# **ATC Gen 4 Top Swap Procedure**

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## Purpose

This document describes the procedure for swapping a toolbox top to a Gen 4 Toolbox top and the subsequent software configuration & testing steps.

# **Required Tools**

- USB Flash Drive (for capturing foam files)
- Flathead Screwdriver
- 8mm Socket
- M6 Allen Key
- White Strip
- Calibration Strip
- USB Keyboard
- USB Mouse

# Capturing Existing Foam Files from Original Toolbox Top

This procedure assumes the legacy device is running V9 software. If the legacy device is running V8 software the foam files can be found in either the E:\Box\_Config\unaligned foam files or C:\ATC\Box\_Config\unaligned foam files directory. Contact Industrial Pro-Services for assistance.

1. The first step in the top swap procedure is to capture the foam files from the device before swapping the top. Click on the gear icon in the top right corner. Once within the Main Menu page, pictured below, click on **I/T Settings**.

U	N	lain Menu	
Inventory	Device Status	Audit	I/T Settings
System Changes	Troubleshooting	Volume	About

2. Use a valid user badge with I/T Settings permissions.

Scan badge for access.	I/T Settings	

#### 3. Select Windows Explorer

# I/T Settings



Windows Explorer	Task Manager	Network Setup	Hard drive cache settings
Date/Time	System Properties	View Log File	Card Reader Config
Calibrate Touch Screen	Network Info	Wireless Info	

4. Navigate to the following directory on the device: E:>V9>Tool Control System>SmartDevice>DeviceData>Device Serial Number>DrawerArchive

5. Copy all of the "Drawer#.txt" text files to the USB flash drive. **NOTE: DO NOT copy the Aligned foam files to the flash drive.** 

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🖈 Quick access	Name	Da	te modified	Type Text Document	Size	7 KB		
OneDrive	Drawer1_Aligned.txt	3/1	22/2024 1:36 PM	Text Document	182	2 KB		
This PC	Drawer2.txt	2/0	6/2024 1:57 PM	Text Document	93	3 KB		
3D Objects	Drawer2_Aligned.txt	2/0	6/2024 1:57 PM	Text Document	92	2 KB		
Desktop	Drawer3.txt	7/	13/2023 4:28 PM	Text Document	298	3 KB		
Documents	Drawer3_Aligned.txt	3/	19/2024 5:45 PM	Text Document	200	) KB		
Downloads	Drawer4_Aligned.txt	4/	19/2024 10:52 AM	Text Document	60	) КВ		
b Music	Drawer5.txt	7/	13/2023 4:28 PM	Text Document	198	3 KB		
Pictures	Drawer5_Aligned.txt	3/	7/2024 3:47 PM	Text Document	174	4 KB		
🚆 Videos	Drawer6.txt	7/	13/2023 4:28 PM	Text Document	133	3 KB		
Local Disk (C:)	Drawer6_Aligned.txt	3/	7/2024 3:48 PM	Text Document	12(	) KB		
Data (E:)	Drawer7.txt	//	7/2023 4:28 PM	Text Document	14	I KB		
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16 items							Γ	

6. Before closing Windows explorer, safely eject the flash drive using the drop-down menu within File Explorer. Once ejected close File Explorer and shutdown the device. **Keep the flash drive handy as this WILL be important later**.

# **Physical Top Swap**

This procedure assumes the legacy device is Generation 3/3B/4 hardware. If the legacy device is Generation 1/2 the procedure may vary slightly. Contact Industrial Pro-Services for assistance.

1. First we must remove the screws fastening the toolbox top to the chassis and slide the top forward. **NOTE:** If servicing a toolbox with batteries, be sure to unplug the cable running from the bottom of the battery to the motherboard from the battery side.



Bolts on Side of Toolbox Top



Bolts on Monitor Support Arm

2. Continue to slide the toolbox top to the farthest point forward. This should expose all of the bolts used to fasten the chassis to the toolbox (shown below).



#### Mounting Bolts in rear of chassis

There is also a set of threaded posts towards the front of the chassis, roughly ~3 inches from the front, that runs through the top of the toolbox. The first drawer will have to be opened to remove the nut attached to this threaded post (pictured below).





View of fasteners within the toolbox with Drawer 1 open

- 3. Once the bolts that adhere the chassis to the toolbox have been removed, slide the top back to its furthest point. Once the stainless steel top has been pushed all the way back, fasten the side screws back into the top. (shown in the first photo of step 1)
- 4. Remove any batteries from the toolbox top before separating the top from the toolbox.
- 5. Now we are ready to take the chassis off of the toolbox. With help, pickup the top from the side ensuring that you do NOT touch the mirror that runs along the front of the chassis. NOTE: This is a two person job at a minimum. Carry the top to an open area and set down. NOTE: ensure proper lifting techniques are used to avoid injury
- 6. Using help, grab the replacement top and place it atop the toolbox. Ensure that all mounting holes are aligned and fasten the chassis to the toolbox.

## **Enter Serial Number**

- 1. When the system boots up, A message will appear stating "No device serial number found in database. Please select an option". Choose "**New**".
- 2. When prompted, use the onscreen keyboard to enter the device's serial number and press **Enter**. (Serial # example: Z72LR002)
- 3. After initialization, the **Network Setup** menu will appear.

# Date & Time

- 1. After the system finished booting it will start in the Network Setup menu
- 2. Press the **Date/Time** button to open the OS Date and Time window.
- 3. Press the "Change date and time..." button.
- 4. Use the following credentials when you are prompted by Windows UAC anytime during this process:
  - a. Username = User1
  - b. Password = F0urth@ndInch3\$
- 5. Adjust the date & time as needed. When finished, click **OK** twice to return to the **Network Setup** menu for the next section.

## **Internal Network**

- 1. You should be at the **Network Setup** menu, continuing from the previous section.
- 2. Click the Internal Network button.
- 3. When prompted, enter the admin username and password: User1 / FOurth@ndInch3\$
- 4. A command window will launch momentarily and then close.

## **Connect to Customers Wired/Wireless Network**

- 1. For a wired connection, simply connect the ethernet cable to the toolbox top and the network should be displayed on the device.
- 2. For a wireless connection, press Ctrl+Alt+Delete

3. Now within the screen, pictured below, on the network symbol (circled in red in the image below).

Lock	
Switch user	
Sign out	
Change a password	
Task Manager	
Cancel	
	<mark>መ</mark> ት ወ

4. You should see a list of available wireless networks. Select the customers network, and enter their network password.

If you need more advanced access to the network settings, you can get to the network settings via the **Main Menu>I/T Settings>Network Setup>Network/Sharing**.

For any additional questions contact indproservices@snapon.com

#### Join Service

To connect an L5 Connect Device to an L5 Connect Service use the following document, <u>Connecting to a L5</u> <u>Connect<sup>™</sup> Service</u>.

## Disable Disk Write Cache

Note: This step will begin automatically after the service is joined.

1. After the service is joined you will be automatically prompted to disable the disk write cache.



- 2. Press the **Change Hard drive cache settings** button.
- 3. When prompted, enter the admin username and password: User1 / FOurth@ndInch3\$
- 4. A command window will briefly appear then close.
- 5. You will be prompted to allow a restart. Click **OK**.

Restart required for changes to take effect.							
	ок						

## **Define System**

Note: This step will begin automatically after the disk write cache is disabled (skip to step 3).

- 1. From the **Main Screen**. Click the gear Icon.
- 2. From the Main Menu screen, select System Changes.
- 3. From the System Changes screen, select Change: Drawer Heights.
- 4. When prompted enter a valid user badge with the proper permissions and press Enter.
- 5. Choose the correct number of drawers for the toolbox (8 shown in the example image below) and press the Green Check in the upper left part of the touch screen.



For a customer with a nonstandard toolbox configuration, click on the custom button shown above. Once is button is pressed, you will be able to select the height of each drawer (from the top down) in inches.



Select the heights of drawers until all drawers have been input into the configurator. **NOTE: the configurator will only allow you continue all drawers are input for the total height of the box** 

- 6. The system will power off all cameras, then power on each one individually, beginning with camera 1.
- 7. After the final camera has been configured (4 or 6) the system will then reinitialize and let the user know the configuration is complete. Repeatedly tap the **Close "X"** button to return to the **Main** screen.

# Lock Test

#### Note: This step will begin automatically after the system is defined. (skip to step 3)

- 1. From the Main Menu, Select Troubleshooting.
- 2. From the Troubleshooting Menu, Select Lock: Diagnostics.
- 3. Scan a valid user badge with the proper permissions and press Enter.
- 4. Using the Key turn the lock to Lock. The Indicator should duplicate the graphics shown:



#### LOCKED

#### UNLOCKED

5. Turn the Key to the Lock Position and change the time constants (the numbers by the hourglass) to 500.



6. Press the disk icon to save changes.



8. Toolbox should Lock. Verify that each drawer is secure and cannot pull open.

9. Toolbox should Unlock. Verify that each drawer can be pulled opened.



- 10. Lock test complete.
- 11. Repeatedly tap the **Close "X"** button to return to the **Main** screen.

## Calibration

#### Note: This step will begin automatically after the lock test is complete. (skip to step 3)

#### **Required Tools**

- White Strip A strip of white paper that has a width larger than the band of light in the bottom drawer of the toolbox and a length of a 36" toolbox drawer. The paper should be thick enough to completely block the blue from the foam (about 5 sheets).
- Calibration Strip A calibration strip is supplied with every shipped ATC toolbox. It is usually attached to the back of the bottom drawer with magnets. Be sure the magnets are attached so that it lays flat
- 1. From the Main Menu, Select Troubleshooting.
- 2. From the **Troubleshooting** Menu, Select **Calibration**
- 3. Scan a valid user badge with the proper permissions and press Enter.



# Note: it may be necessary to peel off the mirror protective plastic. Ensure it is removed before the next step.

5. The system will now unlock and prompt you to place the white strip on the left side of the bottom drawer of the toolbox.

a. The white strip must cover the entire illuminated strip of light from the far-left side of the drawer to at least 36" towards the middle of the drawer.

- b. In a 36" drawer the white strip will cover the full width of the drawer.
- c. In a 54" drawer the white strip should cover at least 30" (or half) of the drawer.
- d. Be sure the white strip lying flat against the drawer foam.
- e. Make sure to tug out on all drawers before starting
- f. Click/tap Start to proceed.





- 6. The system will then process the bottom drawer. Note: a 54" toolbox will prompt the user to move white strip to the right side, after each left side image is taken.
- 7. The system will prompt you to repeat this process on drawer 2 and drawer 1. If any report of **Your white strip check passed with a percentage of extra margin!** should be treated as an error that could require mirror / chassis adjustment.



8. After the white strip process is complete you will be prompted to place the calibration strip inside of drawer 1. If it is a 54" box, then place the calibration strip on the left side first.

a. Make sure that the calibration strip is placed in the drawer in the proper orientation and completely within the brightest portion of the light strip.

b. The specific missing dots will make the shape of the letter "M" when properly oriented.

c. Screen prompts will vary depending on the box size.

d. The calibration strip MUST lay flat against the drawer foam. You may have to remove tools from the drawer for the calibration strip to lay flat. Be sure the magnetic strips are on the back. They support the center so that it doesn't sag.

e. The calibration strip may be placed anywhere between the front and back of the drawer if the other conditions mentioned above have been met.

f. Refer to the image below for how the calibration strip should be positioned in the drawer.



9. Click/tap start to continue.

a. Sometimes a minor adjustment to the calibration dot strip will clear an error and allow the process to continue.

b. If you receive an error for a specific camera, change the view to that camera by tapping the image.

10. When the system prompts move the calibration strip to the right side of the current drawer (54" box). Follow the same guidelines mentioned above. Click/tap start to continue.

Calibration S Place Calibrat		
Camera - 3 - Analyzing (Valid)	Camera - 4 - Analyzing (Valid)	Full Drawer 1 Start
Camera - 5 - Analyzing (Valid)	Camera - 6 - Analyzing (Valid)	Valid Pattern Isolated Column Incomplete Column Isolated Dot
Z72LR992 sw:9.7.11.092	1 10/10/2023 15:28 (UTC)	

11. After the calibration strip process for this drawer is finished, remove the calibration strip.

12. The system will prompt the user to locate the 1st dot of the side position strip at the bottom of the image. The 1st dot is the one nearest the front of the toolbox. Click/tap start to continue.



- 13. The system will repeat steps 8 thru 12 with similar instructions for the remainder of the toolbox drawers. Follow the on-screen instructions for each drawer. Pay special attention as some request may be different for each drawer.
- 14. After data has been collected from the last drawer the system will prompt the user to shut all drawers. After the drawers are shut click/tap ok to continue.
- 15. The system will now reinitialize. End of calibration procedure.

## **Archive Image Review**

NOTE: the drawer images are reviewed just after calibration to determine if any adjustments need to be made, prior to training the drawers. On occasion, a fault in the system is discovered during the calibration process. The intent of this section is to catch any faults before continuing.

- 1. From the Main Menu, Select Troubleshooting.
- 2. From the Troubleshooting Menu, Select Diagnostics: Archive Image.
- 3. Scan a valid user badge with the proper permissions and press Enter.

4. Press the Unlock button and completely open and close every drawer in the toolbox.



5. Once every drawer has been opened and closed press the Lock Button.



- 6. The first image will open. Use the green arrow keys to flip through and review each image. Verify the images satisfy the following criteria
  - The back of the drawer is visible. It is acceptable if the last dot on the side position strips is lost, but no more.
  - No vertical or horizontal lines in the image.

• No image discontinuities.



7. Repeatedly tap the **Close "X"** button to return to the **Main** screen.

### Load Foam Files

- 1. On the ATC Administration laptop select the **L5 Connect Admin Client** shortcut.
- 2. When prompted, enter your username and password.
- 3. Select the **Locations** tab and enter the serial number of the ATC device in the search box.
- 4. Click the **Import Foam file** button

Soma	Top Level Change Current Location	Click to logout
	Dashboard Locations Tools Tool States Employees Groups History Reports Settings	
■         ■           Name         ✓           ' Top Level         292BN006	Z92BT001 Optical Toolbox	
Z92BT001 Z93AU001	Info Profiles Profiles (Group) Options Inventory Status Subscriptions Audit Types Quantity Monitoring Attachments Favorites	
Z97BB012 Z98BB001		
Z99BT001	Name 22281001 Customer ID 2287001	
Z9951002 Z99LS001	Notes	
	Parent Location Top Level 🖉	
	Seid Number (Daries) 2020101	
	Current Version 9.104.0513	
	Service Connection Offline (6/26/2024 1:36:17 PM)	
	PC Info Dell Inc. 0XRC2C	
	OS Version Microsoft Windows NT 10.0.22621.0	
	Hardware Info Toolbox Emulator	
	Default Tolerance 0	
	r Device Info	
	Customer ID	
	Serial Number (Tool)	
Show Deleted Items		

5. Using the flash drive from earlier, navigate to the location of the Foam Files and select all files.

Inf	o Profile (Employ			Importir	ng: Foam fi	le			ttachments
	Cust	or In	nport: Foam file: Star	t			_		
-5	Select: Foam file								×
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		File name:						Tool Control System foam	files ~
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6. Click the arrows to examine each foam file. Once you have confirmed they are correct, Click the Green check in top left of the screen to begin file transfer.

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4 Q.	Press check to confirm all selected items. Current: (1/3) Drawer 1 Z72LR992 Z72LR992	8
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7. After the Foam files have been sent to the device the Importing: Foam File dialog box will indicate it is finished. Click the Green check in the top left of to finish.

# **Drawer Training**

- 1. **Scan** your badge to **unlock** the ATC device.
- 2. Click the Main Menu (gear) button.
- 3. From the Main Menu Click the System Changes button, then Click the Change: Foam File button.
- 4. In the **New: Foam File** menu, Click the drawer number that you wish to train.

New: Foam file				
Drawer 1	Drawer 5	Drawer 8		

5. You will be prompted to Confirm the selected foam file. Click the green check.



- 6. Follow the on-screen and audio instructions.
- 7. After training is complete verify the training by:
  - a. Opening and closing the drawer with the multiple tools in the pocket. The tools should be returned.
  - b. Opening and closing the drawer with the multiple tools OUT of the pocket. The tools should issue.
- 8. Repeat this process for all drawers.
- 9. Repeatedly tap the Close **"X"** button to return to the Main screen.