

Hints about using recent lirc

te=0x0572d40 [0,0]

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ir-ctl

install

```
# apt install v4l-utils
```

```
root@nuc2:~# ir-ctl --features
```

```
Receive features /dev/lirc0:
```

- Device can receive raw IR
- Set receive carrier
- Can set recording timeout min:100000 microseconds max:1000000 microseconds

```
Send features /dev/lirc0:
```

- Device can send raw IR
- Set carrier
- Set duty cycle

sniff

```
root@nuc2:~# ir-ctl -r -m -v
```

gpio-ir-tx

send IR signals using GPIO on cubieboard

device tree

<https://github.com/dpavlin/linux-gpio-pinout/blob/master/device-tree/gpio-ir-tx.dts>

```
/*  
 * add gpio-ir-tx to enable ir send on sunxi  
 * for RM Mini 3 IR board connected to pins  
 */
```

```

/dts-v1/;
/plugin/;

/ {
    compatible = "allwinner,sun4i-a10", "allwinner,sun7i-a20", "allwinner,sun50i-a64", "allwinner,sun7i-a20";

    /* Documentation/devicetree/bindings/leds/irled/gpio-ir-tx.txt */
    fragment@0 {
        target-path = "/";

        __overlay__ {
            irled@0 {
                compatible = "gpio-ir-tx";
                gpios = <gpio 1 10 0>; /* PB10 GPIO_ACTIVE_HIGH */
            };
        };
    };
};

```

```

root@cubieboard:~# modinfo gpio-ir-tx
filename:      /lib/modules/4.19.44-sunxi/kernel/drivers/media/rc/gpio-ir-tx.ko
license:      GPL
author:       Sean Young <sean@mess.org>
description:  GPIO IR Bit Banging Transmitter
alias:        of:N*T*Cgpio-ir-txC*
alias:        of:N*T*Cgpio-ir-tx
depends:
intree:       Y
name:         gpio_ir_tx
vermagic:     4.19.44-sunxi SMP mod_unload ARMv7 thumb2 p2v8

```

```

root@cubieboard:/home/dpavlin/linux-gpio-pinout# armbian-add-overlay device-tree/gpio-ir-tx.dts
Compiling the overlay
Copying the compiled overlay file to /boot/overlay-user/
Reboot is required to apply the changes

```

```

root@cubieboard:/home/dpavlin/linux-gpio-pinout# ./overlay-load.sh /boot/overlay-user/gpio-ir-tx.
+ dtb=/boot/overlay-user/gpio-ir-tx.dtbo
+ test -f /boot/overlay-user/gpio-ir-tx.dtbo
+ + awkmount { print $3 }
-t configfs
+ config=/sys/kernel/config
+ basename /boot/overlay-user/gpio-ir-tx.dtbo
+ name=gpio-ir-tx.dtbo
+ dir=/sys/kernel/config/device-tree/overlays/gpio-ir-tx.dtbo
+ test -d /sys/kernel/config/device-tree/overlays/gpio-ir-tx.dtbo
+ mkdir /sys/kernel/config/device-tree/overlays/gpio-ir-tx.dtbo
+ cat /boot/overlay-user/gpio-ir-tx.dtbo
+ cat /sys/kernel/config/device-tree/overlays/gpio-ir-tx.dtbo/status
applied

```

```

root@cubieboard:/home/dpavlin/linux-gpio-pinout# [Sun Jun  2 19:51:10 2019] rc rc1: GPIO IR Bit B
[Sun Jun  2 19:51:10 2019] rc rc1: lirc_dev: driver gpio-ir-tx registered at minor = 1, no receiv
[Sun Jun  2 19:51:10 2019] rc rc1: GPIO IR Bit Banging Transmitter as /devices/platform/irled@0/r
[Sun Jun  2 19:51:10 2019] rc rc1: lirc_dev: driver gpio-ir-tx registered at minor = 1, no receiv

```

```

root@cubieboard:~# apt-get install v4l-utils # to get ir-ctl

```

```

root@cubieboard:~# ir-ctl --device /dev/lirc1 --features
Receive features /dev/lirc1:
- Device cannot receive
Send features /dev/lirc1:
- Device can send raw IR
- Set carrier
- Set duty cycle

```

```
diff --git a/lirc/lirc_options.conf b/lirc/lirc_options.conf
index d6ddfcf..d5a6648 100644
--- a/lirc/lirc_options.conf
+++ b/lirc/lirc_options.conf
@@ -8,8 +8,8 @@
```

```
[lircd]
nodaemon      = False
-driver       = devinput
-device       = auto
+driver       = default
+device       = /dev/lirc0
output        = /var/run/lirc/lircd
pidfile       = /var/run/lirc/lircd.pid
plugindir     = /usr/lib/arm-linux-gnueabi/hf/lirc/plugins
```

```
root@cubieboard:/etc/lirc# ls -al /etc/lirc/lircd.conf.d/
total 52
drwxr-xr-x 2 root root 4096 Jun  2 21:04 .
drwxr-xr-x 3 root root 4096 Jun  2 21:57 ..
-rw-r--r-- 1 root root 33704 Apr  6 2017 devinput.lircd.conf.disabled
-rw-r--r-- 1 root root 3383 Jun  2 18:52 lg.conf
-rw-r--r-- 1 root root 615 Apr  6 2017 README.conf.d
```

```
root@cubieboard:/etc/lirc# cat /etc/lirc/lircd.conf.d/lg.conf
#
# this config file was automatically generated
# using lirc-0.8.2(iguanaIR) on Thu Jul 15 09:15:21 2010
#
# contributed by Stale Nestas
#
# brand: LG
# model no. of remote control:
# devices being controlled by this remote: LG42H3000
#
```

begin remote

```
name LG_42H3000
bits 16
flags SPACE_ENC|CONST_LENGTH
eps 30
aeps 100
```

```
header 9008 4442
one 533 1652
zero 533 533
ptrail 535
repeat 9001 2204
pre_data_bits 16
pre_data 0x20DF
gap 107753
toggle_bit_mask 0x0
```

begin codes

```
KEY_POWER 0x10EF # Was: power
input 0xD02F
energy 0xA956
tv/rad 0x0FF0
avmode 0x0CF3
KEY_1 0x8877 # Was: 1
KEY_2 0x48B7 # Was: 2
KEY_3 0xC837 # Was: 3
KEY_4 0x28D7 # Was: 4
```

```

KEY_5                0xA857                # Was: 5
KEY_6                0x6897                # Was: 6
KEY_7                0xE817                # Was: 7
KEY_8                0x18E7                # Was: 8
KEY_9                0x9867                # Was: 9
KEY_0                0x08F7                # Was: 0
KEY_LIST             0xCA35                # Was: list
qview                0x58A7
KEY_VOLUMEUP        0x40BF                # Was: vol+
KEY_VOLUMEDOWN      0xC03F                # Was: vol-
KEY_MUTE             0x906F                # Was: mute
KEY_CHANNELUP       0x00FF                # Was: p+
KEY_CHANNELDOWN     0x807F                # Was: p-
KEY_UP              0x02FD                # Was: up
KEY_DOWN            0x827D                # Was: down
KEY_LEFT            0xE01F                # Was: left
KEY_RIGHT           0x609F                # Was: right
KEY_OK              0x22DD                # Was: ok
KEY_MENU            0xC23D                # Was: menu
KEY_EXIT            0x14EB                # Was: return/exit
KEY_RED             0x4EB1                # Was: red
KEY_GREEN           0x8E71                # Was: green
KEY_YELLOW          0xC639                # Was: yellow
KEY_BLUE            0x8679                # Was: blue
KEY_TEXT            0x04FB                # Was: text
topt                0x847B
KEY_SUBTITLE        0x9C63                # Was: subtitle
simplink            0x7E81
qmenu               0xA25D
KEY_INFO            0x55AA                # Was: info
# KEY_INFO           0xD52A                # Was: guide
KEY_FAVORITES       0x7887                # Was: fav
end codes

end remote

```

RaspberryPi

<https://www.raspberrypi.org/forums/viewtopic.php?t=235256>

```

sudo apt install dh-exec doxygen expect libasound2-dev libftdi1-dev libsystemd-dev libudev-dev li
mkdir build
cd build
apt source lirc
wget https://raw.githubusercontent.com/neuralassembly/raspi/master/lirc-gpio-ir-0.10.patch
patch -p0 -i lirc-gpio-ir-0.10.patch
cd lirc-0.10.1
debuild -uc -us -b
cd ..
sudo apt install ./liblirc0_0.10.1-5.2_armhf.deb ./liblircclient0_0.10.1-5.2_armhf.deb ./lirc_0.1

```

so, let's rebuild lircd

```

pi@rpi2 ~ $ sudo apt-get build-dep lirc
pi@rpi2 ~ $ sudo bash

```

```
root@rpi2:/home/pi# mkdir build-lirc
root@rpi2:/home/pi# cd build-lirc/

root@rpi2:/home/pi/build-lirc# apt source lirc

root@rpi2:/home/pi/build-lirc# wget https://raw.githubusercontent.com/neuralassembly/raspi/master

root@rpi2:/home/pi/build-lirc# patch -p0 -i lirc-gpio-ir-0.10.patch

root@rpi2:/home/pi/build-lirc# cd lirc-0.10.1/

root@rpi2:/home/pi/build-lirc/lirc-0.10.1# apt install devscripts # debuild

root@rpi2:/home/pi/build-lirc/lirc-0.10.1# debuild -uc -us -b
```