

Response Time Test of IR Remote Controller and IR Receiver

Hardware version of T99X171T00	RCU part number	Hardware Version and date code of RCU
V005	R-C-MVN-BMM-BA01	V1.1 181207 / 1812

1 Hardware Portion

1.1 Test Environment Setup and Measurement Point



Figure 1: Test Environment

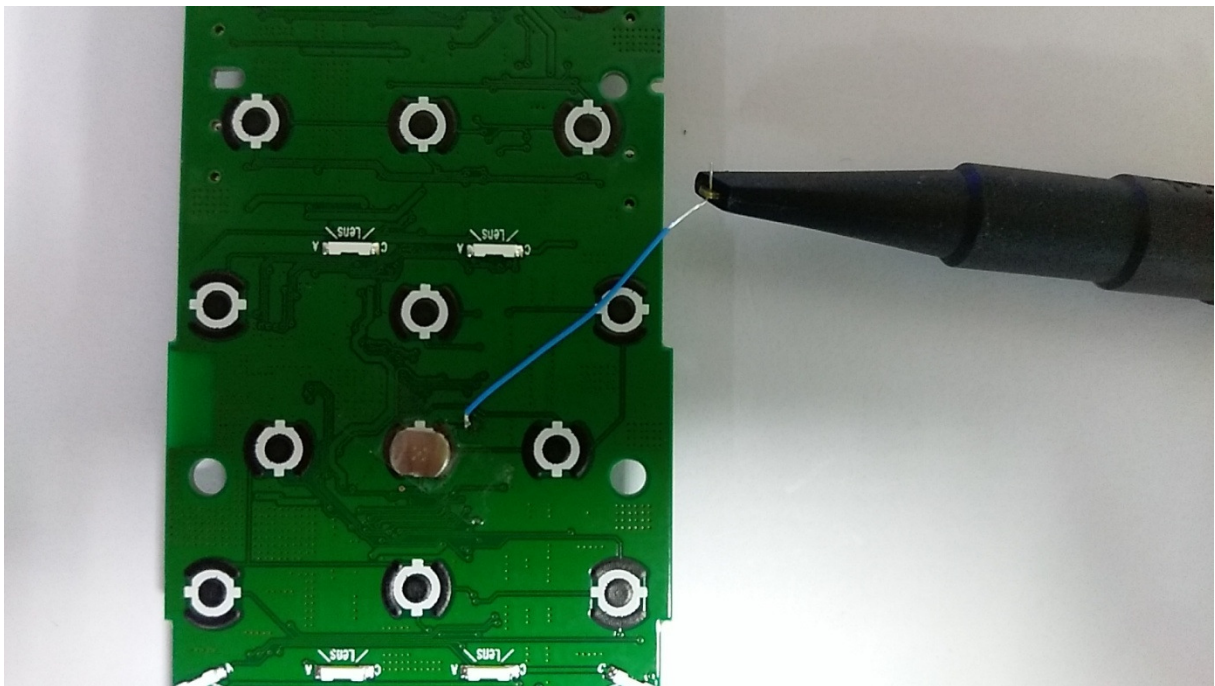


Figure 2: Measurement point of play button on RCU

2 Software Portion

We measured that the time from receiving IR interrupt in kernel driver to send keycode in PhoneWindowManager is **1ms** or less than 1ms.

```
03-12 10:06:50.359 3286 3362 I WindowManager: (framework)[WindowManager][Info] KeyEvent { action=ACTION_DOWN, keyCode=KEYCODE_DPAD_DOWN, scanCode=108, metaState=0, flags=0x0, repeatCount=0, eventTime=106046, downTime=106046, deviceId=3, source=0x301 } Current: 106047
03-12 10:06:50.359 3286 3362 I WindowManager: >>>> KeyBeforeDispatching keyCode : 20 -processed. Application handle the key.
03-12 10:06:50.440 3286 3362 I WindowManager: (framework)[WindowManager][Info] KeyEvent { action=ACTION_UP, keyCode=KEYCODE_DPAD_DOWN, scanCode=108, metaState=0, flags=0x0, repeatCount=0, eventTime=106128, downTime=106046, deviceId=3, source=0x301 } Current: 106128
03-12 10:06:50.440 F 106 105032821 audit: audit lost=200 audit rate limit=5 audit backlog limit=4
```

3 Conclusion

IR response speed that start from pressing play button on the RCU to send keycode in PhoneWindowManager is about 96.6ms.

IR Response Time Test Result		
Hardware: Pressing play button on the RCU	Software: Receiving IR interrupt in kernel driver to send keycode in PhoneWindowManager	Result (ms)
95.6 ms	1 ms	96.6