

TiVo

CERTIFICATE OF SPECIFICATION

DESCRIPTION	TRANSMITTER REMOTE
MODEL	S6BL
RS MODEL	CRB97C00
Ver.	V1.0

CERTIFICATION SEAL

REMOTE SOLUTION CO., LTD

FACTORY & HEAD OFFICE

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Version History					
CUSTOMERS MODEL : S6BL					
Ver. No	DATE	PAGE	PART NAME	SPECIFICATION & MAKER	CHECK
1.0	19.07.16	-	-	First Edition	RH, Kim

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INSTITUTION : 2019.07.16	SPECIFICATION	MODEL NO:	3
REFORM :		S6V-BL	
DECISION : 2019.07.16	(TRANSMITTER REMOCON)		21

1. APPLICATION RANGE : APPLY THIS SPECIFICATION SHEET TO TRANSMITTER REMOCON

2. SPECIFICATION OF TRANSMITTER REMOCON

2-1 APPEARANCE : NO DEFECTS ON THE CASE, SUCH AS DEFORMATION, ATTACHED ALIEN THINGS, SPREAD OF PRINTING AND COARSE COMBINATION OF CASE, AND SHOULD BE EQUAL TO EVERY PRODUCTION LOT.

2-2 CHARACTERISTICS OF FRAMEWORK

2-2-1 CHECK THE FOLLOWINGS : THE WHOLE STRUCTURE OF CASES,
SOLDERING CONDITIONS OF ALL PARTS.

2-2-2 CHARACTERISTICS OF KEY PAD

A. KEYPAD LIFE TIME : NO MALFUNCTION ALLOWED WITH IN 300,000 OPERATIONS

B. KEY RETURN FORCE : Key pressing on different areas of the button and from different angle
with a force of 5N(inelastic test pin, diameter 1.5 mm)

C. TEST OF OPERATING LOAD : SHOULD BE OPERATED WITH KEY : 270 ~ 470 gf

D. RETURN OF RUBBER BUTTON : RELEASING THE BUTTON,
SHOULD BE RETURNED WELL

E. STRENGTH OF RUBBER BUTTON : STAND FOR 3 SECONDS UNDER
THE STRAIGHT LOAD

2-2-3 MAINTENANCE THE STRENGTH OF BATTERY COVER.

IN USUAL, NO TROUBLE IN INSERTING OR REMOVING THE BATTERY COVER.

2-2-4 CHARACTERISTICS OF BATTERY TERMINAL.

A. CONTACT RESISTANCE BETWEEN TERMINAL AND BATTERY : LESS THAN 0.5 (ohm)

B. HOLDING FORCE : MORE THAN 300gf

C. INSERTING FORCE : LESS THAN 1kgf

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2-3 ELECTRICAL CHARACTERISTICS

2-3-1 OPERATING & LEAKAGE CURRENT

- * IR CURRENT (AVERAGE)
 - 37mA $\pm$ 3 [VBAT : 3.0V]
- * RF CURRENT (AVERAGE)
 - 5 mA $\pm$ 1 [VBAT 3.0V]
- * VOICE TRANS CURRENT (AVERAGE)
 - 7 mA $\pm$ 2 [VBAT 3.0V]
- * BUZZER CURRENT (MAX)
 - 90mA $\pm$ 10 [VBAT 3.0V]
- * BACKLIGHT CURRENT (AVERAGE : 2.4 ~ 3.2V)
 - 30mA $\pm$ 5mA
- * LEAKAGE CURRENT (AVERAGE)
 - IR MODE : 2.5uA $\pm$ 1uA [VBAT 3.0V]
 - RF MODE : 25uA $\pm$ 5uA [VBAT 3.0V]

(MEASURE THE CURRENT, AFTER LEAVING FOR 1 MINUTE)

2-3-3 OPERATING VOLTAGE : MORE THAN DC 2.2V ~ 3.2V, BATTERY

2-3-4 FUNCTION OF LOW VOLTAGE DETECT : 2.4V $\pm$ 0.1V

2-3-5 OPERATING DISTANCE AND POINTING ANGLE

Vb : D.C 3.0V (ALKALINE BATTERY 'AA' * 2 EA)

2-3-5-1 IR RANGE

- * STRAIGHT (0 °) : MAX. 22m
- * Angle 30° Up / Left / Right : Min 10 (m)
- * Angle 20° Down : Min 10 (m)

2-3-5-2 RF RANGE

- * STRAIGHT (0 °) : MIN. 30m
- * sight at all directions with anelevation angle +/- 20°

2-3-6 Buzzer Test : MIN 75dB

Vb : D.C 3.0V (ALKALINE BATTERY 'AA' * 2 EA)

STRAIGHT(0 °) : 10Cm

2-3-7. BACKLIGHT FUNCTION ON/OFF CONDITION

- TURN ON (On time : 6sec)
- Conditions of use of ambient light 10LUX or higher.

The backlight illuminates when the remote control button is pressed or the remote control is moved under the operating conditions.(Light Sensing and Move detectiong)

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3. ENVIRONMENT CHARACTERISTICS

3-1 Fundamental performance

- A. Operating Current
- B. Stand-by Current
- C. Operating Voltage
- D. Performance
- E. Exterior

3-2 Dry Heat Test

- A. Temperature : $60 \pm 3^{\circ}\text{C}$
- B. Humidity : 5 ~ 10%
- B. Time : 96 Hrs.

3-3 Damp Heat Test

- A. Temperature : $65 \pm 3^{\circ}\text{C}$
- B. Humidity : 90 ~ 95%
- B. Time : 96 Hrs.

3-4 Temperature Cycling

- A. Temperature : $65^{\circ}\text{C} \sim -10^{\circ}\text{C}$ / 3Cycles
- B. Time : 3Hrs

3-5 Cold Test

- A. Temperature : $-10 \pm 3^{\circ}\text{C}$
- B. Time : 96 Hrs.

3-6 Stressing Chip-On-Board

One cycle of -40°C uncontrolled relative humidity (rh) for 8 hours; 70°C at 10% rh for 8 hours; 70°C at 90% rh for 8 hours and room ambient until stable. Temperature ramp rate is 2°C per minute.

3-7 Vibration Test

- A. Vibration width : 1.5mm
- B. Sweep Frequency : 10~55 Hz
- C. Test Period : 6 Hrs / each direction (X Y Z)

3-8 ESD Test

- A. $\pm 8\text{kV}$, 1Hz, 10 Times Contact discharge
- B. $\pm 16\text{kV}$, 1Hz, 10 Times Air contact discharge

3-9 Life Time

- A. Once Per second for 500,000 cycles

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3-10 Drop (with batteries installed)

- A. Height: 80 cm (31.5 in.)
- B. Floor: hard vinyl tiles over concrete foundation
- C. Impact: Six impact locations on the remote control

3-11 Resistance to Oil and Liquids

- A. Apply the following liquids individually and the confirm appearance after keeping them in a normal ambient
- B. Condition for 96 hours : cooking oil, butter, margarine, hair spray, soy sauce, artificial sweat lanolin

3-12 Liquid Test

- A. 50 cc of coffee including 2cc sugar in solution, poured over the top of the remote. After a drying time of 48hours, the Remote shall operate normally.

3-13 Distance Test

- A. IR Range
 - Straight line from a Receiver module : Min 22 (m)
 - Angle 30° Up / Left / Right : Min 10 (m)
 - Angle 20° Down : Min 10 (m)

B. RF Range

- The range shall be greater than 30 meters line of sight at all directions with anelevation angle +/- 20°

3-14 Alcohol Test

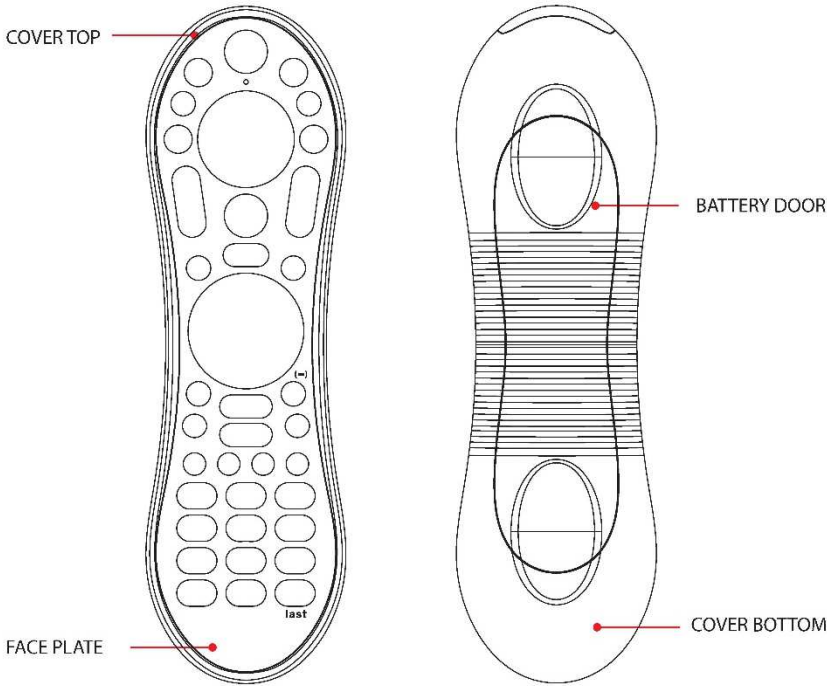
- A. Using a cloth soaked in isoporpyl alcohol, rub key legend 100 times with 200gF

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5. DESIGN SPECIFICATION

5-1. Cover Top, Cover Bottom, Battery Door, Face Plate

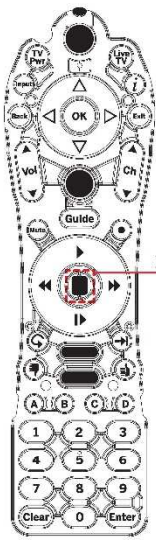
DESIGN SPECIFICATION	Model : CRB97C00
	
1. MOLD	
1.1 MOLD COLOR * COVER TOP : Lotte PC+ABS, NH1017SG, K21441 (B/K) * FACE PLATE : Lotte MABS, TX-0510T, G02244 (translucence B/K) * COVER BOTTOM, B/T DOOR : Lotte MABS, SF-0950, K21294 (B/K) * IR WINDOW : Lotte PC, SC1220R, 40697B (D/Red)	
1.2 SILK COLOR * FACE PLATE : WHITE	

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5. DESIGN SPECIFICATION

5-2. Rubber

DESIGN SPECIFICATION		Model : CRB97C00	
			
RUBBER	SILK (1235C, 2995C, 485C, 361C)	LASER (WHITE & COLOR VIEW)	LASER (CLEAR VIEW)
2 RUBBER			
2.1 RUBBER COLOR 2.1.1 TRANSLUCENCE WHITE 2.3 SPRAY COLOR 2.3.1 WHITE 2.3.2 BLACK		2.2 SILK COLOR 2.2.1 P/T 1235C (YELLOW) 2.2.2 P/T 2995C (BLUE) 2.2.3 P/T 485C (RED) 2.2.4 P/T 361C (GREEN) 2.4 COAT COLOR 2.4.1 NON SOFT COATING 2.4.2 OTHER SOFT COATING	

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5. DESIGN SPECIFICATION

5-3. Key Cap

DESIGN SPECIFICATION		Model : CRB97C00			
3.2.3 3.3.1 TIVO KEY  3.2.1 3.2.2 3.2.5 3.3.2 VOICE KEY  3.2.2 3.2.6 3.3.2 PAUSE KEY  3.2.1 3.2.2 3.2.7 3.3.2 SKIP KEY  3.2.1 3.2.4 3.2.3 3.2.1 3.3.2 NETFILIX KEY 	   SKIP NETFLIX	   SKIP NETFLIX	   SKIP NETFLIX	   SKIP NETFLIX	LASER (CLEAR VIEW) LASER (WHITE VIEW) LASER (CLEAR VIEW) LASER (185C VIEW)
3 KEYCAP					
3.1 KEY CAP COLOR * TIVO, PAUSE KEY : TX-0510T, G02244 (TRANSLUCENCE B/K) * VOICE, SKIP, NETFILIX KEY : PC, SC1220R, MP (CLEAR) 3.2 SPRAY COLOR 3.2.1 WHITE 3.2.2 BLACK 3.2.3 SILVER 3.2.4 P/T 185C(RED) 3.2.5 P/T 2995C(BLUE) 3.2.6 P/T 1235C(YELLOW) 3.2.7 P/T 361C(GREEN)			3.3 COATING 3.3.1 UV GLOSSY COATING 3.3.2 SF MATT COATING(soft)		

FCC warning

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF warning for Portable device

The device has been evaluated to meet general RF exposure requirement.

The device can be used in portable exposure condition without restriction.