
LS7

RADIO COMMUNICATIONS

SURF LIFE SAVING
NEW SOUTH WALES



LS7.1 RADIO COMMUNICATIONS



**NEW SOUTH
WALES**

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Date: 20th September 2014

PURPOSE

To outline club/service radio communications requirements for lifesaving operations in NSW.

POLICY

All SLS clubs/services/branches shall meet the SLSNSW radio/communication requirements when undertaking lifesaving operations, including:

- SLSNSW approved radio equipment (types/models)
- SLSNSW approved radio frequencies (channels)
- Coordinating through SLSNSW approved SurfCom's
- All SLS clubs/services/branches shall utilise and operate within the SLSNSW approved radio network. No service shall undertake lifesaving operations on alternative networks or establish their own alternative radio communications networks unless authorised by SLSNSW.
- All Surf Life Saving clubs/services in NSW shall utilise a SLSNSW endorsed SurfCom communications/coordination centre for lifesaving operations. No Surf Life Saving service shall implement their own 'SurfCom type' entity without the authorisation of SLSNSW.
- Only SLSNSW approved radio frequencies and channel allocations shall be programmed into SLS radios. No unapproved frequencies or frequency changes shall be permitted without the approval of SLSNSW.
- SLS radio frequencies are licensed and managed by SLSNSW. No Surf Life Saving service in NSW shall apply for or implement frequencies through the ACMA for lifesaving operations outside of the SLSNSW frequency plan.
- All SLS radios shall be serviced annually by a licensed and SLSNSW endorsed technician/service agent.
- Only SLSNSW approved, licensed agents/service technicians may service or program SLS radios.
- All SLS services must be contactable via radio if conducting lifesaving operations in regular patrol coverage areas.
- All SLS radios must meet the minimum SLSNSW radio specifications as outlined in this document.
- Only approved SLS club/service officers/personnel (who are currently SLS/ALS members/staff) shall utilise and operate lifesaving radio equipment and monitor lifesaving frequencies. External partner agencies/stakeholders shall require written permission to hold, use or monitor SLSNSW radio frequencies.

LS7.2 RADIO SPECIFICATIONS



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PURPOSE

To outline minimum radio specifications for SLS radios used in NSW.

Definitions

Base-set/Mobile-Set: Fixed radio unit-usually located in towers/clubs or ATV/4WD

Portable/Handheld: Radio units used/carried by individual lifesavers/lifeguards

Lifesaving Operations: Patrolling/Emergency Response/Training/Events/Carnivals

POLICY

1. Only SLSNSW approved radio makes or models shall be utilised for lifesaving operations.
2. Radios for lifesaving operations shall be purchased only from SLSNSW approved suppliers/dealers and must be Australian type approved radios.
3. Only SLSNSW approved radio service agents shall be authorised to service or program SLS radios.
4. SLS radios shall only have the SLSNSW schedule of radio frequencies/channels programmed into them (additional frequencies must have SLSNSW written approval and subsequent records updated on the SLSNSW frequency schedule).
5. No one other than authorised SLSNSW personnel shall provide SLSNSW frequencies to other parties, and no other radios other than SLS radios shall hold SLSNSW frequencies without SLSNSW approval in writing.
6. External (non SLS) services with authorisation to hold SLS frequencies shall reapply to SLSNSW annually.
7. SLS clubs/services shall service all radio equipment annually, including frequency/channel alignment.
8. Only those 'special functions' approved by SLSNSW and provided to endorsed radio suppliers/service agents shall be activated on SLS radios.
9. SLS services shall utilise only radios which meet the following specifications to ensure optimal working ability within the SLSNSW radio network for lifesaving operations.

Radio Equipment Minimum Requirements:

Spectrum	UHF
Radio Type	Base-set/Mobile-Set or Portable/hand-held
Radio Mode	Conventional/PMR/DMR TIER II
Frequency Range	UHF 450–520MHz (UW)
Power Output	4 Watt (portable/handheld) 5 Watt (base-set/mobile-set)
Channel Spacing	12.5 kHz (narrow)
Channels	36+ minimum
Channel Selection	Push button with LCD (> 50 channel)
Signaling	5 Tone (CCIR) Selcall ANI capable CTCSS encode/decode (sub-tone) capable
Compliance	C Tick approval required

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Voting	Capable
Scan	Capable
Background Scan	Capable
TX Timeout	Set to 90 seconds
TX Reclaim (Re-Key)	Capable
TX Lockout	Capable
Environmental	IP57 minimum (water ingress + dust resistant) IP67 recommended
Numeric Keypad	Optional – Duty Officer Radios only
Battery	8+ hour shift life 2000+ mAh Li-Ion or NiMH
Charger	Smart
Accessories	Optional external speaker microphone (IP rated)
Parts and Service	National sales and service (5 years). 12 Month Warranty.
Scribed	Permanently marked with club/service name (engraved/other)

Radio Channel Allocations (branch and club)

Channel #	Activity	Display	Details
Channel 1	Helicopter	1HELI	Simplex Helicopter and emergency working channel (on site)
Channel 2	Patrol	2PATRL	Simplex channel for patrol duties
Channel 3	Repeater (Primary)	3Repeater Name	Primary/main repeater channel
Channel 4	Priority Scan Operates as channel 2 (transmit & receive) + scans Ch1,3 & other branch repeaters. Prioritises Ch3 receive.	4SCAN	Operates as Ch2, but any transmissions over Ch3 (repeater) will override all other transmissions on this channel – so emergency calls from SurfCom are not missed

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Channel 5-9	Other Branch Repeaters	5Repeater Name	North-South
Channel 10	PA Channel	10PA	Only if required (requires SLSNSW approval)
Channel 11	Council Lifeguard Channel	11Council name	Only if required – not recommended (requires SLSNSW approval)
Channel 25-26	Training Channels	25TRAIN	Simplex CB training channel
Then ALL-STATE repeaters listed as actual repeater channel numbers Nth-Sth			
Channel 41	CUDGEN repeater	41CUDGE	
Channel 43	ST HELENA repeater	43STHELE	
Channel 45	BALLINA repeater	45BALLIN	
Etc etc	Etc etc	Etc etc	

Any radios with only **16 channels** should be phased out (natural attrition), but in the short term will be provided a special channel plan that includes only branch repeater channels + other branch repeater to the north and south.

LS7.3 RADIO EQUIPMENT MAINTENANCE



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PURPOSE

To outline the recommended maintenance procedures for SLS radios.

POLICY

Radio Servicing/Preventative Maintenance

All radio equipment shall be annually serviced by a SLSNSW endorsed service agent/technician – to ensure the integrity of equipment and lifesaving service provision.

Equipment needs to be checked for (at a minimum):

- Channel/frequency assignment
- Battery condition
- Transmit power levels
- Correct CTCSS number and format

Preseason Radio Tests

Clubs/Services and SurfComs should conduct a series of preseason radio tests with all lifesaving services within the SurfCom coverage area.

Testing should commence no later than one month before the start of the season to enable issues to be identified and rectified so as to not inhibit lifesaving operations.

Radio Programming/Frequencies

All radios shall be programmed only by a SLSNSW endorsed licensed technician/agent as per SLSNSW specifications and allocations. Radio frequencies schedules are maintained by SLSNSW and are provided only to endorsed radio service agents. They shall not be provided to other clubs/services or other bodies/persons. No alterations to radio programming shall be undertaken without SLSNSW authorisation – to ensure adherence to licenses and to ensure radio channels are correctly documented (SLSNSW).

LS7.4 COMMUNICATIONS SECURITY/ STREAMING



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PURPOSE

To outline expectations and restrictions regarding recording, releasing and streaming of lifesaving communications.

POLICY

No individual club or service shall record, release, publish or stream any Surf Life Saving radio, phone or written communications without the written authorisation of Surf Life Saving New South Wales.

These restrictions include:

- Recording of SLSNSW radio frequencies and/or provision of recording communications to any other party (internal or external).
- Live streaming of SLSNSW radio frequencies on the internet or any intranet system.
- Recording of any lifesaving operations related phone/mobile communications and/or provision to any other party (internal/external).
- Provision of Surf Life Saving logs or forms to any other party (internal/external) – other than NSW Police/Coroner.
- 'Posting' or publishing any official surf life saving logs/forms online or in the media.

Social Media

Please refer to the separate SLSA Social Media Policy.

Sensitive Information

Members may be privy to sensitive information during the course of lifesaving duties, particularly those who undertake roles in SurfCom or as Duty Officers. To be clear, all information (and especially that of a sensitive nature) must remain confidential and must not be disclosed via any medium unless authorised by SLSNSW.

Any suspected breaches will be taken seriously and SLSNSW will investigate. Severe consequences may result for any person(s) found to be responsible.

REFERENCE

SLSNSW SOP – Social Media

SLSA Policy 6.20 - Social Media

LS7.5 RADIO CALL SIGNS



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PURPOSE

To ensure a consistent and standardised form of communication across NSW the following call signs are to be used by and for all radio communications.

PROCEDURE

Callsign: 'SurfCom' – All radio command centres

Club

Units	Call-sign
Patrol Captain or Patrol Base	[Club Name] Patrol
Tower (mobile or fixed)	[Club Name] Tower
Flagged Area (waters-edge)	[Club Name] Flags
Roving Foot/ATV Patrol	[Club Name] Roving or Mobile
IRB*	[Club Name] IRB*

*Additional units assigned numbers. i.e. "[Club Name] IRB1" and "[Club Name] IRB 2."

Lifeguards (ALS)

Units	Call-sign
Patrol Base	[Beach Name] Lifeguard
Tower (mobile or fixed)	[Beach Name] Tower
Flagged Area (waters-edge)	[Beach Name] Flags
Lifeguard RWC	[Beach Name] Support Ski
Roving Foot/ATV Patrol	[Beach Name] Roving or Mobile
Lifeguard Supervisor	[Council Name] 1
Lifeguard Supervisor (additional)	[Council Name] 2

Duty Officers

Branch/Regional Position	Call-sign
Duty Officer (in command)	[Branch/Council* Name] 10
Duty Officer 2 (additional)	[Branch/Council* Name] 11
Duty Officer 3 (additional)	[Branch/Council* Name] 12

*In some Branches where responsibility may be divided between Council areas, "Council" may replace "Branch" in the call-sign. i.e Randwick 10

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Rescue Water Craft Services (Jet Ski)

Call signs for RWC services will be assigned as per the Service's relevant Lifesaving Service Agreement.

SLSNSW

State Position	Call-sign
State Duty Officer	NSW 10
Director of Lifesaving	NSW 11
Lifesaving Manager	NSW 12
Lifesaving Officer	NSW 13
Duty Operations Coordinator	NSW 14
Lifeguard Manager	Lifeguard 11
Lifeguard Coordinator – Northern Region	Lifeguard 12
Lifeguard Coordinator – Southern Region	Lifeguard 13
Lifeguard Services Coordinator	Lifeguard 14

Helicopter/s

Unit	Call-sign	
SLSQ Gold Coast Helicopter	Lifesaver 5	
SLSQ Gold Coast Helicopter	Lifesaver 6	
Northern Region Helicopter (Lismore)	Lifesaver 2	
Northern Region Helicopter (Lismore)	Lifesaver 4	
Tamworth Helicopter	Westpac 3	
Tamworth Helicopter	Westpac 4	
Hunter Helicopter	Westpac 1	
Hunter Helicopter	Westpac 2	
Sydney Westpac Helicopter	Lifesaver 1	
South Coast Westpac Helicopter	Lifesaver 3	

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Police	PolAir 1	Continuous
Ambulance	Rescue 22,23,24	Bankstown
	Rescue 26	Wollongong
Aerial Shark Patrol (fixed-wing)	Airpat 1-3	

Rescue Vessels

Unit	Call-sign
Ballina Jet Rescue Boat	Surf Rescue 40
Randwick Offshore Rescue Boat	Surf Rescue 30
Cronulla Offshore Rescue Boat	Surf Rescue 20
Kiama Jet Rescue Boat	Surf Rescue 50

LS7.6 RADIO CODES



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PURPOSE

To outline SLSNSW endorsed radio codes and the parameters of use in lifesaving operations.

POLICY

Use of radio codes is not mandatory for lifesaving operations, but if used, shall adhere to the following.

PROCEDURE

- Any SLSNSW services wishing to use radio codes shall adhere to the codes below and shall implement their use consistently across the whole service (i.e club).
- No alternative 'codes' shall be used by lifesaving services on SLSNSW frequencies without written authorisation by SLSNSW.
- SurfComs shall be aware of radio codes and have 'the code' immediately available to reference when on-duty.
- SurfCom Operators and Duty Officers shall be inducted in 'the code' during SurfCom training.
- Club/service personnel should be adequately trained/inducted in the use of codes should that service implement their use.
- If in any doubt services/personnel should always revert to standard English (clear and concise sentences).

Radio Codes

Code	Meaning	Further Explanation
Rescue Rescue Rescue	Prefix for emergency transmissions to indicate urgency + call-sign	Should prefix every initial 'Priority 1' emergency call to notify/request support. i.e from lifesaver to patrol base/patrol captain or from club to SurfCom.
Break Break	Grouping transmissions together (should always leave a gap after 2 different transmissions)	'Break break' can be used to group different transmissions together. E.g. "Avoca patrol from SurfCom, all copied thank you. Break break, Copacabana Copacabana patrol this is SurfCom requesting your patrol sign-on, over"
No Duff	A real incident underway during a training exercise	The term 'NO DUFF' is used when a real incident is occurring during a training exercise or simulated event. Every transmission after "No Duff" is treated as legit. E.g. "No Duff No Duff No Duff, Rescue Rescue Rescue, SurfCom SurfCom this is Avoca Beach"
Priority 1	Urgent task	Specific tasking that requires immediate attendance – usually involves life-threatening situation/rescue or serious injuries or several patients.
Priority 2	Non-urgent task	Specific tasking that requires lifeguard to provide emergency care or to undertake rescue operations but not considered life-threatening.
Priority 3	Routine task	Specific task but is not considered urgent. May include administrative, logistics requests.

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Code	Meaning	Further Explanation
Sign On	Commencing of duty (start of shift)	
Sign Off	Ceasing duties (end of shift)	
Secure Radios	Secure radios from public earshot	Prefixing non-urgent but sensitive information to be communicated.
X	Search for submerged patient	More details required in transmission.
1	On duty and available for tasking	
2	On standby and awaiting further instructions at (location)	Used during incident/callout to indicate 'elevated state of readiness' and/or arrival at incident site.
3	On meal break	
4	Beginning to pack up patrol area	The lifeguard commences to pack equipment at the end of shift.
5	Leaving beach, assigned task or use restroom etc	When complete – transmits a 'Code 1.'
6	Entering the water for training	Used when going for a swim, undertaking water based training. When complete – transmits a 'Code 1.'
7	Unavailable to respond to calls (service/equipment)	This code means the service or aspect of the service is contactable but cannot respond at that time. Offer a timeframe if possible. i.e Byron Support Ski Code 7.
8	Unable to be contacted	More details required in transmission.
9	Entering water to undertake rescue	
10	Search for missing person in water	Provide details, e.g. location, description, etc. "Code X" may be relevant if confirmed (submerged person).
11	Mass Rescue	
12	Lifesaver/Lifeguard in trouble (man-down)	Member/staff has been injured, is in physical danger or is missing. Urgent assistance required. If possible give further information – especially location.
13	CPR Incident	More details required in transmission.
14	Deceased Person	More details required in transmission.
15	Undertaking First Aid (non-life threatening)	
16	Shark Sighting	
17	Shark Attack	More details required in transmission.
18	Indecent Behaviour	More details required in transmission.
19	Undertaking Enforcement Function	

LS7.7 RADIO NETWORK FAULT REPORTING



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PURPOSE

To outline the process and roles/responsibilities of lifesaving services and service providers in resolving radio network issues.

POLICY

A fully operational and effective radio network is essential to the provision of lifesaving services across the state. The resolution of radio problems must be undertaken in a coordinated manner, to achieve the most time efficient and effective outcome.

PROCEDURE

Radio Network Responsibilities

The following parts of the radio network are managed by the following parties:

- a) Base sets, handheld radios, facility antennas – Clubs/Services/Lifeguards
- b) SurfCom facilities/equipment – Branches
- c) SurfCom phone/fax lines – Branches
- d) SurfCom internet lines – Branches
- e) Radio Network Repeaters/VOIP – SLSNSW
- f) Radio Frequencies – SLSNSW
- g) Radio Network SOPs/Procedures – SLSNSW

Radio Transmission Quality Checks – For use by lifesaving services

SIGNAL STRENGTH
LOUD – STRENGTH 5
GOOD – STRENGTH 4
WEAK – STRENGTH 3
VERY WEAK – STRENGTH 2
FADING – STRENGTH 1

REPORT ON READABILITY
CLEAR
READABLE
UNREADABLE
DISTORTED
WITH INTERFERENCE

Example: "Reading you Strength 3, with Interference over."

Radio Network Maintenance Report Forms

FORM 1

- Used by Clubs/Services/Lifeguards to inform Branch/Supervisor of problem.
- Used by Branch/Lifeguard Supervisors to inform State of problem.
- Used by SLSNSW to inform service technician of problem.

FORM 2

- Used by service technician to inform SLSNSW of work undertaken (in conjunction with network drawings).

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RADIO NETWORK MAINTENANCE PROCEDURE

1. A lifesaving service identifies a problem with their radios:
 - Lifesaving service undertakes radio checks within its own area on at least 2 handhelds and its base set (simplex, main repeater channel, and alternative repeater channel).
 - Lifesaving service undertakes radio checks (on main and alternative repeater channels) with SurfCom and services to the North and South.
 - Lifesaving service records the results of these radio checks and contacts its appropriate branch/service officer/lifeguard supervisor.
2. The branch officer/lifeguard supervisor completes and sends "Form 1" to lifesaving@surflifesaving.com.au or fax 9471 8001 and calls SLSNSW on 9471 8000

NOTE: ONLY THE SLSNSW LIFESAVING MANAGER CAN ENDORSE REPAIRS TO THE RADIO NETWORK

3. SLSNSW contacts radio network service technician and provides "Form 1" and a "Form 2" template + radio network drawings. Quote requested for repair. Purchase Order number supplied.
4. Service provider provides 'quote'. SLSNSW reviews quote and provides direction on whether to progress.
5. Service Provider completes work:
 - Notifies SLSNSW of repair at 9471 8000 & lifesaving@surflifesaving.com.au
 - Completes "Form 2"
 - Updates network drawings
 - Returns "Form 2" + drawings to SLSNSW with invoice
6. SLSNSW advises the lifesaving service officer/supervisor of repair/relevant details and updates its radio network records.
7. Lifesaving service officer/supervisor notifies their lifesaving service personnel.

REFERENCE

Radio Fault Reporting – 'Form 1' and 'Form 2'

LS7.7 RADIO NETWORK FAULT REPORTING



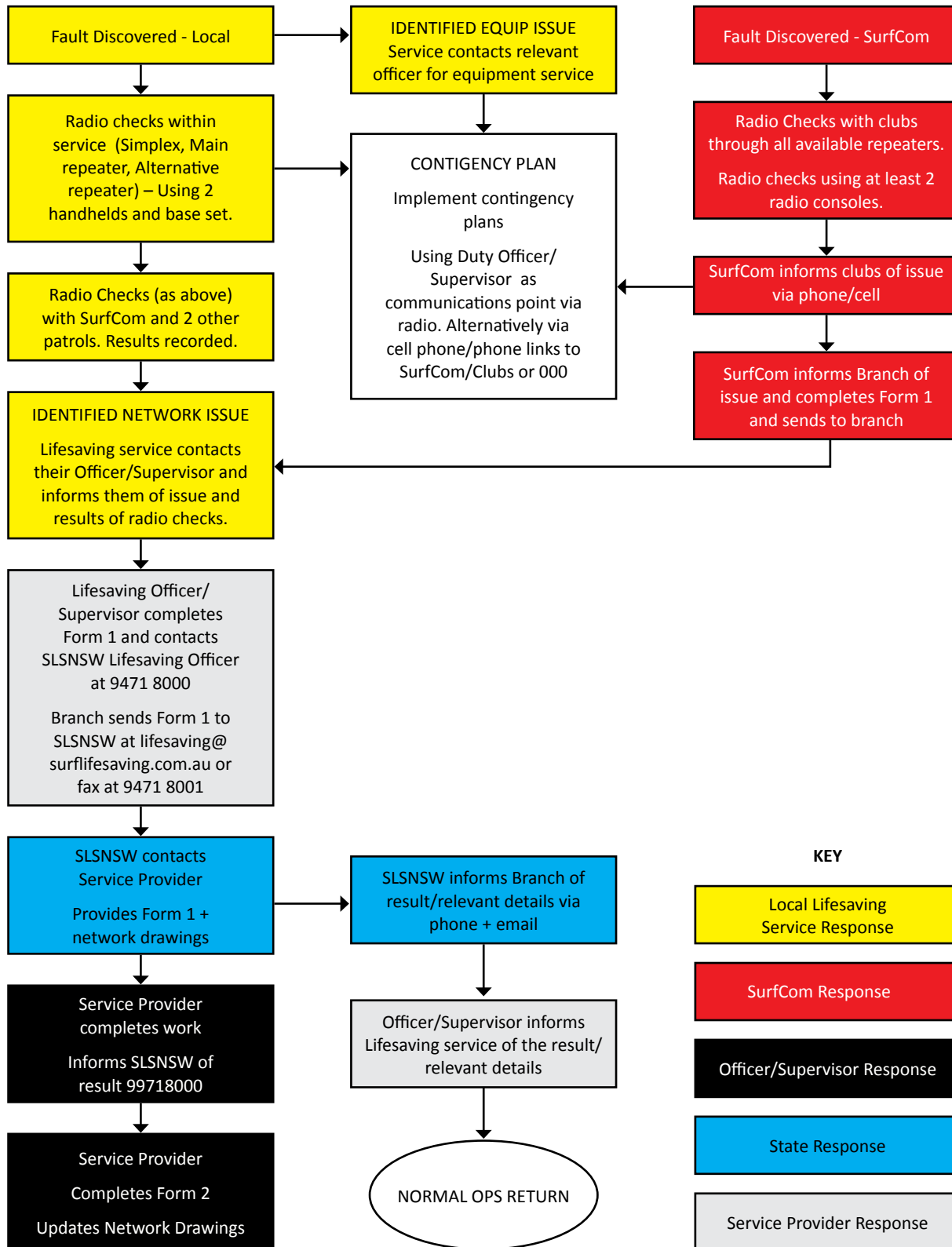
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RADIO NETWORK MAINTENANCE PROCEDURE



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