Aadva™ IOS 100

Training

Digital technology made easy

Aadva™ IOS 100

PAGE 4 SETUP

PAGE 12 SCAN

PAGE 24 TIPS & TRICKS

System startup (IOS100P)

Scope of supply:

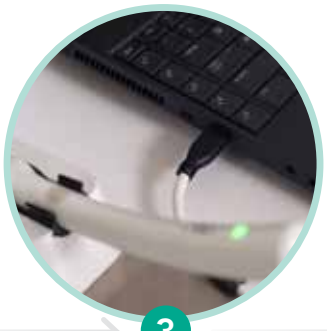
ATTENTION:
If the scan is unusually slow or there are a lot of interruptions, you may be running on battery mode! Make Sure that the power supply is properly connected on adapter AND on PC side!

check the **power supply** connections

connect **power supply** of laptop

1

connect **handpiece** to laptop



3

start **Aadva GUI**

5

2

connect **cradle** to Laptop

4

switch **on/power** on laptop

POSSIBLE PROBLEM:
Handpiece is overheating – warning message after GUI start

SOLUTION:

> Connect all parts properly and restart the laptop

> Make sure that the Aadva GUI is started after connecting the handpiece to avoid overheating

GUI Setup - Before Scanning

When the patient arrives and is prepared for scanning the ideal situation is:

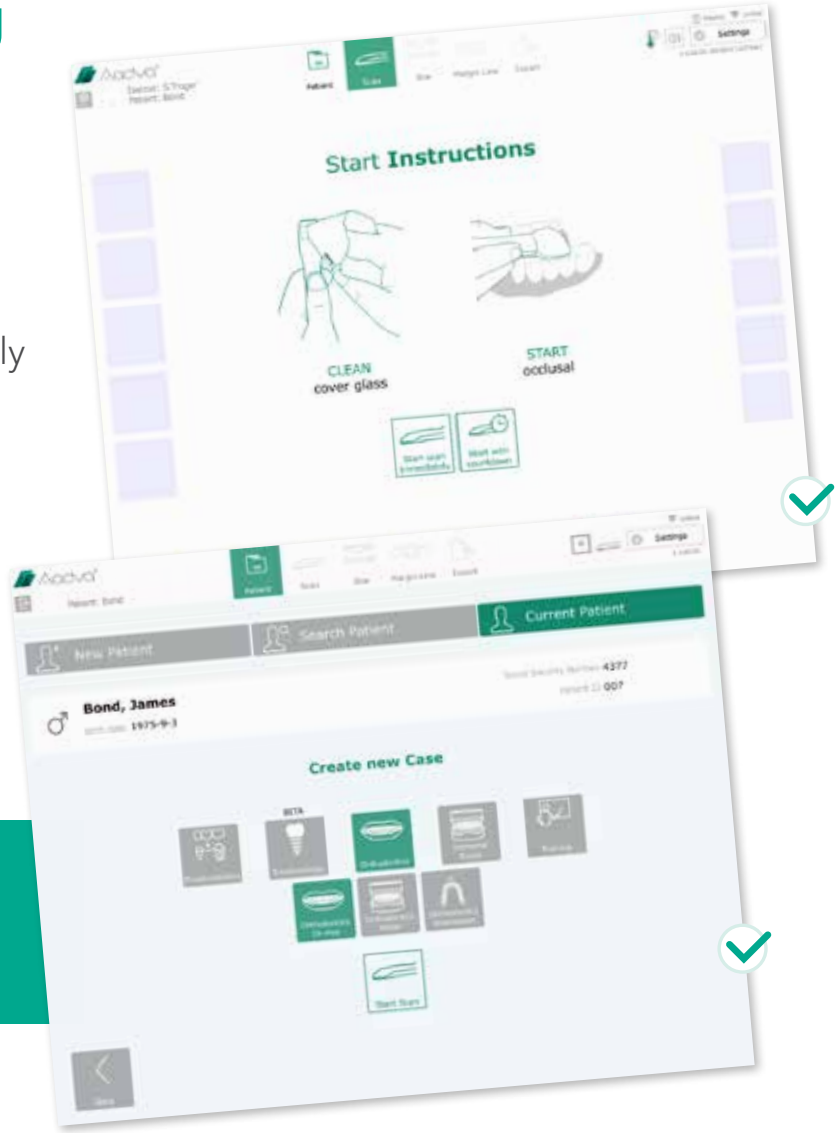
> Patient information is already filled out

> Handpiece is disinfected and cleaned properly

> Handpiece is at working temperature

> Correct workflow is already selected

> GUI is already in the scan section



ALREADY DONE?
YOU ARE READY TO SCAN!

Cleaning & Disinfection

After the IOS 100 handpiece is plugged in to the Laptop, follow these quick steps to clean and disinfect it.

1. Thoroughly clean the IOS 100 handpiece, cradle and cradle in-lay with Dürr FD333 disinfection wipes
2. Clean the glass on the handpiece with a soft Kleenex tissue
   NOTE: Do not use soft tissues with balsam as it leaves an oily surface
3. Ensure that there are no streaks or spots on the glass left from disinfection wipes.
   NOTE: To effectively identify streaks or spots see PG. 9
4. Ensure the handpiece reaches working temperature (PG. 8)

ATTENTION: After disinfection the glass might be cold again, although the software shows working temperature!!!

SOLUTIONS

> Option 1: put the handpiece for 30 - 60sec back into the cradle

> Option 2: put the cover glass for 15sec on the patient cheek for faster heating; afterwards clean saliva with a soft tissue (Kleenex)

Working Temperature

> Handpiece must be at **working temperature**

> Start the device at least **10 minutes** before scanning and allow handpiece to warm up

> Temperature is **indicated** in the right top corner (1) of the **AadvaIOS GUI**

WORKING TEMPERATURE:

ATTENTION:
Desinfect always in advance, so that the handpiece can heat up after desinfection again.

Cleaning Check in the GUI

> Check of the cover glass cleaning with the "black" window in the right top corner

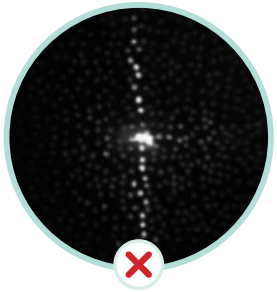
Fogging
cold cover glass

HP scanning

Poory Cleaned
dirty cover glass

HP facing the air

Poory Cleaned
dirty cover glass



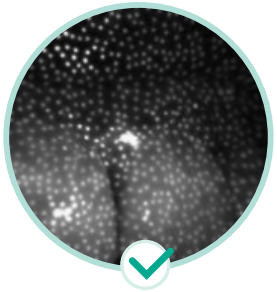
HP facing the air

The small white spot is not a bad cleaned cover glass, but an optical reflexion, which can be ignored and is supposed to be there all the time.

Ideal Situation!

HP facing the air

Ideal Situation!



HP scanning

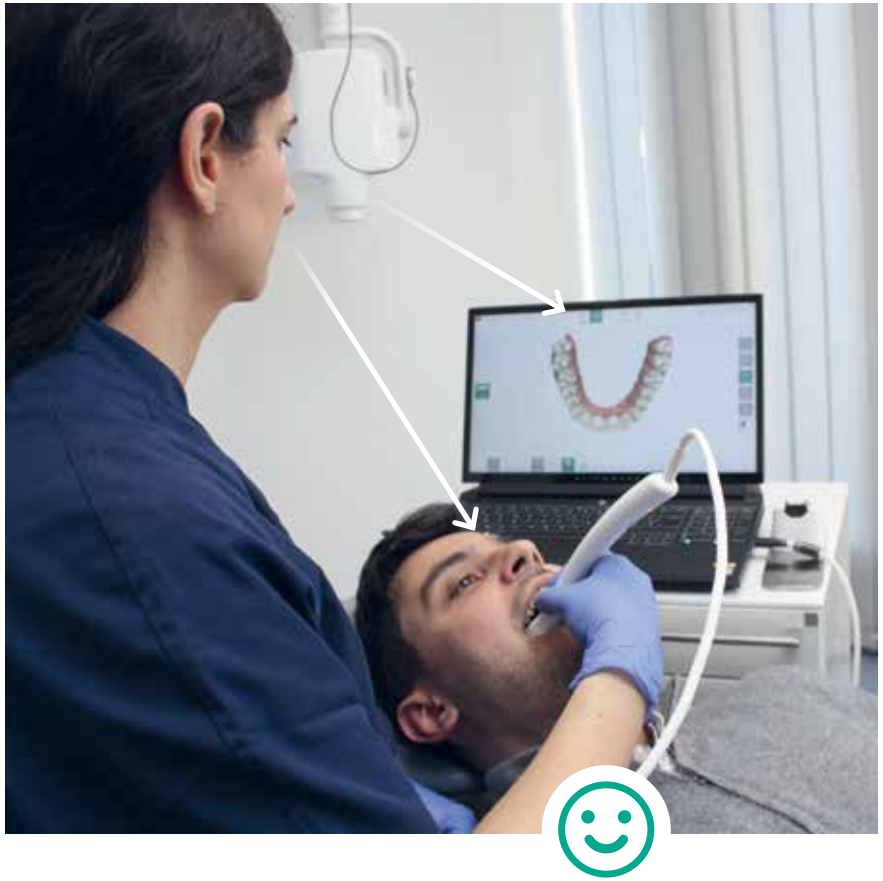
Workplace Setup

> Prepare your workplace before scanning

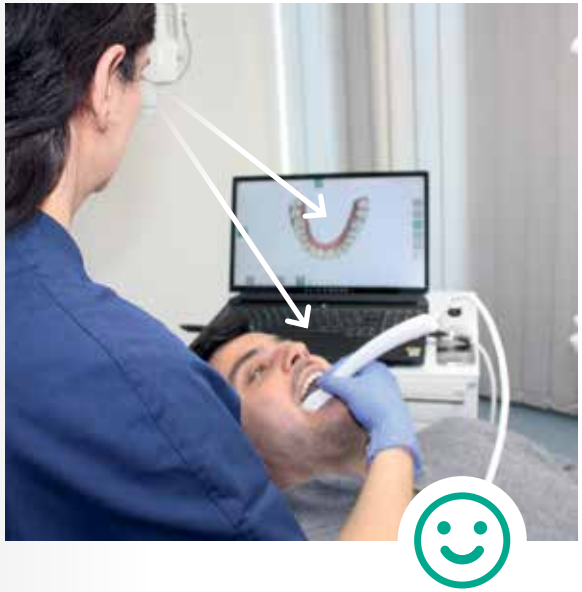
> Make sure you and your patient are in a **relaxing position**

> You should see the screen and the patient´s mouth EASILY

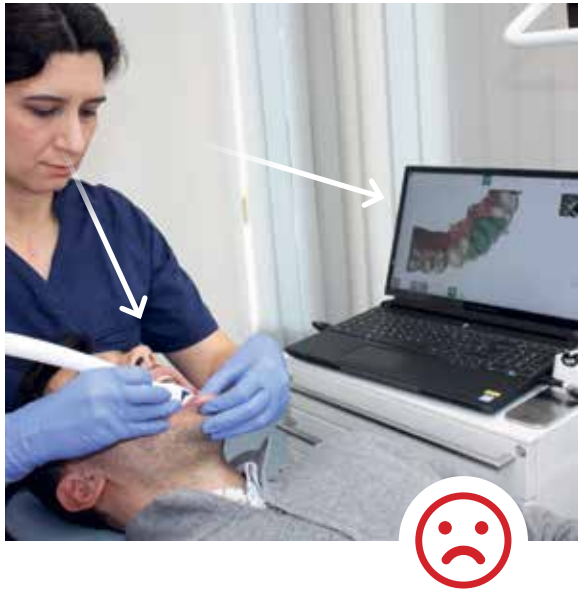
ATTENTION: As a user you need to see the in-vivo situation, the position of the device and the 3D almost parallel to ensure the best possible scan.



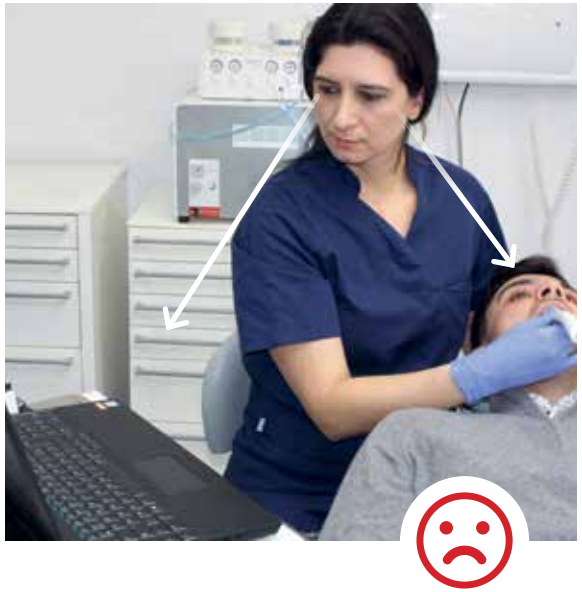
GUI and patient in same line of sight



GUI and patient in
same line of sight ✓



GUI and patient in
different line of sight ✗



GUI and patient in
different line of sight ✗

Workflow Selection

Create a new Case and select the correct workflow! (1)

In-vivo Scan:
> Prosthodontics
> Orhtodontics in-vivo

In-vitro Scan:
> Orthodontics Model / Impression
> Extraoral Model / Impression

ATTENTION:
Never use an in-vivo Workflow to scan a model (in-vitro). The scanner is individually optimized for in-vivo and model scans.

Intelligent Scanning

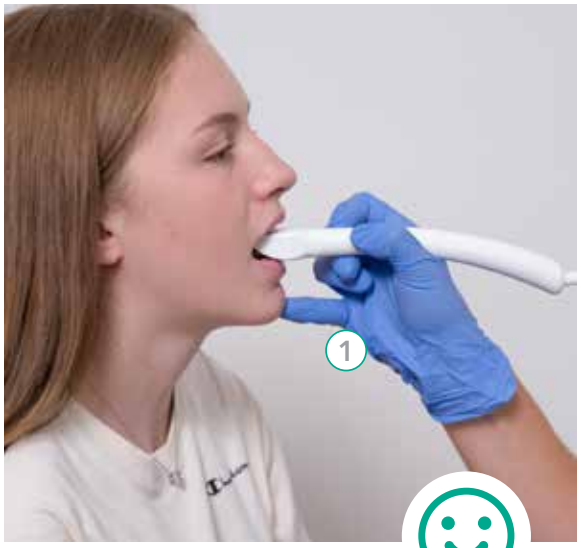
Functionality to filter soft tissue!
(Lips, Tongue, Cheek,…)

In-vivo Scan:
> Soft tissue filter **ON!** (2)

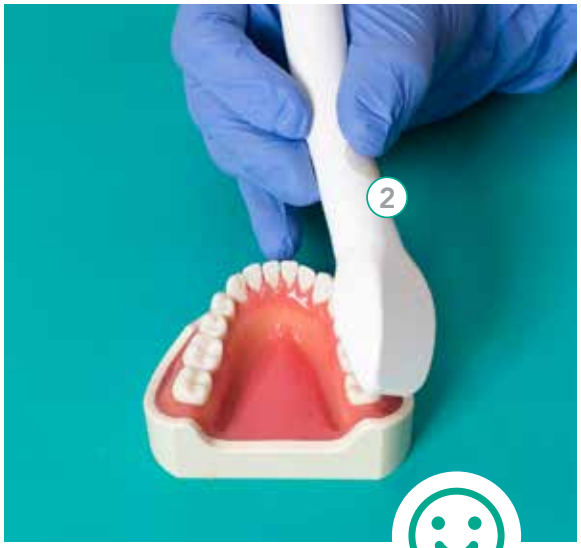
In-vivo Scan:
> Soft tissue filter **OFF!** (3)
(for scanning the Palate)

ATTENTION:
Disabling the soft tissue filter to scan a model is not the same as using the extraoral model workflow. Always use dedicated workflows!

Handpiece



Use the little finger for a stable handpiece movement (1).



Grab the handpiece like a turbine (2) (pencil grip).

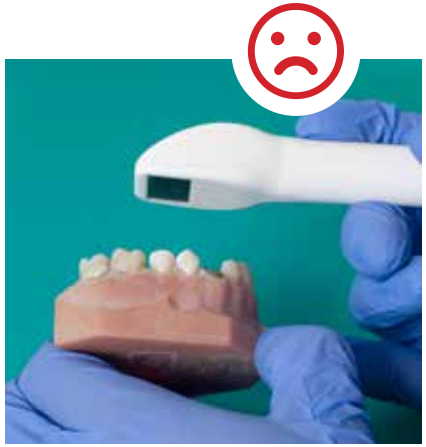
ATTENTION:
When the little finger is not used to stabilize the handpiece, the scanner will shake and suffer from rapid movements causing interruptions and low accuracy

Good Scan Distance

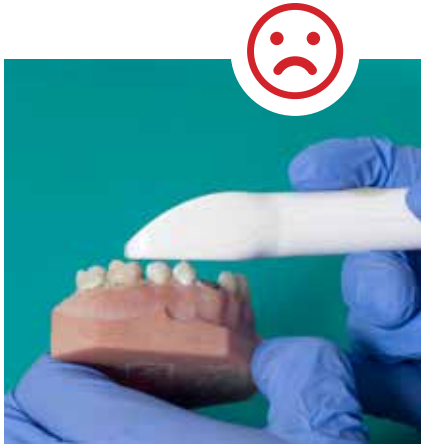
Keep scanning with a certain distance from the teeth

> Green color indicates the optimal scanning distance

> Red color indicates that the distance is too large or the distance is too short



distance **too large**



distance **too short**

Preperation Scan

Move/tilt continuously:
lingual - occlusal - buccal

SCAN MODE

occlusal start

rotational movement

rotate to buccal

back to occlusal

LIVE VIEW

occlusal start
scan 2-3 teeth

move/tilt
to lingual

back to occlusal
position

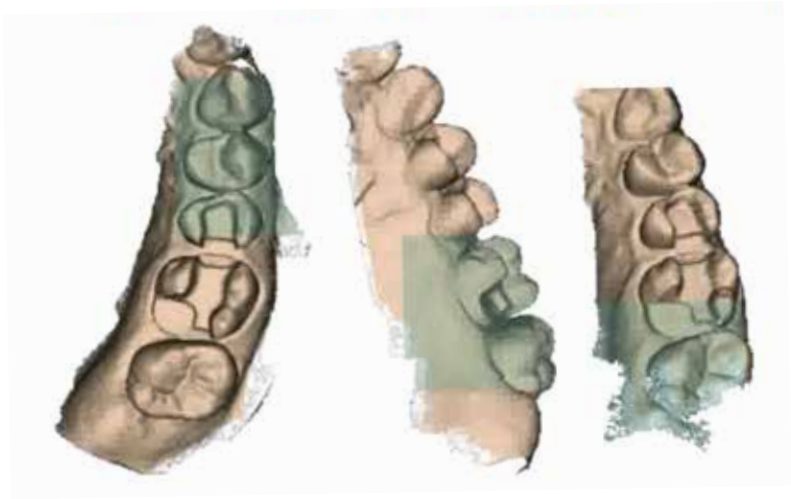
move/tilt
to lingual

rotational movement

rotate to lingual

7 8 9

occlusal - lingual - occlusal - buccal - occlusal



back to occlusal

scan prep. occlusal

Finalize the scan by moving back and forth buccal-occlusal-lingual as often as possible.

Full Arch Scan

Move/tilt continuously:
lingual - occlusal - buccal

SCAN MODE

start:
incisors

move to canine
on lingual area

move to buccal
over the canine

continue
buccal

LIVE VIEW

start at the incisor area
at the palate/lingual

scan the palate/lingual area
from #4 to #4 on each side

finalize tooth #3 and #4
on one of the quadrants

turn over tooth #4
to the buccal side

ATTENTION: Finish the molar area similar to prep-scans by moving back and forth between occlusal-lingual-occlusal-buccal

scan half incisals

return to lingual over canine

canine to buccal

finish incisors

scan the buccal side (with slight up and down movements to also cover the incisor edges)

start in the incisal side and go over to tooth #4 on the other quadrant

also turn over to buccal side on tooth #4

finalize the buccal incisor part

Mill-Cut / Rescan Functionality

Any object (saliva, teeth, cord…) will be automatically corrected or removed by simply scanning over the object again or by rescanning after interruption.

PATENTED FEATURE BY GC-DENTAL!

SCAN MODE

scan prep with retraction cord

rescan prep without retraction cord

LIVE VIEW

Scan data with artefacts like saliva, blood or even retraction cord

Pause scan, remove artefact on patient and continue the scan (pick-up). Rescan the artefact/retraction cord to make it disappear

*Red indicators used to show parts that will be removed during rescan

SOME EXAMPLES:

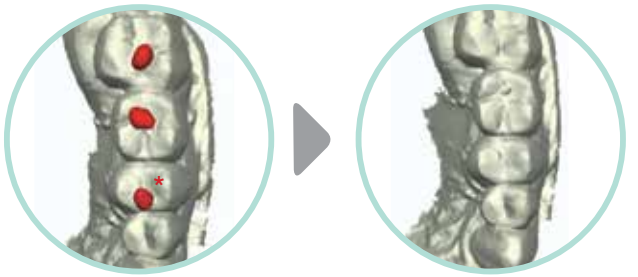
NO NEED TO SCAN THE SAME PATIENT EACH TIME FROM BEGINNING! SIMPLY USE THE RESCAN FUNCTIONALITY!

Patient who is bleeding strongly

> Scan the arch – the blood can be ignored

> Remove the blood from the patient's mouth

> Rescan the areas where there was blood in the scan



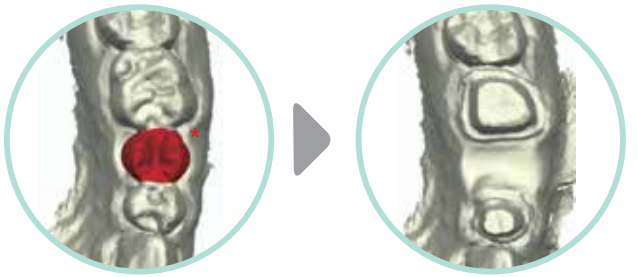
BEFORE AFTER

Rescan of prepared teeth

> Load a precondition scan (before tooth is prepared)

> Click on rescan and reuptake on an area where now preparation is

> Use the rescan functionality and update the area where the preparation was done



BEFORE AFTER

*Red indicators used to show parts that will be removed during rescan

Re-uptake / Pick-up

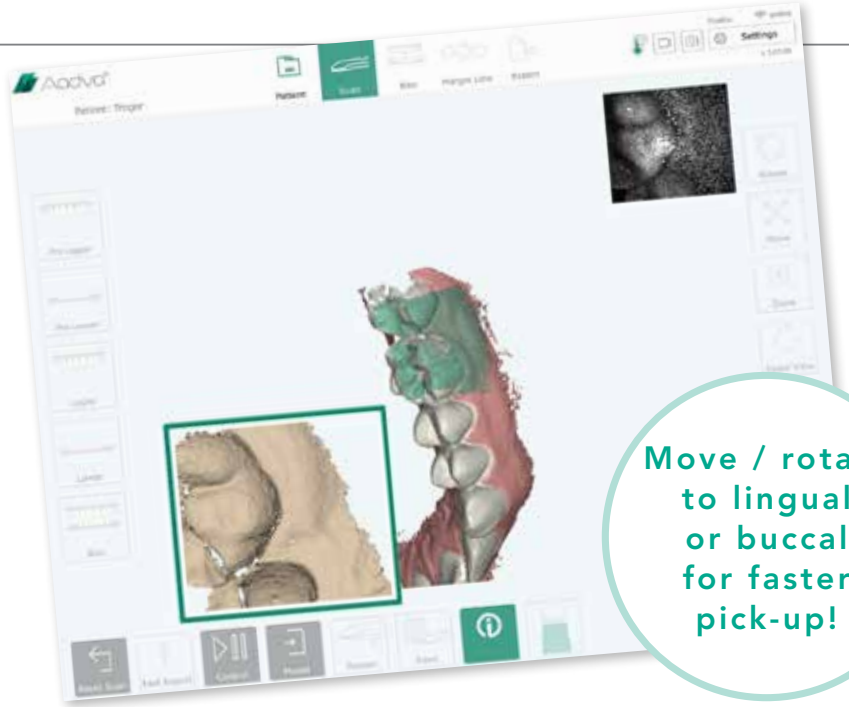
When in pick-up note the following:

> Do NOT stay stationary

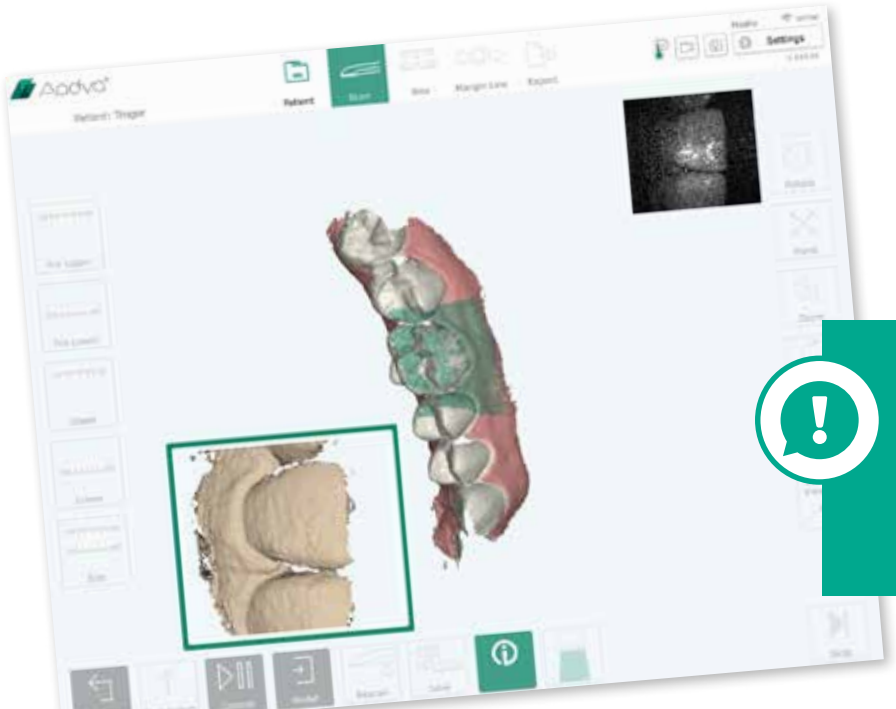
> Keep on moving – generate data

> Scan where data already exists?

> Last position can be recognized by the colored rectangle



Move / rotate to lingual or buccal for faster pick-up!



PICK-UP POSITIONS:

PREFERRED:
lingual area
buccal area

NOT GOOD:
occlusal area

ATTENTION:

> Pick-up does not work at areas with no previous scan data

> If pick-up does not work within 2.3sec, then chose a different position

CAD Parameters

Recommended design parameters for CAD softwares:

Inform your dental lab aoubt the recommended CAD Parameters.

Parameters for Crowns & Bridges

Gap thickness of cement..... 0,1 mm
Angled crown margin..... 0.2 mm
Angle..... 60 °
Vertical crown margin..... 0 mm
Don´t block out ..... 0 mm

Parameters for Onlays & Inlays

Gap thickness of cement..... 0,08 mm
Begin of cement gap..... 0.5 mm
Horizontal crown margin ..... 0.2 mm
Don´t block out ..... 0.2 mm

Parameters for occlusal & approximal distance

Parameters for exact collision (no interception):

Distance to neighbouring tooth..... + 0.1 mm
Max. occlusion..... + 0.1 mm

Dental labs usually design restorations with up to 50 microns (0.05mm) occlusal and approximal interception to allow the dentist to obtain a perfect fitting by grinding the restoration. For such an interception, the above mentioned, interception distance, should be added.

TIPS & TRICKS

Keep moving!

Always try to keep moving the handpiece

Without movement – no further data is captured – lean the cover glass properly.

Always use soft Kleenex for cleaning

Rough paper towels do not clean the cover glass properly.

Disinfection wipes are always cold

After disinfection always wait 1 minute before scanning.

Don’t use default CAD parameters

of 3d parties CAD software -
only use GC CAD parameters

Train yourself

The more you scan,
the easier it gets.

**THANK YOU FOR YOUR ATTENTION!
HAVE FUN!**

Notes

Digital technology made easy

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