# H O W  T O  L O A D  S O F T W A R E

**APPLICABLE TO:** Precision system

**INFORMATION:**

This instruction covers how to load software to the system when replacing a spare part and/or upgrading entire system to a new software version.

**TOOLS NEEDED:**

- Service cable
- Service PC with COM-port (or USB to Serial RS232 converter)
- USB memory stick
  (preferably the one included with system delivery which is validated for software updating)
- Programming node
  (Only needed if Collimator/UI-node needs upgrading – this document explains if and how)
- Software package *(88-109_Precision-C_x_x)*

**ABBREVIATIONS USED THROUGHOUT THE DOCUMENT:**

UDI = Update instruction

RLN = Release notes

SSW = Service Software *(ArcoCeil_1_x_x.exe)*

**ACTION STEPS:**

Follow the flow chart on next page to get an overview, determine first steps and how to proceed.

The flow chart gets divided early on in 3 possible directions - A, B, C - depending on your situation

A

***"I am replacing a spare part containing software"***

*This is in case you are replacing any of the following spare parts:*

| *PART NAME* | *SPARE PART NUMBER* |
|---|---|
| • *Master/Z* | *0070-811-100* |
| • *UI/Collimator* | *0073-810-014* |
| • *Guard* | *0070-811-104* |
| • *Signal Interface* | *0512-810-207* |
| • *X* | *0070-811-130* |
| • *Y* | *0070-811-140* |
| • *Alpha/Beta* | *0070-811-150* |
| • *Bucky* | *0065-811-207* |
| • *Wallstand* | *0072-810-102* |
| • *System Master CB800* | *0073-810-100* |
| • *Tube display* | *0073-810-001 / 002 (with / without loop)* |

B

***"Node is damaged or in error state"***

*A similar but slightly different scenario from **A)**.*

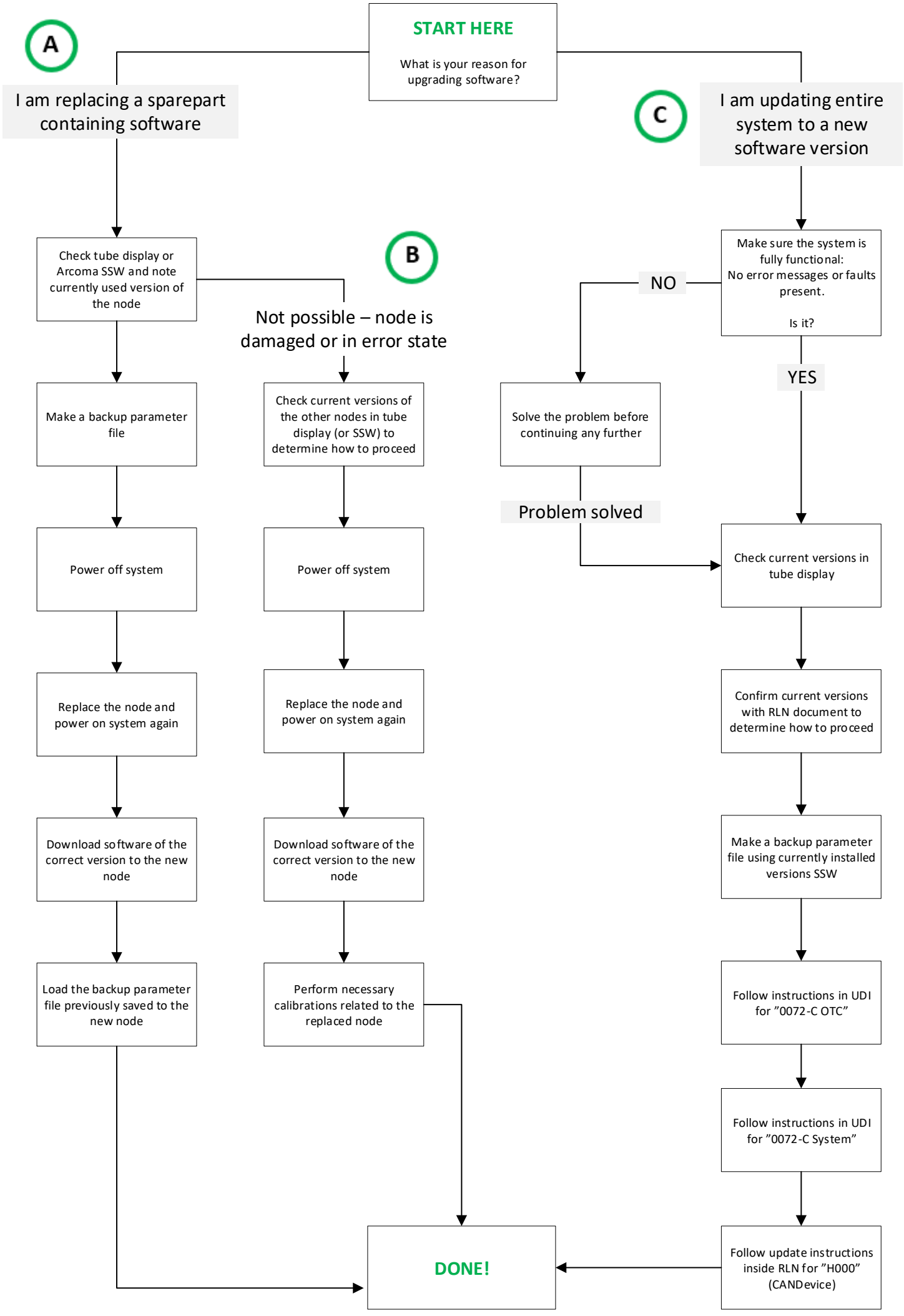
*This is in case you are replacing a spare part containing software that doesn't communicate – thus not being able to make a backup parameter file prior to replacing it.*

C

***"I am updating entire system to a new software version"***

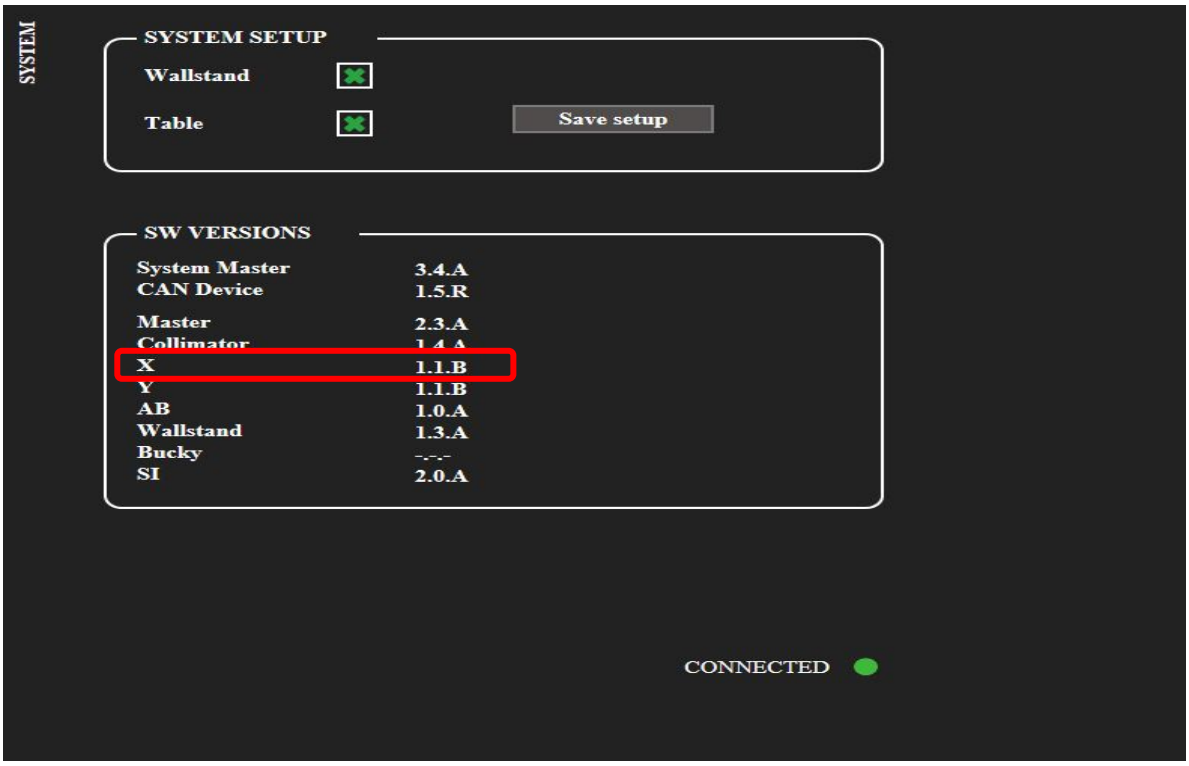
*This is when you are updating an already fully functional system into a newer software version.*

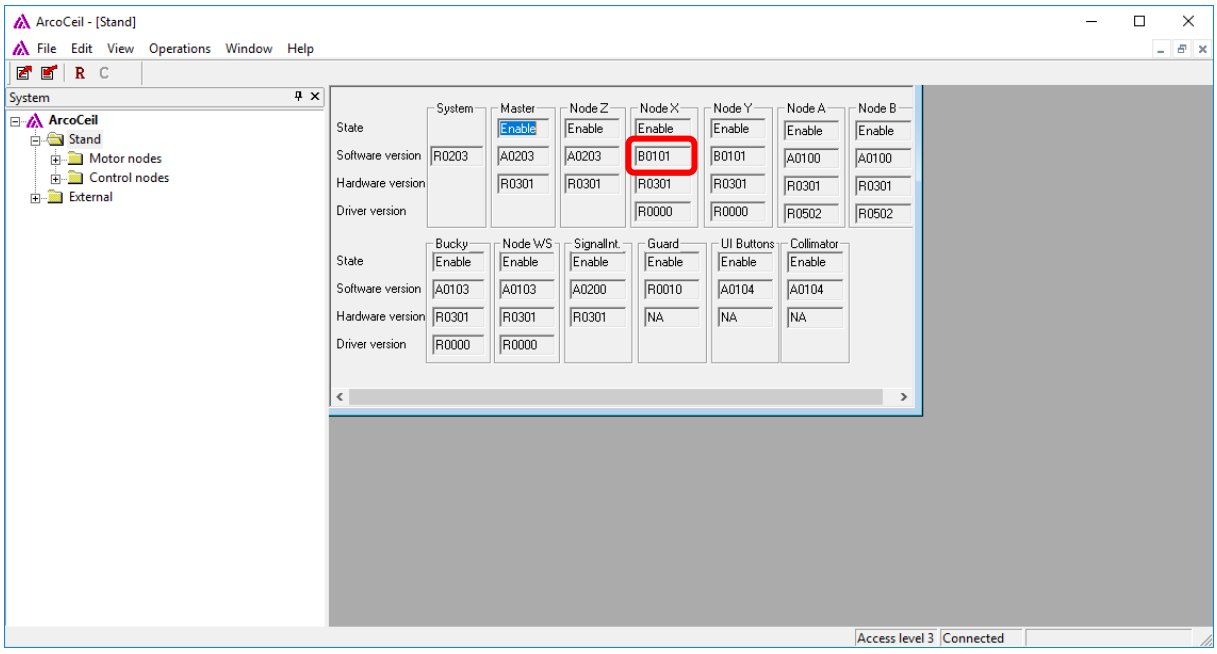
The flow chart is followed by explanations, reference pictures and guidance for each of the above scenarios. Turn the page to get started!


START HERE
What is your reason for upgrading software?
A
I am replacing a sparepart containing software
Check tube display or Arcoma SSW and note currently used version of the node
Make a backup parameter file
Power off system
Replace the node and power on system again
Download software of the correct version to the new node
Load the backup parameter file previously saved to the new node
B
Not possible – node is damaged or in error state
Check current versions of the other nodes in tube display (or SSW) to determine how to proceed
Power off system
Replace the node and power on system again
Download software of the correct version to the new node
Perform necessary calibrations related to the replaced node
C
I am updating entire system to a new software version
Make sure the system is fully functional:
No error messages or faults present.
Is it?
NO
Solve the problem before continuing any further
Problem solved
YES
Check current versions in tube display
Confirm current versions with RLN document to determine how to proceed
Make a backup parameter file using currently installed versions SSW
Follow instructions in UDI for ”0072-C OTC”
Follow instructions in UDI for ”0072-C System”
Follow update instructions inside RLN for ”H000” (CANDevice)
DONE!

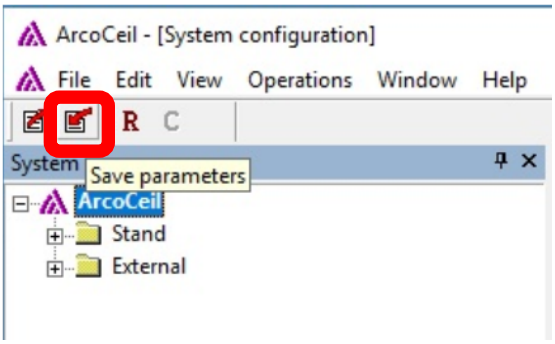
## A ”I am replacing a spare part containing software”

1. Check tube display (or Arcoma SSW) and note currently used version
   Easiest way to check is in tube display. But if the error in system is inhibiting this, use the service software instead. In this example, we are to replace the node X:



2. Make a backup parameter file:




3. Power OFF the system

4. Replace the spare part (in this example node X).

5. Power ON the system.

6. Download software of correct version to the node (determined in step 1).

| | | | |
|---|---|---|---|
| 0072-C_OTC_AB_1_0_0.s28 | 2013-09-11 17:40 | S28-fil | 162 kB |
| 0072-C_OTC_Bucky_1_3_0.s28 | 2016-01-11 11:24 | S28-fil | 178 kB |
| 0072-C_OTC_Collimator_1_4_A.srec | 2017-10-20 14:57 | SREC-fil | 275 kB |
| 0072-C_OTC_Master_2_3_A.s28 | 2018-01-16 15:46 | S28-fil | 459 kB |
| 0072-C_OTC_SI_2_0_0.s28 | 2015-06-24 08:36 | S28-fil | 75 kB |
| 0072-C_OTC_WallStand_1_3_0.s28 | 2015-06-29 10:29 | S28-fil | 176 kB |
| 0072-C_OTC_X_1_1_0.s28 | 2015-04-27 11:22 | S28-fil | 160 kB |
| 0072-C_OTC_Y_1_1_0.s28 | 2015-04-27 11:22 | S28-fil | 160 kB |
| 0072-C_System_display_3.0.F.m2f | 2017-06-27 07:55 | M2F-fil | 68 030 kB |
| 0072-C_System_SystemMaster_3_4_A.bin | 2018-10-03 10:33 | BIN-fil | 4 423 kB |
| H000_CANdevice_1_5_0.bin | 2014-02-13 13:44 | BIN-fil | 46 kB |
| touchcalib_2_0_1.m2f | 2015-02-03 08:19 | M2F-fil | 5 kB |

In this example, the following file should be downloaded to node X:

7. Load the backup parameter made in step 2.

8. Test the system and make sure all functions are working properly.

9. Done!

***ADDITIONAL INFO:*** *For more details and a complete guide on how to make a backup and load software to different nodes, read the document named "SwUDI_0072-C_OTC_x_x".*

| | | | |
|---|---|---|---|
| SwRLN_0072-C_OTC_2_3 | 2017-11-07 15:09 | Adobe Acrobat Docum... | 507 kB |
| SwRLN_0072-C_System_3_4_0 | 2018-10-08 13:19 | Adobe Acrobat Docum... | 535 kB |
| SwRLN_H000_1_5_0 | 2014-02-18 11:26 | Adobe Acrobat Docum... | 178 kB |
| SwUDI_0072-C_OTC_2_3 | 2017-11-08 13:45 | Adobe Acrobat Docum... | 637 kB |
| SwUDI_0072-C_System_3_4 | 2018-10-08 13:20 | Adobe Acrobat Docum... | 1 181 kB |

*(where "_2_3" in the file name is the system software version and differs accordingly)*

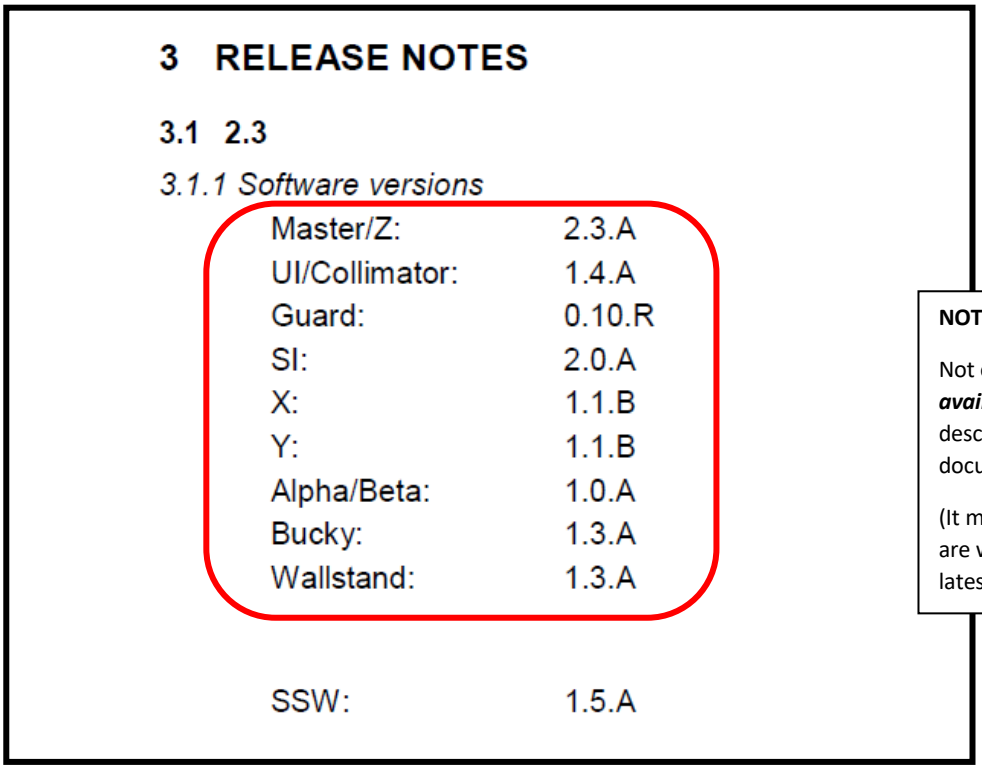
B

# “Node is damaged or in error state”

1. When the node is unable to communicate we will not be able to tell which version it was running on. So, instead we will look at all the other nodes and figure it out that way.

   In this example, the Bucky node is not responding and we need to replace it.
   So, by looking at tube display or Arcoma SSW we then need to compare all the other node versions with the RLN document named “SwRLN_0072-C_OTC_x_x.pdf”.

   Like this – compare the versions present at tube display with RLN document:

## 3 RELEASE NOTES

### 3.1 2.3

*3.1.1 Software versions*

| | |
|---|---|
| Master/Z: | 2.3.A |
| UI/Collimator: | 1.4.A |
| Guard: | 0.10.R |
| SI: | 2.0.A |
| X: | 1.1.B |
| Y: | 1.1.B |
| Alpha/Beta: | 1.0.A |
| Bucky: | 1.3.A |
| Wallstand: | 1.3.A |
| SSW: | 1.5.A |

**NOTE!**

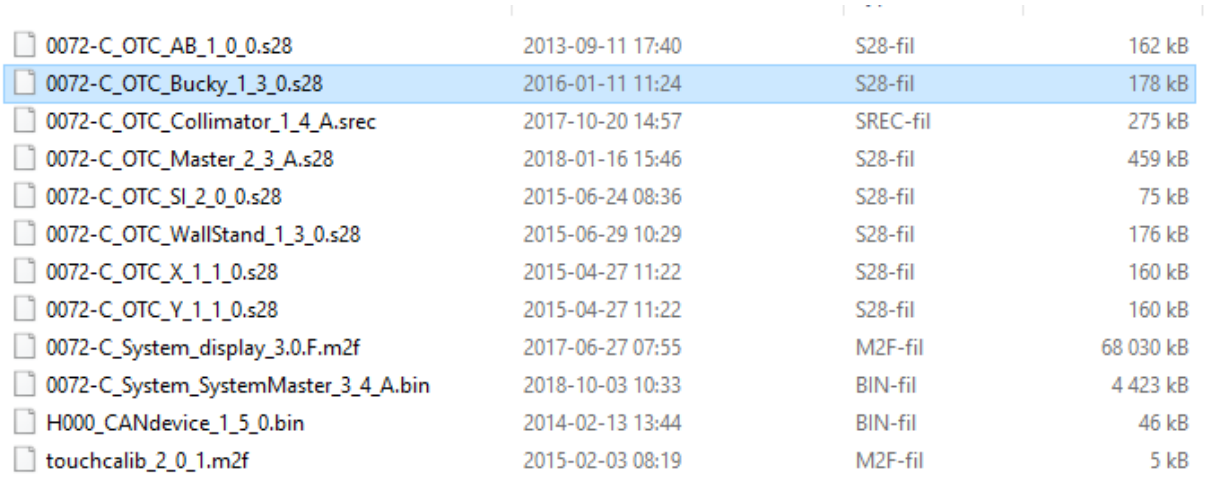
Not only the latest, but ***all available versions*** are described in the RLN document.

(It might be the system you are working on is not using latest software version yet.)

In this example we find that all the node versions (except Bucky which is unknown for us) presented in tube display are consistent with the versions in the RLN document for our version (_2_3).

This way we know that the one missing – Bucky node – needs version “1.3.A” to belong!

2. Power OFF the system
3. Replace the spare part (in this example node Bucky).
4. Power ON the system.
5. Download software of correct version to the node (determined in step 1).
   In this example, the following file should be downloaded to node Bucky:



| | | | |
|---|---|---|---|
| 0072-C_OTC_AB_1_0_0.s28 | 2013-09-11 17:40 | S28-fil | 162 kB |
| 0072-C_OTC_Bucky_1_3_0.s28 | 2016-01-11 11:24 | S28-fil | 178 kB |
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| 0072-C_System_SystemMaster_3_4_A.bin | 2018-10-03 10:33 | BIN-fil | 4 423 kB |
| H000_CANdevice_1_5_0.bin | 2014-02-13 13:44 | BIN-fil | 46 kB |
| touchcalib_2_0_1.m2f | 2015-02-03 08:19 | M2F-fil | 5 kB |

6. Load parameter to Bucky node (from an earlier system backup or factory default).

7. Depending on which backup was used, the node might need a calibration.
   If needed, perform calibration for the affected axis (in this example Bucky) according to Installation and Service manual.

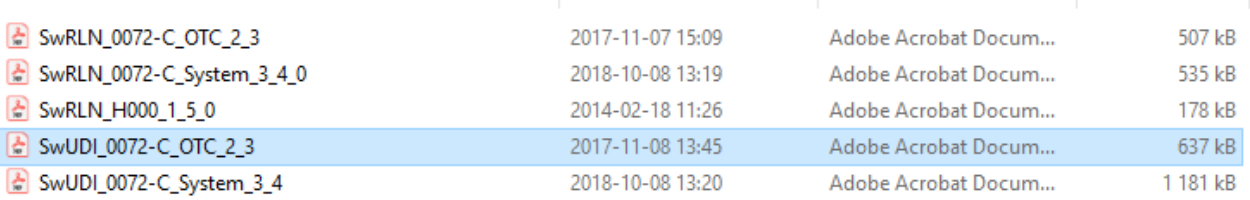
8. Test the system and make sure all functions are working properly.
   Also make sure that autopositions are aligning correctly.

9. If all is OK, save a fresh backup file.

10. Done!

***ADDITIONAL INFO***

*For more details and a complete guide on how to make a backup and load software to different nodes, read the document named “SwUDI_0072-C_OTC_x_x”.*



| | | | |
|---|---|---|---|
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| SwUDI_0072-C_System_3_4 | 2018-10-08 13:20 | Adobe Acrobat Docum... | 1 181 kB |

*(where “_2_3” in ending of file name is the system software version and differs accordingly)*

C

## “I am updating entire system to a new software version”

When the entire system needs updating, it is important to make sure everything works properly first. If any deviations or problems are present, solve those first before beginning to update software!

### Begin with “0072-C_OTC” – the positioning system:

1. Check which version is currently installed by comparing versions displayed in tube display or Arcoma SSW with RLN document:


## 3 RELEASE NOTES

### 3.1 2.3

*3.1.1 Software versions*

| | |
|---|---|
| Master/Z: | 2.3.A |
| UI/Collimator: | 1.4.A |
| Guard: | 0.10.R |
| SI: | 2.0.A |
| X: | 1.1.B |
| Y: | 1.1.B |
| Alpha/Beta: | 1.0.A |
| Bucky: | 1.3.A |
| Wallstand: | 1.3.A |
| SSW: | 1.5.A |

2. Now read and follow the UDI document named “SwUDI_0072-C_OTC_x_x” to update the positioning system first.

   *Note that there is a section named “Additional Instructions” at the end. This contains specific instructions for updating from previous individual versions – this is why it is important to check current version first, as we did in step 2.*

## Continue with “0072-C_System” –

## the interface software between image system and positioning system:

3. Follow the UDI document named “SwUDI_0072-C_System_x_x” included in the software package you are upgrading to.

   *(This is to update the interface system = application software in CB800 (the interface between positioning system and imaging system) and the tube display.)*

## Continue with “CAN Device” –

## the master CAN bus communication software:

4. Follow the update instructions inside RLN document “SwRLN_H000_x_x_x” included in the software package you are loading.

5. Test the system and make sure all functions are working properly.

6. Done!

- **END OF DOCUMENT -**