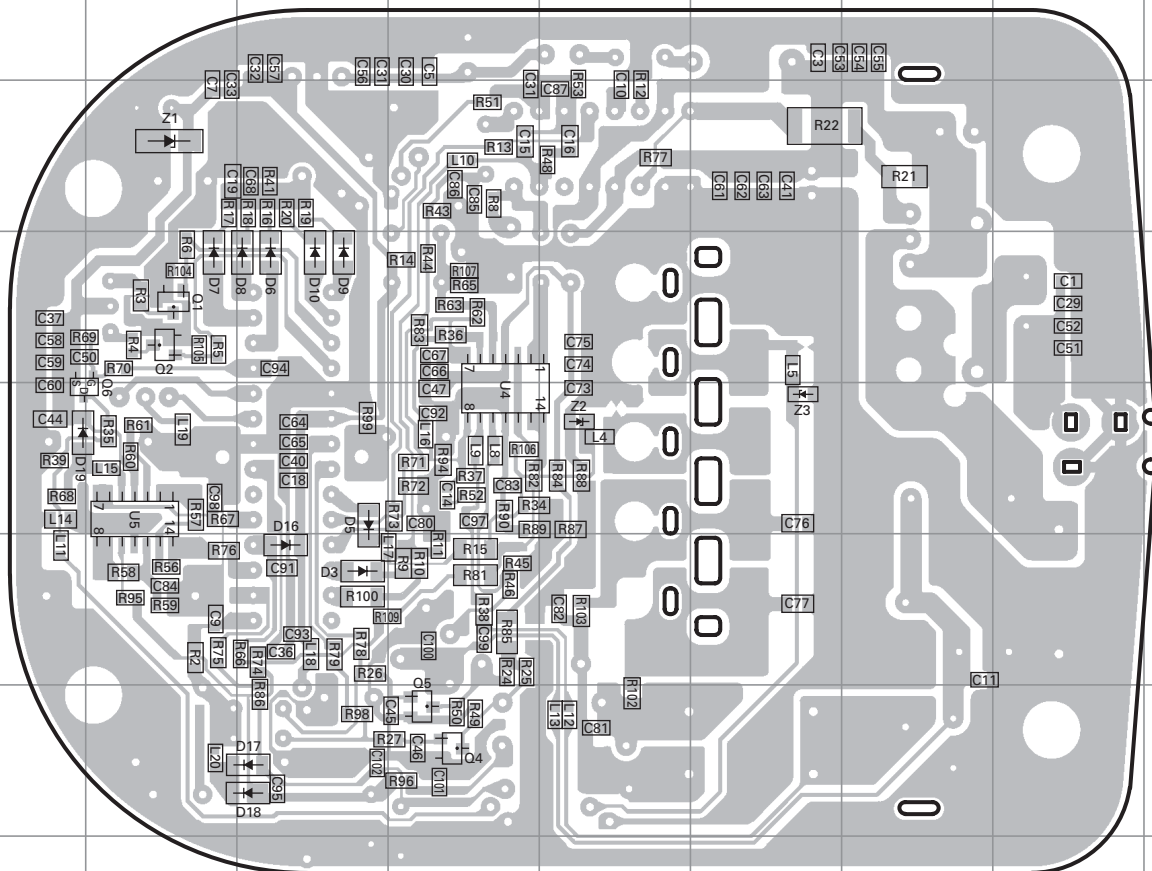
CHARGER UNIT (W02-3668-08) Component side view



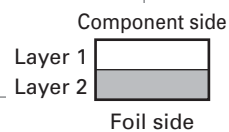
Ref. No.	Address
U1	7C
U2	4C
U3	6E
Q3	6G
D1	5G
D2	7F
D11	4H
D12	2F
D13	3F
D14	3D
D15	3E
LED1	5B



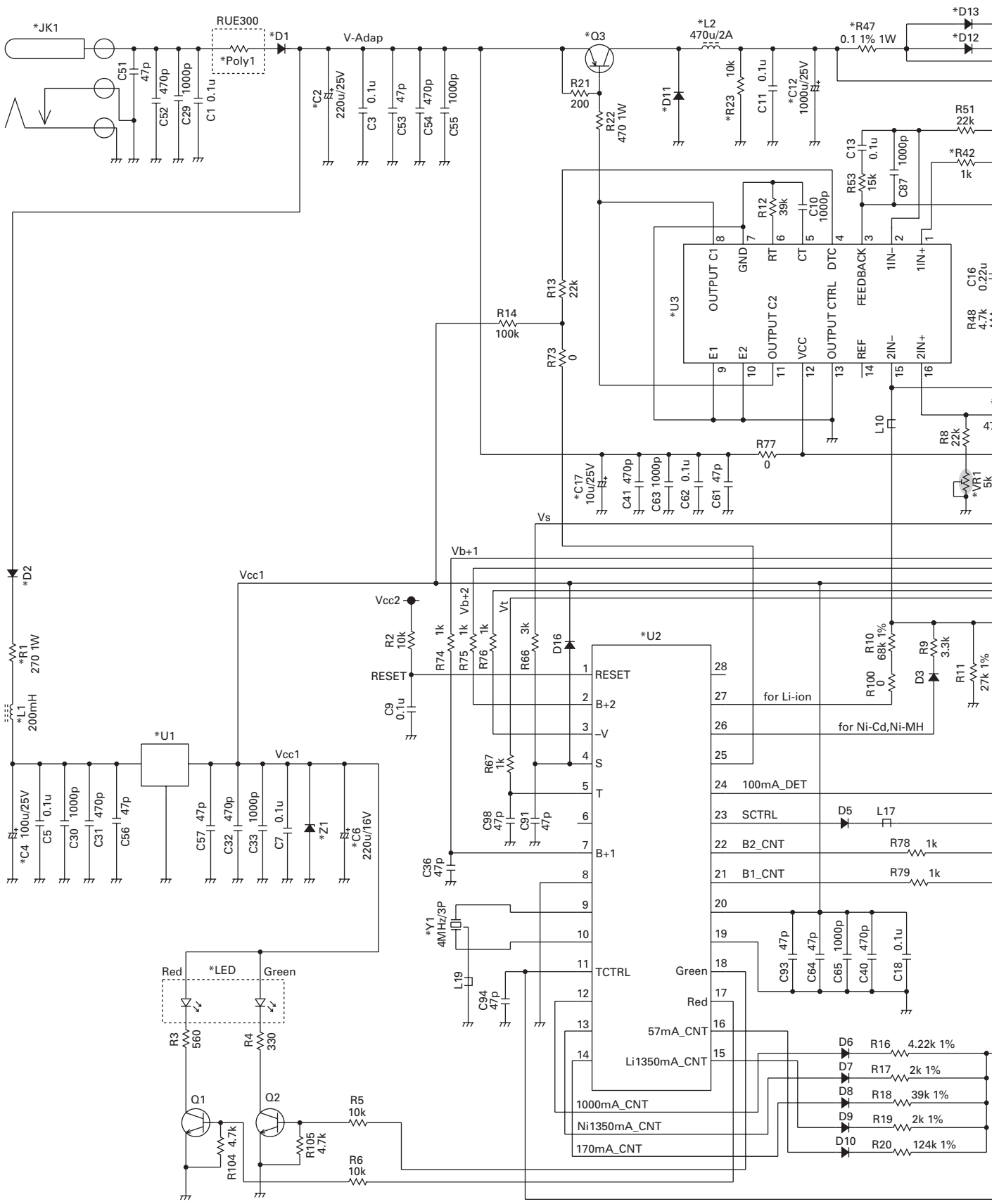
CHARGER UNIT (W02-3668-08) Foil side view



Ref. No.	Address
U4	11D
U5	11B
Q1	10B
Q2	10B
Q4	13D
Q5	13D
Q6	11A
D3	12C
D5	11C
D6	10C
D7	10B
D8	10C
D9	10C
D10	10C
D16	12C
D17	13C
D18	13C
D19	11A
Z1	9B
Z2	11E
Z3	11F



KSC-32 SCHEMATIC DIAGRAM

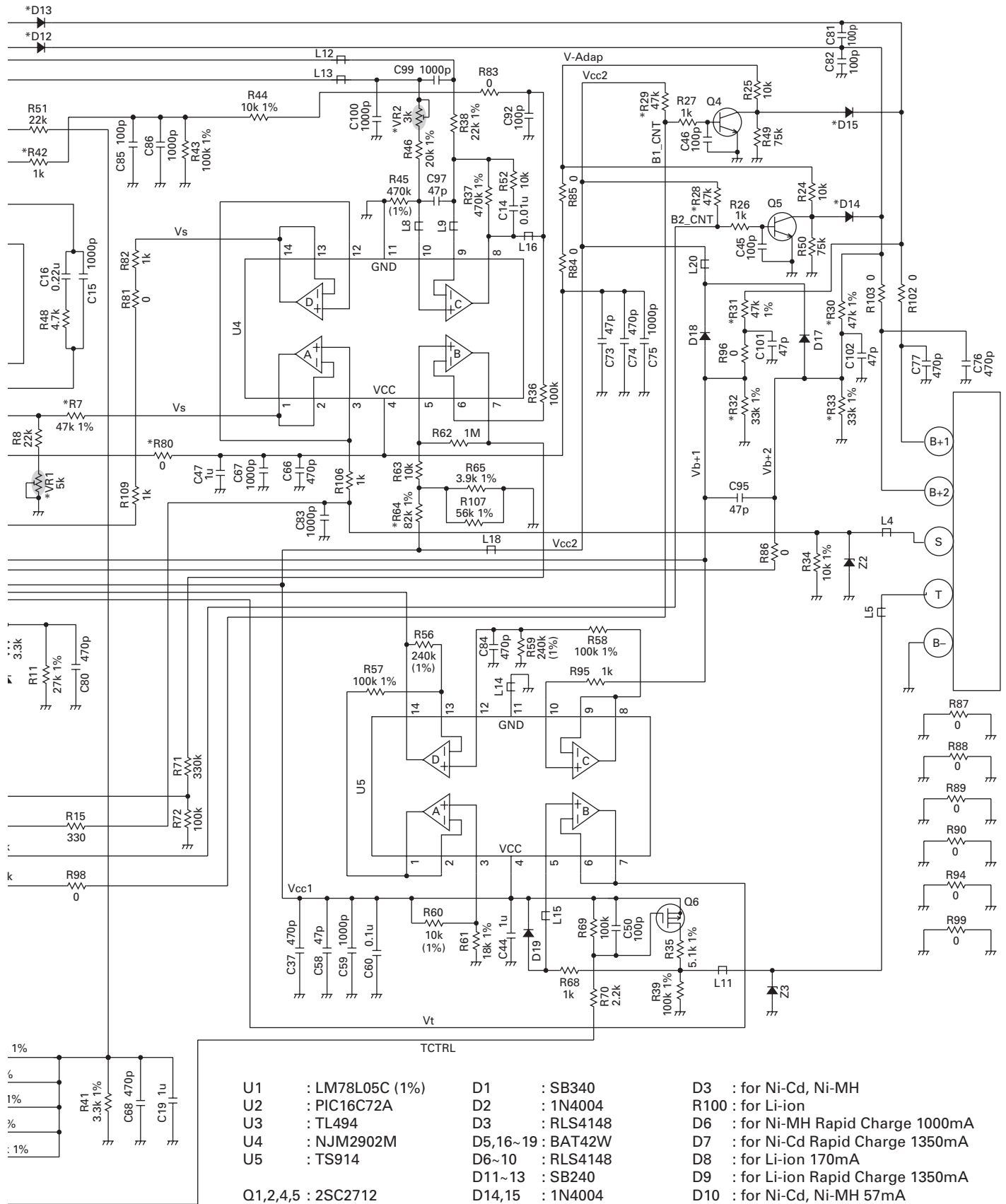


“*” Marks are lead wire parts

VR1 (RC 655MC 5K) : Adjust Li-ion 8.4V
 VR2 (RC 655MC 3K) : Adjust 57mA at Ni-Cd Trickle 10.80V

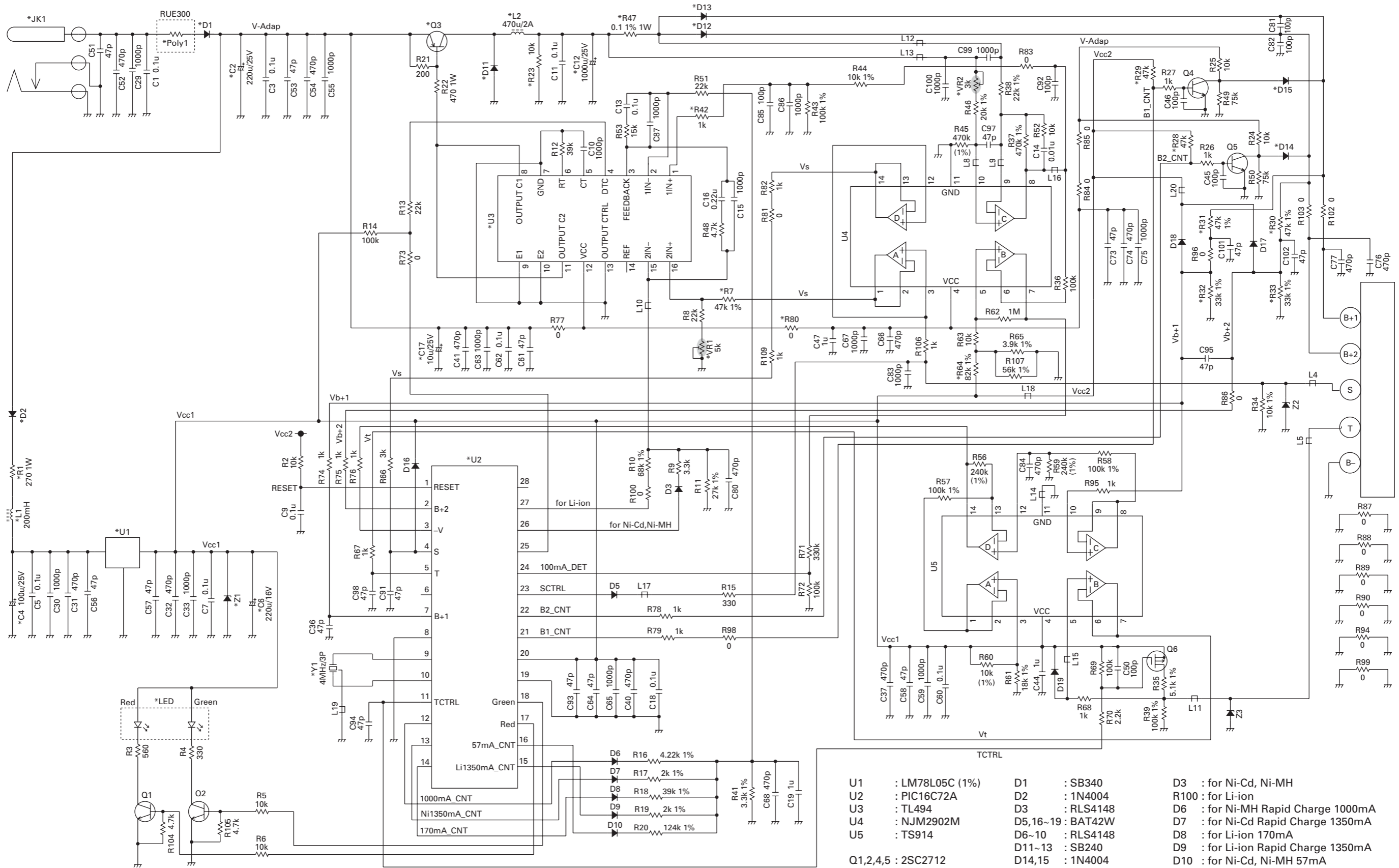
L1 : CHOKE 200mH
 L2 : CHOKE 470uH/2A
 L4,5,8~13,15~17,20 : BEADS 600Ω (SBK160808T-601Y-S)
 L14,18,19 : BEADS 600Ω (SBK201209T-601Y-S)

SCHEMATIC DIAGRAM KSC-32



- | | | |
|--------------------|-------------------|--------------------------------------------------------------|
| U1 : LM78L05C (1%) | D1 : SB340 | D3 : for Ni-Cd, Ni-MH |
| U2 : PIC16C72A | D2 : 1N4004 | R100 : for Li-ion |
| U3 : TL494 | D3 : RLS4148 | D6 : for Ni-MH Rapid Charge 1000mA |
| U4 : NJM2902M | D5,16~19 : BAT42W | D7 : for Ni-Cd Rapid Charge 1350mA |
| U5 : TS914 | D6~10 : RLS4148 | D8 : for Li-ion 170mA |
| Q1,2,4,5 : 2SC2712 | D11~13 : SB240 | D9 : for Li-ion Rapid Charge 1350mA |
| Q3 : 2SA1469 | D14,15 : 1N4004 | D10 : for Ni-Cd, Ni-MH 57mA
(Low Voltage, Trickle, Pulse) |
| Q6 : IRLML6302 | Z1 : PTZ5.6B/1W | |
| | Z2,3 : MMSZ5246BS | |

LED : MO59AGW-A-K



“*” Marks are lead wire parts

- L1 : CHOKE 200mH
- L2 : CHOKE 470uH/2A
- L4,5,8~13,15~17,20 : BEADS 600Ω (SBK160808T-601Y-S)
- L14,18,19 : BEADS 600Ω (SBK201209T-601Y-S)

VR1 (RC 655MC 5K) : Adjust Li-ion 8.4V
 VR2 (RC 655MC 3K) : Adjust 57mA at Ni-Cd Trickle 10.80V

- | | | |
|--------------------|-------------------|-------------------------------------|
| U1 : LM78L05C (1%) | D1 : SB340 | D3 : for Ni-Cd, Ni-MH |
| U2 : PIC16C72A | D2 : 1N4004 | R100 : for Li-ion |
| U3 : TL494 | D3 : RLS4148 | D6 : for Ni-MH Rapid Charge 1000mA |
| U4 : NJM2902M | D5,16~19 : BAT42W | D7 : for Ni-Cd Rapid Charge 1350mA |
| U5 : TS914 | D6~10 : RLS4148 | D8 : for Li-ion 170mA |
| Q1,2,4,5 : 2SC2712 | D11~13 : SB240 | D9 : for Li-ion Rapid Charge 1350mA |
| Q3 : 2SA1469 | D14,15 : 1N4004 | D10 : for Ni-Cd, Ni-MH 57mA |
| Q6 : IRLML6302 | Z1 : PTZ5.6B/1W | (Low Voltage, Trickle, Pulse) |
| | Z2,3 : MMSZ5246BS | |
| | LED : MO59AGW-A-K | |

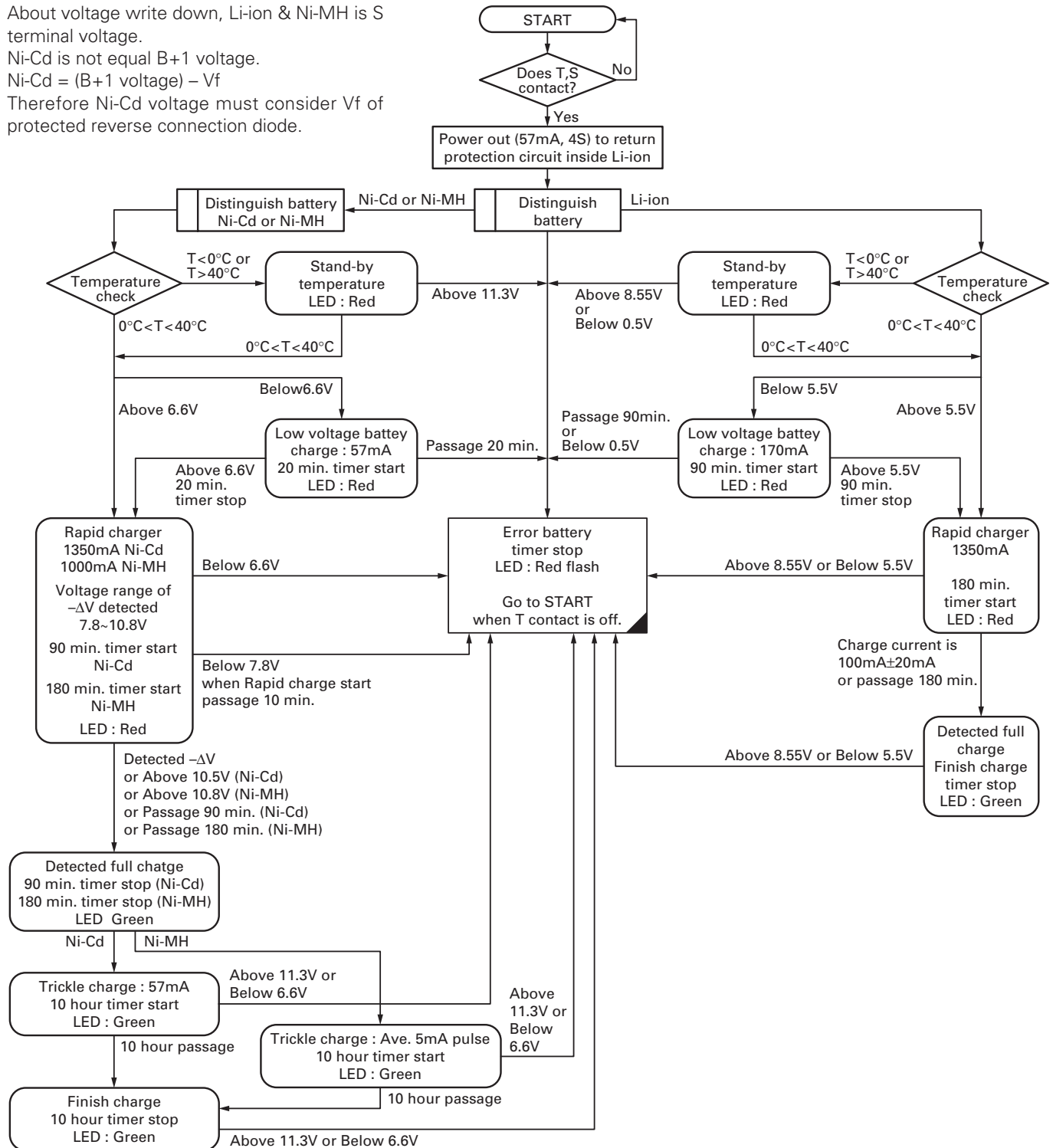
FLOW CHART

About voltage write down, Li-ion & Ni-MH is S terminal voltage.

Ni-Cd is not equal B+1 voltage.

Ni-Cd = (B+1 voltage) - Vf

Therefore Ni-Cd voltage must consider Vf of protected reverse connection diode.



KSC-32

PARTS LIST / SPECIFICATIONS

Parts List

* New Parts.

Ref. No.	Address	New parts	Parts No.	Description	Destination
KSC-32					
		*	A02-3857-08	CABINET UPPER	
		*	A02-3870-08	CABINET BOTTOM	
		*	B43-1169-08	BADGE	
		*	B62-1768-00	INSTRUCTION MANUAL	K, T E
		*	B62-1769-00	INSTRUCTION MANUAL	
			E03-0200-08	DC JACK	
		*	E23-1256-08	RELAY TERMINAL	
			G13-1547-08	CUSHION	
			N80-2610-45	SCREW	
		*	W02-3668-08	CHARGER UNIT	K T E
		*	W08-0976-05	AC ADAPTER	
		*	W08-0977-05	AC ADAPTER	
		*	W08-0978-05	AC ADAPTER	

Specifications

AC Voltage 100~240V
 Dimensions (W x H x D) 102 x 56.4 x 131.5 mm
 4-1/32 x 2-15/64 x 5-3/16 inches
 Weight (charger only) Approx. 190g / 0.42 lbs
 Approximate Charging Times
 KNB-31A (Ni-Cd : 7.2V, 1700mAh) 80 minutes
 KNB-32N (Ni-MH : 7.2V, 2500mAh) 170 minutes
 KNB-33L (Li-ion : 7.4V, 1700mAh) 130 minutes

KENWOOD CORPORATION

2967-3, Ishikawa-machi, Hachioji-shi, Tokyo, 192-8525 Japan

KENWOOD U.S.A. CORPORATION

P.O. BOX 22745, 2201 East Dominguez Street, Long Beach, CA 90801-5745, U.S.A.

KENWOOD ELECTRONICS CANADA INC.

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rembrücker Str. 15, 63150 Heusenstamm, Germany

KENWOOD ELECTRONICS BELGIUM N.V.

Leuvensesteenweg 248 J, 1800 Vilvoorde, Belgium

KENWOOD ELECTRONICS FRANCE S.A.

13, Boulevard Ney, 75018 Paris, France

KENWOOD ELECTRONICS U.K. LIMITED

KENWOOD House, Dwight Road, Watford, Herts., WD18 9EB United Kingdom

KENWOOD ELECTRONICS EUROPE B.V.

Amsterdamseweg 37, 1422 AC Uithoorn, The Netherlands

KENWOOD ELECTRONICS ITALIA S.p.A.

Via G. Sirtori, 7/9 20129 Milano, Italy

KENWOOD IBERICA S.A.

Bolivia, 239-08020 Barcelona, Spain

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD.

(A.C.N. 001 499 074)

16 Giffnock Avenue, Centrecourt Estate, North Ryde, N.S.W. 2113 Australia

KENWOOD ELECTRONICS (HONG KONG) LTD.

Unit 3712-3724, Level 37, Tower one Metroplaza, 223 Hing Fong Road, Kwai Fong, N.T., Hong Kong

KENWOOD ELECTRONICS SINGAPORE PTE LTD.

1 Ang Mo Kio Street 63, Singapore 569110

