



RIDGID PRO ORGANIZER  
TOOLBOX & CART

TRANSFORMATION TO  
VHF/UHF RADIO GO-BOX SET

# DESIGN OBJECTIVES

Implement an amateur radio go-box suitable for the following use cases:

- Portable deployment
  - Self-contained system
  - Manageable weight and mobility
  - Rapidly deployable with minimum setup time
  - Emergency power solution safe for indoor use
  - Digital operations (e.g., Winlink messaging and D-Star)
- Home radio shack
  - Rapid transition from portable use to base station use

# BASIC DESIGN QUESTIONS

- Case choice
  - Rack system (e.g., 4U rack travel case)
  - Pelican case solution
  - Other case types (e.g., RIDGID)
- Integrated and/or external power supply?
  - Space / weight / ease-of-use
  - Battery or power supply unit
- Closed or open case operation?
  - Thermal considerations
  - Moisture considerations

# RIDGID TOOL BOXES

- Heavy-duty construction
- Stackable, lockable system
- Moisture / dust resistant
- Relative cost lower compared with other options (e.g., Pelican)

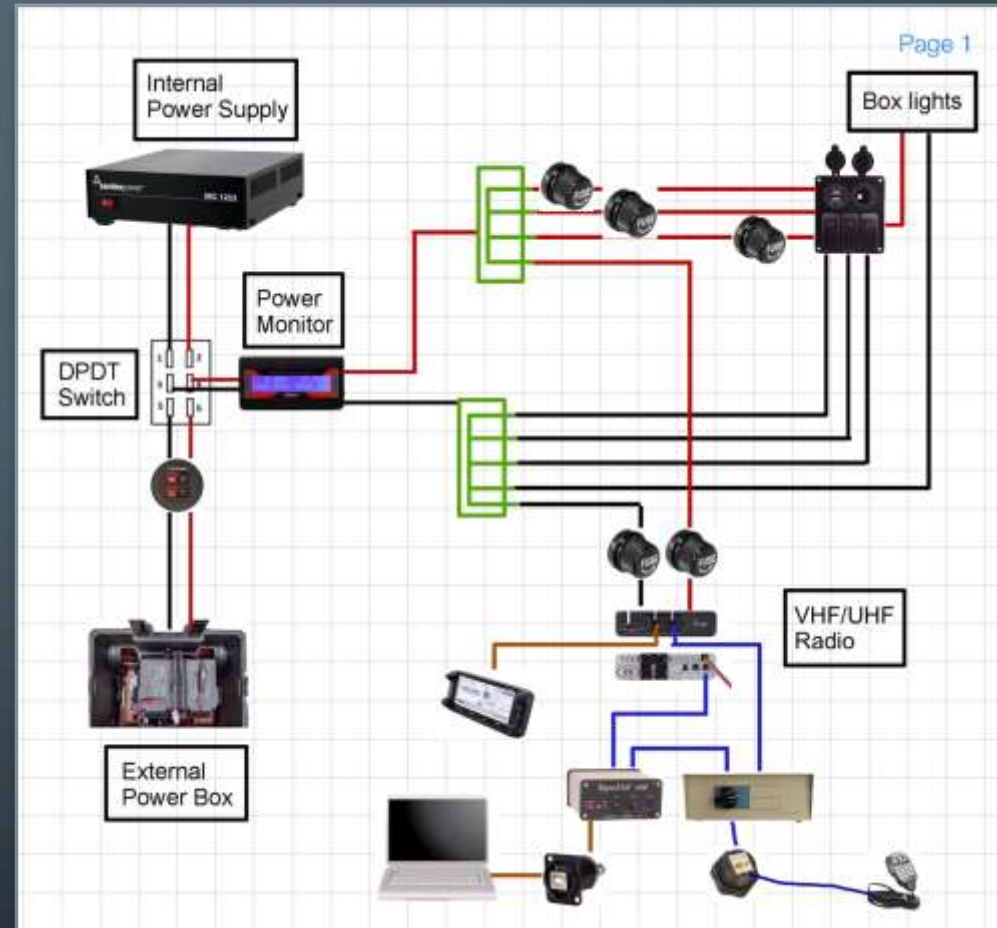


# N7GRB GO-BOX BASIC FEATURES

- RIDGID Pro Organizer case & Tool Cart
  - Provides dust and moisture protection during transit to/from deployment site
- ICOM ID-5100 Transceiver
  - Dual band VHF / UHF with D-Star Digital voice/data
- External connections for power, antenna and microphone
- Console with power meter, car style 12v DC receptacle and USB charge ports
- 20 amp continuous/ 23 amp surge 13.8v DC power supply
- Storage area
  - Signalink, A/B switch, ICOM control head and associated cables

# COMPONENT WIRING PLAN

- Simple DPDT ON-OFF-ON switch selects power source
- Rocker switches control power to accessories
- Easy access fuse protection on DC circuits
- Standard Anderson Power Pole connection (Powerwerx port) to external DC power source (battery box)



# POWER DISTRIBUTION CONTROL



## POWER MGMT CONSOLE

- Car style 12v DC receptacle
- USB charge ports
- Fuse access
- Power monitoring
- Led rocker switches



## DON'T LOOK UNDER THE HOOD

- Automotive style crimp connections
- WAGO Lever Nuts



## WAGO LEVER NUTS

- 5 Conductor Compact Connectors
- Up to 12 AWG
- 20A 600V UL rating (IEC/EN 32A/450V)

# SOME ASSEMBLY REQUIRED ...



- RIDGID Pro Organizer
  - Inside lid, parts buckets and dividers removable
- Parts and more parts ... never enough



# FOUNDATION



- Wood base board
  - Firm attachment of PSU and radio to base board
  - Base board attached to case bottom

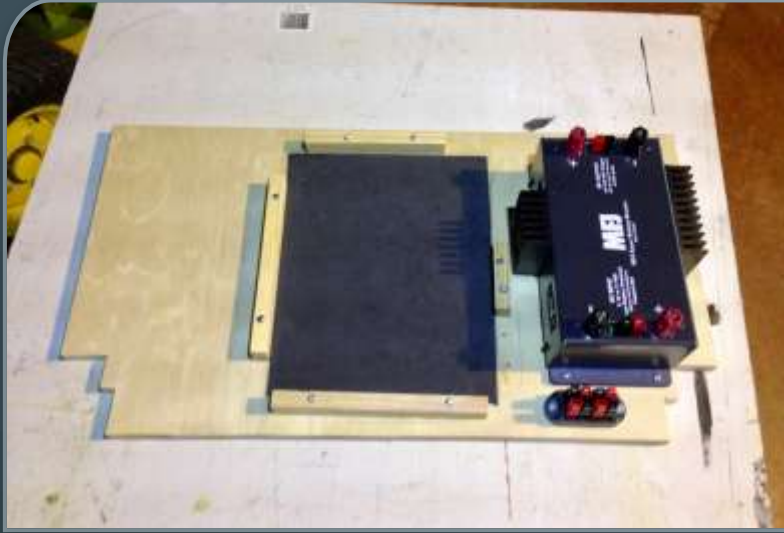
# EXTERNAL CONNECTIONS



A/C AND DC INPUT  
(LEFT REAR CORNER)



MIC AND ANTENNA  
(RIGHT SIDE)



## BATTERY & STORAGE BOX

- Bioenno 30 AH battery
  - Integrated over current / low voltage protection
  - Shock pad under battery
- MFJ-4416C Battery Booster
  - 25 Amps ICAS 30A peak
  - 13.8 Volts at 9-13.8 volts input



# BATTERY & STORAGE BOX



- Master power switch
  - Lock-out protection feature
- Powerwerx Power Pole ports

- Charge port
- Power port

# DEPLOYED

- Normal operation with lid open for natural air ventilation
- Lid has:
  - Whiteboard for notation of situation info
  - LED lighting
- Large digital clock
- ICOM ID-5100 control head mounted on articulating stand
- Removable storage box holds Signalink, A/B switch and associated cables



# DEPLOYED

GWINNETT SHERIFF JAIL  
BREAK RUN



AMERICAN RED CROSS  
COMMUNICATIONS  
EXERCISE



# ANTENNA

- Slim Jim dual-band VHF / UHF antenna
- Slim Jim suspended between PVC pipe arms attached to lightweight collapsible mast
- Mast also supports HF Alpha Antenna



# N7GRB IC-7100 GO-BOX PROTOTYPE



RIDGID Tool Box and a Little PVC



# GEORGE ZAFIROPOULOS KJ6VU

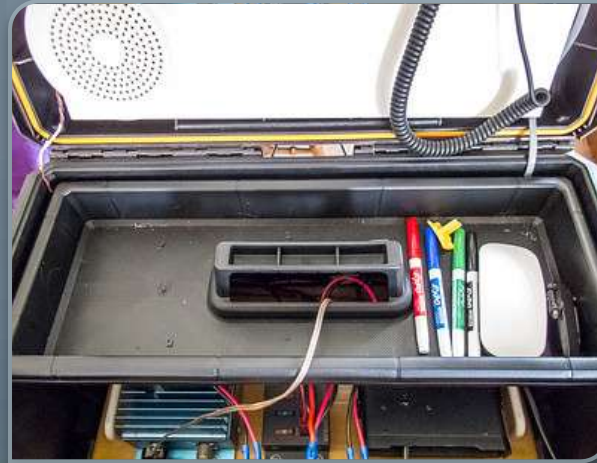
## IC-7100 RIDGID GO-BOX

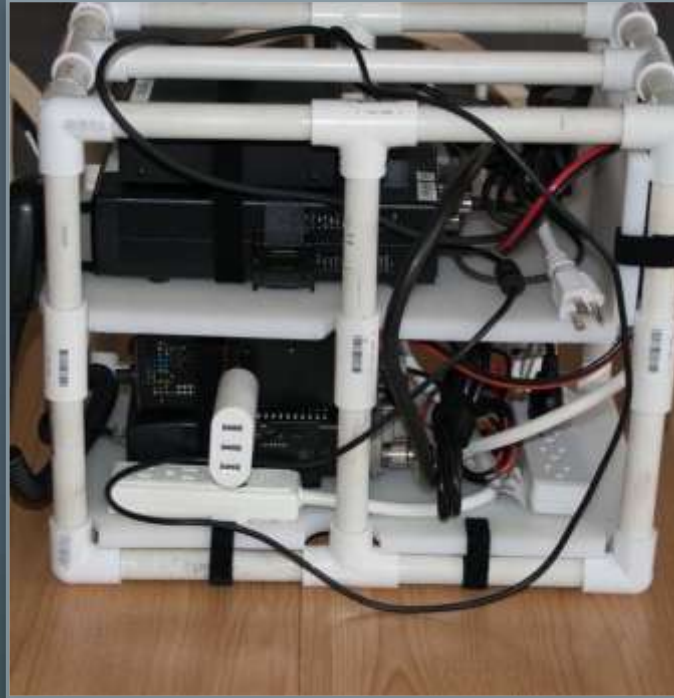
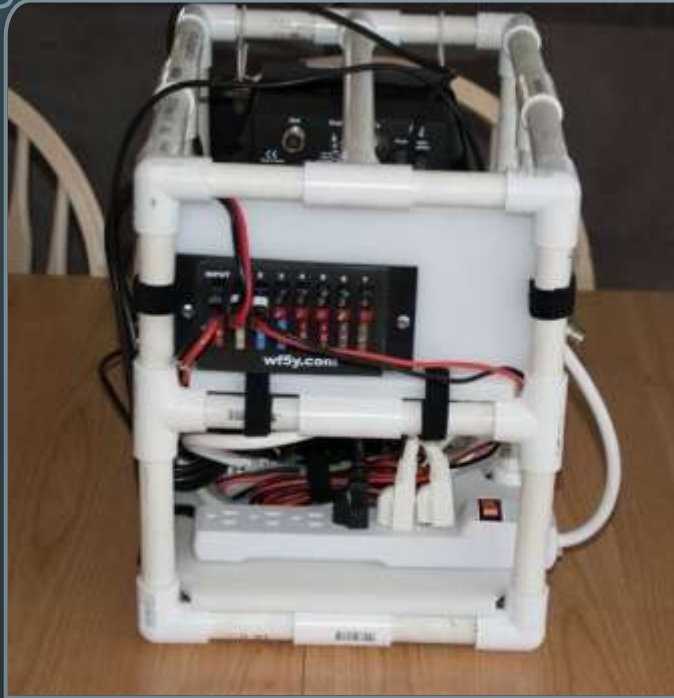


- Design approach
  - External power source
  - Closed case with powered ventilation

# K6CPO RIDGID BASED GO-BOX SET

[JOHNWRIGHT.SMUGMUG.COM](http://JOHNWRIGHT.SMUGMUG.COM)





# RIDGID TOOL CART – PVC GO-BOX

Fits in RIDGID Tool Cart

Dual radios VHF/UHF and HF with power supply

The image features a dark blue background with white, stylized circuit board traces in the corners. These traces consist of straight lines and right-angle turns, ending in small circles that represent solder pads or vias. The traces are located in the top-left, top-right, bottom-left, and bottom-right corners, framing the central text.

Thank You!