Iowa Statewide Interoperable Communications System (ISICS)
Standards, Protocols, Procedures

ISICS Standard:	**Standard #:**	1.11.0
Use of 700 MHz Scene of Action (SOA) Channels	Date Adopted:	10/11/2018
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	Version:	2.0

1. Purpose or Objective

The purpose of this standard is to provide standards, protocols, procedures, and operating parameters for short range simplex Scene of Action (SOA) channels.

2. Technical Background

- **Capabilities**
  - SOA channels allow the ability to communicate radio-to-radio without using system resources.
  - There are seven statewide P25 700 MHz SOA general purpose channels, 2 are encrypted.
  - There are two statewide P25 700 MHz SOA channels that are law enforcement specific, one is encrypted.
  - In this standard we are identifying these frequencies as channels but, these can also be conventional talkgroups.

- **Constraints**
  - The public safety/service interest is best served by creating an operating procedure that maintains safety of personnel in situations. The limitation of this resource due to the range of mobiles and the potential “walk over” issue is a critical point. Once a radio is keyed, there is no way to control the footprint of the transmission other than limiting the power of that transmission. Personnel talking on a mobile radio may have

no way of knowing if they are walking over a portable in the next community, because they will not be able to receive it or realize that the channel is in use by the portable.

- The 700 MHz SOA channels are only licensed for use within Iowa.
- Portable units will have limited range of operation, depending on the situation and conditions, while mobile units will have a greater range but may cause inadvertent interference to SOA portable users in adjacent areas.
- SOA channels included in a multi-mode (trunked and conventional) scan list of a radio unit will not allow that unit to priority scan. SOA channels may be included in scan lists. However, personnel will need to be aware that if the SOA channel is included in the scan list, the radio could lose the priority revert feature. If they are scanning, they may miss important radio traffic even on the channel selected.
- Since these SOA channels are not licensed for base station use, dispatch centers are not authorized to transmit on or patch the SOA channels into other resources using fixed stations.
- Dispatch centers normally will not be able to monitor SOA channels due to the limited range of these channels.
- 700 MHz SOA channels licensed to the State of Iowa are limited to 2 Watts Effective Radiated Power (ERP) per Federal Communications Commission (FCC) Rule 90.531 (portables or mobiles programmed to low power).
- CAUTION: If radios are incorrectly programmed, it is possible for radio units to inadvertently walk over or interfere with other radio units in close proximity to one another, endangering personnel operating on emergency scenes.

3. Operational Context

The 5 general purpose 700 SOAs, 2 encrypted general purpose 700 SOAs, 1 law enforcement specific and 1 law enforcement encrypted SOA shall be designated for use on scene by the incident commander or controlling public safety communications center. Units requiring use of a SOA channel shall verify that the channel is available via on-air announcement before use.

4. Recommended Protocol/Standard

This abbreviated table lists the SOA talkgroups from the ISICS 217a

Channel	Name	Receive Frequency	Transmit Frequency	Remarks	Enc. Key
Simplex/Direct	7-IA-GTAC-1D	774.93125 N	774.93125 N	TGID $0001, $C###, Max ERP 2 watts	
Simplex/Direct	7-IA-GTAC-2D	774.95625 N	774.95625 N	TGID $0001, $C###, Max ERP 2 watts	
Simplex/Direct	7-IA-GTAC-3D	774.98125 N	774.98125 N	TGID $0001, $C###, Max ERP 2 watts	
Simplex/Direct	7-IA-TAC-4D	774.94375 N	774.94375 N	TGID $0001, $C###, Max ERP 2 watts	
Simplex/Direct	7-IA-TAC-5D	774.96875 N	774.96875 N	TGID $0001, $C###, Max ERP 2 watts	
Simplex/Direct	7-IA-TAC-6DE	769.00625 N	769.00625 N	TGID $0001, $C###, Max ERP 2 watts	SLN 786
Simplex/Direct	7-IA-TAC-7DE	769.01875 N	769.01875 N	TGID $0001, $C###, Max ERP 2 watts	SLN 786
Simplex/Direct	7-IA-LAW-8D	769.03125 N	769.03125 N	TGID $0001, $C###, Max ERP 2 watts	
Simplex/Direct	7-IA-LAW-9DE	769.04375 N	769.04375 N	TGID $0001, $C###, Max ERP 2 watts	SLN 787

*RX Squelch is $293, TX Squelch is $293, Mode is D (digital)

* TGID $0001 is for Statewide use and $C### is for local county use. Place holder 2 and 3 designates county number and place holder 4 is 0-F

*These frequencies are licensed by ISICSB and authorized for any public safety agency possessing a FCC part 90 license.

All parameters on the ISICS ICS-217A shall be followed.

Elevated external or gain antennas connected to portable or mobile radios for portable radios may be allowed on the 700 MHz SOA channels, but a communications technician should be consulted prior to utilizing an elevated antenna.

5. Recommended Procedure

Unit-to-unit communications using the SOAs is initiated when necessary or during an event or incident when assigned by an incident commander. The dispatch centers will normally not be able to monitor each SOA channel to assign them for use. On scene units requiring the use of an SOA channel should announce their intent to use the channel.

SOA channel location on portable radios will be set by sub-system administrators in their fleetmaps.

6. Management

Sub-system administrators will be responsible for ensuring compliance with this standard.