

# DRS-I Dynamic Relay Station type I

## Key Features:

1. Multifunctional radio relay station
2. Support SATCOM to Radio interface
3. Selective relay
4. Relay / dispatch modes
5. Simple user interface
6. User friendly
7. Ruggedize
8. Suitable for field use
9. Power from radio



## Specifications

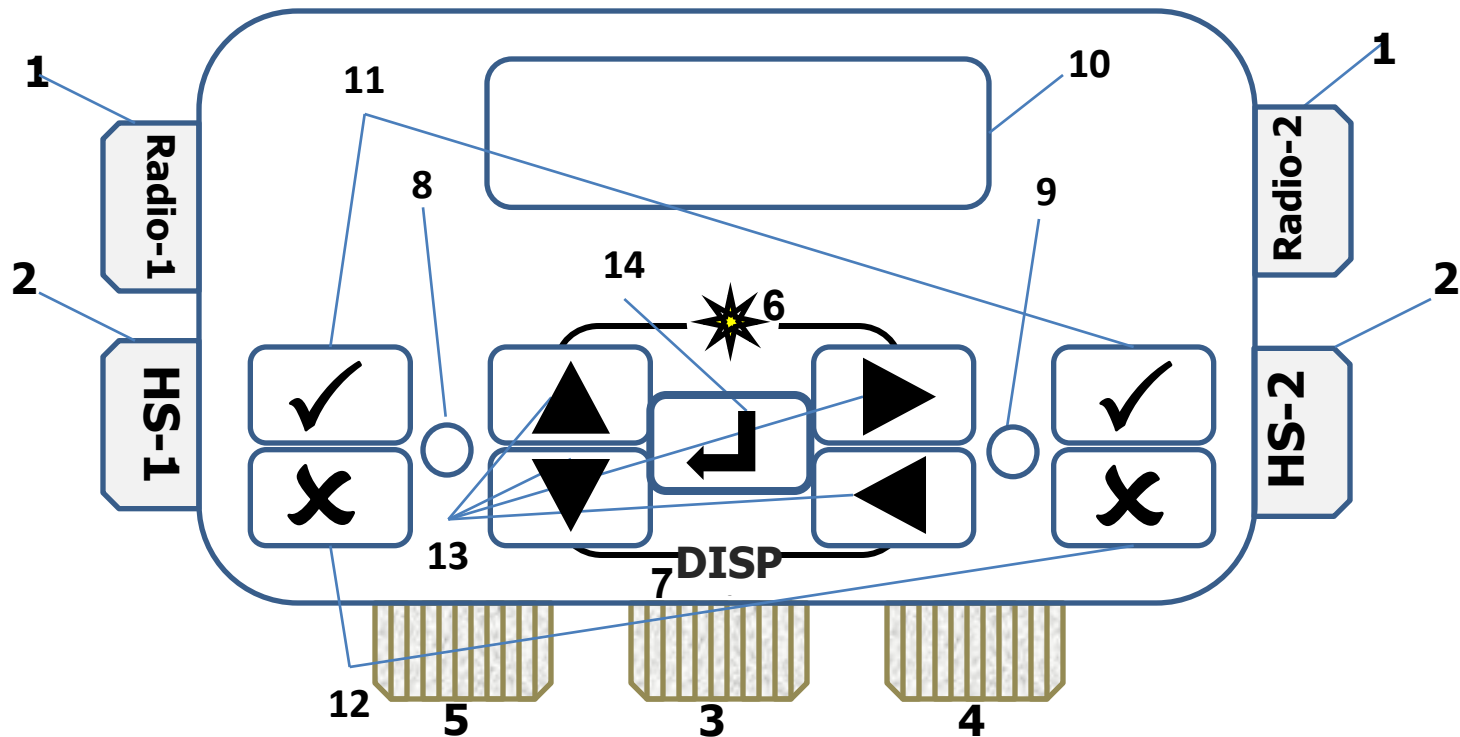
1. Size : 130mm X 43mm X 91mm
2. Weight : 430gr
3. Temp : -20C<sup>0</sup> to +55C<sup>0</sup>
4. Immersion : 1meter
5. Test method : MIL-STD-810 , MIL-STD-461
6. Power consumption : 100mW – 350mW

## Kit content

1. DRS-I
2. DRS-2-Radio Cable
3. DRS-2-Iridium Cable
4. User manual

# DRS-I (CU-2961)

## Operator's Manual



### Content:

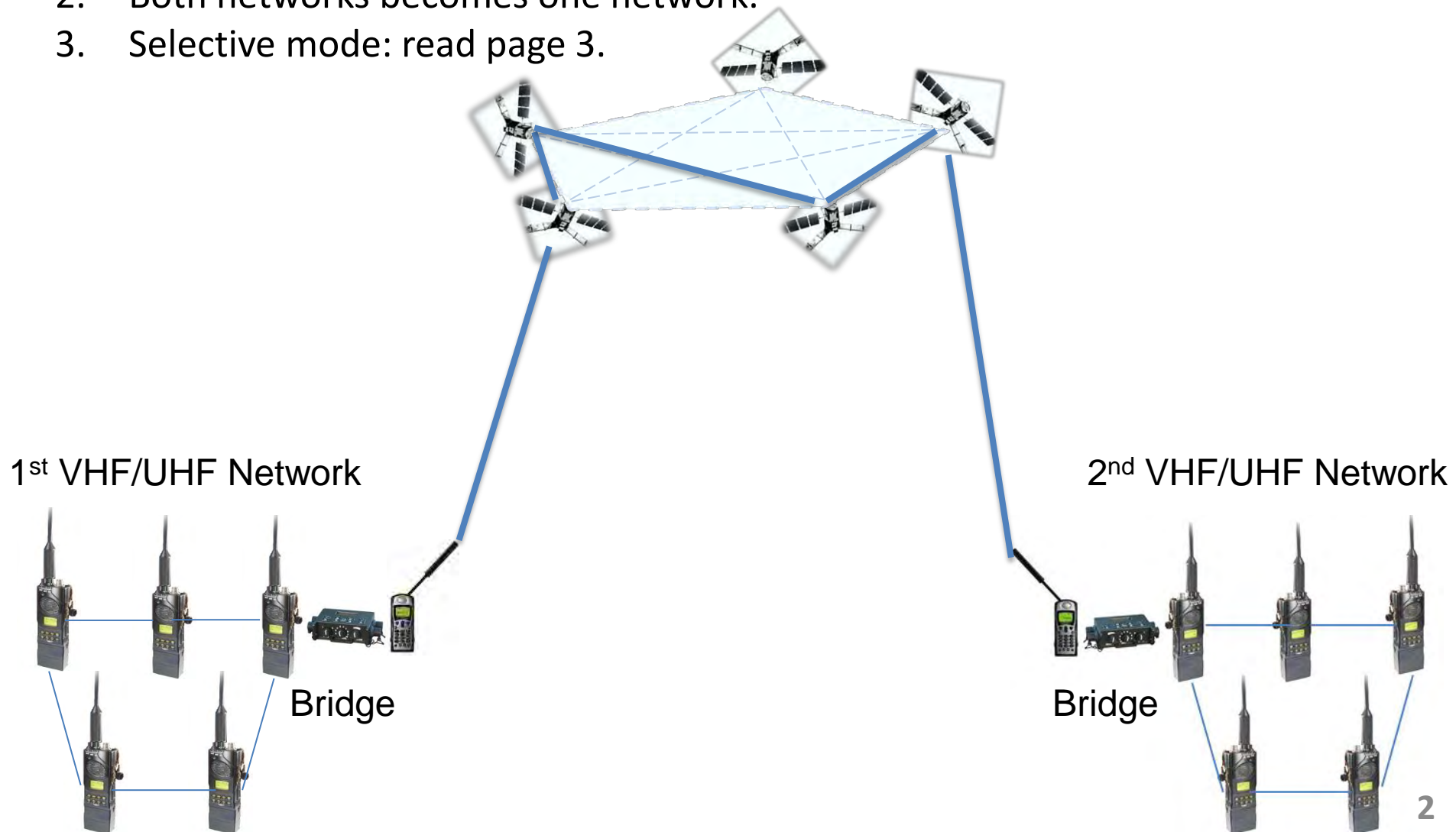
1. Panel
2. System Architecture
3. Setup
4. Operating
5. Special Keys
6. Troubleshoot

### Panel Description:

- |                           |                     |
|---------------------------|---------------------|
| 1. radio audio connectors | 8. Radio-1 LED      |
| 2. HS audio connectors    | 9. Radio-2 LED      |
| 3. channels selector      | 10. LCD             |
| 4. HS volume              | 11. Enable / ✓      |
| 5. radio selector         | 12. Cancel / ✕      |
| 6. Light ON/OFF           | 13. Navigating keys |
| 7. DISP Change            | 14. Enter key       |

# Radio ↔ SATCOM ↔ Radio System Architecture

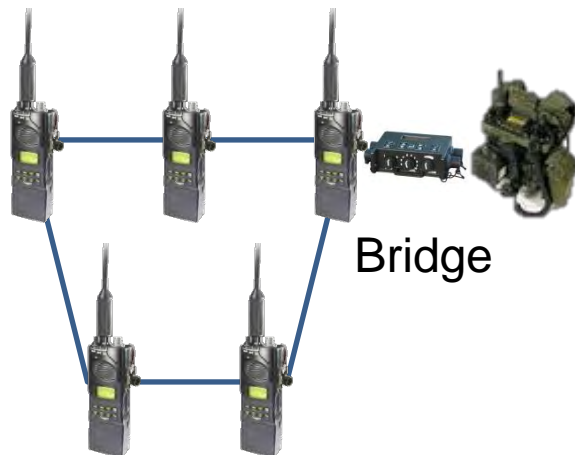
1. By Opening the bridge at both sides – the 2 networks become connected.
2. Both networks becomes one network.
3. Selective mode: read page 3.



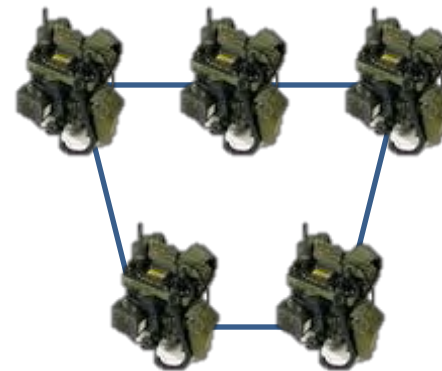
# VHF ↔ UHF System Architecture

1. By Opening the bridge at both sides – the 2 networks become connected.
2. Both networks becomes one network.
3. Selective relay mode: pushing ✕ button for 3 seconds at one side of the DRS will disable traffic from this side to be forwarded to the other side.
4. Press ✓ button for 3 seconds, at that side again, will enable this side's traffic, and the **DRS** will be symmetric again.

1<sup>st</sup> VHF/UHF Network

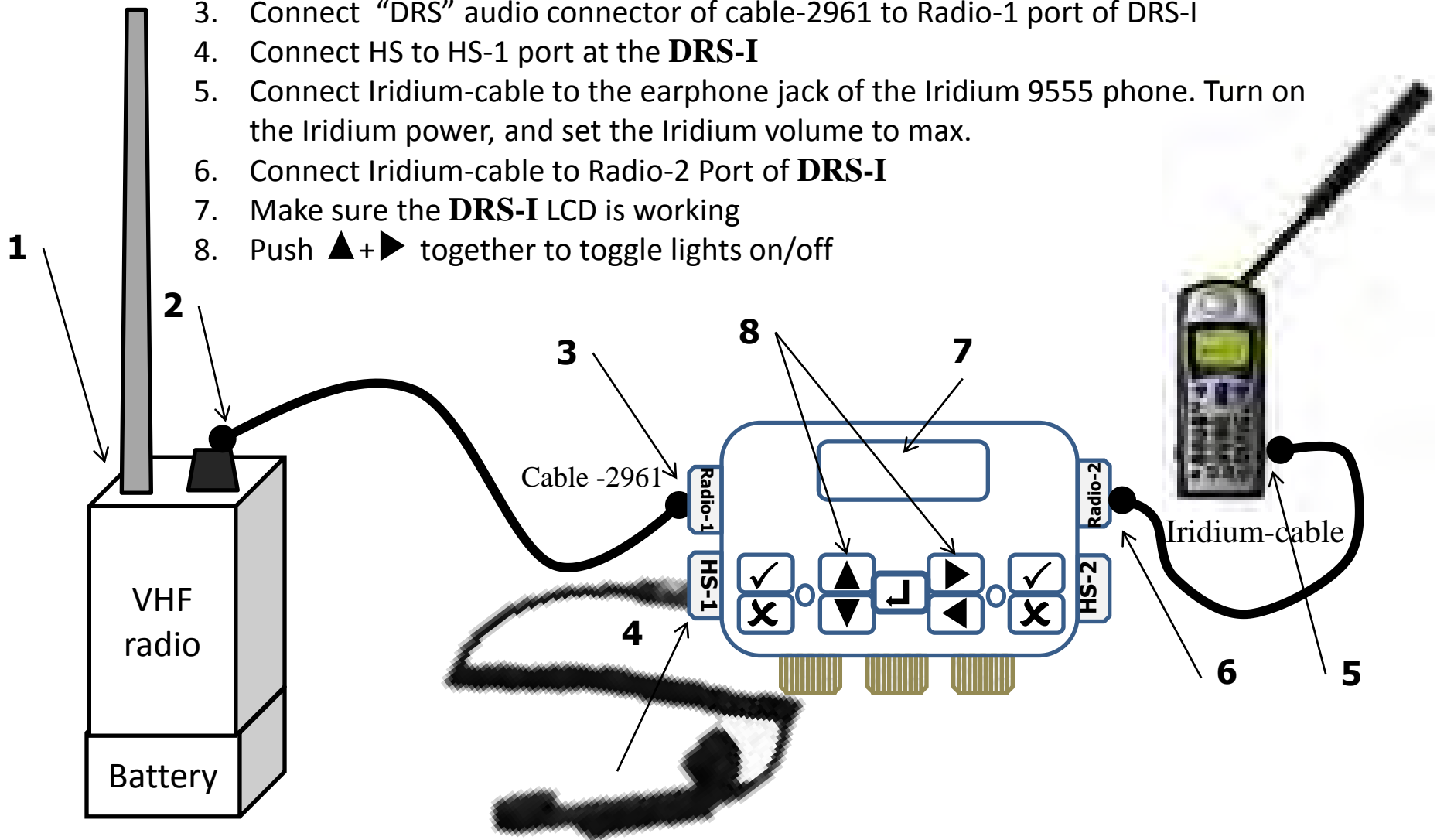


2<sup>nd</sup> VHF/UHF Network



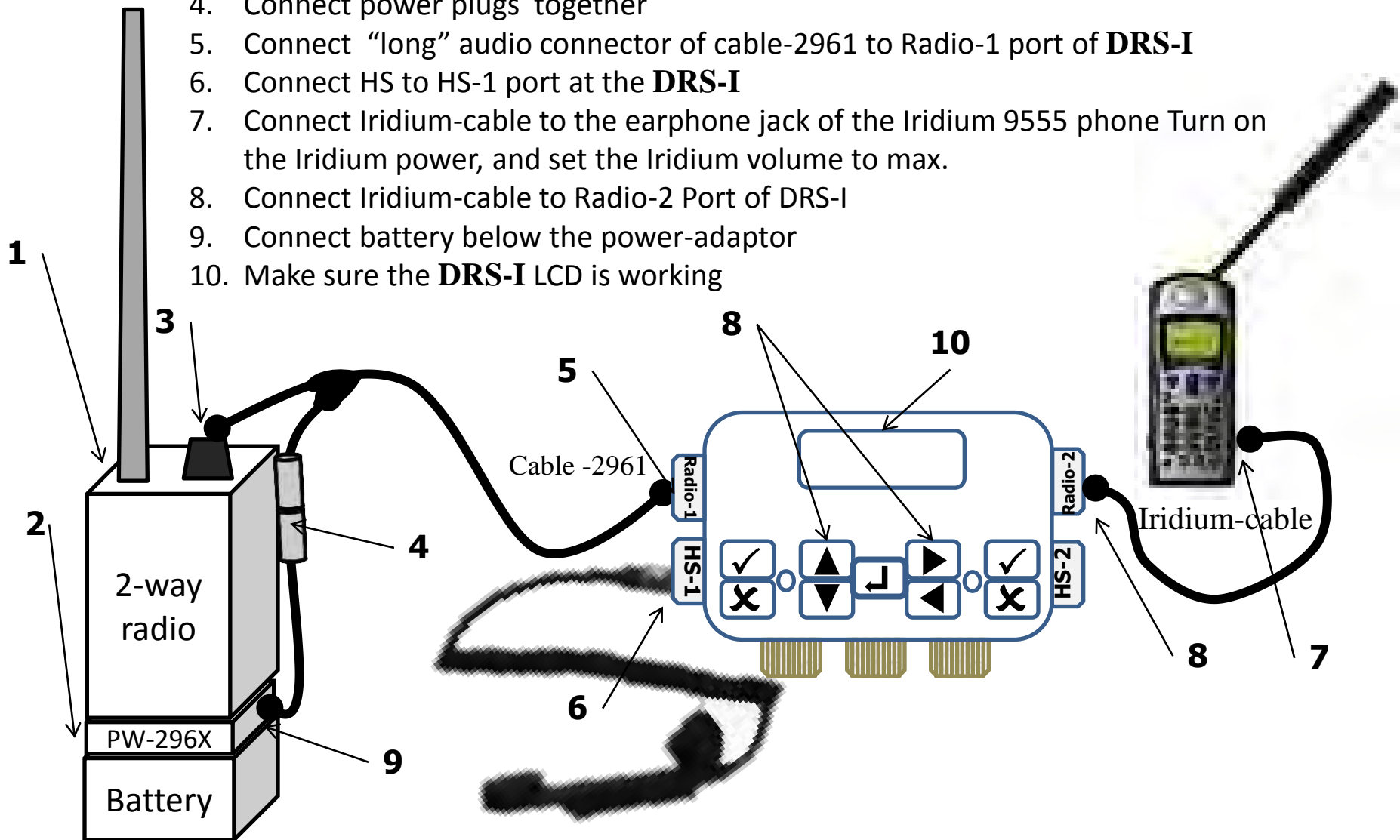
# Setup DRS-I with 2-way Radio (Power from audio connector)

1. Connect Antenna to the VHF radio
2. Connect "Radio" audio connector of cable-2961 to the VHF Radio audio con
3. Connect "DRS" audio connector of cable-2961 to Radio-1 port of DRS-I
4. Connect HS to HS-1 port at the **DRS-I**
5. Connect Iridium-cable to the earphone jack of the Iridium 9555 phone. Turn on the Iridium power, and set the Iridium volume to max.
6. Connect Iridium-cable to Radio-2 Port of **DRS-I**
7. Make sure the **DRS-I** LCD is working
8. Push ▲+▶ together to toggle lights on/off



# Setup DRS-I with VHF Radio (No power from audio connector)

1. Connect Antenna to the VHF radio
2. Connect power-adaptor to the bottom of the VHF Radio
3. Connect "short" audio connector of cable-2961 to the VHF Radio audio con
4. Connect power plugs together
5. Connect "long" audio connector of cable-2961 to Radio-1 port of **DRS-I**
6. Connect HS to HS-1 port at the **DRS-I**
7. Connect Iridium-cable to the earphone jack of the Iridium 9555 phone Turn on the Iridium power, and set the Iridium volume to max.
8. Connect Iridium-cable to Radio-2 Port of DRS-I
9. Connect battery below the power-adaptor
10. Make sure the **DRS-I** LCD is working



# DRS-I – Relay Operation

## 1. Setup

1. Connect Radio to Radio-1 port (see p. 2)
2. Connect 2<sup>nd</sup> device at Radio-2 side:
  1. Another VHF/UHF/HF with 2961-100 cable
  2. No need for power supply at both sides. One side is enough.
  3. To connect Iridium-9555, set MENU->RADIO2 -> IRDM
3. Set MENU->GATEWAY->OPEN+ ENTER (default after powerup)
4. Connect 2 HS, one to HS-1, one to HS-2. set high volume for both HS.
5. Light ON (“Up”+”Right”)
6. Call units from one of the HS – make sure both LEDs are **RED**
7. When unit from F1 calls, LED1=**GREEN** and LED2=**RED**
8. When unit from F2 calls, LED2=**GREEN** and LED1=**RED**

## 2. Noises from one channel

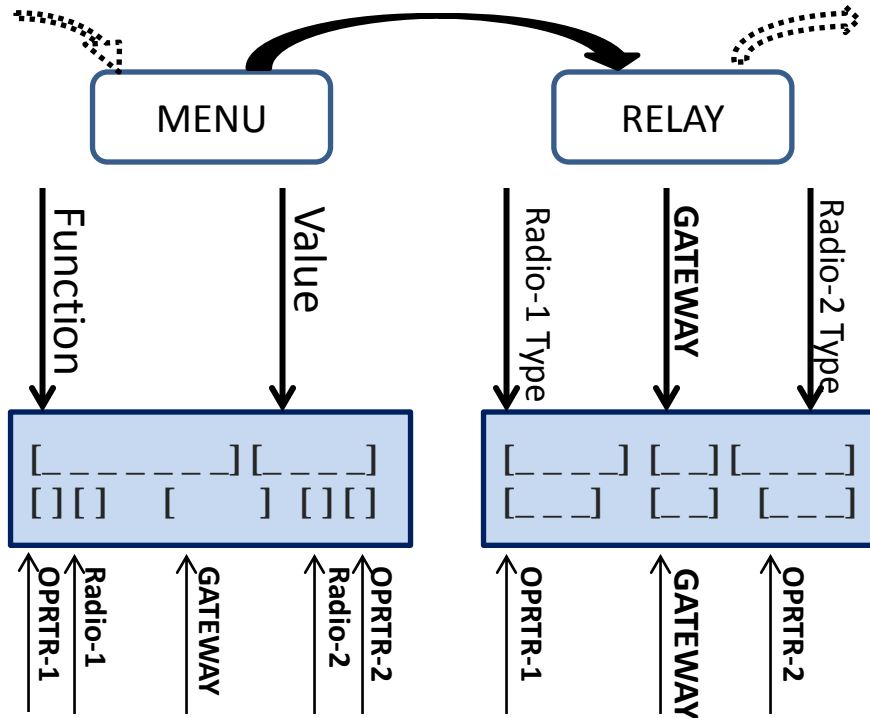
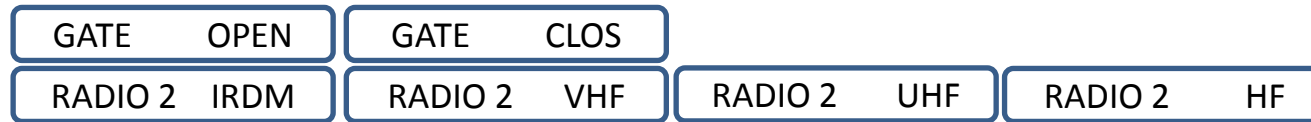
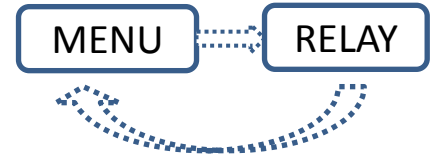
1. Connect HS/SPKR and listen to the incoming channel
2. Push long-X on the side of that channel
3. Push “V” to enable good MSG
4. MSGs from the “clean” channel will automatically override the noisy channel
5. Push long-V once noises disappeared

## 3. Noises from both channels

1. Repeat section 2 for both channels
2. If 2 LEDs are **GREEN**, and “V” pushed, a MSG will go out only if channel is not busy

# Display Modes

- The LCD has 2 display modes:
  - Use ▼ & ◀ together to switch between display mode.
  - MENU : setting DRS functions.  
while browsing MENU, 2<sup>nd</sup> line shows a brief RELAY info
  - RELAY : informative display for a relay station
- LCD content changes from MENU display mode to RELAY display mode:

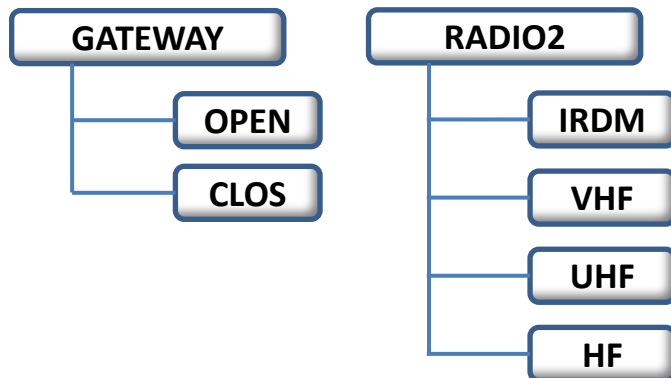




# DRS-I MMI

1. The table below describe the menu order
2. Use “DOWN” / “UP” to change line
3. Use “Right” / “Left” to change value
4. Press ENTER to set new value to selected function
5. Setting GATEWAY= OPEN, connects 2 sides of the DRS
6. Setting GATEWAY = CLOS, disconnect 2 sides of the DRS
7. Setting RADIO2 : User can adjust Radio2 type as follow
  1. Iridium 9555 (Default)
  2. VHF 2-way Radio
  3. UHF 2-Way Radio
  4. HF 2-Way Radio

## MENU Structure



## Open Relay Display

RAD >> SAT  
AUTO << AUTO

## Close Relay Display

RAD -- SAT  
MAN -- MAN

## Selective Relay Display

RAD >> SAT  
AUTO -- MAN

# DRS-I Lights

## 1. Lights

1. Push “UP” & “Right” together to switch light to “TEMP”
2. Push “UP” & “Right” together again to switch light back to “OFF”
3. Any time the DRS is been connected to power, the lights goes “OFF”
4. TEMP: LCD’s backlight is “ON” for 6 seconds after any key press
5. LEDS: will represent traffic (**GREEN**=RX, **RED**=TX) unless LIGHT=OFF

# DRS-I Troubleshooting

1. Can't see what is written in the LCD
  1. Make sure all sides of the cables are connected well
  2. See p. 2, and check all the setup steps again
  3. Push "UP"+"RIGHT" together
  
2. **GREEN** LED doesn't light when someone transmit to me
  1. Make sure frequency is the same and check antenna
  2. Check that LEDs are lite (push PTT shortly, **RED** LED should be lite)
  3. Check MENU->RADIO2 is set correctly
  
3. HS can't hear calls
  1. Select 1 at the "Radio Select" knob
  2. Turn Volume clockwise until HS1 volume is maximal
  3. Repeat for HS2 (select 2 at "Radio Select")
  4. Normal position should be "radio select" on "middle"
  
4. Improper connection between 2 networks via SATCOM
  1. Make sure MENU -> RADIO2 -> IRDM is set
  2. Push "Enter", and switch back to RELAY display mode