

TAU-STK-L-01

GUIDE TO THE HYFIRE TAURUS SURVEY KIT LITE

WARNINGS AND LIMITATIONS

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors.

Ensure that this device is only used with compatible control panels.

Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation.

Smoke sensors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks.

Sensors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions.

Refer to and follow national codes of practice and other internationally recognized fire engineering standards.

Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

Use only for Taurus wireless fire detection and alarm systems.



Hyfire Wireless Fire Solutions Ltd - Unit B12a, Holly Farm Business Park, Honiley, Warwickshire, CV8 1NP - United Kingdom

WARRANTY

All devices are supplied with the benefit of a limited 5 years warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product.

This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage.

Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified.

Full details on our warranty and product's returns policy can be obtained upon request.

TW-SK-L-01

1. THE PURPOSE OF THE SURVEY KIT

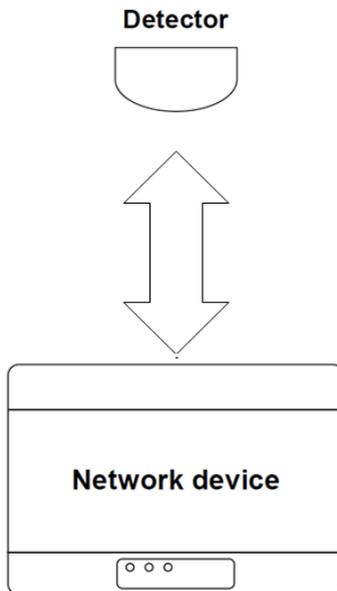
A survey kit is a diagnostic system that is used to test the wireless channels or frequency bands that are used, in general, by Taurus wireless systems.

The aim of the test is to determine the degree of reliability of the various channels, select the less congested ones and use those for building up the Taurus wireless system in the installation phase.

1.1 Survey Kit Main Parts

The Taurus survey kit is always composed by the following fundamental components:

- Survey Hub
Main unit to receive and transmit tests
- Survey Detector + Pole Attachment
To be used to determine locations where product would be installed. The bi-colour LED will flash to indicate signal strength
- CR123 Lithium-Ion Batteries (x6)
•2x for detectors, 4x for Hub (included)
- Power Adapter
•Comes with global adaptors
•Allows the Hub to be powered from mains (Please note, the batteries are not rechargeable)



Picture 1

2. POWERING UP - SURVEY DETECTOR

1. Remove the survey detector from its wall adapter base. Keep the base still and rotate the detector counter-clockwise; separate the detector from its base.
2. Under the detector, push the closing clip and extract the battery cover.
3. Ensure that the switch is in position 1, not 'ON', as shown in the photo below.



 Always remember to remove the batteries after you have finished using the survey test system: this will avoid discharging them.

Picture 2

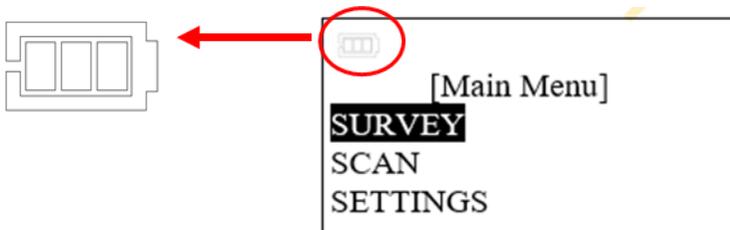
4. Insert both CR123A batteries, the first one in the **Secondary** or **B** location, the second one in the **Primary** or **A** location.

 Battery polarities must match the + and — signs printed on the detector

5. Detector LEDs will flash for a couple of seconds to indicate that the device is powering-up
Do not turn the switch to 'ON' position until starting the survey.

 Always remember to remove the batteries after you have finished using the survey test system: this will avoid discharging them.

Low battery indicator: in case of low battery the LED on the survey detector will start to flashing orange. At the same time on the network device appear the following icon on the upper left of display and the orange LED remains steady.

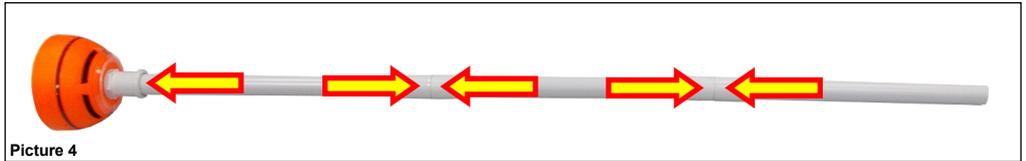


Picture 3

2.1 Elevating The Survey Detector

The survey detector comes with an extendable pole which can be used to elevate the device to wall or ceiling positions where a required product may be potentially installed.

The supplied pole connects as follows (picture 4):



The pole inserts into the survey detector as follows:



! Please ensure that the pole's assemble segments are fitted securely

! Make sure the detector's base and the network device cover are safely installed.

! Make sure the pole is well and safely inserted into the survey detector's adapter.

3. POWERING UP - Survey Hub

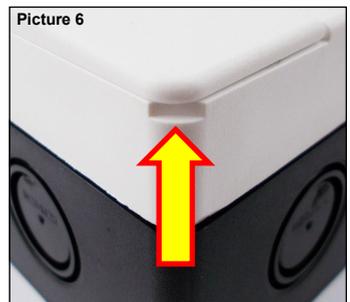
The survey kit includes a 12V wall adapter power supply. Its output jack can be inserted into the DC socket on the side of the network device.

The survey network device can be power supplied either externally or by the 4x included CR123A batteries.

If the survey network device has batteries installed and is connected to the wall power supply, priority is given to the external source in order to prolong batteries lifespan. The wall power adapter does not charge the batteries.

4. INSTALLING THE BATTERIES

1) Remove the two plastic screw covers from the front side. Lifting the protective covers using the gaps at their angles makes this operation easier (Picture 6).

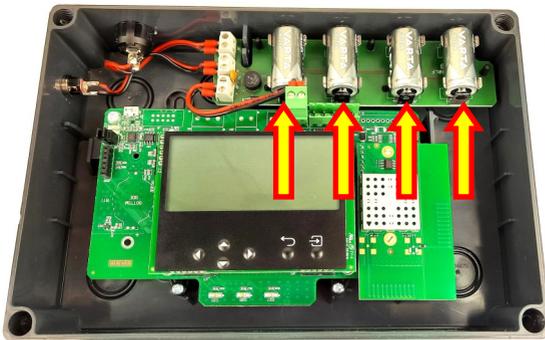


2) Remove the four sealing plastic screws (Picture 7):



3) Remove the front protective cover.

4) Insert the four CR123A batteries (as shown in picture 8).



Picture 8



Battery polarities must match the + and - signs printed on the batteries' board.



If you intend not use the network device for a long period, and you have batteries in it, remember to remove them.

4.1 Switching on

Survey network device on/off switch is located on the top side.

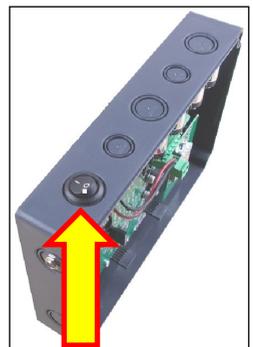
1) Switch on **I** position. All three LEDs quickly blink once.

After, the power on LED blinks green every second: the survey network device is powered on.

2) When the survey is complete or the kit is not been used for a period of time, power down by moving the switch to the **O** position



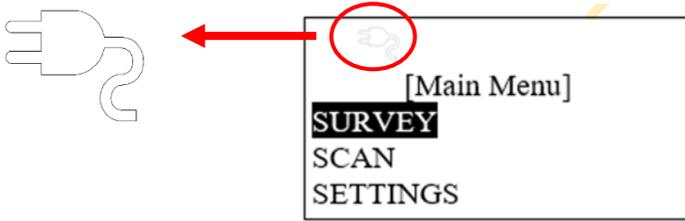
When you have finished using the hub device, switch it off, especially if you are using batteries' power supply; this will avoid running them out.



Picture 9

4.2 Low battery indicator

In case of low battery on network device the display shows the following icon on the upper left and the orange LED remains steady ON.



Picture 10

4.3 Survey test

This paragraph gives you general guidelines on how to perform a survey test. The survey procedure is described in the **HOW TO PERFORM A SURVEY** paragraph, but here an introduction to the procedure is given.

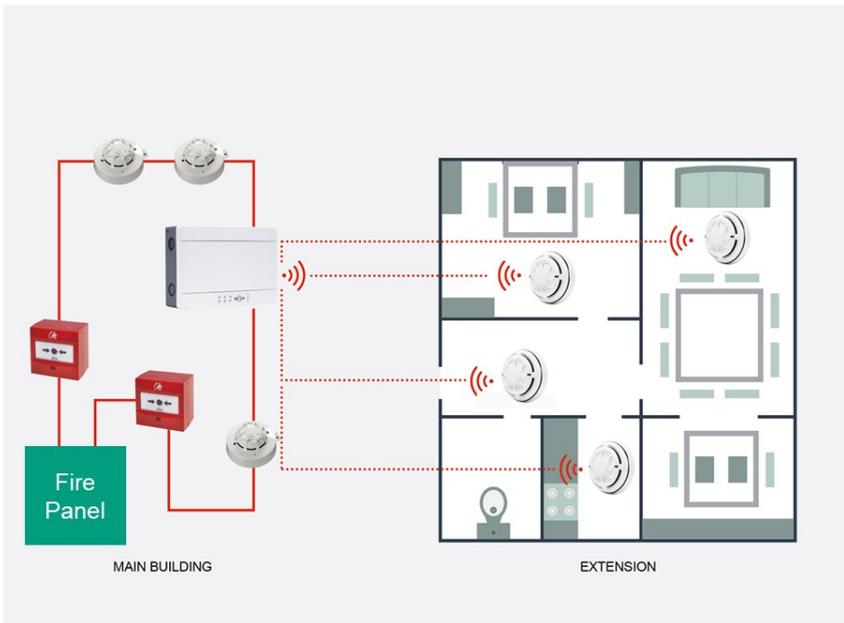
Purpose of the survey

The objective of the survey is to determine up-front whether the Hyfire Hub and wireless devices will be in-range of each other.

This means considering where the Argus Vega protocol wired loop can be broken and the Taurus Translator can be mounted. Once determined, each ideal location of wireless fire devices can be surveyed.

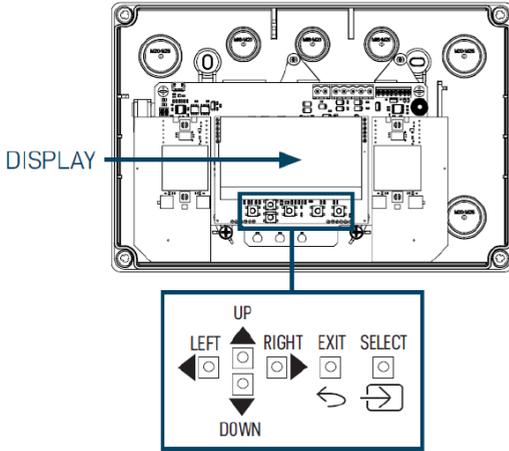
If link quality at a potential device location is not good enough, this will help you to either:

1. Determine an alternative device location nearby where signal strength may be better
2. Determine a new location for the Hub that may better serve the device locations
3. Determine whether expanders are required



4.4 Network device keypad

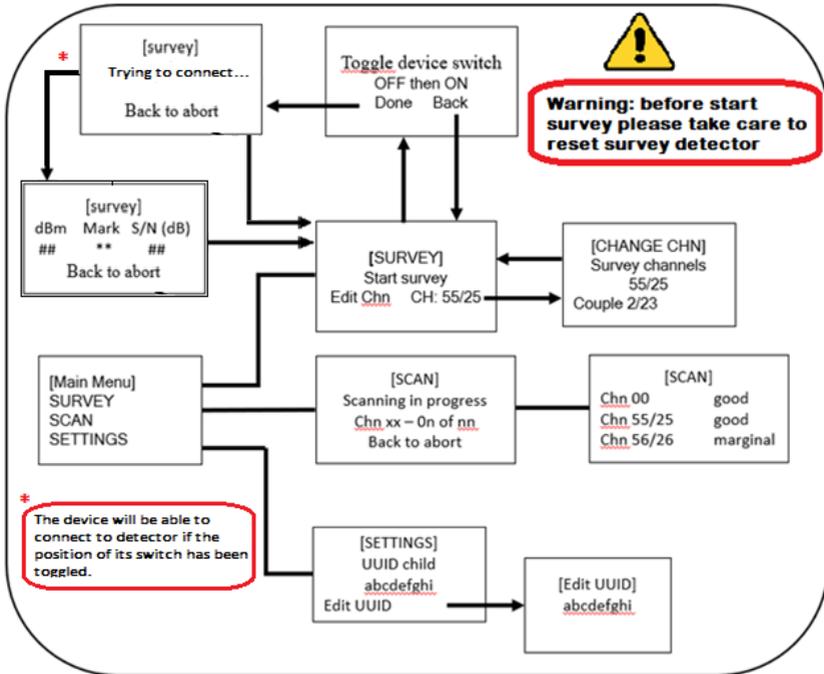
The LCD display let the user to select the actions to start in order to perform a survey. The keypad under the display is used to navigate through the menu and select the option.



UP	Pulls up the display's menu selection. If applied to a value, the selected digit is increased
DOWN	Pushes down the display's menu selection. If applied to a value, the selected digit is decreased.
LEFT	Returns to the previous menu. If editing a value, sets the cursor to the left digit.
RIGHT	Enters into the next submenu. Some options require exclusively the "Enter" key to gain access to the next submenu. If editing a value, sets the cursor to the right digit.
SELECT	Enters into the next submenu. Confirms the selected setting.
EXIT	Returns to the previous menu.

Table 1

Picture 11



Picture 11

5. HOW TO PERFORM A SURVEY

The communication between hub and detector start after the selection of the survey step on the hub device menu and stops when the survey is stopped on the network device. The communication rate must be fast enough to assure a good stability of the quality link data shown.

The detector shows the link quality blinking the LEDs according to table 2 below:

5.1 Background Scan

Signal Quality LED Table				
Rssi (dBm)		LED Activity + Colour	Signal Quality	Ok to Install?
Min.	Max			
0	-65	● ● ● ---	Excellent	Yes
-66	-75	● ● ● ● ---	Good	
-76	-80	● ● ● ● ● ---	Sufficient	
-81	-85	--- --- ---	Marginal	No
-86	-90	--- --- ---	Bad	
-91	-95	--- --- ---	Very bad	
-96	-100	--- --- ---	Extremely bad	
-101	-105	--- --- ---	Range limit	

Table 2

The background RF Channel scan is an important first step before proceeding with the survey.

1. At the **Main menu**, enter in the **SCAN menu**
Once initiated, it will scan all available RF channels for congestion/noise for ~5 seconds per channel. This process takes around 4 minutes to complete.
2. Once complete, a results table will be displayed with each RF channel listed in order of preference.

5.2 Point-to-point Survey

The point-to-point survey is used to determine the expected signal strength of each Taurus device at the potential install locations.

1. To begin the survey, from the Main Menu, select **Survey**.
2. Select the RF Channel number that you would like to survey with. This should be the channel listed during the **Background Scan** that we performed first. Once input, select **Start Survey**.
3. You will be asked to "Toggle Device Switch...". This prepares the mock detector with the RF channel to survey
To do this, remove the detector from the included base (rotate anti-clockwise) to expose the battery cover. Remove the battery cover and install the included CR123 batteries. Now follow the on-screen instructions to toggle the device switch.
Note: The red switch position "ON" is active and 1 is "Dormant"
4. Once the device is powered on and paired to the Hub, the Hub should display a live read-out of signal strength in dBm. This is also indicated on the detector device via the LED (see table 2).

The LED readouts indicate suitability for a product to be installed in the location being tested.

Positive results = Green LED quick flash

Negative results = Red LED long flash

Results are often followed by a 1 second blank. The exception is the extremely bad result, to indicate range limit. Once this is exceeded, the LED will no longer flash until it comes back in-range.

Marginal signal quality is indicated as not OK to install as this is likely lead to communication errors that require repeated transmission, lowering device battery life.

Note: If the RF Channel pair being surveyed is changed - the point-to-point survey must be repeated for accurate results. This requires the survey detector to be re-paired to the Hub.

Results of each survey point should be recorded.

Appendix A

THE UNIQUE IDENTIFIER (UUID)

The unique identifier is a 8 alphanumeric character sequence that univocally identifies every device that comes out of the factory; it is written in every device's permanent memory.

Unique identifier can be indicated as **UID**, **UUID** or **Unique ID**.

It is labelled below the QR code on each Hyfire device and it is encoded in the QR code.

Survey kit detector and network device carry a Unique ID number.