

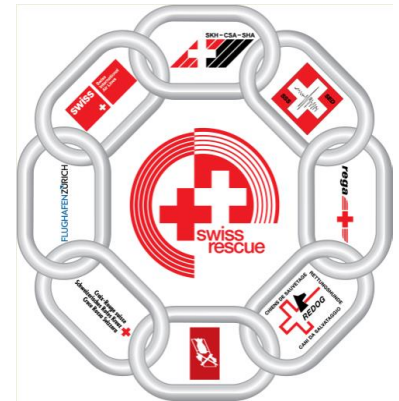


Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Federal Department of Foreign Affairs FDFA  
Swiss Agency for Development and Cooperation SDC

HH/SKH – Fachgruppe Telecom – Bruno Knuchel - 27.06.2013

# Swiss Rescue Communication



# Specialized Telecom Group of SHA

- About 20 members
- Members are all Amateur Radio Operators
- Specialists in Computer and Computer Networks
- Have skills on HF and VHF
- Are trained and prepared for the field
- Not only Swiss Rescue missions

# Topics of presentation:

- Task of SHA Telecom group
- Base of Operation (BoO)
- VHF nets
- Frequencies used
- Future

# Task of SHA Telecom group

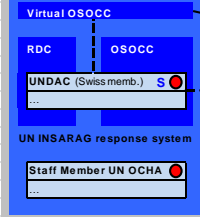
**Always to grant adequate communication to all involved persons**

1. Previous to flight
2. During flight
3. On the way to the Base of Operation (BoO)
4. At the Base of Operation (BoO) – during operation

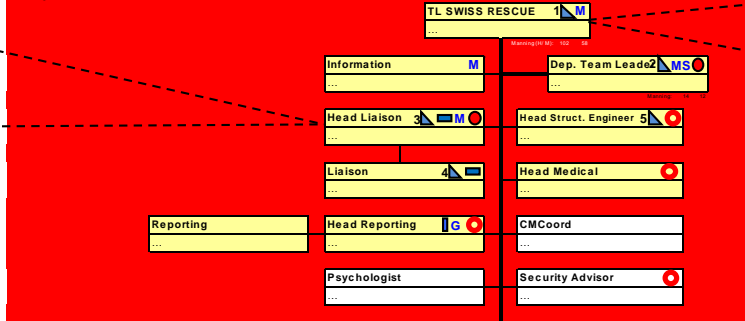
Swiss Rescue: Organization Chart



Affected Country / LEMA



Call Sign: TANGO



Schweizer Botschafterin  
 ...  
 Leiter Kobü / Programmbüro  
 ...  
 Affected Country / LEMA

Version: Feb 12

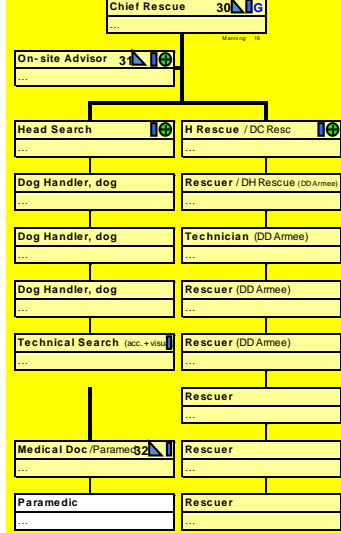
Marking system: SR 1  
 Call Sign: ALPHA

INSARAG MEDIUM :  
 to operate at 1 site  
 with 1 SRM - unit,  
 24 hours/day, 7 days/week  
 shifting after 12 hours

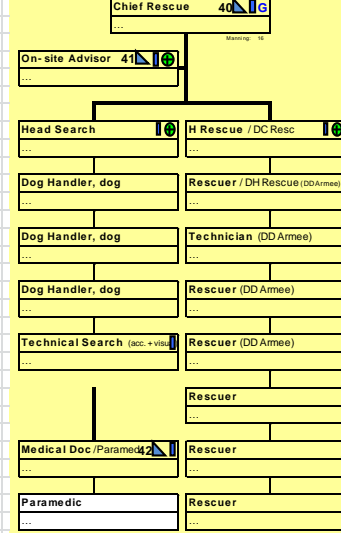
Marking system: SR 2  
 Call Sign: BRAVO



Marking system: SR 3  
 Call Sign: CHARLIE



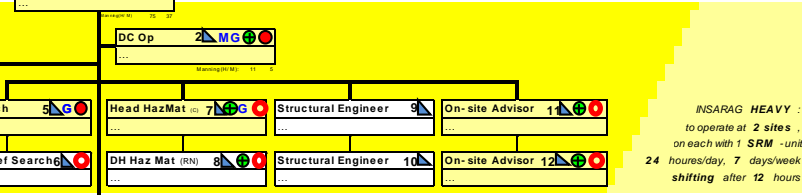
Marking system: SR 4  
 Call Sign: DELTA



Marking system: SR 5  
 Call Sign: ECHO

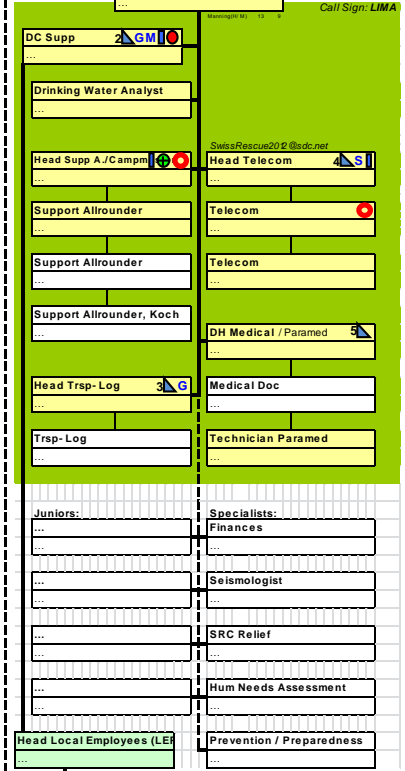


Chief Operations 1



INSARAG HEAVY :  
 to operate at 2 sites  
 on each with 1 SRM - unit,  
 24 hours/day, 7 days/week  
 shifting after 12 hours

Chief Support 1



Bemerkungen:  
 1) Funken  
 - Rufname "standard": Funktionsbezeichnung (+ Nummer bei Bedarf)  
 - Rufname "spezial": Call sign + Nummer  
 Beispiel "standard" einfach  
 "TL von C Supp"  
 "TANGO 1 von LIMA 1"  
 Beispiel "standard" mit Nummer  
 "OSA 12 von OSA 21"  
 "ALPHA 12 von BRAVO 21"

- Legende:
- Advanced assessment 1st prio
  - Advanced assessment 2nd prio
  - Command radio network + number
  - On-site radio network
  - Haz Mat at personal alarming equipment (dosimeter, 3-gas monitor)
  - Box with Haz Mat equipment for measuring
  - Mat VD: SwissCoord202@cdc.net
  - Mat Staff: SwissCoord202@cdc.net
  - Mobile phone
  - Sat-Phone
  - GPS

REGA:  
 Pilot in Command  
 ...  
 First Officer  
 ...  
 Nurse  
 ...  
 VD : 10 RK-PAX  
 Prinzip: Kein VD bei Übersee-Einsätzen



- LEP: Advisor  
 ...  
 LEP: Translator  
 ...  
 LEP: Driver  
 ...  
 LEP: Guide  
 ...

Summary:

|                       |         |
|-----------------------|---------|
| Eff. strength: HEAVY  |         |
| 02 PAX                | 860 kg  |
| 12 dogs               | 360 kg  |
| Pers. equipm:         | 3060 kg |
| Technical mat         | 6781 kg |
| Eff. strength: MEDIUM |         |
| 08 PAX                | 4640 kg |
| 6 dogs                | 80 kg   |
| Pers. equipm:         | 1740 kg |
| Technical mat         | 6781 kg |

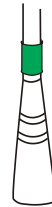
Affected Country / LEMA

# Base of Operation (BoO)

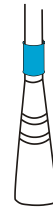
- Telephone (SAT)
- Internet (SAT)
- Electricity
- GPS
- Photos and data
- If all fails – HF Radio

# VHF nets at the field

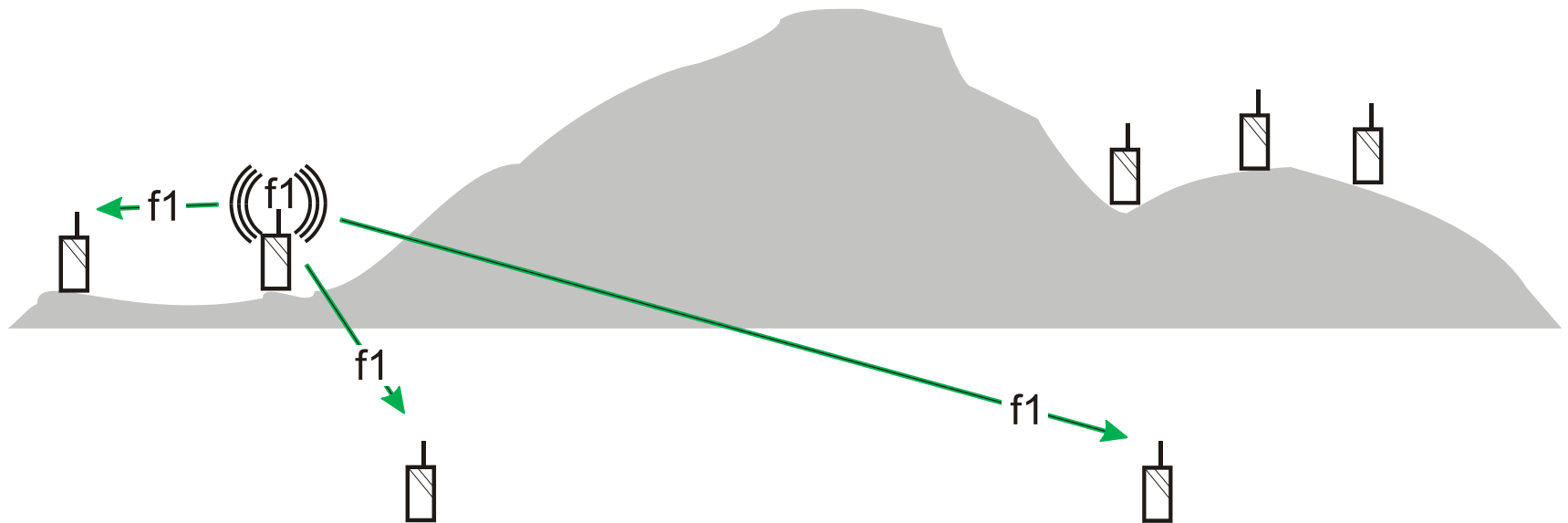
- Command net (through repeater) **GREEN label**  
connect all heads, chiefs and support



- Onsite net (simplex) **BLUE label**  
local use only

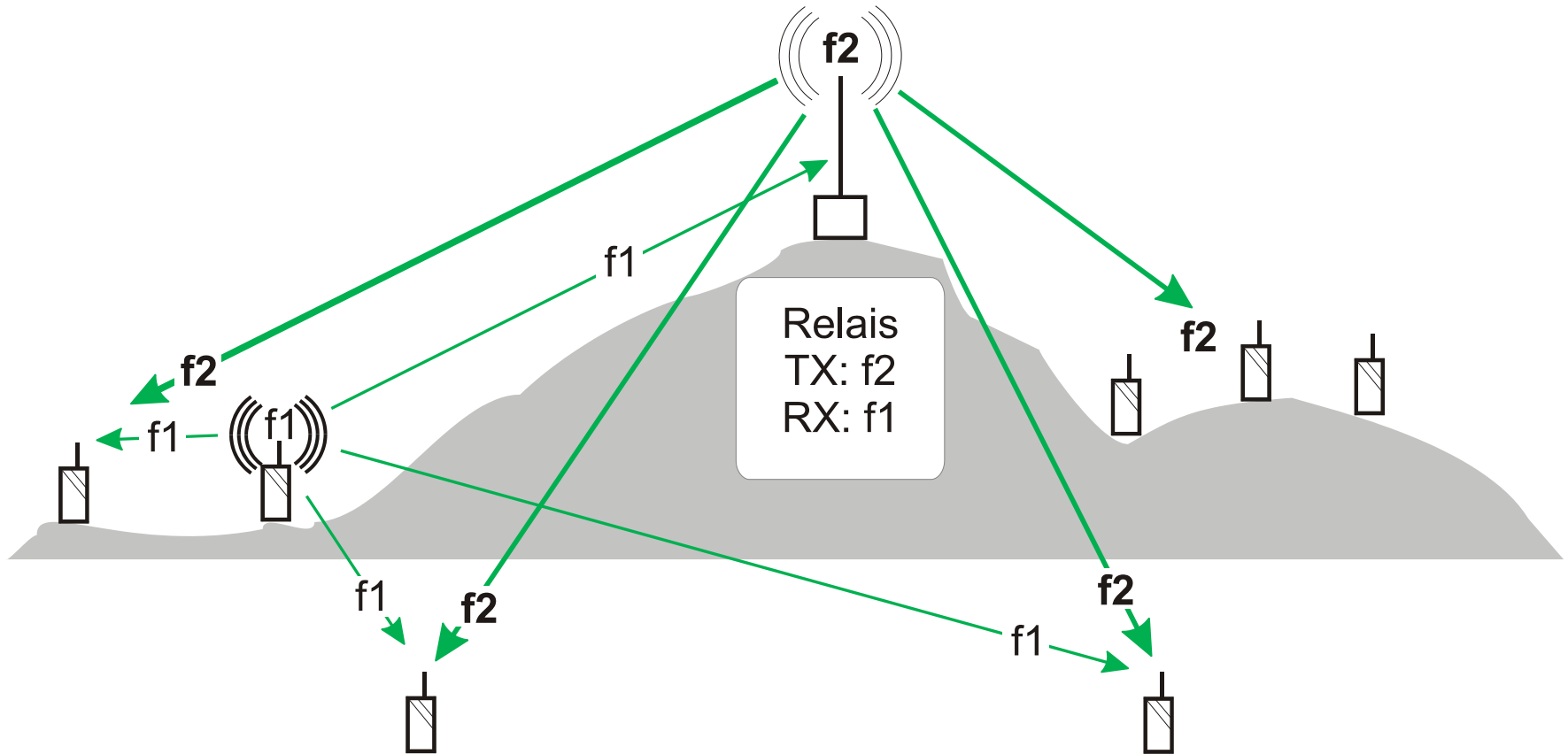


# Command net without repeater





# Command net after installation of repeater



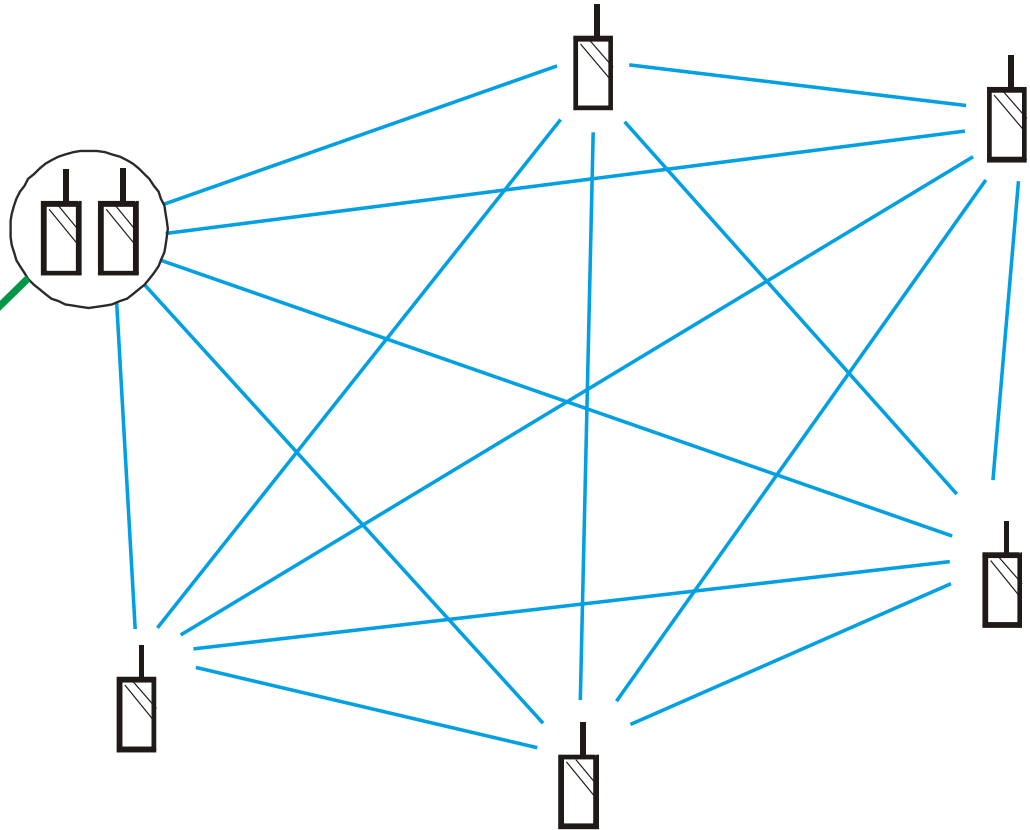
# On site activities



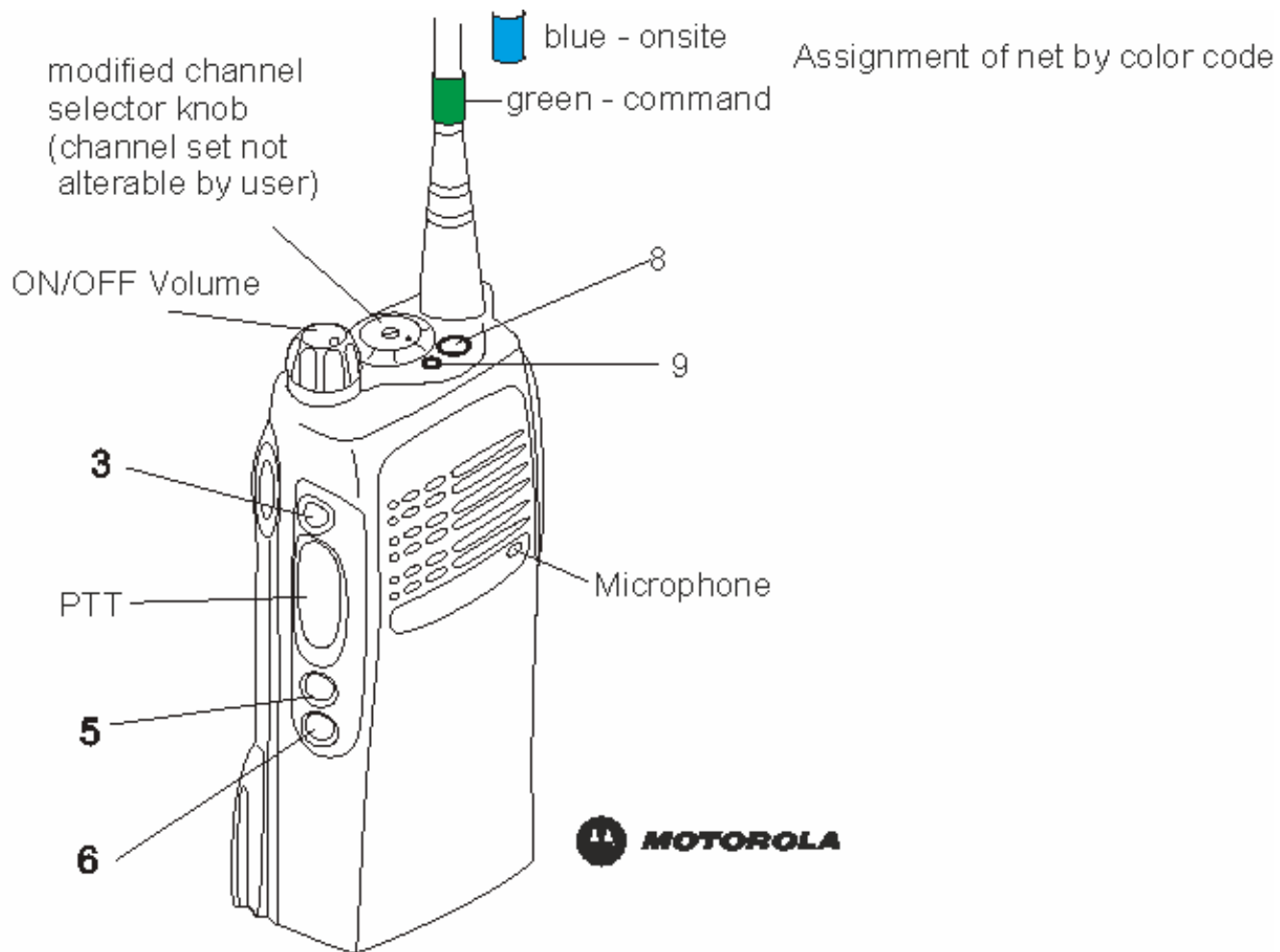
# On site net



connection to  
command net



# Motorola GP340 (modified for SHA use)



# VHF Frequencies used

**Exclusive 2m Amateur-frequencies  
(144.025 – 145.775 MHz) are used during operation!**

**Reasons for:**

- **The Tampere Convention facilitates**  
<http://www.itu.int/ITU-D/emergencytelecoms/tampere.html>
- **No interference with safety networks**
- **No interference with other networks**
- **Ready to use preprogrammed radios provided**

# VHF Amateur frequencies

**Prevention to minimize QRM on exclusive Amateur - frequencies**

- 1. Group members are Amateurs as well**
- 2. Operations will be announced by Telecom Group on the band should QRM occur**
- 3. Whenever possible local Amateurs will be informed of operation**
- 4. Good training of users grant strict communication**

# Future

- Constant evaluation of the market
- GPS tracking of individuals
- Internet access for leaders by tablet computers
- New repeater (already digital modes provided)
- Amateur Radio Operators

**You want to become a member of the  
Specialized Telecom Group of SHA?**

**[www.skh.ch](http://www.skh.ch)**



**Thank you for your  
attention**

**Questions?**