Statewide Interoperability Radio Network (SIRN)
Standards, Protocols, Procedures

Document Section	Interoperability Standards	Status: Committee Date: 8/30/2021
State Standard Number	**1.8.0**	
Standard Title	Minimum Programming Standard (Radio/Console Layout)	
Date Established	**8/30/2021**	**SIEC Approval**: 8/30/2021
Replaces Document Dated	**NA**	
Date Revised/Reviewed	**8/30/2021**	

1. Purpose or Objective

The purpose of this standard is to establish minimum programming requirements and talkgroup matrix (or fleetmap) recommendations for subscriber radios and dispatch consoles.

2. Technical Background

▪ **Capabilities**

The SIRN Platform provides local, regional, and statewide resources for interoperable communications should multiple events occur simultaneously. Subscriber devices, including radios and dispatch consoles, will be configured with dozens, and in some cases hundreds, of talkgroups to access these local, regional, and statewide communications capabilities.

▪ **Constraints**

If programming of subscriber radios is not coordinated, situations may arise in which subscriber radios and consoles may not have the proper talkgroups or channels programmed to appropriately handle the event. For consoles and subscriber radios to be effective, radio and console programming must be consistent and follow these guidelines.

3. Operational Context

Consistent programming will facilitate interoperable communications during the vast majority of scenarios. Uniform organization of these capabilities within the device eases a user's ability to quickly navigate to the right resource for the incident-at-hand.
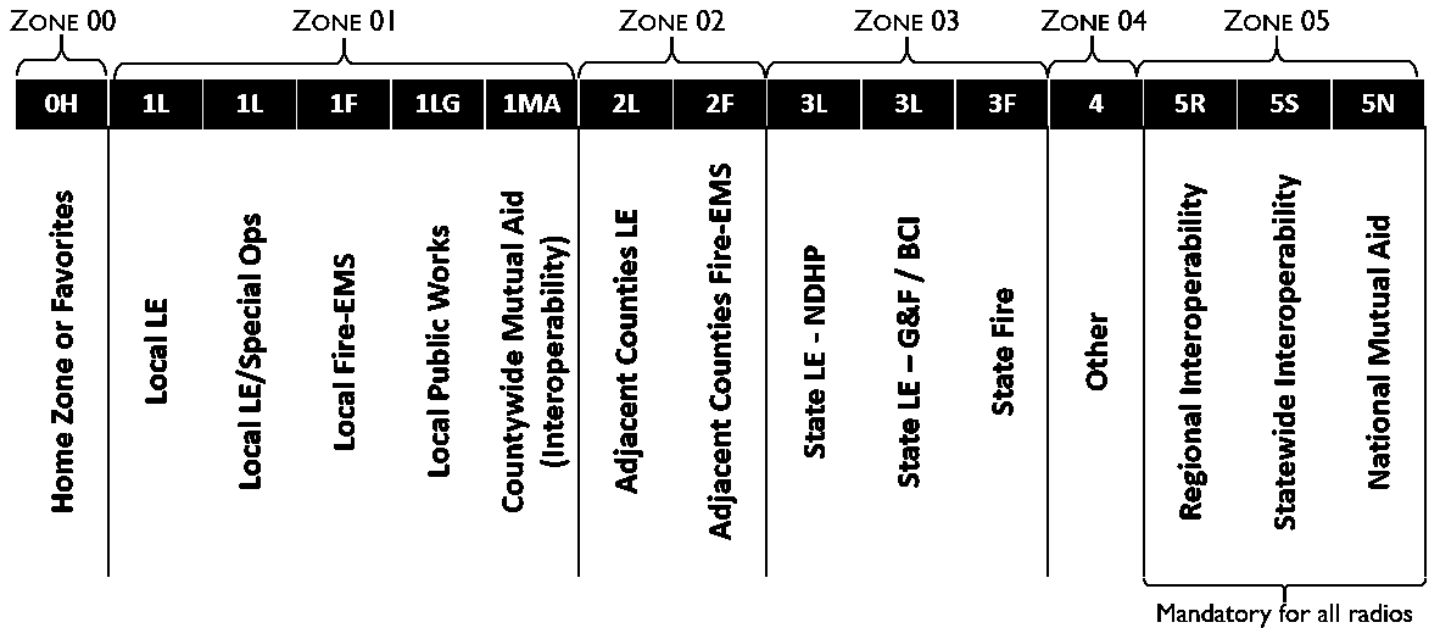
4. Recommended Protocol/ Standard

Subscriber Radios

For ease of navigation and consistency, talkgroups must be programmed as described and illustrated below, organized into six distinct groups of *Zones*.

ZONE 00	ZONE 01					ZONE 02		ZONE 03			ZONE 04	ZONE 05		
0H	1L	1L	1F	1LG	1MA	2L	2F	3L	3L	3F	4	5R	5S	5N

| Home Zone or Favorites | Local LE | Local LE/Special Ops | Local Fire-EMS | Local Public Works | Countywide Mutual Aid (Interoperability) | Adjacent Counties LE | Adjacent Counties Fire-EMS | State LE - NDHP | State LE – G&F / BCI | State Fire | Other | Regional Interoperability | Statewide Interoperability | National Mutual Aid |

Mandatory for all radios

Talkgroups must be organized into six groups as follows:

- 00 HOME ZONE: Customizable zone(s) populated with the agency's or specific radio user's frequented talkgroups replicated from Zones 1 to 5. Agencies are free to organize the HOME Zone(s) per their unique needs and internal policies; however, HOME Zone(s) must include the following talkgroups required for interoperable functions:
  - ND MA HAIL
  - ND MA PURSUIT1 and ND MA PURSUIT2
  - Applicable ND Regional HAIL
  - Applicable ND Regional PURSUIT
  - Applicable Direct Mode Channel

- 01 LOCAL ZONE: LOCAL county/municipal talkgroups. Each function (law enforcement, Fire/EMS, and public works) may be organized as "sub-zones." Agency administrators can determine whether to include all different disciplines into their respective radios. It is recommended that all radios within the agency or County have uniform 01LOCAL Zone(s).

- 02 ADJACENT (or SHARED) ZONE: Following the LOCAL talkgroup zone(s), ADJACENT or neighboring county/municipal talkgroup zones are to be included. Each function (law enforcement, Fire/EMS, and public works) may be organized as sub-zones. Note that access to these SHARED talkgroups must be based on mutually-executed Letters of Authorization between the parties. See SIRN Standard 1.5.0 Use of Shared Talkgroups for further details.

- 03 STATE ZONE: State agency LE and Fire zones. Fire and law enforcement agencies may be limited to their respective discipline's state agency talkgroups. Note that these, too, are subject to SIRN Standard 1.5.0 Use of Shared Talkgroups.

- 04 OTHER ZONE: Other special purpose talkgroups including special operations, task forces, State agencies or hospitals relevant to the users' duties.

- 05 MUTUAL AID/INTEROPERABILITY ZONE: All radios must be programmed with Zone 05 which includes all applicable regional, Statewide and National conventional channels and MUST be organized as described below.

05 MUTUAL AID/INTEROPERABILITY Zones Programming

All SIRN radios must be programmed with all SIRN statewide and regional trunked talkgroups, and the national mutual aid *conventional channels*, organized into 16-talkgroup sub-zones as illustrated below.

05 REGIONAL MA1	05 REGIONAL MA2	05 STATE MA1	05 STATE MA2	5 STATE 700 MA	5 NAT'L 700 MA1	5 NAT'L 700 MA2	5 NAT'L 800 MA	5 NAT'L VHF MA
Regional Interop	Regional Interop	Statewide MA	Statewide MA	Local Simplex	National MA (700)	National MA (700)	National MA (800) + AG	National MA (VHF)
ND NW MA HAIL	ND NE MA HAIL	ND MA HAIL	ND MA HAIL	7CALL70_D	7CALL50	7CALL50_D	8CALL90	VCALL10
ND NW PRSUIT	ND NE PRSUIT	ND PURSUIT 1	ND MA 16	7TAC71_D	7TAC51	7TAC51_D	8TAC91	VTAC11
ND NW MA 01E	ND NE MA 01E	ND PURSUIT 2	ND MA 17	7TAC72_D	7TAC52	7TAC52_D	8TAC92	VTAC12
ND NW MA 02	ND NE MA 02	ND MA 03 E	ND MA 18	7TAC73_D	7TAC53	7TAC53_D	8TAC93	VTAC13
ND NW MA 03	ND NE MA 03	ND MA 04 E	ND MA 19	7TAC74_D	7TAC54	7TAC54_D	8TAC94	VTAC14
ND NW MA 04	ND NE MA 04	ND MA 05 E	ND MA 20	7TAC75_D	7TAC55	7TAC55_D	8CALL90_D	VFIRE21
ND NW MA 05	ND NE MA 05	ND MA 6	ND MA 21	7TAC76_D	7TAC56	7TAC56_D	8TAC91_D	VFIRE22
ND NW MA 06	ND NE MA 06	ND MA 7	ND MA 22	7GTAC77_D	7GTAC57	7GTAC57_D	8TAC92_D	VFIRE23
ND SW MA HAIL	ND SE MA HAIL	ND MA 8	ND MA 23	7MOB_79D	7MOB59	7MOB59_D	8TAC93_D	VFIRE24
ND SW PRSUIT	ND SE PRSUIT	ND MA 9	ND MA 24	7LAW81_D	7LAW61	7LAW61_D	8TAC94_D	VFIRE25
ND SW MA 01E	ND SE MA 01E	ND MA 10	ND MA 25	7LAW82_D	7LAW62	7LAW62_D	7AG58	VFIRE26
ND SW MA 02	ND SE MA 02	ND MA 11	ND MA 26	7FIRE83_D	7FIRE63	7FIRE63_D	7AG60	VMED28
ND SW MA 03	ND SE MA 03	ND MA 12	ND MA 27	7FIRE84_D	7FIRE64	7FIRE64_D	7AG67	VMED29
ND SW MA 04	ND SE MA 04	ND MA 13	ND MA 28	7MED86_D	7MED65	7MED65_D	7AG58_D	VLAW31
ND SW MA 05	ND SE MA 05	ND MA 14	ND MA 29	7MED87_D	7MED66	7MED66_D	7AG60_D	VLAW32
ND SW MA 06	ND SE MA 06	ND MA 15	ND MA 30		7DATA69	7DATA69_D	7AG67_D	SAR NFM

Applies to dual band radios

Emergency Activation Reverting on Mutual Aid Trunked Talkgroups

Emergencies activated from a radio on a mutual aid talkgroup must be configured to revert to a local talkgroup monitored by the radio user's serving/home PSAP. As an example, an emergency alert by a user from County X who is operating on ND MA 4 in County Y would be transmitted to County X's Home/Emergency talkgroup. This setting will route emergency activations from users supporting incidents to their home PSAP regardless of their location and selected talkgroup enabling their home PSAP staff to respond to and triage the emergency.

Consoles

SIRN dispatch consoles must similarly be programmed the SIRN regional and statewide interoperability talkgroups into their consoles. Dispatch consoles may be configured with individual or combined "tabs" (groups of communication resource icons) to organize the statewide and regional interoperability talkgroups as illustrated below.

Console TAB: REGIONAL		Console Tab: STATEWIDE	
ND NW MA HAIL	ND SW MA HAIL	ND MA HAIL	ND MA 16
ND NW PRSUIT	ND SW PRSUIT	ND PURSUIT 1	ND MA 17
ND NW MA 01E	ND SW MA 01E	ND PURSUIT 2	ND MA 18
ND NW MA 02	ND SW MA 02	ND MA 03 E	ND MA 19
ND NW MA 03	ND SW MA 03	ND MA 04 E	ND MA 20
ND NW MA 04	ND SW MA 04	ND MA 05 E	ND MA 21
ND NW MA 05	ND SW MA 05	ND MA 6	ND MA 22
ND NW MA 06	ND SW MA 06	ND MA 7	ND MA 23
ND NE MA HAIL	ND SE MA HAIL	ND MA 8	ND MA 24
ND NE PRSUIT	ND SE PRSUIT	ND MA 9	ND MA 25
ND NE MA 01E	ND SE MA 01E	ND MA 10	ND MA 26
ND NE MA 02	ND SE MA 02	ND MA 11	ND MA 27
ND NE MA 03	ND SE MA 03	ND MA 12	ND MA 28
ND NE MA 04	ND SE MA 04	ND MA 13	ND MA 29
ND NE MA 05	ND SE MA 05	ND MA 14	ND MA 30
ND NE MA 06	ND SE MA 06	ND MA 15	ND MA 31

*Sequence Can vary from Crib Region to Crib Region

Similar to subscriber programming rules, each PSAP dispatch console's primary dispatch tab must include the following SIRN talkgroups to facilitate interoperability functions:
- ND MA HAIL
- ND MA PURSUIT1 and ND MA PURSUIT2
- Applicable ND Regional HAIL
- Applicable ND Regional PURSUIT

5. Recommended Procedure

Agency administrators and third-party radio service/programming vendors are required to be familiar with this Standard and are responsible for ensuring their agency's or customer's devices are programmed per this Standard.

Radio programmers will be required to demonstrate knowledge of this Standard to receive the SIRN System Key and other electronic hardware/software permissions necessary to configure

devices for SIRN access. See SIRN Standard 2.14.0 Programming System Keys for further details on obtaining System Keys and for approval as a SIRN radio programmer.

During the on-boarding stage and configuration of new devices, the SIRN Statewide Administrator will provide support and guidance to ensure compliance with this Standard.

To ensure the technical parameters are accurate, the System Administrator or designee will provide well-vetted "seed code plugs" including some of the base configuration parameters (e.g. talkgroups IDs) to assist agencies with radio programming and compliance to this Standard.

Agency locally-generated codeplugs (radio configuration software files) will be subject to certification for compliance to this and other applicable SIRN device standards. See SIRN Standard 2.16.0. Subscriber Configuration File or Codeplug Development for further details on the radio on-boarding and configuration file test and certification process.

6. <u>Management</u>

The SIRN Statewide System Administrator will maintain records of approved agency codeplugs (radio configuration software files) as reference against future codeplug changes that deviate from the approved version.

The SIRN Statewide System Administrator will may sporadically audit local codeplugs to verify programming of regional and statewide interoperable talkgroups and, additionally, retain records consistent with current records retention policies.