

## 12. Product function description

### 1. Function introduction

Bluetooth button , Google voice, infrared learning, SmartRCU , backlight

### Second, the hardware part

- Main control chip: RTL8752CJF
- Indicator light: 1 LED red indicator light
- Backlight: 11 white backlights
- Launch tube: 1 launch tube
- Antenna form: PCB antenna

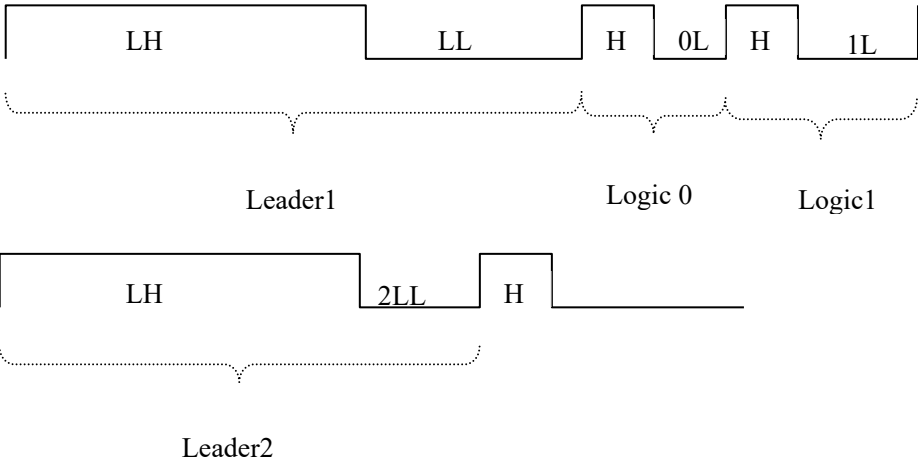
### 3. Functional requirements

#### 1. Bluetooth pairing

step	operate
enter pairing mode	Case 1 : When the remote control has no pairing information, press any button to enter the pairing mode (except the learning button)  Case 2: Press and hold " <b>HOME+BACK</b> " at the same time for 3 seconds, clear the pairing information, and then send the pairing broadcast to enter the pairing mode
Pairing time and indicator	1: Enter pairing mode, the red light flashes quickly (5-6 times per second)  2: The pairing is successful, the indicator light is always on for 3s and then goes out  3: Pairing fails, the indicator light flashes for 60 seconds and exits pairing mode  4: When pairing by pressing the key combination, first clear the previous

	pairing record
bluetooth device name	BH100J

## 2. Infrared code format and parameters



Note: NEC-N format IC: PT6121/2 UPD6121[T32DBA]; low byte read code first, duty ratio: 1:3;



Leader1	8B Custom		8B Custom		8B Data		8B Data/		Delay1
©Leader2			Delay2				To © Cycle		
Name	KHz	LH	LL	H	0L		1L	2LL	C
T32DBA(NEC)	37.90k	9.00m	4.50m	560u	560u		1.69m	2.25m	108m

## 3. Key code value

### 1) Key function

When any key is pressed, the white backlight lights up, and if there is no more key press within 4s, the backlight turns off. When the backlight is on, the key appears again to start timing for 4s, and the backlight is also on for 4s after long-pressing the key .

### 2) Key code value:

key sequ ence	key name	IR code: NEC	Usage page	Usage ID	NOTE
		User code: 0x 00,FF			
	TV POWER 	0xF1	/	/	1: Support manual learning 2: Support SmartRCU
	TV SOURCE 	0xF2	/	/	1: Support manual learning 2: Support SmartRCU
	BOX Power	/	0x0C	0x0030	
	REWIND	/	0x0C	0x00B4	
	PLAY/PAUSE	/	0x0C	0x00CD	
	FAST_FORWARD	/	0x0C	0x00B3	
	Live TV	/	0x0C	0x0063	
	Record/REC	/	0x0C	0x00b2	
	Option	/	0x0C	0x0083	
	Youtube	/	0x0C	0x000c	
	On Demand	/	0x0C	0x0200	
	UP	/	0x0C	0x0042	
	DOWN	/	0x0C	0x0043	
	Left	/	0x0C	0x0044	
	Right	/	0x0C	0x0045	
	Center/OK	/	0x0C	0x0041	
	VOL+	/	0x0C	0x00e9	Smrat RCU support
	VOL-	/	0x0C	0x00ea	Smrat RCU support
	CH+	/	0x0C	0x009c	
	CH-	/	0x0C	0x009d	
	BACK	/	0x0C	0x0224	
	Assistance	/	0x0C	0x0221	
	Home	/	0x0C	0x0223	
	Menu	/	0x0C	0x0040	
	All Apps	/	0x0C	0x01A2	
	1	/	0x07	0x001E	
	2	/	0x07	0x001F	
	3	/	0x07	0x0020	
	4	/	0x07	0x0021	
	5	/	0x07	0x0022	
	6	/	0x07	0x0023	
	7	/	0x07	0x0024	
	8	/	0x07	0x0025	
	9	/	0x07	0x0026	
	Mute	/	0x0C	0x00e2	
	0	/	0x07	0x0027	
	TV/RADIO	/	0x0C	0x001c	
	OK+BACK	/	0x0c 0x0041+0x0c 0x0224		Bugreport
	DOWN+BACK	/	0x0c 0x0043+0x0c 0x0224		

## 4. Google ATV voice function

- 1) Support Google voice 1.0 spec;
- 2) Use Google ATV standard voice interface; support long key recording, and key release recording;
- 3) Voice key Press the key, and send out the press and release together;
- 4) After Google Voice is turned on, if the host has not received the command to turn off Google Voice, the remote control will automatically exit after a timeout of 30 seconds.

## 5. Infrared learning function

- 1) The learning function has a total of 2 buttons, the "TV POWER" and "TV SOURCE" buttons are the buttons for learning;
- 1) Press and hold the "learning button" for 3 seconds, the indicator light is always on, and the indicator light continues to be on when you let go to enter the learning function.
- 2) control to be learned at the infrared tube of the BH13J remote control, and press the button of the remote control to be learned.
- 3) After the learning is successful, the indicator light flashes three times quickly and then goes out and saves the learning data;
- 4) The learning failure indicator goes off immediately.
- 5) Press and hold the "VOL+ and VOL-" keys for 10 seconds, and the indicator light flashes 3 times to clear the infrared learning data and the infrared code configured by the SmartRCU .

### **Remark:**

- a) When learning, the transmitters of the two remote controllers should be on the same line, and the

distance should be within 3cm.

b) After entering the learning function, if no learning is performed within 20 seconds, it will automatically exit the learning state.

c) Repeatedly learning the same button, the previously learned code will be overwritten after learning, and the last learning signal will be retained; learning failure and learning overtime will not change the original learning data.

d) When pressing any non-learning key in the learning state , exit the manual learning function.

## 6. SmartRCU function \_

- 1) details, please refer to the SmartRCU standard document
- 2) TV POWER, TV SOURCE, VOL+, VOL- support SMartRCU function
- 3) Press and hold "VOL+ and VOL-" at the same time for 10 seconds, the red light flashes 3 times, clearing the infrared code configured by the SmartRCU , and also clearing the infrared learning data.

## 7. Other functions

- 1) Entering sleep and waking up: When the link is disconnected, the remote control enters the low-power sleep mode within 7s, and enters the deep sleep mode after 20 seconds ; when the link is disconnected, it does not enter the sleep deep sleep mode;
- 2) Press any key to wake up the remote control, and use the Bluetooth low energy protocol to establish a quick connection with the set-top box that has been coded, and send the corresponding key value.
- 3) the case of abnormal disconnection of the remote control (except when the host actively disconnects ), it will automatically send back a connection broadcast packet at intervals, with a timeout of 30s;

- 4) remote control is disconnected , after the power button sends a wakeup broadcast packet (2s), it sends a 7s return broadcast packet;
- 5) In the case of disconnection , the button sends back the connection broadcast packet (1s direct connection broadcast packet + 10s non-direct connection broadcast packet). During the broadcast process, it supports replying to the scan request of all devices. The scan response should contain the Bluetooth device name "BH100J", but only Support connect request of devices in the whitelist;

## 8. Power management

Power supply	2 AAA dry batteries
low power	$V_{BAT} \leq 2.3V \pm 0.2V$ ; when the battery is low, the indicator light flashes slowly (once in 1 second) during the key operation, and then goes out after flashing 3 times.
Power acquisition	Supports normal battery reading service for the host to read the battery level of the remote control.

## 9. The remote control supports ota (online) upgrade

In order to adapt to new needs or changes, the remote control needs to support ota upgrades. The upgrade package is sent to the Bluetooth remote control through the box side .

## 10. Software version number

1) Software version number: BH100J\_Vx.xx

Version number description: BH100J\_ is a fixed format, after the software version is updated, the cumulative update Vx.xx

# 1 1. VID & PID

Vendor ID: 0x1d5a

Product ID: 0x1800

## 12、Indicator light description

state	Running light indication		cycle
Manual pairing	Press and hold for 3s to enter the pairing state, the indicator light will be on, and the indicator will flash quickly for 60s after letting go, waiting for pairing		Flashing frequency: fast flashing (5-6 times per second)
Bluetooth connection	The pairing is successful, the indicator light is always on for 3s and then turns off Pairing failed, the light is off		
infrared key (Unpaired, disconnected)	button click	Function indicator flashes slowly	Frequency: Flashes 2 times in 1 second, and turns off after 6 flashes
		The backlight is always on for 4s and then turns off	
	long press	Function indicator flashes slowly	Frequency: Flashes 2 times in 1 second, and turns off after 6 flashes
		The backlight is always on for 4s and then turns off	
bluetooth button (link	button click	Function indicator does not light up	
		The backlight is always on	

succeeded)		for 4s and then goes off	
	long press	Function indicator does not light up	
		The backlight is always on for 4s and then goes off	
Infrared low power	During key operation	The indicator light flashes slowly	Frequency: flashes once per second, flashes 3 times and then turns off
bluetooth low power	During key operation	The indicator light flashes slowly	Frequency: flashes once per second, flashes 3 times and then turns off



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 .

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

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 harmful 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.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

#### Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirement in portable exposure condition without restriction.