

CASE STUDY - Scanning/Bar Code Reading (Hand Held)

TASK TITLE: Scanning/Bar Code Reading (Hand Held)	
Task Description:	<p>The Scanning/Bar Code Reading (Hand Held) task typically occurs in warehouses in order to track incoming or outgoing items. The employee uses a hand held scanner to read bar codes that may be attached to a container or on the paperwork. The employee may scan directly on boxes or scan paperwork while sitting at a work desk.</p> <p>Typical areas in which the Scanning/Bar Code Reading (Hand Held) task may be found can include:</p> <ul style="list-style-type: none">• Receiving Operations• Picking
Job Performance Measures Most Often Impacted by Scanning/Bar Code Reading (Hand Held):	<p>Measure of work performance can include (but are not necessarily limited to):</p> <ul style="list-style-type: none">• Items processed per day
Typical Employee Comments about Scanning/Bar Code Reading (Hand Held):	<p>Employees rarely attribute discomfort to the scanning task.</p> <p>The hands/wrists/arms is the body area that most commonly receives a “High” priority rating. The remaining body areas, with the exception of the head/eyes, are more likely to receive “Medium” priority rating, or lower.</p>
Suggested Level II Analysis:	Postural Analysis

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
1. Reaching	<ul style="list-style-type: none"> Object is too high 	32. Lower the work piece / work surface <ul style="list-style-type: none"> reduce the conveyor height 		✓	med to high	low	med
2. Arm forces: Repeated arm forces or holding/ carrying materials	<ul style="list-style-type: none"> Positioning of items 	41. Move work piece closer to body <ul style="list-style-type: none"> position the bar codes on the side of the box instead of the top 	✓		low	med	high
3. High speed, sudden shoulder movements	<ul style="list-style-type: none"> Rarely occurs 	N/A					
4. Head/neck bent or twisted	<ul style="list-style-type: none"> Inspecting inside boxes 	32. Lower the work piece / work surface <ul style="list-style-type: none"> use an adjustable height table or conveyor section 		✓	med to high	med	med

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
5. Bent wrists/repeated wrist movements or repeated forearm rotation	<ul style="list-style-type: none"> Scanning from labels placed flat on the desk surface  <ul style="list-style-type: none"> Scanning from awkward locations on boxes 	146. Angle the work surface <ul style="list-style-type: none"> Use a document holder or angled stand to support the labels during scanning 	✓		med to low	low	med
		148. Provide appropriate equipment <ul style="list-style-type: none"> install a surface mounted scanner in the desk, similar to those used by cashiers 		✓	low	med	med
		149. Provide appropriate tools <ul style="list-style-type: none"> select scanner gun models which can read from longer distances and off-center angles 		✓	med to high	med	high
		41. Move work piece closer to body <ul style="list-style-type: none"> rotate boxes to place labels closer to the employee consider the label location when placing boxes on conveyors or tables 	✓		low	low	med
			✓		low	med	med

Hands/Wrists/Arms (cont'd)

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
6. Repeated manipulations with fingers	<ul style="list-style-type: none"> Rarely occurs 	N/A					
7. Hyper-extension of finger/thumb or repeated single finger activation	<ul style="list-style-type: none"> Scanner has single finger operation Scanner requires repeated inputs on small keys 	149. Provide appropriate tools <ul style="list-style-type: none"> select a model with at least two finger activation 		✓	med	med	med
		11. Eliminate unnecessary tasks <ul style="list-style-type: none"> transfer frequently keyed information into barcodes placed in a book 	✓	med	med	high	
8. Hand/grip forces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
9. High speed hand/wrist/arm movements or vibration, impact or torque to the hand	<ul style="list-style-type: none"> Rarely occurs 	N/A					
10. Exposure to hard edges	<ul style="list-style-type: none"> Rarely occurs 	N/A					
11. Hands and fingers exposed to cold temperatures	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
12. Repeated forward or sideways bending movements	<ul style="list-style-type: none"> Object is too low 	124. Raise the work piece/work surface		✓	med to high	low	med
		<ul style="list-style-type: none"> raise the conveyor provide a fixed table to support work piece 		✓	low to med	low	med
	<ul style="list-style-type: none"> Scanning location is too low 	41. Move work piece closer to body	✓		low	low	med
		<ul style="list-style-type: none"> rotate boxes to place labels closer to the employee consider the label location when placing boxes on conveyors or tables 	✓		low	med	med
		149. Provide appropriate tools		✓	med to high	med	high
13. Twisting of the lower back	<ul style="list-style-type: none"> Scanning is performed in a restricted space 	149. Provide appropriate tools		✓	med to high	med	high
		<ul style="list-style-type: none"> select scanner gun models which can read from longer distances and off-center angles 					
		41. Move work piece closer to body	✓		low	low	med
		<ul style="list-style-type: none"> rotate boxes to place labels closer to the employee consider the label location when placing boxes on conveyors or belts 	✓		low	med	med

Back/Torso (cont'd)

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
14. High speed, sudden movements or Lifting awkward, uneven, shifting or bulky items.	<ul style="list-style-type: none"> Rarely occurs 	N/A					
15. Static, awkward back postures	<ul style="list-style-type: none"> Rarely occurs 	N/A					
16. Lifting forces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
17. Pushing or pulling	<ul style="list-style-type: none"> Rarely occurs 	N/A					
18. Whole body vibration	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Legs/Feet

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
19. Fixed position, standing	<ul style="list-style-type: none"> Rarely occurs 	N/A					
20. Exposure to hard edges on legs, knees, and feet <u>or</u> Standing on hard surfaces	<ul style="list-style-type: none"> Standing on a hard surface 	86. Provide an appropriate anti-fatigue mat		✓	med to high	low	low
		96. Provide appropriate shoe inserts		✓	low	low	low
		143. Wear appropriate shoes	✓		low	low	low
21. Awkward leg postures	<ul style="list-style-type: none"> Work object is too low 	124. Raise the work piece / work surface		✓	med to high	low	low
		<ul style="list-style-type: none"> provide support for the work piece provide an adjustable table for work piece 		✓	low to med	low	med
22. Awkward foot postures	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Head/Eyes

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
23. Difficult to see/light levels too low/too high	<ul style="list-style-type: none"> Rarely occurs 	18. Improve visual access to work <ul style="list-style-type: none"> Light level should be 50fc to 75fc for the work 		✓	low to med	med	med
24. Intensive visual tasks, staring at work objects for long periods	<ul style="list-style-type: none"> Rarely occurs 	N/A					

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