

Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

RUNWAY INCURSION REMEDIAL TRAINING CONCEPT

The RIRTP is designed to be taught as a traditional ground school in a classroom environment. The training plan should include collaboration between the FAASTeam Program Manager (FPM) and the respective Regional Runway Safety Group Office. This RIRTP provides knowledge and skill modules that, at the discretion of the FPM, can be used to provide remedial training to a pilot involved in a runway incursion event.

OBJECTIVE

The FPM, in collaboration with the investigating ASI is expected to use *interdependence and critical thinking* to evaluate the discreet facts of the runway incursion event and assign the module(s) that will fix the problem, ensuring that the outcome is *consistent* with regulations, policies, and the specific circumstances. The times provided for each task are the recommended times for completion of that task and to guide the overall time needed to satisfy the remedial training plan. Times may vary depending on the knowledge and experience of the airman, but instructors will ensure the material is fully understood by the airman. **Modules marked with an asterisk * are required modules for all training plans.**

REMEDIAL TRAINING COMPLETION STANDARD

In accordance with the remedial training agreement, the pilot will demonstrate their knowledge of each module assigned through questions and ***if stipulated*** in the remedial training agreement, perform a skills assessment demonstration flight.

RESOURCES (LINKS)

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

[AC 150/5210-20A Ground Vehicle Operations to include Taxing or Towing an Aircraft on Airports](#)

[Airman's Information Manual \(AIM\)](#)

[FAA NOTAMS Website](#)

[FAA-H-8083-2 Risk Management Handbook](#)

[FAA-H-8083-3A Airplane Flying Handbook](#)

[FAA-H-8083-25A Pilot's Handbook of Aeronautical Knowledge](#)

[Order 8900.1, Volume 15, Chapter 6](#)

[Runway Safety Publications/Resources & Tools](#)

[Runway Safety Website](#)

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MODULE 1: COURSE OVERVIEW

TASK: INITIAL BRIEFING * (00:30-1:00)

- First define a runway incursion. Review the causal factors of the Runway incursion in which the pilot was involved and the mitigations available. Relate personal knowledge of any similar Runway Incursion Pilot Deviation(s).
- Explain that runway incursions can and have led to serious accidents with significant loss of life. Although they are not a new problem, current runway incursion reports indicate that general aviation operations accounts for the largest percentage of runway incursions.
- Explain the subject material that will be presented during Runway Incursion Training and how the modules(s) will proceed.

REFERENCES

Runway Incursion Investigative Report(s)/Pilot Deviation Report
Related PTRS
RIRTP

OBJECTIVE

To discuss the pilot's runway incursion and the circumstances surrounding the event. To develop a full understanding of what a runway incursion is and the content of the RIRTP that will address the root cause of the pilot's runway incursion event.

KNOWLEDGE

The pilot will understand what a runway incursion is and the circumstances that caused their runway incursion event as well as what is to be covered in the course and why.

RISK MANAGEMENT

The instructor will ensure the pilot has a complete understanding of this module before continuing to the next module.

SKILLS

The pilot will display knowledge of why their runway incursion occurred . The pilot will also know how, through the selected RIRTP modules, they will gain the knowledge and skills to prevent a reoccurrence.

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MODULE 2: PREFLIGHT PLANNING

TASK A: NOTAMS (01:00)

REFERENCES

[FAA NOTAMS Website](#)

Use JO 7930.2Q to extract Runway Surface NOTAM acronyms and explanations.

[Runway Safety Website](#)

OBJECTIVE

To develop skills associated with obtaining NOTAMS, finding items within the NOTAMS that will affect flight and ground operations, i.e. airport runway conditions, closures, and how to interpret NOTAMS.

KNOWLEDGE

NOTAMS

- All D NOTAMS shall have one of the following keywords as the first part of the text:
 - RWY, TWY, RAMP, APRON, AD, OBST, NAV, COM, SVC, AIRSPACE, (U), or (O).
 - Note: AD means Aerodrome, OBST means Obstacle, NAV means Navigation Aid, COM means Communications, SVC means Services, AIRSPACE, self-explanatory, (U) means unverified aeronautical information, and (O) means Other Aeronautical Information received from any authorized source that may be beneficial to aircraft operations and does not meet defined NOTAM criteria. Any such NOTAM will be prefaced with “(O)” as the keyword following the location identifier.

SKILLS

The pilot demonstrates the ability to able to find, interpret and use NOTAM information affecting the flight during the preflight planning process. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

RISK MANAGEMENT

- The pilot demonstrates the ability to identify, assess, and mitigate any potential airport hazard(s) identified by NOTAMS/ATIS or other airport information during preflight planning.
- Identify risk controls to limit exposure to hazards if necessary.

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MODULE 2: PREFLIGHT PLANNING

TASK B: TAXI ROUTE PLANNING (01:30)

REFERENCES

Airport Facility Directory (AFD) – Airport Diagram
Automatic Terminal Information Service (ATIS)
NOTAMS
[FAA-H-8083-2 Risk Management Handbook](#)

OBJECTIVE

To develop skills associated with preflight taxi route planning, including runway incursion avoidance.

KNOWLEDGE

- **Base your plans on information from:**
 - The Automatic Terminal Information Service (ATIS), Notices to Airmen (NOTAMs), recent experience at that airport and on a review of the current airport diagram.
 - Don't take a standard or expected route for granted from the controller.
 - Focus pre-taxi plans on the departure airport, and pre-landing plans on the arrival airport.
 - Take time to study the airport layout of your departure and arrival airports.
 - Note and brief airport HOT SPOTS
 - Have the appropriate, current airport diagram readily available:
 - Use not only during the planning phase also during taxi.
 - Minimize cockpit tasks and always practice being in "heads up" mode. While on the taxi route, especially when navigating through complex intersections, and crossing intervening runways.
 - Check the expected taxi route against the current airport diagram or taxi chart. Pay special attention to any complex intersections (for example, more than two crossing pavements along the taxi route) or specific areas designated as "Hot Spots."
 - Heightened awareness when ATC utilizes a runway as a taxiway.
 - Be alert of the possible lack of crossing runway signage and markings as you approach an intersecting runway
 - Verify your assigned route on the airport diagram or verbally after receiving taxi instructions from the controller.
 - When in doubt, stop and ask for help or clarification from Air Traffic.

RISK MANAGEMENT

The pilot has the ability to develop a mitigation strategy if needed and understands proper ATC and airport movement procedures to preclude a runway incursion event.

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Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

SKILLS

The pilot demonstrates the ability to obtain NOTAMS, ATIS information, use an airport diagram, identify HOT SPOTS and hazards as well as determine expected taxi routes. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 3: TAXI PROCEDURES

TASK A: AIR TRAFFIC CONTROL INSTRUCTIONS (01:30)

REFERENCES

Airport Facility Directory (AFD) – Airport Diagram
NOTAMS

[FAA-H-8083-2 Risk Management Handbook](#)

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

[AC 150/5210-20A Ground Vehicle Operations to include Taxing or Towing an Aircraft on Airports](#)

[Airman's Information Manual \(AIM\)](#)

OBJECTIVE

To develop skills associated with using an airport diagram, NOTAMS, and ATIS information to understand to comply with ATC taxi instructions.

KNOWLEDGE

- **Air Traffic Control (ATC) Instructions** - Once taxi instructions are received, you should:
- Write down taxi instructions, especially instructions that are complex. This can help reduce your vulnerability of forgetting part of the instruction.
 - Taxi at a slow speed to permit time to stop your aircraft so to comply with an ATC hold short instruction.
 - ATC using a runway as a taxiway. Be aware of runways you must be cleared to cross. Some runways may not have hold short lines to alert you of a runway ahead. Be alert, and ask ATC if you are cleared to cross.
 - Monitor ATC clearances/instructions issued to other aircraft.
 - Be especially vigilant if another aircraft has a similar sounding call sign.
 - Listen carefully to avoid taking a clearance/instruction intended for someone else.
 - Ask immediately if you are uncertain about any ATC instruction or clearance.
 - Read back all clearances/instructions with your aircraft call sign.
 - Remember an ATC instruction to taxi to a runway **is not** a clearance to cross the assigned takeoff runway, or to taxi on that runway at any point. Current instruction reference AIM: When assigned a takeoff runway, ATC will first specify the runway, issue taxi instructions, and state any hold short instructions or runway crossing clearances if the taxi route will cross a runway.
 - Does not authorize the aircraft to "enter" or "cross" the assigned departure runway at any point.
 - Advise ATC if you anticipate a delay, or are unable to comply with their instructions.
 - Look for light gun signals from the tower if you suspect radio problems.

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RISK MANAGEMENT

The pilot has the knowledge of ATC procedures and instructions critical to avoiding or mitigating runway incursion events.

SKILLS

The pilot demonstrates the knowledge to obtain, understand and read back all ATC taxi instructions. The pilot should be able to use proper taxi procedures and 'best practices' to safely comply with ATC instructions. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 3: TAXI PROCEDURES

TASK B: RISK MITIGATION PROCEDURES (1:30)

REFERENCES

Airport Facility Directory (AFD) – Airport Diagram

NOTAMS

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OBJECTIVE

To develop 'best practices' during taxi operations that promote safe airport surface operations.

KNOWLEDGE

➤ **Maintaining Situational Awareness:**

- When taxiing on the airfield, you need to be aware of your location on the airfield, and how that location relates to your intended taxi route, and to other aircraft and vehicles that may be operating on the airfield. This is commonly referred to as "situational awareness."
- Understand and follow ATC instructions and clearances.
- Use an airport diagram.
- Know the meaning of the visual aids available at the airport, such as airfield markings, signs, and lights.
- Maintain a "sterile" cockpit. You must be able to focus on your duties without being distracted by non-flight related matters like engaging in conversation about good restaurants, tee times, or who is going to meet you at the airport.
- Advise ATC and, if necessary, request progressive taxi instructions.
- If you become uncertain about your location on the airport movement area, make sure you are clear of any runway and **STOP THE AIRCRAFT**.

➤ **While Taxiing**

- Use extra caution when directed to taxi on a runway, especially at night and during reduced visibility conditions.
- Use all resources available to keep your aircraft on its assigned taxi route.
- Have the airport taxiway diagram for reference
- Use the heading indicator to ensure correct direction to taxi
- Make sure you comply with hold short or crossing instructions when approaching an entrance to an active runway.
- Scan the full length of the runway and the final approaches before entering or crossing any runway, even if you have received a clearance.

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➤ **After Landing:**

- Use utmost caution after landing on a runway where the exit taxiways intersect another runway.
- Determine if a taxiway exit will place the pilot in close proximity to another runway which can result in a runway incursion.
- Appropriate after landing/taxi procedures in the event the aircraft is on a taxiway that is between parallel runways.
- Do not exit onto another runway without ATC authorization.
- Do not accept last minute turnoff instructions from the tower unless you clearly understand the instructions and are certain that you can safely comply.
- Do not initiate non-essential communications or actions after landing.

RISK MANAGEMENT

- The pilot will use their knowledge of airport and ATC procedures to identify possible runway incursion precursors and how to mitigate hazards that lead to a runway incursion.
- The pilot demonstrates the ability to avoid distractions, and improper task management, during taxiing. The pilot avoids conformation or expectation bias as related to taxi instructions.

SKILLS

The pilot demonstrates the knowledge and ability of airport and ATC procedures to safely navigate on the airport surface. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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MODULE 3: TAXI PROCEDURES

TASK C: EXTERIOR AIRCRAFT LIGHTS (00:30)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

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Aircraft POH

OBJECTIVE

To review the proper use of exterior aircraft lighting.

KNOWLEDGE

➤ Using Exterior Lighting

- During daytime as well as nighttime operations, exterior aircraft lights may be used to make an aircraft operating on the airport surface more conspicuous, and to convey location and intent to other pilots.
- Engines: Running turn on the rotating beacon.
- Taxiing: Prior to commencing taxi, turn on navigation/position, strobe, taxi, and logo lights, if available.
- Crossing a Runway: All exterior lights should be illuminated when crossing a runway. You should consider any adverse effects to safety that illuminating the forward facing lights will have on the vision of other pilots or ground personnel during runway crossings.
- Entering the Departure Runway After Takeoff Clearance Received, turn on all exterior lights to make your aircraft more conspicuous.

RISK MANAGEMENT

The pilot uses exterior aircraft lighting to make their aircraft more conspicuous and bring attention to the location of their aircraft on the airport to ATC as well as other aircraft.

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SKILLS

The pilot demonstrates the knowledge and ability to properly use exterior aircraft lighting during airport operations. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 3: TAXI PROCEDURES

TASK D: LINE UP AND WAIT PROCEDURES (00:30)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

[AC 150/5210-20A Ground Vehicle Operations to include Taxing or Towing an Aircraft on Airports](#)

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OBJECTIVE

To ensure the pilot has a thorough understanding of Line Up and Wait Procedures

KNOWLEDGE

➤ Line Up and Wait

- ATC uses "Line Up and Wait" when a takeoff clearance cannot be immediately issued due to traffic or other reasons.
- Pay close attention when instructed to "Line Up and Wait," especially at night or during periods of low visibility.
- When ATC issues intersection "Line Up and Wait" instructions and takeoff clearances, the intersection designator will be used.
- If two or more aircraft call the tower ready for departure, one or more at the approach end of the runway and one or more at the intersection, the controller will state the location of the aircraft at the full length of the runway when authorizing that aircraft to taxi to Line Up and Wait or when clearing that aircraft for takeoff.

➤ Before entering the runway, remember to:

- Verify the ATC clearance.
- Scan the full length of the runway, and Scan for aircraft on final approach or landing roll out.
- Verify that the aircraft is on the assigned/correct runway.
- Turn on landing lights only when takeoff clearance is received, or when commencing takeoff roll at an airport without an operating control tower.
- **Consider lining up slightly to the left or right of the centerline (approximately 3 feet) when holding in position at night so landing aircraft can differentiate your aircraft from runway lights.**
- When placing you into "Line Up and Wait," ATC should advise you of any delay in receiving your takeoff clearance, for example, landing or departing aircraft, wake

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- turbulence, or traffic on an intersecting runway.
- If a takeoff clearance is not received within a reasonable time after instructed to “Line Up and Wait,” contact ATC. **(90 SECONDS)**

Note: There have been some collisions and several incidents involving aircraft instructed to Line Up and Wait waiting for a takeoff clearance. The FAA’s analysis indicates that two minutes or more elapsed between the time an instruction was issued to “Line Up and Wait” and the resulting collision, land over, or go around by an aircraft cleared to land. Current guidance is to contact ATC if you have been holding in position for **90 SECONDS**.

RISK MANAGEMENT

- The pilot will use ‘Line Up and Wait’ procedures and ‘best practices’ to assure there are not collision conflicts prior to operating on an active taxiway or runway.
- The pilot will properly divide attention between operating the aircraft, communicating with ATC, and with scanning the final approach path / runway environment.
- The pilot will take appropriate action if he/she enters a runway different from the expected runway.

SKILLS

The pilot demonstrates the understanding and use of Line Up and Wait clearances as well as techniques to increase situational awareness and identification of collision hazards. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 4: COMMUNICATIONS

TASK A: GOOD RADIO TECHNIQUE (00:30)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

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OBJECTIVE

To ensure that the pilot uses and understands good radio techniques ('best practices') when communicating with ATC.

KNOWLEDGE

➤ Good Radio Technique

- Effective pilot/controller communications are key to safe surface operations. You can enhance the controller's understanding by responding appropriately and using standard phraseology.
- Prepare first; your transmission should be well thought out.
- Ensure that the proper radio frequency has been selected.
Before keying your transmitter. Know what you want to say and check to make sure you are on the proper frequency.
- Communication with ATC should be concise and to the point.
- For unusual situations or lengthy communications, initial contact should be established first.
- Acknowledge all clearances with your aircraft call sign. It is permissible to begin or end your transmission with your aircraft's call sign.

RISK MANAGEMENT

- The pilot uses effective and efficient radio communications to mitigate any confusion or misunderstanding when communicating with ATC.
- The pilot will understand equipment issues that could cause loss of communications. The pilot will ensure proper automation management.
- The pilot will demonstrate proper single-pilot resource management (SRM) and/or crew resource management (CRM).

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SKILLS

The pilot demonstrates the ability to use good radio technique when communicating with ATC. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 4: COMMUNICATIONS

TASK B: ATC COMMUNICATIONS PROCEDURES (01:00)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

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OBJECTIVE

To ensure the pilot understands and uses efficient and effective radio communications procedures with ATC when operating within the airport environment.

KNOWLEDGE

➤ Communications

- Use proper communications procedures when contacting ATC. Your initial transmission should contain these elements:
 - State who you are calling
 - Use your aircraft's call sign
 - State where you are located on the airfield
 - Provide ATIS that you have alphabetical code for the ATIS, if available, and state briefly, what you want to do
 - State your position whenever making initial contact with any tower or ground controller, regardless of whether you have previously stated your position to a different controller.
 - Use standard ATC phraseology at all times in order to facilitate clear and concise pilot/controller communications.
 - Focus on what ATC is instructing. Do not perform any non-essential tasks while communicating with ATC.
- Read back all clearances/instructions to enter a specific runway, Hold short of a runway, or "Line Up and Wait: on the runway designator, and taxiway intersection when appropriate.
- When cleared to Line Up and Wait and when on final approach, actively monitor the assigned tower frequency, or the Common Traffic Advisory Frequency (CTAF), for potential conflicts involving your runway.
- Read back all runway assignments.
- Read back all takeoff and landing clearances, including the runway designator.
- If unfamiliar with the taxi routes at an airport, ask for progressive taxi instructions.
- When you are instructed to monitor a frequency, you should listen without initiating contact,

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- the controller will initiate contact.
- Clarify any misunderstanding or confusion concerning ATC instructions or clearances.
- The pilot demonstrates understanding of light gun signals.

RISK MANAGEMENT

The pilot uses effective and efficient radio communications to mitigate any confusion or misunderstanding when communicating with ATC.

SKILLS

The pilot demonstrates the ability to consistently and effectively use proper communications procedures/requirements during airport operations. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

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Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 5: AIRPORT MARKINGS, LIGHTING & SIGNAGE

TASK A: AIRFIELD MARKINGS (01:00)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

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OBJECTIVE

To identify and fully understand the different airfield markings and where to expect to see (or not see) specific types of airfield markings.

KNOWLEDGE

- **Airfield markings, signs, and lights are designed to assist you in navigating around the airfield and during landing and takeoff. Airfield Markings – Understanding the Differences.**
 - **Airfield markings Content:**
 - Runway markings are white (although yellow taxiway centerlines may lead on, lead off, or cross the runway).
 - Taxiway markings are yellow.
 - Markings on aprons and in ramp areas may include other colors besides yellow (for example, it is common to mark vehicle roadways in white).

Taxiway Marking Patterns



Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

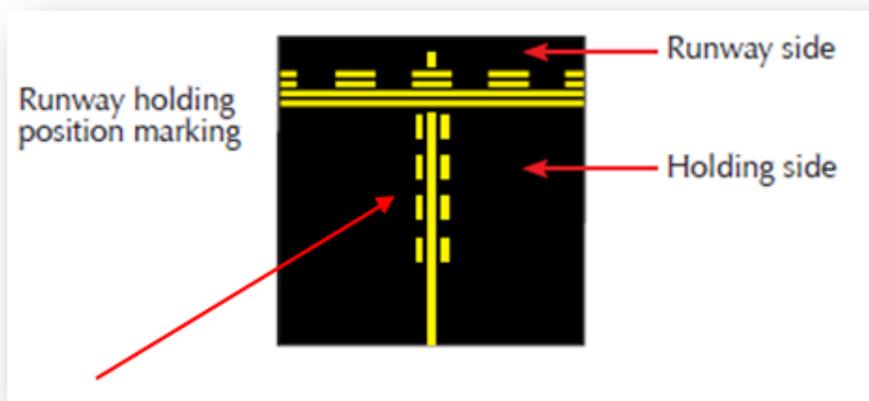
Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

- If a marking pattern consists of two or more lines - some of which are solid and some of which are dashed, It is always permissible to cross from the dashed side to the solid side.
- ATC permission is always required to cross from the solid side to the dashed side at an airport with an operating control tower.



- When instructed to "Hold Short," always stop prior to first solid line of the holding position marking.



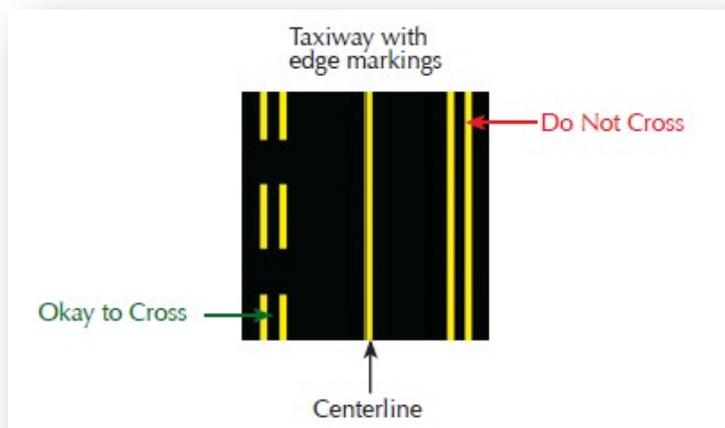
Note: To alert pilots that they are approaching a runway, the taxiway centerline is enhanced with dashed yellow lines on both sides of centerline 150 feet prior to the runway holding position marking at many airports.

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- Never cross solid double yellow lines on the edge of a taxiway. However, it is permissible to cross dashed, double yellow lines.

RISK MANAGEMENT

Use of airfield markings plays a pivotal role in avoiding a runway incursion. A complete understanding of airfield markings is critical to safe airfield surface operations.

SKILLS

The pilot demonstrates the ability to describe where to expect different types of airport markings and what those markings mean. The pilot understands the critical nature of airport markings and how airport markings prevent runway incursions.

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MODULE 5: AIRPORT MARKINGS & SIGNAGE

TASK B: AIRFIELD SIGNAGE (01:00)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

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OBJECTIVE

To identify and fully understand the different categories of airfield signage and where to expect to see (or not see) specific types of airfield signage.

KNOWLEDGE

- **Airfield Signs – How to Get from Here to There Safely:**

Along with airfield markings and lights, airfield signs are designed to assist you in navigating around the airfield. • It is essential that you understand the color coding and meaning of these four types of signs when taxiing on an airfield.

- **Location Sign:** Identifies the taxiway or runway you are currently located on. It has a yellow inscription on a black background. *Remember: Black Square, You're There.*



- **Mandatory Instruction Sign:** Identifies the entrance to a runway or critical area, and areas prohibited for use by aircraft. It has a white inscription on a red background.

Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>



- **Direction Sign:** Identifies the designations of taxiways leading out of an intersection along with an arrow indicating the approximate direction of turn needed to align the aircraft on that taxiway. They are located prior to the intersection normally on the left side. It has a black inscription on a yellow background.



- **Destination Sign:** Identifies with arrows the directions to specific destinations on the airfield (for example, runways, terminals, and fixed base operators). It also has a black inscription on a yellow background. *Remember: Yellow Array Points the Way.*



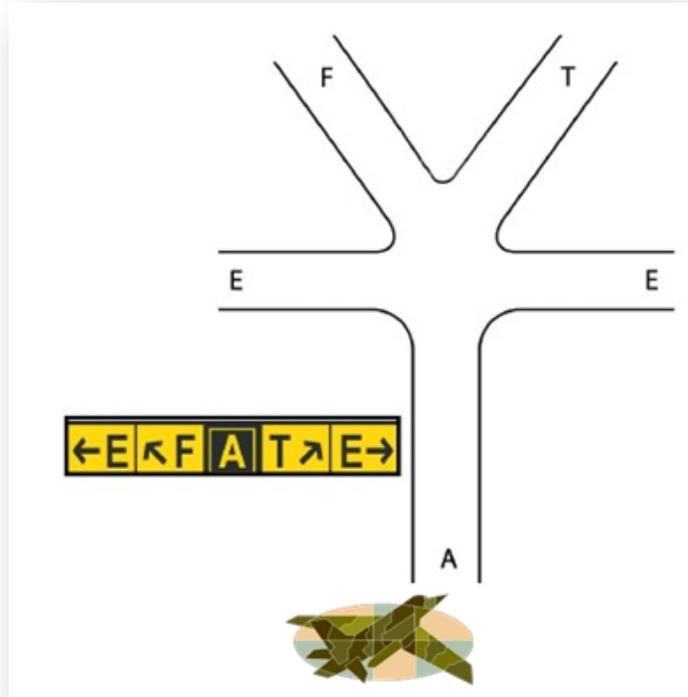
- **Sign Arrays:** Grouping of direction signs. Orientation of signs is from left to right in a clockwise manner. Left turn signs are on the left of the location sign and right turn signs are on the right of the location sign

Runway Incursion Remedial Training Program (RIRTP)

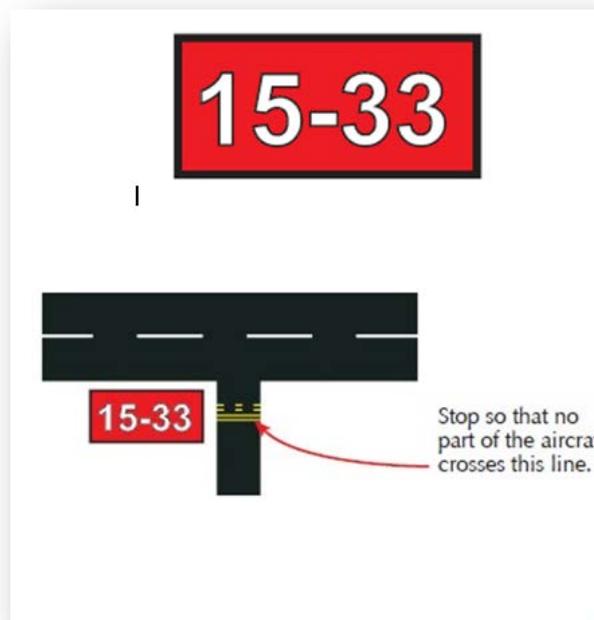
Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>



- **Holding position sign:** This sign is located next to the yellow holding position markings painted on taxiways that intersect a runway. This sign indicates that the threshold for Runway 15 is to your left; the threshold for Runway 33 is to your right.



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Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

Note - If you are facing solid lines, be sure you are cleared to enter or cross the runway. The dashed lines are always on the side toward the runway.

DO NOT CROSS THE RUNWAY HOLD LINES AND ENTER A RUNWAY UNLESS YOU ARE ABSOLUTELY POSITIVE THAT ATC HAS CLEARED YOU ONTO THE RUNWAY

RISK MANAGEMENT

Use of airfield signage plays a pivotal role in avoiding a runway incursion. A complete understanding of a signage is critical to safe airfield surface operations.

SKILLS

The pilot demonstrates the ability to describe where to expect different categories of airfield signage and what those signs mean. The pilot understands the critical nature of airfield signage and how airport signage prevents runway incursions. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

MODULE 5: AIRPORT MARKINGS & SIGNAGE

TASK B: AIRFIELD LIGHTING (01:00)

REFERENCES

[AC 91-73B Part 91 & 135 Single-Pilot Procedures During Taxi Operations](#)

[AC 150/5210-20A Ground Vehicle Operations to include Taxing or Towing an Aircraft on Airports](#)

[Airman's Information Manual \(AIM\)](#)

[FAA-H-8083-3A Airplane Flying Handbook](#)

[FAA-H-8083-25A Pilot's Handbook of Aeronautical Knowledge](#)

[Runway Safety Publications/Resources & Tools](#)

[Runway Safety Website](#)

OBJECTIVE

To identify and understand the different types of airfield lighting and their use.

KNOWLEDGE

➤ Airfield Lights

- There are many different lighting combinations that may be located on some airports, especially where aircraft operations are conducted in the lower visibility ranges. For taxing operations during Visual Meteorological Conditions (VMC) , you should remember the following:



Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

- Runway edge lights are white (although on the last 2,000 feet of an instrument runway the edge lights will be yellow). Note: Picture also shows runway centerline and touchdown zone lights.



Taxiway Edge Lights or Reflectors are Blue



- Taxiway centerline lights or reflectors are green, except for the lead-on and lead-off lights, which alternate yellow and green to indicate the aircraft is entering or leaving the runway environment.

Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>



- Taxiway centerline lights or reflectors are green, except for the lead-on and lead-off lights, which alternate yellow and green to indicate the aircraft is entering or leaving the runway environment.



- Runway holding position as viewed from a taxiway centerline. This holding position has both above ground and in-pavement runway guard lights.
 - Never taxi across a row of illuminated red lights. This is a stop-bar, do not proceed until the lights are turned off.

Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

RISK MANAGEMENT

A complete understanding of airfield lighting helps avoid confusion and the possibility of an runway incursion.

SKILLS

The pilot demonstrates the ability to identify and is able to explain the purpose of the different types of airfield lighting. Skills can be assessed verbally or by practical demonstration as determined by the instructor.

Runway Incursion Remedial Training Program (RIRTP)

Training Provider: <Enter Training Provider Name>

Modules Required: <List Modules, i.e., Module 1, 2-Task A, & 4>

Minimum Training Time <Add All Module Times and Enter Total, i.e., 1.5>

RIRTP SUMMARY (00:30-1:00)

THINGS TO REMEMBER (00:30) *

BE AWARE. DO NOT CAUSE A RUNWAY INCURSION. A RUNWAY INCURSION CAN CAUSE A TREMENDOUS LOSS OF LIFE AND PROPERTY.

- A majority of runway incursions result from pilots acknowledging ATC hold short instructions and then proceeding across the hold short line anyway.
- *Runway holding position markings on taxiways* identify the locations where an aircraft is required to stop when it does not have authorization to proceed onto the runway (you will also see a red and white holding position sign).
- When instructed by ATC to "Hold short of runway 'xx,'" you should read back the instruction and stop so **no part** of the aircraft extends over the first solid line of the holding position marking.
- Keep your head up, set back distances to runway holding position markings may vary at different airports.
- When approaching the holding position marking, you should not cross the marking without ATC clearance at a controlled airport
- At uncontrolled airports, make sure that there is adequate separation from other aircraft.
- An aircraft exiting a runway is not clear of the runway until all parts of the aircraft have crossed the applicable holding position marking.

SUMMARY

Review modules with emphasis on any weak area(s).

CLOSURE

Advise the pilot that the information contained in each of the training modules within the RIRTP assigned to that pilot must become part of their safety culture, habits, or anything else that will describe consistent safe pilot flight operational behavior.

The FPM will discuss with the pilot that if they have any questions for the safe operation of their aircraft, that they feel free to contact them, and that they should become involved in the FAAS Team program, and that enforcement for second runway incursion may lead to suspension of the pilot's certificate.