Manuals+ — User Manuals Simplified.

TAURUS-8T4 Transmitter Remote Control Base Module User Guide

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TAURUS-8T4 Transmitter Remote Control Base Module

Operation

Press any of the switches to operate.

The Transmitter will auto sleep between operations to save power.

RF Transmit GREEN LED operates when Taurus is transmitting an RF signal.

RF Acknowledge (if configured):

GREEN LED will Flash at high speed to indicate that an acknowledgment has successfully been received back form the receiver.

RED LED will Flash at high speed to indicate that an acknowledgment has not been received back form the receiver.

Low Battery: If battery requires recharging Low Battery LED illuminates for 3 seconds after each operation.

Recharging the Battery

Recharge with either USB Cable or QI Wireless Charger
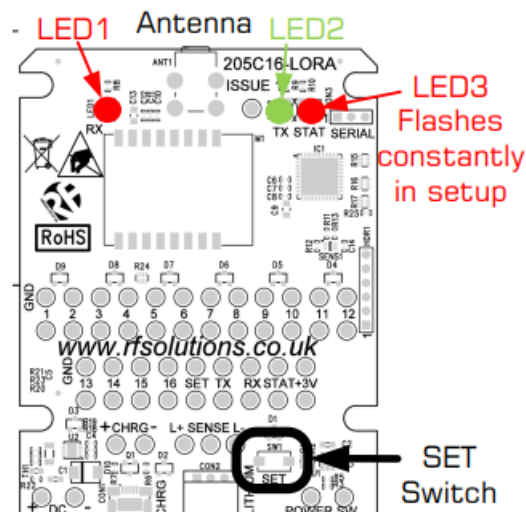

When Charging the Battery RED LED gives a slow Flash indicates charging is in progress.
When fully charged the GREEN LED is illuminated
Note: If the Battery becomes very depleted it can take a few minutes before there is adequate charge to start the RED LED to flash!

Configuring Modes of Operation

To configure the modes of operation, unscrew the six enclosure fixing screws to access the internal circuit board. The SET switch is used to configure the operating modes.
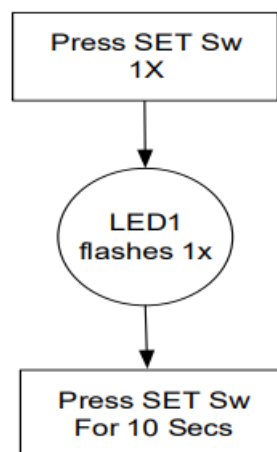
The Following Modes can be configured using the SET Switch

1. RF Mode of Transmission (FM or LORA Mode)
2. Acknowledgment back from the Receiver
3. Automatic Watchdog Transmissions
4. Continuous or State Change Transmission

TAURUS Transmitters are factory Shipped with the following Settings

RF Transmission	FM
Acknowledgment	OFF
Watchdog	OFF
Transmission Type	Continuous

Restoring TAURUS to Factory Default

```
┌─────────────────┐
│  Press SET Sw   │
│       1X        │
└─────────────────┘
         │
         ▼
      ╱──────╲
     │  LED1  │
     │flashes │
     │   1x   │
      ╲──────╱
         │
         ▼
┌─────────────────┐
│  Press SET Sw   │
│   For 10 Secs   │
└─────────────────┘
```
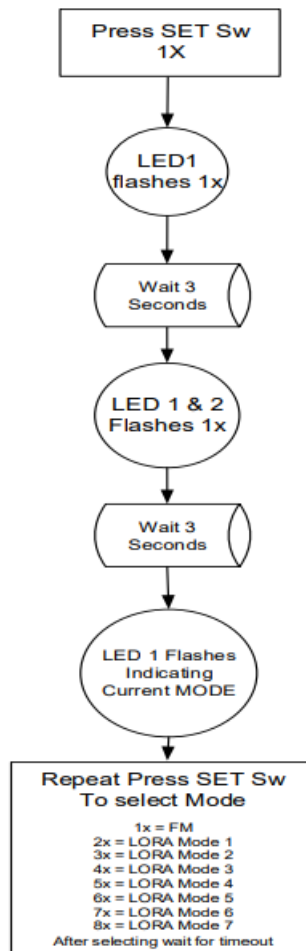
To Set the RF Transmission MODE

This sets the type of RF Transmission.
Possible options are FM, or LORA Modes 0 – 7
FM or LORA mode 0 provides the quickest response; from Transmitter sw pressed to Receiver Relay output.
LORA mode 7 provides the longest operating range but with the longest time delay of from button press to receiver relay actuation.

```
┌─────────────┐
│ Press SET Sw│
│     1X      │
└─────────────┘
       │
       ▼
   ╭─────────╮
   │  LED1   │
   │flashes 1x│
   ╰─────────╯
       │
       ▼
   ╭─────────╮
   │ Wait 3  │
   │ Seconds │
   ╰─────────╯
       │
       ▼
   ╭─────────╮
   │LED 1 & 2│
   │Flashes 1x│
   ╰─────────╯
       │
       ▼
   ╭─────────╮
   │ Wait 3  │
   │ Seconds │
   ╰─────────╯
       │
       ▼
   ╭──────────────╮
   │ LED 1 Flashes│
   │  Indicating  │
   │ Current MODE │
   ╰──────────────╯
       │
       ▼
┌──────────────────────┐
│  Repeat Press SET Sw │
│    To select Mode    │
│     1x = FM          │
│    2x = LORA Mode 1  │
│    3x = LORA Mode 2  │
│    4x = LORA Mode 3  │
│    5x = LORA Mode 4  │
│    6x = LORA Mode 5  │
│    7x = LORA Mode 6  │
│    8x = LORA Mode 7  │
│ After selecting wait for timeout │
└──────────────────────┘
```

Notes

1. Range is dependant on many factors including the mode of transmission. Range can be reduced by 75% in built up areas with poor antenna, and environmental conditions.
2. Battery life quoted is approximate based on 30 operations per day.

RF Transmission	Mode (No of LED1 Flashes)	Propagation Time from TX to output Activated (approx)	Operations from a Single battery charge
FM	1	20 mS	1Million
LoRa Mode 1	2	20 mS	~550K
LoRa Mode 2	3	40 mS	288K
LoRa Mode 3	4	80 mS	144K
LoRa Mode 4	5	160 mS	72K
LoRa Mode 5	6	320 mS	36K
LoRa Mode 6	7	640 mS	18K
LoRa Mode 7	8	1.28 Secs	~9,000

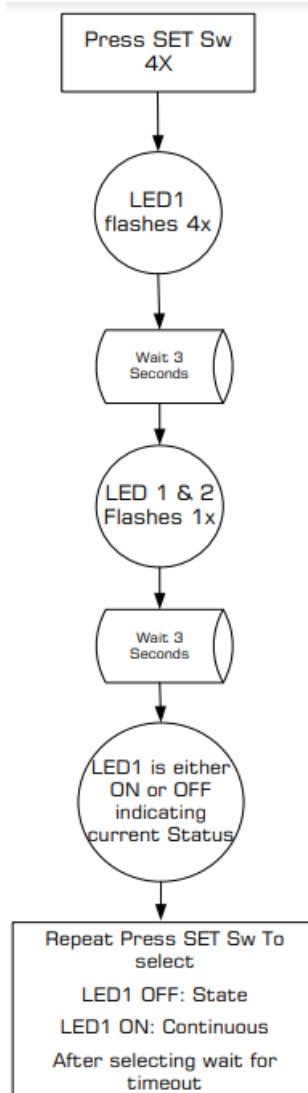**To Set Continuous or State Change RF Transmissions**

When a switch button is operated, TAURUS will transmit a "Button Down" RF Transmission.
When a switch button is released, TAURUS will transmit a "Button Up" RF Transmission.

Continuous Transmit
TAURUS repeat transmits "button Down" in short bursts for as long as switch button is pressed.
If the Acknowledgment is ON the receiver will reply after each RF transmission burst.
This is ideally suited to momentary operation where the receiver output needs to be active as long as the user presses down a TAURUS Button.

State Change Transmit
TAURUS transmits an RF transmission only when the switch button is pressed or released (i.e. a state change).
On each of these "state changes" TAURUS transmits up to 4 transmissions, or, "RF packets" (which can be seen by the GREEN LED flashing up to 4 times,
If the Acknowledgment is ON the receiver will reply immediately.
After receiving an Acknowledgment the TAURUS will cease sending any remaining of the 4 transmissions.

```
        ┌─────────────┐
        │ Press SET Sw│
        │     4X      │
        └─────────────┘
               │
               ▼
           ╭───────╮
          │  LED1   │
          │flashes 4x│
           ╰───────╯
               │
               ▼
          ╭─────────╮
          │ Wait 3  │
          │ Seconds │
          ╰─────────╯
               │
               ▼
           ╭───────╮
          │ LED 1 & 2│
          │Flashes 1x│
           ╰───────╯
               │
               ▼
          ╭─────────╮
          │ Wait 3  │
          │ Seconds │
          ╰─────────╯
               │
               ▼
          ╭──────────╮
         │ LED1 is either│
         │  ON or OFF   │
         │  indicating  │
         │current Status│
          ╰──────────╯
               │
               ▼
   ┌──────────────────────┐
   │ Repeat Press SET Sw To│
   │      select           │
   │  LED1 OFF: State      │
   │  LED1 ON: Continuous  │
   │ After selecting wait for│
   │      timeout          │
   └──────────────────────┘
```

LED Status

Continuous Transmission Acknowledgement OFF		
Operation	**GREEN LED**	**RED LED**
Button is briefly pressed	Flashes briefly	No-operation
Button is held Down	Flashes constantly	No-operation
Button is released	Flashes briefly	No-operation

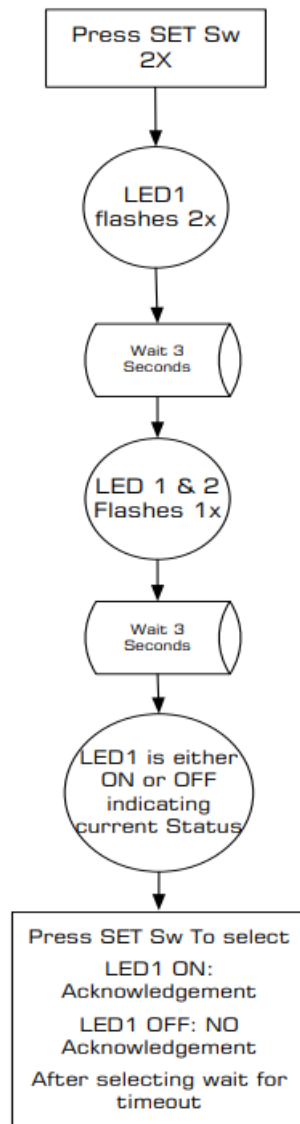| Continuous Transmission Acknowledgement ON		
Operation	**GREEN LED**	**RED LED**
Button is briefly pressed	Flashes briefly (TX then RX ack)	Flashes if no Ack received
Button is held Down	Flashes continually (TX then RX ack)	Flashes if no Ack received
Button is released	Flashes briefly (TX then RX ack)	Flashes if no Ack received

State Change Transmission Acknowledgement OFF		
Operation	**GREEN LED**	**RED LED**
Button is briefly pressed	Flashes 1X (TX)	No-operation
Button is held Down	No-operation	No-operation
Button is released	Flashes 1X (TX)	No-operation

State Change Transmission Acknowledgement ON		
Operation	**GREEN LED**	**RED LED**
Button is briefly pressed & Receiver, ack OK	Flashes (TX then RX ack)	No-operation
Button is briefly pressed & Receiver, NOK	Flashes continually (awaiting Ack)	Flashes to show no Ack received
Button is held Down	Flashes continually (awaiting Ack)	Flashes to show no Ack received
Button is released	Flashes 2 – 5X (TX and RX ack)	Flashes if no Ack received

To Set Acknowledgement Request

Acknowledgement Feature provides the user with LED indication that the receiver has successfully received the transmitters signal.
When activated the TAURUS Transmitter includes an acknowledgement request within each radio transmission.
The response from the receiver is indicated on the transmitter via the RED / GREEN LEDs.

```
┌──────────────┐
│ Press SET Sw │
│      2X      │
└──────┬───────┘
       │
       ▼
   ┌────────┐
   │  LED1  │
   │flashes │
   │   2x   │
   └───┬────┘
       │
       ▼
   ┌────────┐
   │ Wait 3 │
   │Seconds │
   └───┬────┘
       │
       ▼
   ┌────────┐
   │ LED 1 &│
   │   2    │
   │Flashes │
   │   1x   │
   └───┬────┘
       │
       ▼
   ┌────────┐
   │ Wait 3 │
   │Seconds │
   └───┬────┘
       │
       ▼
 ┌───────────┐
 │LED1 is    │
 │either     │
 │ON or OFF  │
 │indicating │
 │current    │
 │Status     │
 └─────┬─────┘
       │
       ▼
┌──────────────────┐
│Press SET Sw To   │
│select            │
│LED1 ON:          │
│Acknowledgement   │
│LED1 OFF: NO      │
│Acknowledgement   │
│After selecting   │
│wait for timeout  │
└──────────────────┘
```

RF Acknowledgment from Receiver – Warning! When Acknowledgement is ON, TAURUS requests an RF signal back from the receiver. Whilst in theory if an RF signal can be transmitted one way then it can be returned, in practice occasionally the received acknowledgement many not penetrate as well as the Taurus transmitted signal.
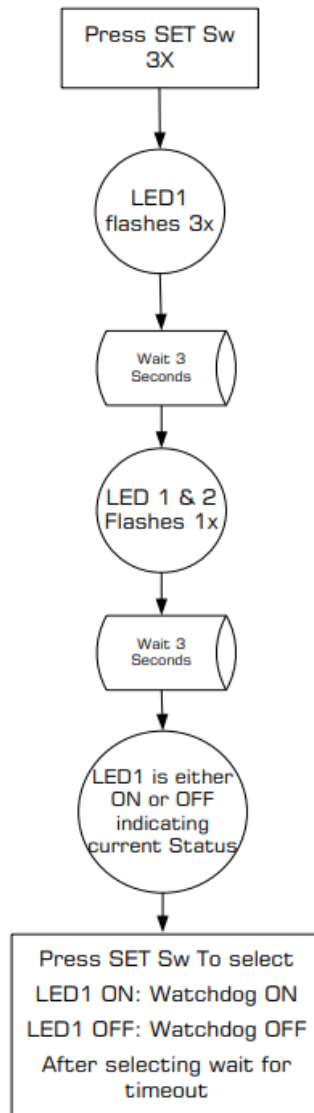
To Set Watchdog Transmissions

If enabled, TAURUS automatically transmits a background "watchdog" RF Signal approx. every
~45 secs,
RF Solutions Receivers with a Watchdog feature will hold a Relay contact "ENERGISED" as long as Watchdog is regularly received confirming the transmitter is in range and the system is operating correctly.
When using Watchdog it may be useful to incorporate a Power Switch to avoid premature battery discharge.
A power switch can be incorporated if this is required please contact our Sales Dept.

```
┌─────────────┐
│ Press SET Sw│
│     3X      │
└─────────────┘
       │
       ▼
   ╭───────╮
   │ LED1  │
   │flashes│
   │  3x   │
   ╰───────╯
       │
       ▼
   ┌───────╮
   │Wait 3 │
   │Seconds│
   └───────╯
       │
       ▼
   ╭───────╮
   │LED 1&2│
   │Flashes│
   │  1x   │
   ╰───────╯
       │
       ▼
   ┌───────╮
   │Wait 3 │
   │Seconds│
   └───────╯
       │
       ▼
  ╭──────────╮
  │LED1 is   │
  │either ON │
  │or OFF    │
  │indicating│
  │current   │
  │Status    │
  ╰──────────╯
       │
       ▼
┌─────────────────────┐
│Press SET Sw To select│
│LED1 ON: Watchdog ON │
│LED1 OFF: Watchdog OFF│
│After selecting wait for│
│      timeout        │
└─────────────────────┘
```

Simplified Declaration of Conformity (RED)

Hereby, RF Solutions Limited declares that the radio equipment type defined within this document is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: **www.rfsolutions.co.uk**

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Meets the following EC Directives:
DO NOT Discard with normal waste, please recycle.
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Specifies certain limits for hazardous substances.
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Waste Batteries and Accumulators Directive 2006/66/EC
Where batteries are fitted, before recycling the product, the batteries must be removed and disposed of at a licensed collection point.
RF Solutions battery producer number: BPRN00060.

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Documents / Resources

taurus TAURUS-8T4 Transmitter Remote Control Base Module [pdf] User Guide
TAURUS-8T4 Transmitter Remote Control Base Module, TAURUS-8T4, Transmitter Remote Control Base Module, TAURUS-8T4 Transmitter, Remote Control Base Module

References

- ⊕ **ons.co.uk**
- ⚙ **RF Solutions | Remote control systems, RF Modules, Antennas**
- ⚙ **RF Solutions | Remote control systems, RF Modules, Antennas**
- ⊕ **rtsintercom.com/**

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