





**Grab Kit & Go Boxes**

# Grab Kits & Go Boxes

by

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for

RAYNET members

# This presentation is going to provide:

- An overview of what a **Grab Kit** is.
- An introduction to the Brightline Flex System.
- What is a **Go Box** & then get into more detail.
- My experience gained from building Go Boxes.
- An overview of Project MAX.
- Questions & Answers.



**Grab Kit**

# What is a Grab Kit?

- A grab kit is made up of the things you need to carry out a task on your own or as an individual.
- A grab kit should help bring together in one place the items need to respond and deploy quicker.
- A grab kit is personal to you.
- Content is dependent on a number of factors such as location, time of year and task duration.
- Ask the person calling you out (and yourself) the five **W**'s before running out the door with the wrong kit...

What are the five **W**'s ?

# What is in my Grab Kit this time?

- **Where** am I going?
- **What** will I need to do when I get there?
- **When** am I going there and **how** long for?
- **Why** am I going there?
- **Who** will be there with me?



# Some everyday examples that could be called grab kits?



So... what might be some  
of the items in a RAYNET  
grab kit ?

- Rucksack & Polythene bag liner
- Waterproof torch and spare leak-proof batteries
- Waterproof outer clothing and stout footwear
- Change of cloths, spare socks, Jumper, coat, gloves, scarf & hat
- Enough food and **full** drinking water bottle, plastic mug
- Waterproof & windproof matches
- Quick emergency food (sweets or dextrose tablets)
- Paper tissue, loo roll, hand cleaner & baby wipes
- Sun block and brimmed hat
- Personal medication & wash kit
- Small first aid kit (plasters, bandage, clean handkerchief, safety pins, paracetamol tablets)
- Space, Fleece or Lightweight blanket
- Street Maps, OS Land Ranger Maps, compass, GPS
- Money, Keys, mobile phone

- RAYNET ID card, Hi-Vis jacket
- PPE: Hard Hat, Dust Mask, Work & Latex gloves
- Glasses, contact lenses & solutions
- headlight & spare batteries
- Penknife, Thin rope, Whistle, Plastic tape & zip ties
- Charger leads for handy & mobile phone
- Clipboard, Pens, pencils, Notebook, Message forms, Watch
- Rig – Mobile, Handy & spare battery, head phones
- Radios Spares ( power & coax adaptors, fuses, coax and antenna) Test meter, VSWR meter.

- **Laminated reminder cards:**

A tick list of the bags content

Contact lists: Next of Kin and Emergency Contacts

Reversible laminated “Okay” and “Help” sign

Carry out a **F.L.O.W.E.R** check on your car...  
**F**uel, **L**ights, **O**il, **W**ater, **E**lectrics & **R**ubber

A note for you to leave your family to see. Let next of kin know where you are going & when you will be back.



# Brightline Flex System



**One of my Grab Bags**



BrightLine Bags

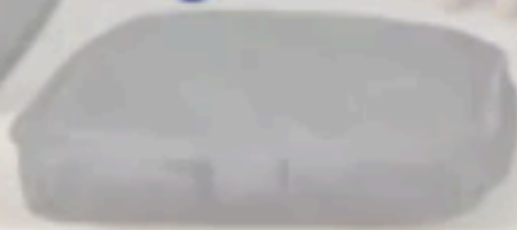
THE  
**FLEX**  
SYSTEM

# Configuration Overview



BrightLine Bags

THE  
**FLEX**  
SYSTEM







**Go Boxes**



# What should a 'RAYNET' Go Box be?

- ...should be easily transported (less than 25Kg).
- ...should protect equipment while being transported.
- ...make setting up equipment quicker.
- ...easy to use and to maintain.
- ...safe for other people operate and be around.
- ...well labeled to avoid any confusion later.

How big should a go box be?

As **big** as you like !

In the style that suits your needs



**Horses**

for

**Courses**

# **Boxes** for **Duties**

**Simple &  
remote controllable  
TTU Go Box**





**KENWOOD TH-71e**  
001-020 RSGB Poper VHF  
021-040 RSGB Simplex VHF  
101-120 RSGB Poper UHF  
121-140 RSGB Simplex UHF  
201-220  
301-330  
401-420 CIV AIR  
421-440  
501-520 RAYNET VHF  
601-640 RAYNET UHF  
701-720

**Same Radio ... Way more style!  
Go Box by G8VIC**



# My 'Complex' Go Boxes @ Shoreham Air Show



# My 'Complex' Go Boxes @ Shoreham Air Show





More detail about the build process  
for these go boxes

# Why use separate boxes?

- Lighter to carry.
- Simple or complex as needed.
- Deployable to different tasks or locations.
- Resilience.



# Quick and Simple to use

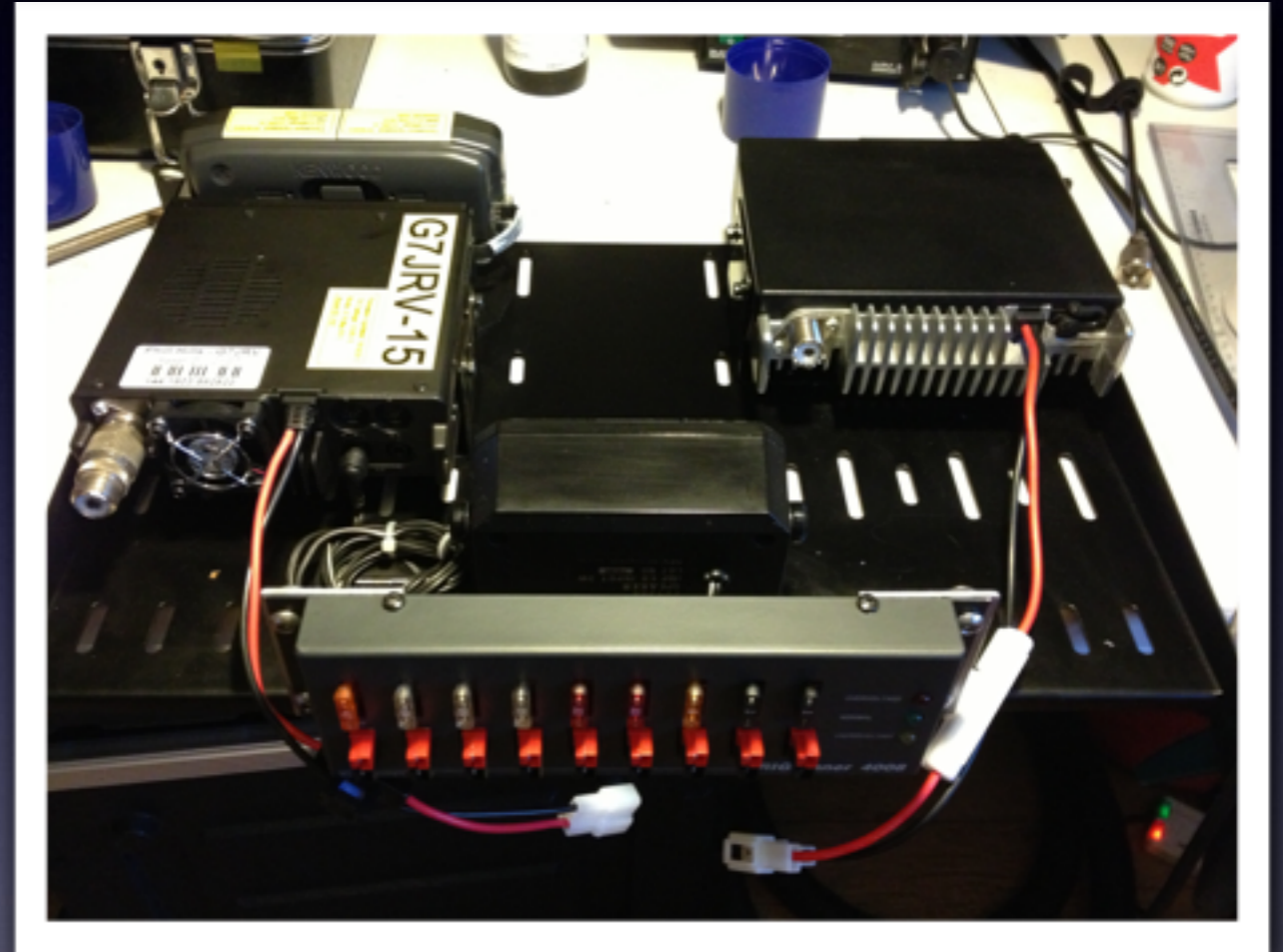


- Make fuses easy to access.
- Use patch cables for hard to reach sockets.
- Use a common type off connector for the whole go box.
- Don't over complicate it.



# What radios have I used and why?

- Kenwood TM-D710E (& G)
- Kenwood TM-V71E
- Yaesu FT-8900R (Quad Band)
- AnyTone AT-5189 (4m Low Band)
- Icom IC-F510 (256ch VHF PBR)
- Icom IC-F610 (256ch UHF PBR)
- Byonics Micro-Trak Ready To Go 50 (2m APRS TX only)



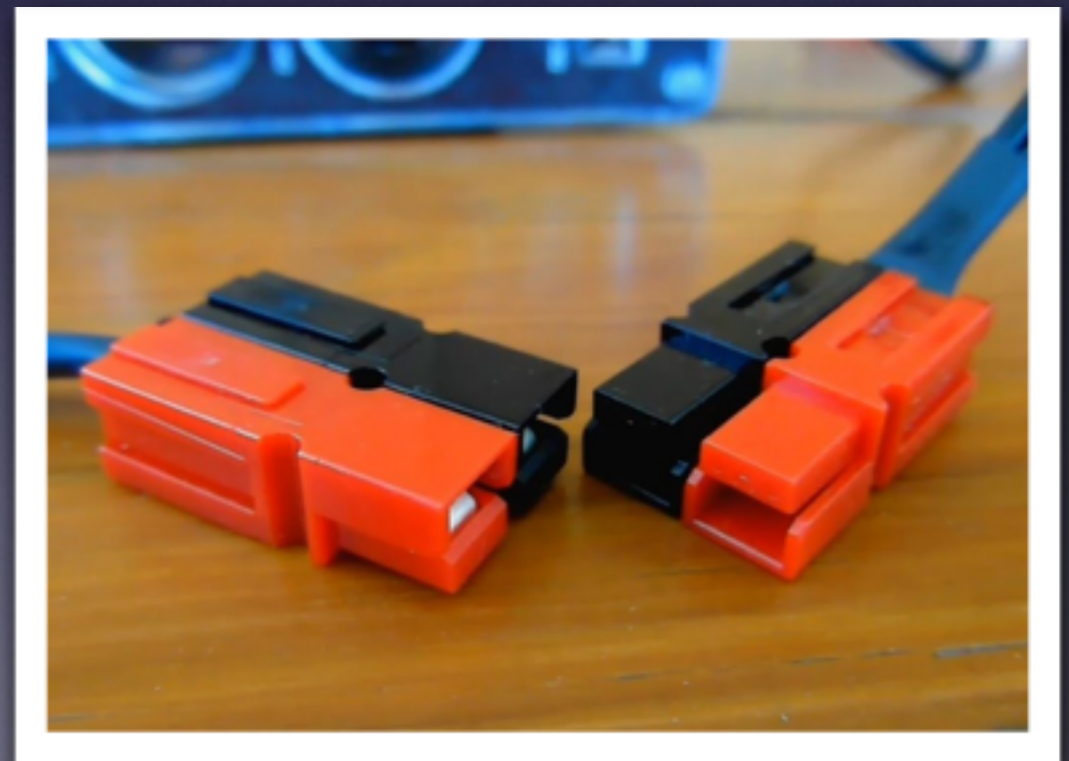
# Powering these go boxes

- MyDEL MP-30SW3 PSU
  - Monitor Volts or Amps
  - Control voltage
  - Swing needle not digital
- West Mountain Radio RIG Runner 4008
  - 40 Amps max current & 8 Outputs
  - Audible alarm for Low & High voltage (11.5v & 15v)
  - Blown fuse indicators behind each fuse
  - Reverse polarity protection
- West Mountain Radio RIG Runner 4004U
  - 40 Amps max current & 4 Outputs
  - Two 2 Amp USB sockets handy for charging phones



# Standard connectors

- PL259 as the standard radio coax interface beyond the connector on the back of the radio.
- N' Type as the standard antenna coax interface.
- (APP) Anderson Power Pole as the standard power interface for 12v DC cables beyond the connector on the back of the radio.





# Keep it Safe

- NEVER cut corners with mains electricity & power supplies
- ALWAYS fit the correct fuses
- EARTH BOND when needed
- DOUBLE CHECK your work or get someone else to
- Consider P.A.T. testing





**What if you out grow your go box ?**

Project **MAX** that's what !

Better known as: '**MAX** | The Big One'

# MAX | The Big One





Insulate



DC Power



Window

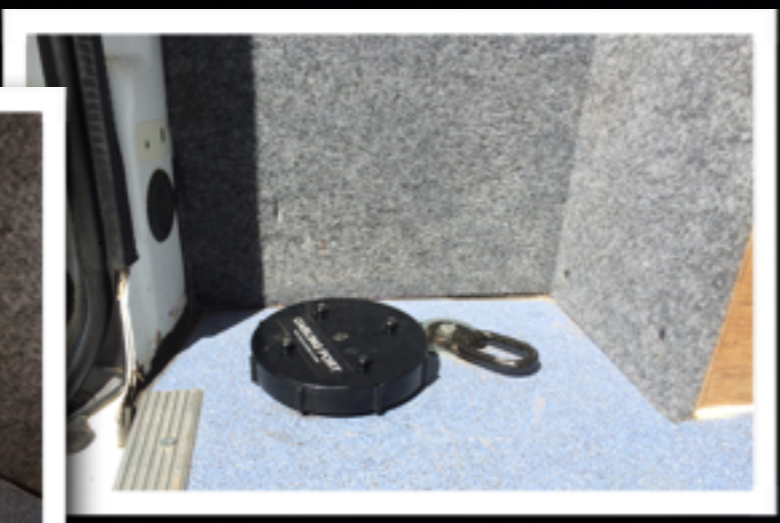


Build out





Cable Entry



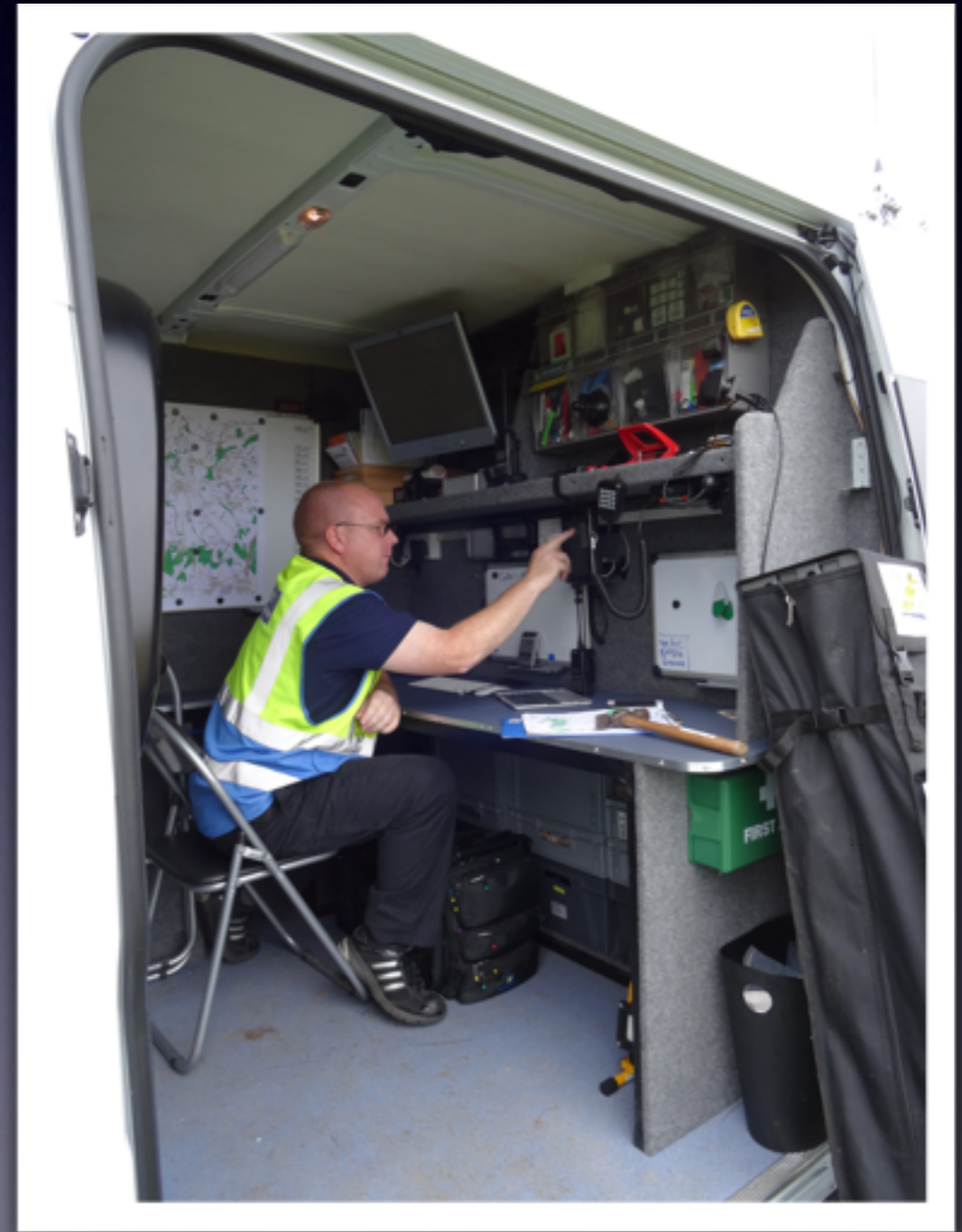
230v AC Power



Task Lighting



# Then & Now...

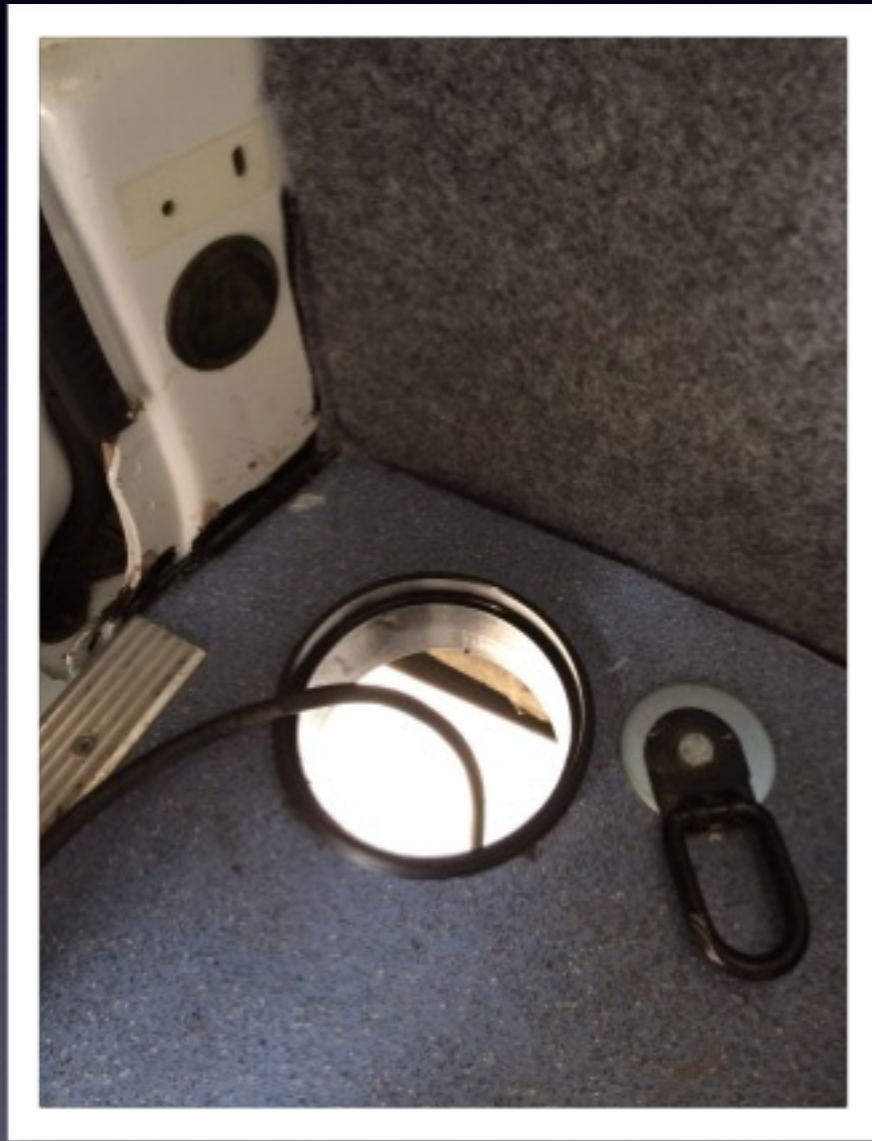


# Then & Now...





# Cable Entry Point



110mm Soil Pipe Screw On Access Cap Black  
and hole sealed with Tigerseal (or similar)





Storage



Radio bodies





Night Operation



Byonics  
APRS unit



Any Questions ?



Peli Case TTU



B25 Grab Bag



Two Go Boxes

Here with me today...



Go Box By G8VIC



Project MAX

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It's time for your grab bags !