

# Warder/Warden Addressing

The Warden/Warder system is quite flexible. Any of the devices can be programmed to be either a Warden or a Warder. Generally a Warden will have a larger antenna and potentially an amplifier. Warder generally have a small coil or spring antenna.

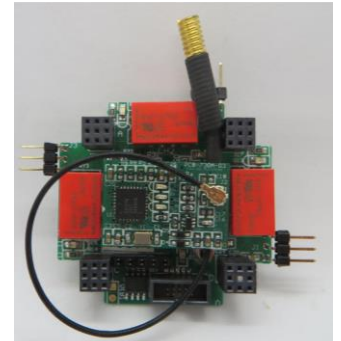
## Warder (The Subordinate)

This device is housed as a “puck” that can be bolted most places on a vehicle that can support its size and weight. The Warder is the interface to the unscrewed vehicle from a safety point of view. Power is provided by the vehicle through the 16-pin connector at the bottom of the device. Communications with the Warder occur serially through that connector.



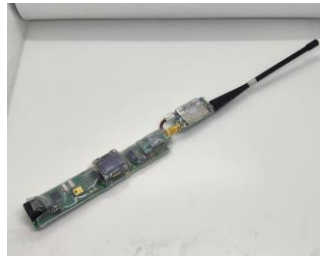
## UxV/35 Warder

This device is integrated on a UxV/35 board for easy integration into a USV, UGV or UAV. The UxV/35 stack can control most unscrewed vehicle platforms. Communications occur through an MF connector located on the board. It can be plugged into the USB serial commns board designed for Warders and Wardens.



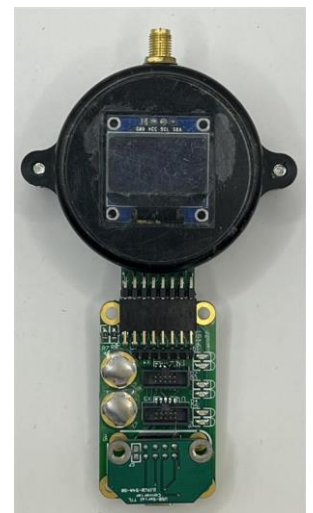
## Warden (The Controller)

The Warden is offered as a stationary base station and a smaller pocket-sized device for ground personnel. The base station would be located at range operations and provide control over all unmanned vehicles on range. The portable Warden would provide a smaller area of effect, but would allow a person to immediately stop all assets in the near vicinity. A hierarchy of commands is established so that a STOP command sent from range safety is not overwritten by a RUN command sent from ground personnel.



## Warder/Warden Serial Communications Board

This is the USB serial interface board used for programming and testing. It provides power and communications to the attached device at 38400 baud.



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## Change ID of a Warder

The following commands change the address or ID of a Warder to a desired address. All Warders and Warders combined must have unique IDs.

warder addr	- Show current warder ID
warder addr n	-Set Warder ID to 'n', n is decimal or 0xn is hex
warder save	
lora save	
reboot cold	- restart system
warder addr	- Observe changed ID value

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warden save	
lora save	
reboot cold	- restart system
warden addr	- Observe changed ID value

Also the display of a Warden will show the updated ID of this Warden.

## Change Target ID of a Warden

A Warden can transmit globally to all Warders or just to a targeted Warder by setting the Warden Target value

warden target	- Show current warder target ID
warden target n	-Set Warder target ID to 'n', n is decimal or 0xn is hex
warden save	
lora save	
reboot cold	- restart system
warden status	- Observe changed target ID value

The display of a Warden will show the updated Warden Target ID.

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## Change a Warden to a Warder

The following commands change the functionality of a Warden to that of a Warder. The resultant Warder will then receive commands from a Warden.

warden status	- Observe Warden Status
warder status	- Observe Warder Status
warder on	- Turn Warder off
warden of	- Turn Warden on
lora save	- Save parameters
warder save	
warden save	
reboot cold	- restart system
warden status	- Observe changed mode to Warden

Also the display of a Warden will show the updated a received status from a Warden

## Change a Warder to a Warden

The following commands change the functionality of a Warden to that of a Warder. The resultant Warder will then receive commands from a Warden.

warden status	- Observe Warden Status
warder status	- Observe Warder Status
warder off	- Turn Warder off
warden on	- Turn Warden on
lora save	- Save parameters
warder save	
warden save	
reboot cold	- restart system
warden status	- Observe changed mode to Warden

Also the display of a Warden will show the updated a received status from a Warder

# Warder/Warden Addressing



## All Warder & Warden Commands

The following is the commands available from the Warder/Warden Command Line  
warden

```
ip
port
report
    id
    status
status
send
    id
    status
group
addr
cmd|command
    beat
    estop
    rth
    pause
    run
    report
update
    beat
    estop
    rth
    pause
    run
    report
    disable
    enable
cmdline
pistol
on
off
save
load
target

warders
    clear

warder
    console
    usenq
    beacon
```

# Warder/Warden Addressing



voltage  
min  
check  
init  
key|keys  
motion  
i2c1\_off  
i2c1\_on  
low\_power  
report  
    id  
    status  
send  
    id  
    status  
point  
distance  
radius  
quality  
estop  
    on  
    off  
rth  
    on  
    off  
pause  
    on  
    off  
run  
    on  
    off  
all  
    on  
    off  
rank  
group  
addr|address  
cmd  
    beat  
    estop  
    rth  
    pause  
    run  
    report  
status  
on  
off

# Warder/Warden Addressing



- init
- save
- load
- test
- config
- task
  - install
  - remove
  - on
  - off