

# Cabinet X-Ray Machine User

# 25 Task Practical Exam

**(EXAMS OPTIONAL EXCEPT IN CALIFORNIA) See Your States Industrial Radiography regulations for Exemptions for certified and certifiable Cabinet X-Ray Systems.**

**A user shall not allow any individual to operate a cabinet x-ray system until such individual has:**

- (1) Received copies of, instruction in, and demonstrated understanding of, the user's operating and emergency procedures by obtaining a passing grade of **at least 80% on a written examination** covering this material. The written examination shall be at least 50 questions in length; and
- (2) Demonstrated competence to use the radiation machine by obtaining a passing grade of **at least 80% on a practical examination** covering this material. The practical examination shall be at least 25 questions in length.

The below list is an example of recommended practical tasks a cabinet x-ray operator may perform to meet the above requirements of the practical examination portion of the training and testing requirement. The instructor shall utilize the manufacturer's operations manual to identify those task which are important for the new operator to master in order to properly and safely operate the cabinet x-ray equipment.

The qualified instructor shall observe the trainee perform each task and verify competence. The instructor shall complete this form in its entirety, sign and date this form and submit to the facility RSO for review and retention.

Today's Date: \_\_\_\_\_ Name of User Being Tested: \_\_\_\_\_

PASS	FAIL	PRACTICAL TASK	INSTRUCTOR INITIALS
		<b>PRE-STARTUP CHECKS</b>	
		1. Check the Inside of the Tunnel to ensure it is free of materials.	
		2. Check all Service Panels are closed and locked.	
		3. Check the Service Panels have not been tampered with.	
		4. Check that no lead curtains are torn or missing and they are hanging straight down if applicable.	
		5. Check the outside of the machine for loose, cut or hanging wires.	
		6. Check all video monitor connections are tight and power cord is plugged in.	
		7. Check the circuit breaker switch is set to the ON position.	
		8. Check all Emergency Stops are released and in the normal out position.	
		9. Verify the Power ON capture key is placed in the ON position and lightly pull up on the Key to ensure it cannot be removed in the ON position.	
		10. Turn the System ON and Verify the POWER ON indicator light(s) are illuminated.	
		11. Enter the User ID and Password and click the left mouse button	

		12. Check the conveyor belt for alignment, tears and/or sharp protrusions at the sides of the belt and joint connections. Do not use your finger to check the sides of the belt since protrusions could cut your finger.	
		13. Start the Conveyor in the forward direction and scan a test bag and verify all X-RAY ON indicator lights are illuminated.	
		14. If the x-ray system is equipped with an Operator Presence device like a foot mat, scan a test bag and step OFF the foot mat or whatever means required to deactivate the operator presence device. Verify the X-RAY ON lights deenergize AND the conveyor belt stops. (The operator presence device is only required when x-ray machines are operated and accessible to the general public, such as an airport security check point).	
		<b>OPERATIONAL CHECKS</b> (These tasks may be modified by the instructor depending on the manufactured x-ray system being operated)	
		15. Verify the image(s) obtained by scanning the test bag indicate the 3 basic colors of orange, green and blue. Black for very dense materials.	
		16. Press the Variable Gamma keys and describe their function. What does it allow the operator to do to the image? Brightness	
		17. Press the Variable Edge Enhancement keys and describe their function. What does it allow the operator to do to the image? Sharpness	
		18. Press the Variable Density keys and describe their function. What does it allow the operator to do to the image? Exaggerates Color Brightness	
		19. Press the Variable Color keys and describe their function. What does it allow the operator to do to the image? Original color all others greyscale	
		20. Press the Previous Bag and Next Bag keys and describe their purpose.	
		21. Press the Crystal-Clear key and describe its function. What does it allow the operator to do to the image?	
		22. Press both the Organic, Inorganic, Black & White, High Penetration and Inverse keys. Describe the purpose of each.	
		23. Demonstrate the use of and purpose of the 3 Programmable Function buttons.	
		24. Press Each of the Screener Scanner Mode Function Keys and describe the purpose of each.	
		25. Access the Screener Menu. Click the OCP left mouse button. Select Log Out.	

Instructor Approval: (Print Name) \_\_\_\_\_ (Signature): \_\_\_\_\_

Trainee Signature: \_\_\_\_\_

Corrective Actions:

\_\_\_\_\_

\_\_\_\_\_

Corrective Actions, if Applicable, Completed on \_\_\_\_\_  
(Date)

**SUBMIT THIS FORM TO THE FACILITY RADIATION SAFETY OFFICER FOR REVIEW AND RETENTION**