6.5   Basic Image Adjustments Overview

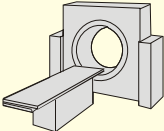**Step 1:** • Get up-to-date **Connectivity Release Document** from MedNet, HealthCare Library

Path: General Info → Connectivity & Application

• Perform image adjustments as described at the Modality and/or the Printer

• Continue with Step 2, in case
→ the customer is not satisfied with the image **or**
→ for this modality no Connectivity Release Document exists

⚠ In case the printer is part of a solution (e.g. DR Mammography Solution), refer to the solution specific requirements concerning image adjustments.

Step 2: Try to adjust Contrast and Sharpness at the **Modality**

Contrast Adjustment → Use Kanamori Taste LUT[1] If available also Dmax

Sharpness Adjustment → Cubic High Res + smoothfactor[2] (modality sends in image mode) **or**
→ Cubic Bell + smoothfactor[2] (modality sends in page mode)

Interpolation Smooth Factors (DICOM values)[3]
Software ≥ SW Rel. 3

299   251 **245** 235   200 Cubic Bell

199   148 **143** 138   101 Cubic High Res
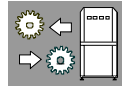
less sharp   sharp   too sharp

Legend
Limits
Default
299   251 **245** 235   200
Useable values

[1]Refer to note 1 next page
[2]Refer to note 2 next page
[3]Refer to note 3 next page

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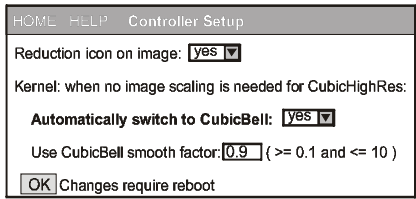
Contrast and Sharpness adjustment at the Modality

1 The Look-Up-Table, which is responsible (in combination with Dmin and Dmax) for the contrast of the image, may be named at the modality
- Taste LUT
- Perception LUT
- Correction LUT
- Presentation LUT

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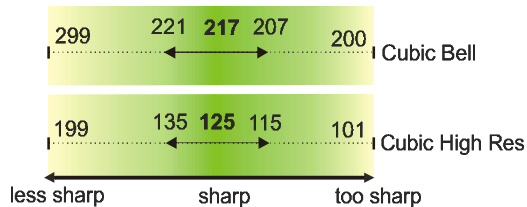In case of "Presentation LUT" selection, also enter lightbox illumination and reflected ambient light.

2 **Autoswitch to cubic bell functionality of the printer:**
When no image scaling (i.e. magnification or reduction) is required, Cubic HighRes interpolation type does not sharpen the image. Interpolation type 'Cubic Bell' sharpnes the image however, independant whether scaling is required or not.
This automatic adjustment is only used, in case the Interpolation Type is adjusted to 'cubic high res' in the user profile (= default).

HOME HELP   Controller Setup

Reduction icon on image: yes ▾

Kernel: when no image scaling is needed for CubicHighRes:

Automatically switch to CubicBell: yes ▾

Use CubicBell smooth factor: 0.9 (>= 0.1 and <= 10)

OK Changes require reboot

Access to this window:

Browser Pages
⬇
Service Tools
⬇
Scaling Setup

3 At printers with Software < SW Rel. 2 the required interpolation smoothfactor setting at the modality is different compared to printers with Software > SW Rel. 2.

Interpolation Smooth Factors (DICOM values)
Software < SW Rel. 2

299   221 **217** 207   200 | Cubic Bell

199   135 **125** 115   101 | Cubic High Res

less sharp   sharp   too sharp
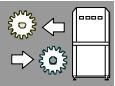
Step 3: • In case Contrast and Sharpness adjustment
at the Modality not possible, adjust it at **printer.**

• Can be made via
  ◦ local keypad → ①
  ◦ Service Engineer Browser pages → ②

① **Contrast and Sharpness adjustment
via key-operator menu "Image Quality"**
Access via Keypad or Browser

Key-Operator Menu
⬇
2 Change Settings
⬇
5 Image Quality
⬇
<select Modality>
⬇
2 Select Other
⬇

Contrast
Adjustment *

Sharpness
Adjustment *

1 Look up table
2 Interpolation
3 Dmax

| Kanamori
Linear
Kanamori_like |
| Cubic Bell
Cubic High Res
Linear
Replication |
| 2.80 - 3.20
(2.80 - 3.80
Mammo printers) |

② **Contrast and Sharpness Adjustment
via DICOM Host Profile**
Access via Browser only

HELP   Host Profile: Name XYZ

These are the default settings for all print jobs coming from the host
(modality) specified under 'Calling AE title'.
The values may be overloaded at run-time by the Dicom input.
You can prevent this by checking the checkboxes at the left side.

Nick Name: [Name XYZ]
Use this profile only for incoming 'Calling AE title': [Host AE]
Use this profile only for local SCP server: [all ▼]
Host Profile type: GENERIC-GENERIC [Change]
....
☐ **Kernel:** [site ▼] [Edit Custom]
....
☐ **Perception LUT:** [kanamori   ▼]
   Kanamori Like value: [   ]
   Custom value: [▼]
....
☐ **Maximum Density (OD x 100)**   [site ▼] [300]
....
LR like: [off ▼]

[OK] [Cancel] [Show Defaults] [Show last Input]
Manually customized items are show in red

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Sharpness
Adjustment *
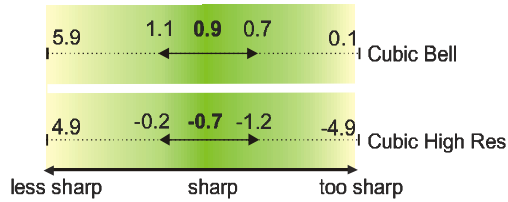
Contrast
Adjustment *

*Refer to notes next page
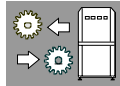
Contrast and Sharpness adjustment at the printer

ℹ

Interpolation Smooth Factors (Kernel values)
Software ≥ SW Rel. 2

| 5.9 | 1.1 | **0.9** | 0.7 | 0.1 | Cubic Bell |

| 4.9 | -0.2 | **-0.7** | -1.2 | -4.9 | Cubic High Res |

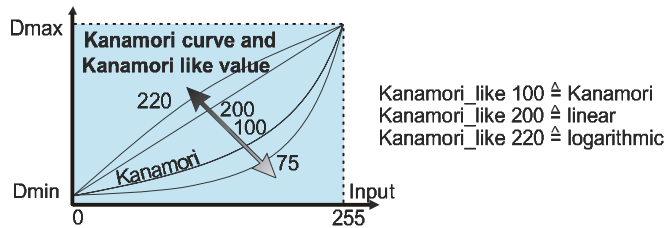less sharp   sharp   too sharp

At printers with Software < SW Rel. 2 the interpolation smoothfactor setting is different compared to printers with Software ≥ SW Rel. 2.
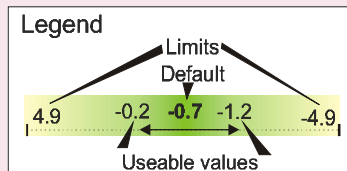
Interpolation Smooth Factors (Kernel Values)
Software < SW Rel. 2

| 5.9 | 0.5 | **0.35** | 0.15 | 0.1 | Cubic Bell |

| 4.9 | -1.7 | **-2.5** | -3.3 | -4.9 | Cubic High Res |

less sharp   sharp   too sharp

ℹ
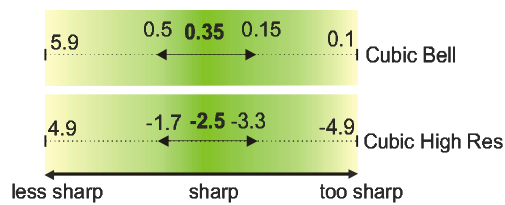
Perception LUT / Look up table settings at the Printer

Dmax

Kanamori curve and Kanamori like value

220
200
100
75
Kanamori

Dmin

0   255   Input

Kanamori_like 100 ≜ Kanamori
Kanamori_like 200 ≜ linear
Kanamori_like 220 ≜ logarithmic

☞ **For more details refer to the Hardcopy Application Manual on MEDNET, GSO Library**

Legend

Limits
Default

| 4.9 | -0.2 | **-0.7** | -1.2 | -4.9 |

Useable values

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