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| UNIT OVERVIEW |
| **Course** Helicopter Crewmember, S-271 |
| **Unit** 3 – ICS Concepts and Principles |
| **Time** TBD |
| **Objectives**1. Describe the application of the ICS as it pertains to the Law Enforcement helicopter crewmember.2. Describe the ICS types of helicopters and the minimum National Standards for each type. |
| **Strategy**This unit will help students to gain an understanding of the ICS organization and the ICS types of helicopters. This will be done through lecture, helicopter photos, and student interaction. |
| **Instructional Method(s)*** Facilitation/informal lecture with PowerPoint
* Group Exercise
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| **Instructional Aids*** Personal computer with LCD projector and presentation software
* Fireline Handbook, PMS 410-1
* IRPG
* IHOG
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| **Exercise*** Helicopter Typing
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| **Evaluation Method(s)*** Review and discuss group exercise
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| **Outline**I. ICS Concepts and PrinciplesII. ICS Helicopter Typing |
| **Aids and Cues Codes**The codes in the Aids and Cues column are defined as follows:IG – Instructor Guide IR – Instructor ReferenceSW – Student Workbook SR – Student ReferenceHO – Handout Slide – PowerPoint |

# UNIT PRESENTATION

COURSE: Helicopter Crewmember, S-271

UNIT: 3 – Incident Command System (ICS) Concepts and Principles

| OUTLINE | AIDS & CUES |
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| Unit Title Slide.Present Unit Objectives.i. ics concepts and principlesIncident Command System: A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without the hindrance of jurisdictional boundaries.The ICS was developed to manage incidents and the resources used on the incident. Incident resources are part of one of the four management sections; Plans, Operations, Logistics, or Finance. As law Enforcement helicopter crewmembers you will be part of the Air Operations Branch a branch of the Operations Section within the ICS organization.Direct students to the ICS Organization Chart.A. ICS positions related to your daily operations assignment:* Incident Commander (IC) oversees all incident activity
* Air Operations Branch Director (AOBD) oversees all air operations
* Air Support Group Supervisor (ASGS) oversees air support personnel and needs
* Helibase manager
	+ Helispot manager
	+ Deck
	+ Load master personnel
	+ Cargo load master
	+ Crash rescue
	+ Parking tender
* Air Tactical Group Supervisor (ATGS) is responsible for tactical coordination of all aircraft.
* Helicopter Coordinator (HLCO) coordinates helicopter operations
* Air Tanker Coordinator (ATCO) coordinates air tanker operations
* Division Supervisor (DIVS)

Refer students to the IHOG Chapter 2 for position duties and responsibilities.The helibase or helispot manager may directly or indirectly supervise the helicopter crewmember.B. Follow the Chain of CommandThe ICS is a series of management positions in order of authority. Following the chain of command is simplified. The **chain of command** refers to the orderly line of authority within the ranks of the incident management organization. The flow of task assignments and resource requests between positions in the ICS occurs only with the person directly above or below them on the organizational chart.It is very important to following the established chain of command anytime you have a question or a concern to get it resolved.C. Span of ControlKey points:* Span of control is key to an effective and efficient incident management. Maintaining an effective span of control is important because safety and accountability are a priority.
* Within ICS, the span of control of any individual with incident management supervisory responsibility should range from three to seven subordinates.

D. ICS TerminologyICS establishes common terminology that allows diverse incident management and support entities to work together across a wide variety of incident management functions and hazard scenarios.This common terminology covers the following:* Organizational Functions. Major functions and functional units with domestic incident management responsibilities are named and defined.

Terminology for the organizational elements involved is standard and consistent.* **Incident Facilities.** Common terminology is used to designate the facilities in the vicinity of the incident area that will be used in the course of incident management activities.
* **Resource Descriptions.** Major resources—including personnel, facilities, and major equipment and supply items—used to support incident management activities are given common names and are "typed" with respect to their capabilities, to help avoid confusion and to enhance interoperability.
* **Position Titles.** At each level within the ICS organization, individuals with primary responsibility have distinct titles. Titles provide a common standard for all users, and also make it easier to fill ICS positions with qualified personnel.

ii. ics helicopter typingFor the purpose of managing aerial fire resources used during fire suppression the Incident Command System developed a classification to distinguish the different types, sizes, and capabilities of helicopters.Helicopters were classified as “Type” along with a number to distinguish what category an aircraft fits in based on capabilities. Typically, a Type 1 is the largest category.Typing of helicopters took the guess work out of what kind of helicopter to order or what type of helicopter you’re expecting. This simplified the entire air operation organization. A. Helicopter Typing

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| Type | Passenger Seats | Minimum Allowable Payload | Minimum Gallons Retardant |
| 1 | 15+ | 5,000 lbs | 700 |
| 2 | 9-14 | 2,500 lbs | 300 |
| 3 | 4-8 | 1,200 lbs | 100 |

It is important to recognize that not all makes of helicopters are equal. A helicopter may have twelve passenger seats, but that does not mean it can lift that much weight. Density altitude and other environmental factors can dramatically affect payload.Density altitude will be covered in another unit.Different models within the same series of helicopter may look the same, but newer models generally have increased performance.An example is the Bell 206 “Long Ranger” Series (L-1, L-3, L-4). The L-1, L-3, and L-4 look the same, but the L-4 has a bigger engine and better performance.Other examples are the AS350 “Eurocopter Astar” (BA, B-2, B-3), and Bell 205. Even within the same make and model some helicopters may have engine and/or rotor blade modifications that dramatically increase performance. If you don’t know, ask the pilot.For the following, focus on what determines a type 1, 2, or 3 helicopter. Not so much on makes and models.1. Type 1 -- Minimum of:* 15 passenger seats
* 700 gallons retardant or water
* 5,000 lbs. allowable payload at 59 degrees Fahrenheit at sea level

Examples include:* Kaman K1200 “K-MAX”
* Kaman H-43 “Husky”
* Bell 214 B-1
* Bell 214 ST
* Sikorsky S-70
* UH-60 “Blackhawk” (Military)
* Aerospatiale AS-332L “Super Puma”
* Boeing Vertol 107-II
* Boeing Vertol 234 (CH-47 Military)
* Sikorsky S-64 “Sky Crane”
* Sikorsky S-61

2. Type 2 -- Minimum of:* 9-14 passenger seats
* 300 gallons retardant or water
* 2,500 lbs. allowable payload at 59 degrees Fahrenheit at sea level

Examples include:* Bell 204B
* Bell 205
* Bell 212
* Bell 412
* Sikorsky S-58T
* Eurocopter BK-117 A-4

3. Type 3 -- Minimum of:* 4-8 passenger seats
* 100 gallons retardant or water
* 1,200 lbs. allowable payload at 59 degrees Fahrenheit at sea level

Examples include:* McDonnell Douglas (MD) & Hughes
* 500D
* MD 500E
* MD 530F
* MD 900 NOTAR
* Bell 206 B-III “Jet Ranger”
* Bell 206 L-3/4 “Long Ranger”
* Bell 407
* Aerospatiale AS-350 “Astar”
* Aerospatiale AS-355 “Twin Star”
* Aerospatiale SA-315B “Lama”
* Aerospatiale SA-316B Alouette III
* Eurocopter MBB BO-105

B. SummaryICS types of helicopters are intended to provide a general classification of their capability.Helicopters dispatched to incidents are generally what are available. However, it is important for firefighters to know the general capabilities of the types of helicopters to effectively and efficiently use helicopters assigned to an incident.Review Unit Objectives.Hand out unit quiz. Correct quiz as a class. | Slide 3-1Slide 3-2Slide 3-3Slide 3-4Slide 3-5Slide 3-6Slide 3-7Slide 3-8Slide 3-9Slide 3-10Slide 3-11Slide 3-12Slide 3-13Slide 3-14Slide 3-15Slide 3-16Slide 3-17Slide 3-18Slide 3-19Slide 3-20Slide 3-21Slide 3-22Slide 3-23Slide 3-24Slide 3-25Slide 3-26Slide 3-27Slide 3-28Slide 3-29thruSlide 3-38Slide 3-39Slide 3-40thruSlide 3-46Slide 3-47Slide 3-48ThruSlide 3-59Slide 3-60Slide 3-61HO-3-1 |