AGFA HealthCare
Global Services

Service Bulletin

Announcement of Update to System Version 9.0 (bug fixes)

Task

Timing	Category	Scope
Next service as agreed with customer	◯ **Apply at all sites** ⦿ **Apply at affected sites as listed below** ◯ **Optional to improve functionality of product**	**Problem record:** **PRB0053200, PRB0054680** **PRB0054761, PRB0054946** **PRB0054963, PRB0055035** **PRB0056532, PRB0056616** **PRB0055998, PRB0052713**

Task Tracking

After completion of your task the following entry in your Service Report is required:	**DD+DIS169.16E**	*

* Insert the document number into the field "Comment" (SMS form).

Purpose of this document:

- This document announces system version 9.0 of the DX-D 100 / DX-D 100 Wireless system.
- It lists the software components which have been updated with system version 9.0.
- It contains the solutions for the listed PRB cases.

Affected serial number(s) / batch: Update those sites which require the new features or where the solved issues need to be implemented.

The signatures on the approval page indicate the solutions described in this Service Bulletin have been reviewed and are NOT reportable because no actions are taken to reduce a "Risk to Health" according to our risk assessment process.

List of contents

1 Introduction

The following **software** is released with DX-D 100 / 100 Wireless V 9.0:

- NX 3.0.9000
- XRDI 18.1
- Softconsole 5.7
- TechService 6.17
- HT Controller Software V5R8.10
- ATP Generator firmware V7R1B92

For an overview of new NX functions of NX 3.0.9000 refer to NX 3.0.9000 Service Bulletin No. 01, "Release of NX 3.0.9000", Document ID 57096072.
The other software components are released for bug fixing and to support the copy exposure functionality and multiple detector types.

NOTE:
- Detailed installation instructions and spare part numbers of the following optional hardware components will be part of an upgrade bulletin which will be released later.
- More information when adding or replacing a DR10s / DR14s detector or when Mutli detector use is required: Refer to DX-D 100 Wireless Service Manual, Section 11, Document ID 57323150

The following optional **hardware** components are released with
DX-D 100 / 100 Wireless V 9.0 and available for an optional upgrade of the installed base:

- Key pad to switch on/off the unit
- For DX-D 100 Wireless Type 5411/300*:
  Infrared Eye upgrade kit
- For DX-D 100 Wireless Type 5411/300/*400**:
  Battery charger including power adapter and grid storage holder.

 * with wireless detector DX-D 40C/G or DX-D 45C/G
** with wireless detector DR10s / DR14s

NOTE:

In hospitals with very narrow rooms it might be needed to make exposures with the arm at 0⁰.

The micro-switch already present at the parking latch is going to be also used to allow making exposures with the arm at 0⁰, when the arm is out of parking position.

This switch is called X-Ray inhibition switch (SW8) and is implemented ex factory as from DX-D 100 / 100 Wireless V 9.0. It is not possible to upgrade the switch in the field.
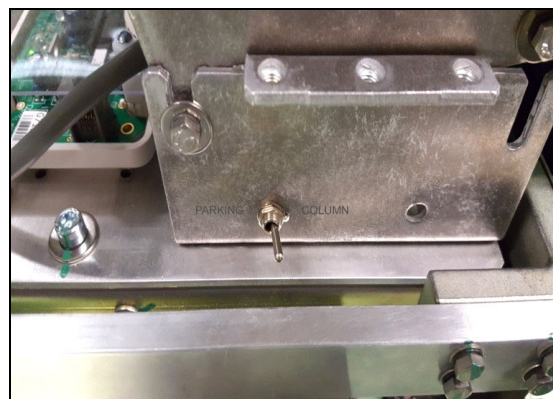
Figure 1

1.1 Overview of DX-D 100 subtypes and configurations

The following 4 different DX-D 100 configurations are available:

- Type number 5410/050, with tethered detector DX-D 10C/G or DX-D 20C/G
- Type number 5411/050, with wireless detector DX-D 30C or DX-D35C
- Type number 5411/300, with wireless detector DX-D 40C/G or DX-D 45C/G
- Type number 5411/400, with wireless detector DR10s / DR14s

	DX-D 100 5410/050	DX-D 100 wireless 5411/050	DX-D 100 wireless 5411/300	DX-D 100 wireless 5411/400
DX-D20C/G	✔	-	-	-
DX-D10C/G	✔	-	-	-
DX-D30C	-	✔	-	-
DX-D35C	-	✔	-	-
DX-D40C/G	-	-	✔	-
DX-D45C/G	-	-	✔	-
DR10s	-	-	-*	✔
DR14s	-	-	-*	✔

* DR10s / DR14s can be added to this system.

1.2   Version overview

System version	8.2.10	9.0
Type	5410/050	5410/050
	5411/050	5411/050
	5411/300	5411/300
	5411/400	5411/400
NX Workstation	NX 8950	**NX 9000**
XRDI	18.0	**18.1**
Canon Detector Software CDI	3.5	3.5
VDI software	3.1	3.1
Trixell Detector Software TRI	2.2	2.2
Sedecal SoftConsole	5.6	**5.7**
Agfa Softconsole ASC	4.1	4.1
Sedecal TechServ	6.15	**6.17**
Generator firmware ATP Console	Type 5411/050/300:	
	V7R1b78	**V7R1B92**
	Type 5411/400	
	V7R1b82	**V7R1B92**
Generator firmware HT controller	V5R8.9	**V5R8.10**
Motion Control Board firmware	V11R3b7	V11R3b7
Atheros driver	V10.0.0.297	V10.0.0.297

1.3   Solved Problem Records

✓ **NOTE:**
For <u>all</u> solved problems in NX 3.0.9000 refer to
NX 3.0.9000 Service Bulletin No. 01, "Release of NX 3.0.9000", Document ID 57096072.

1.3.1   Poor quality of lumbar spine images at speed class free digitizers [PRB0053200]

Symptom   Lumbar spine images scanned with a speed class free digitizer show low contrast.
The user needs to adjust window / level to get an optimal image.
The problem can appear at all NX versions.

Cause   For comparable dose, the speed class free digitizers provide slightly lower contrast and brighter results compared to a DR detector. This can be corrected by window/level adjustments.

Solution   The new image processing for Axial Skeleton improves the contrast by default and hence eliminates the need for manual window/level adjustment. This change in image processing will however not be able to cure the cases with inherent lack of contrast e.g. due to suboptimal exposure factors.

1.3.2   NX in grace period after the network adapter has been renamed [PRB0054680]

Symptom   After renaming the network adapter from default "Local Area Connection" for example to "Connection to Hospital" the NX Workstation is in grace period.

The issue appears in NX 3.0.8950 and may also appear in NX 3.0.9000.

Cause   As of NX 3.0.8950 the software looks for the network adapter name "Local Area Connection XYZ" to determine the MAC Address of the network adapter on the PC's motherboard. In case of a different name the licensing service fails to retrieve the MAC address of that adapter.

Solution   When renaming the network adapter hosted by the motherboard make sure its name starts with "Local Area Connection", for example "Local Area Connection to hospital".

✓   **NOTE:**

In case several network adapters are installed on NX it can be useful to rename the adapters to meaningful names. This makes it easy to identify the purpose of the network adapter. The network adapter can be renamed in menu **Control Panel > Network and Sharing Center > Change Adapter Settings.**

The adapter belonging to the motherboard is usually the first in the list. This can be double-checked by executing "ipconfig /all" in a command window and checking the IP address assignment for that adapter.

1.3.3   ExamtreeDuplicator (AgeGroup Copy tool) fails on loading a configuration file [PRB0054761]

Symptom   AgeGroup Copy Tool fails with error message "Task aborted" when loading a configuration file.

The NX AgeGroup Copy Tool as part of the NX Offline Configuration Tool NX 2.0.8400 / 3.0.8400 up to NX 3.0.8950 is affected.

Cause   Software issue.

Solution   The AgeGroup Copy Tool version 12.0.0700 which is part of the NX Offline Configuration Tool 3.0.9000 works as expected.

✓   **NOTE:**

The AgeGroup Copy Tool is installed together with the NX Offline Configuration Tool. It is started via shortcut All Programs > Agfa > HealthCare > NX > Offline Config Tool NX X.0.XXXX > AgeGroup Copy Tool.

Main purpose of the tool: Quickly build an exam tree containing age groups.

1.3.4   8 bit printing fails under specific circumstances [PRB0054946]

Symptom   Printing to a DICOM printer configured for 8-bit printing fails. A few specific printers are affected only, for example Kodak DryView 8900.

Cause   Software issue. In NX 3.0.8950 the DICOM print management has been transcoded to a different programming language.

Solution   Workaround: In the **NX Configuration Tool > Devices > Printer > Image Sheet Settings > Advanced Settings** set the **Pixel Format** from a 8 bit format to a 10 or 12 bit format.

Preventive action: From within the configuration tool Image Sheet Settings it is possible to print test sheets for the different supported film sizes per configured printer via button **Test Profile**.

Solution: In NX 3.0.9000 8 bit printing works for all DICOM printers.

1.3.5   When clicking on thumbnail NX displays error "missing pixel file - call service" [PRB0054963]

Symptom   When clicking on an already exposed thumbnail, NX displays error "missing pixel file - call service".

This issue may happen on NX 3.0.8950, when the NX viewer has not been restarted for long time.

Cause   Memory problem in the NX viewer process introduced with NX 3.0.8950 MUSICA software.

Solution   Workaround: Restart the NX viewer from time to time, for example once a day.

In NX 3.0.9000 the possible memory problem is solved.

1.3.6　Some sequences of switching between CR and DR can result in a recovery image [PRB0055035]

Symptom　In case of configurations with DR detectors and digitizers without reception of post exposure parameters (no control parameters from generator), some sequences of switching between CR and DR can result in a recovery image.

Example:

- Select a thumbnail configured for DR exposure
- In the detector switch change to CR exposure, identify the cassette (ID is shown in thumbnail)
- Make exposure (retrofit → no post exposure parameters)
- Select another thumbnail → at this moment the previous thumbnail switches back to DR and the 'ID' symbol stays.
- Re-select the first thumbnail → ID symbol is gone
- Make DR exposure → DR image arrives on this thumbnail
- Scan the CR cassette → CR image arrives as recovery

Cause　The issue is caused by re-using the same thumbnail to acquire both a CR and a DR exposure. The one which arrives latest is stored as a recovery image.

Solution　In NX 3.0.9000 this behavior has now been adapted, such that the CR/DR position on the thumbnail is no longer changed at the time of de-selection. Note that the thumbnail will still be changed to DR when re-selecting it.

1.3.7　Not possible to change image presentation in Multi Exam Sheet [PRB0056532]

Symptom　When pressing F6 from the Worklist, the Examination or Editing environment, the Multi Exam Sheet opens. This allows to drag and drop images from any environment into a print sheet.

In this print sheet it is possible to change the presentation of each single image (for example true size, fit image to cell, Landscape). Changing the image presentation in the NX user interface works as expected. When printing, the changed image presentation is not taken over, but the single images are in their original presentation.

The fault was introduced with NX 3.0.8900.

Cause　Software issue.

Solution　In NX 3.0.9000 the software issue is solved.

1.3.8   Special Polish characters not displayed correctly [PRB0056616]

Symptom   Patient names coming from the RIS are not displayed correctly, for example � or 9_ instead of the expected special Polish character.

Cause   DICOM library issue in NX 3.0.8950.

Solution   In NX 3.0.9000 the issue is solved.

1.3.9   Sporadic error message "Idis.GUI.PanelManager.exe has stopped working" [PRB0055998]

Symptom   Very sporadically following error message appears in the NX user interface: "Idis.GUI.PanelManager.exe has stopped working".

The issue may appear with any XRDI version where the detector switch ("Multi Panel GUI") is available.

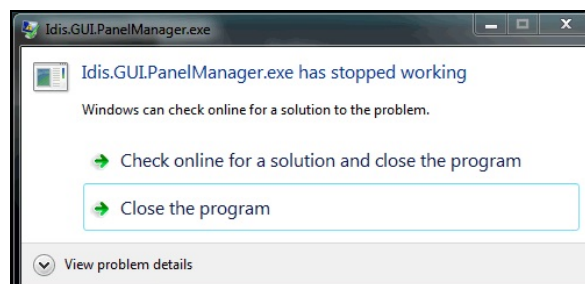When clicking "Close the program" the user can continue working.

Figure 2

Cause   Software issue in all XRDI version where the detector switch ("Multi Panel GUI") is available (MPG introduced withXRDI 14).

Solution   In XRDI 18.1 the issue is solved.

1.3.10   SoftConsole crashes [PRB0052713]

Symptom   SoftConsole crashes with a frozen screen.

Cause   Software issue:
The log file for battery usage becomes corrupt and causes an internal error.

Solution   Solved with SC 5.7.

Temporary workaround if SC 5.7 is not installed:

(1)   Delete file C:\Agfa\Healthcare\Sedecal\log\PowerOff.xml

(2)   Reboot the system.

2 Prerequisites

SOFTWARE:

- ELMS licenses needs to be activated

Download the following software from the Agfa HealthCare Library to a USB flash drive (checked to be virus-free).

- NX 3.0.9000
  Computed Radiography > CR Workstation Software > NX 3.0.9000> Software

- XRDI 18.1
  Direct Radiography > DR Components > XRDI > Software

- SC 5.7
  TechService 6.17
  Direct Radiography > DX-D Components > Generator > Software

TOOLS:

- Portable storage medium, checked to be virus-free, e.g. USB Flash Drive.
- Standard service tool kit

SPARE PARTS:

Software components:

- Spare Parts for ATP Generator firmware V7R1B92 and
  HT Controller Software V5R8.10:
    - SC+A521071-06   SOFT KIT U5/U24 20 KW MOBILE AGFA W.DAP
    - SC+A521072-06   SOFT KIT U5/U24 32 KW MOBILE AGFA W.DAP
    - SC+A521073-06   SOFT KIT U5/U24 40 KW MOBILE AGFA W.DAP
    - SC+A521074-06   SOFT KIT U5/U24 50 KW MOBILE AGFA W.DAP
    - SC+A521075-06   SOFTKIT 20 KW U5/U24 MOBILE AGFA W/O DAP
    - SC+A521076-06   SOFTKIT 32 KW U5/U24 MOBILE AGFA W/O DAP
    - SC+A521077-06   SOFTKIT 40 KW U5/U24 MOBILE AGFA W/O DAP
    - SC+A521078-06   SOFTKIT 50 KW U5/U24 MOBILE AGFA W/O DAP

Hardware components:

Will be announced in a later released Upgrade Bulletin.

REFERENCED DOCUMENTS:

- Mobile X-Ray Unit - Service Manual
  Direct Radiography > DX-D 100 > DX-D 100 Generic > Service Manual,
  Document ID 41600560.

- DX-D 100 Wireless - Service Manual
  Direct Radiography > DX-D 100 Wireless > DX-D 100 Wireless V9 > Service Manual, Document ID 57323150

- DX-D100 - Service Manual
  Direct Radiography > DX-D 100 > DX-D 100 V9 > Service Manual,
  Document ID 57538751

- DX-D100 / DX-D 100 Wireless - Spare Parts List
  Direct Radiography > DX-D 100 > DX-D 100 Generic > Service Spare Parts,
  Document ID 30872155

- DX-D100 / DX-D 100 Wireless - Spare Parts List
  Direct Radiography > DX-D 100 > DX-D 100 Generic > Service Spare Parts,
  Document ID 30872155

! **IMPORTANT:**

The installation and service of the product(s) described herein is to be performed
by qualified personnel who are employed by Agfa HealthCare N.V or one of its affiliates
or who are otherwise authorized by Agfa HealthCare N.V. or one of its affiliates to provide
such services.

3   Instructions

✓ **NOTE:**
Detailed installation instructions and spare part numbers of optional hardware components will be part of an upgrade bulletin which will be released later.

3.1   Update of existing DX-D 100 / DX-D 100 Wireless systems to V9.0

3.1.1   Update to NX 3.0.9000

🕐 REQUIRED TIME:
Approximately 1,5 hours or more. Depends on the complexity of the situation on site.
Note that installing hotfixes may already take up to 1 hour, depending on the hotfix status.

✓ **NOTE:**
For instructions how to install or upgrade the NX refer to
NX 3.0.9000 Service Bulletin No. 01, "Release of NX 3.0.9000", Document ID 57096072

3.1.2   Installation of XRDI 18.1 and SC 5.7

REQUIRED TIME:
30 minutes

IMPORTANT:

During installation the error message
"Windows can't verify the publisher of this
driver software" might pop up. Select "Install
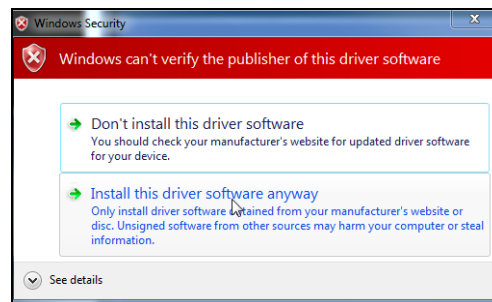this driver software anyway" if this message
occurs.

Figure 3

Each NX 3.0.9000 installation will automatically initiate the installation of the required
components. If the components must be installed separately:

(1)   Perform the installation of XRDI 18.1 and SC5.7 as described in the NX Service
       Manual, Chapter 07, NX Software Component Update, Document ID 57096570.

NOTE:
As from XRDI version 15, it is necessary to run the
Microsoft Security Essentials Autoconfigurator (MSEA) after a higher XRDI version has
been installed.
For details on how to work with the MSEA, refer to the following Service Bulletin:
DR Service Toolbox version 3.0 available. Refer to Agfa HealthCare library
Direct Radiography > DX-D 100 > Service Bulletins or refer to Document ID 45186624

NOTE:
When using SC 5.7 in combination with the LED Status Indicator, the following adaption
must be made:
(1)   Open SSerialConfigXML.xml file in the C:/Agfa/Healthcare/Sedecal directory.
(2)   In the text file, search for <LED> </LEDS>
(3)   Change the value to 1 (e.g.: LEDS>1</LEDS>)
(4)   Close the editor.
(5)   Save the **SSerialConfigXML.xml** file.

3.1.3 Installation of TechService 6.17, ATP Generator firmware V7R1B92 and HT Controller Software V5R8.10

REQUIRED TIME:

60 minutes

IMPORTANT:

It is required to back up configuration data prior to the exchange of the EPROM because existing configurations may be lost after the update.

(1) Turn off the system.

(2) Stop NX workstation completely.

Enable Service Mode

(3) Open the pencil tray and remove the two screws that fasten the console frame to the unit.

(4) Push the console frame towards the column.
Do not lift up the console frame until its upper side is fully released.

Figure 4

(5) Remove the three lateral screws placed on the front cover, at the right side underneath the console frame, in order to facilitate an access between the console and the cover.

Figure 5

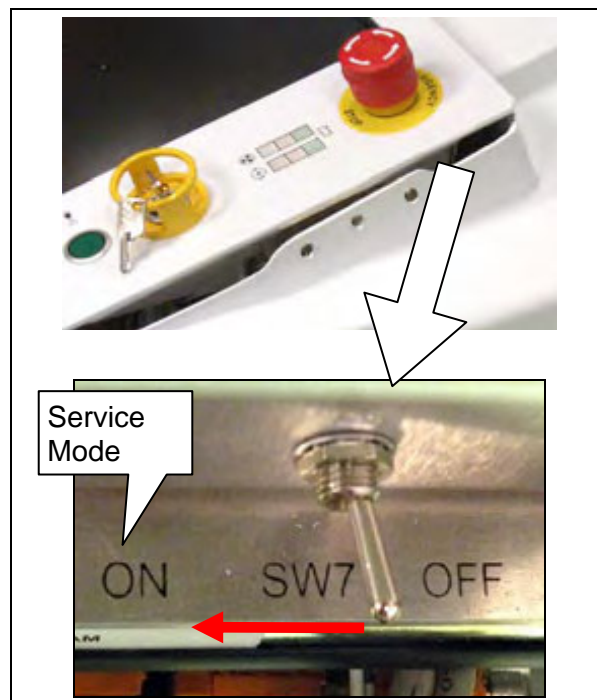(6)   Set Switch SW7 "Calibration ON/OFF" in "ON" position to enable Service Mode.

Figure 6

Note down configuration data

(7)   Switch on the generator.

(8)   On the NX Workstation: Stop the NX application.
       Go to: **Start > Agfa > NX > Stop NX.**

(9)   Start the Techserv Software in the **Sedecal Generator Service Application** window.

(10)   Click the **Configuration** button.

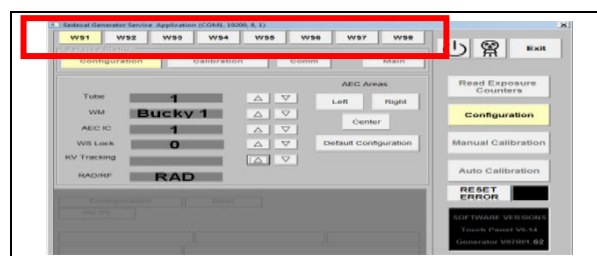(11)   Note down the configuration for all workstations WS1 – WS8.

Figure 7

(12)   Click **Exit** to leave the configuration menu.

(13)   Click on **Manual Calibration**

(14)   Select WS1 and click **OK**

(15)   Use the arrow buttons to increase or decrease the mA value. Observe when the **Focus** field changes from LARGE to SMALL or vice versa.

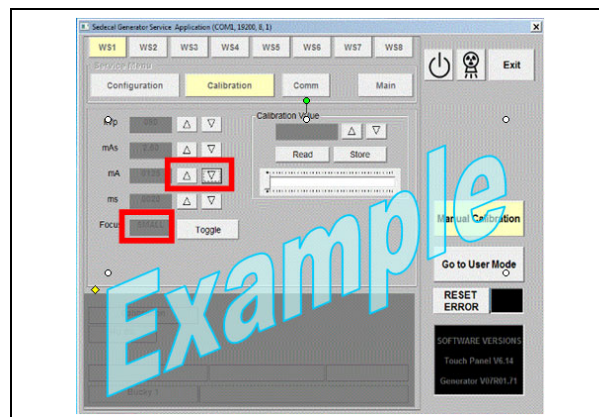(16)   Record the lowest mA version for the LARGE focus so the mA just before the focus switches to SMALL.

Figure 8

(17)   Click on **Exit** to leave the calibration menu.

(18)   Repeat step 12 to 16 for each configured WS.

(19)   Switch off the generator.

Installation of TechService 6.17

NOTE:

The TechService software can be installed by running the executable.
ATP Generator firmware V7R1B92 is required for TechService 6.17.
Previous versions of the ATP Generator firmware are not compatible with TechService 6.17.

(1)   Uninstall TechService 6.15.

(2)   **Click Software TechServ 6.17.exe** and follow the instructions on the screen.
It is possible that a popup will appear after installation. If so, select the option
`This program installed correctly`.

**Replacement of U24 EPROM to upgrade the generator software and
Replacement of Microprocessor U5 to upgrade the HT Controller Software**

(1)   Remove the front cover.

(2)   Open the generator module front door
      by removing the two Allen screws.

      The ATP console CPU board is placed
      at the generator module front door.

(3)   Remove the U24 EPROM on the ATP
      Console CPU with a chip extractor.

(4)   Mount the new U24 EPROM with
      software version v7R1b92.
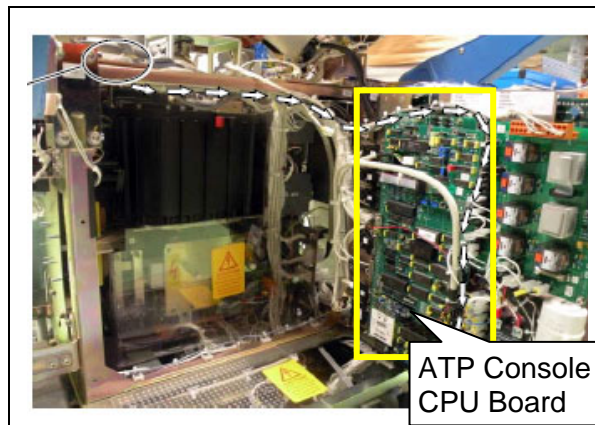

ATP Console
CPU Board

Figure 9

(5)   Remove the U5 Microprocessor on
      the HT Controller board.

(6)   Mount the new U5 Microprocessor
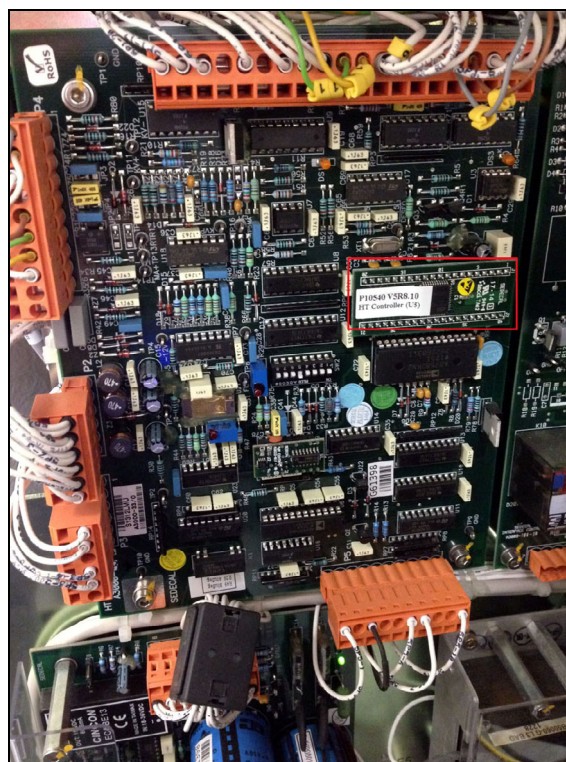   with HT Controller Software V5R8.10

Figure 10

NOTE:

For more instructions refer to Mobile X-Ray Unit Service Manual, Document ID 41600560,
Troubleshooting, Section 2.11 "Replacement of Memory in ATP console CPU Board and/or
HT Controller board".

Verification of generator software upgrade

(1)   Switch on the generator.

(2)   On the NX, start the Techserv software.

Error 10 appears.

(3)   Click **RESET ERROR**

Error 98 appears.

(4)   Click **RESET ERROR**

(5)   Click **Configuration**

(6)   Check the software version.
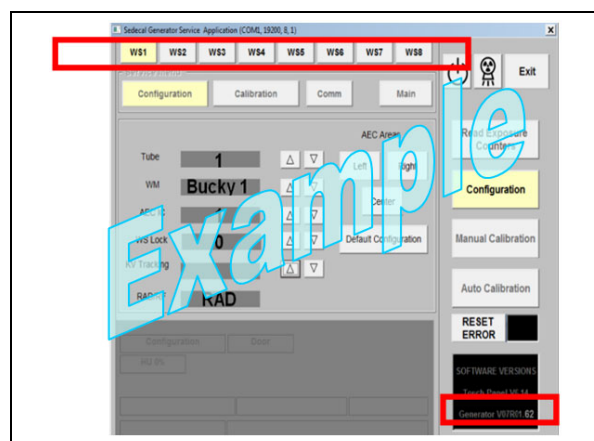   Correct version: Generator v7R1b92

Figure 11

(7)   Configure WS with the values recorded in above on page 17.

⚠ IMPORTANT:

Also check all WS configurations and the Sync Type:

For DX-D 100 Type 5410/050 and DX-D 100 Wireless Type 5411/050/300:

- All used Workstations should use HW as Sync Type.

For DX-D 100 Wireless Type 5411/400:

- WS 2 should use HW as Sync Type
- WS 3 should use SW as Sync Type

If a HW connection in the generator was made in previous DX-D 100 Wireless Type 541/400 system versions and the wire J4-6 was changed to J3-2 :

- Connect wire again to J4-6.
  Since now this is handled by generator SW (Sync Type: "SW").

(8)   Click on **Exit** to leave the configuration menu.

Re-configuration of the system is only required in case of issues.

(9)   Switch off the generator.

(10) Set the switch SW7 in "OFF" position to enable Application Mode.

(11) Close generator module front door and fasten the two Allen screws.

(12) Mount the front cover.

(13) Remount the console frame (see Figure 5 and Figure 4).

Figure 12

4   Verification

Correct functionality of the respective DX-D system is verified by performing the following Acceptance Test procedures:

- On system level: System Acceptance Test
- On component level: NX workstation Acceptance Test procedure

5   Keywords

NX9000, HT Controller SW, ATP,

6   Version history

Version	Change	Date
1.0	Initial version	02-2017

Details as of PDF Creation Date

Document Metadata

Title:	DX-D 100 Wireless - Service Bulletin No. 92 - Announcement of Update to System V 9.0_bug fixes
Livelink ID:	57286060
Version#:	22
Version Date:	2017-02-09 11:26 AM CET
Status:	Approved on 2017-02-13 10:26 AM CET
Owner:	Carsten Bockel (awyuq)
Created By:	Carsten Bockel (awyuq)
Created Date:	2016-11-15 05:03 PM CET
PDF Creation Date:	2017-02-13 10:26 AM CET

This document was approved by:

Signatures:

1. Josef Wagner (agwj) on 2017-02-09 01:55 PM CET
2. Paul Merckx (amdag) on 2017-02-13 10:23 AM CET
3. Bart Biesemans (amajm) on 2017-02-09 03:47 PM CET
4. Steven Goovaerts (awhxb) on 2017-02-10 10:14 AM CET
5. Lieven Lauwers (awibr) on 2017-02-10 11:06 AM CET

Detailed Approver History:

- **Approval Workflow started on 2017-02-09 11:32 AM CET**
  - Approval task originally assigned to and completed by Lieven Lauwers (awibr) on 2017-02-10 11:06 AM CET
  - Approval task originally assigned to and completed by Steven Goovaerts (awhxb) on 2017-02-10 10:14 AM CET
  - Approval task originally assigned to and completed by Josef Wagner (agwj) on 2017-02-09 01:55 PM CET
  - Approval task originally assigned to and completed by Bart Biesemans (amajm) on 2017-02-09 03:47 PM CET
  - Approval task originally assigned to and completed by Paul Merckx (amdag) on 2017-02-13 10:23 AM CET

Version & Status History

Version#	Date Created	Status
22	2017-02-09 11:26 AM CET	Approved - 2017-02-13
21	2017-02-09 11:25 AM CET	
20	2017-02-09 10:15 AM CET	Reviewed - 2017-02-09
19	2017-02-09 10:15 AM CET	
18	2017-02-03 03:09 PM CET	Reviewed - 2017-02-09
17	2017-02-03 02:06 PM CET	
16	2017-01-25 12:24 PM CET	Approved - 2017-01-30
15	2017-01-25 12:24 PM CET	
14	2017-01-25 12:14 PM CET	
13	2017-01-25 12:13 PM CET	