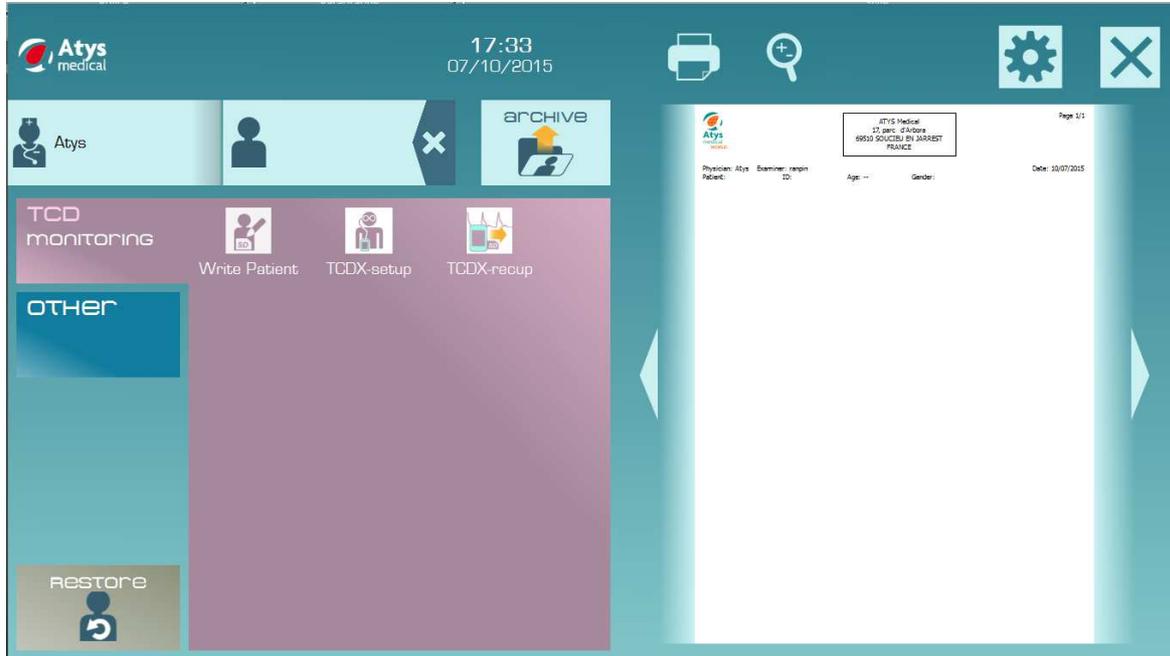


1 Starting ADMS software

On the PC office, double-click on



Check that the Archive folder was defined before (to be done at first use).

2 Writing the patient name on the SD card

This task is compulsory before starting any new monitoring.

- On PC, insert the SD card on the SD card drive.

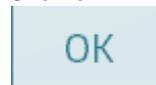
- Click on



The following screen is displayed:

Input at least the patient name or ID.

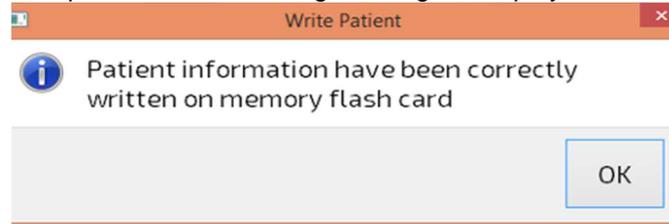
Click on



- Click on



If no problem, the following message is displayed:



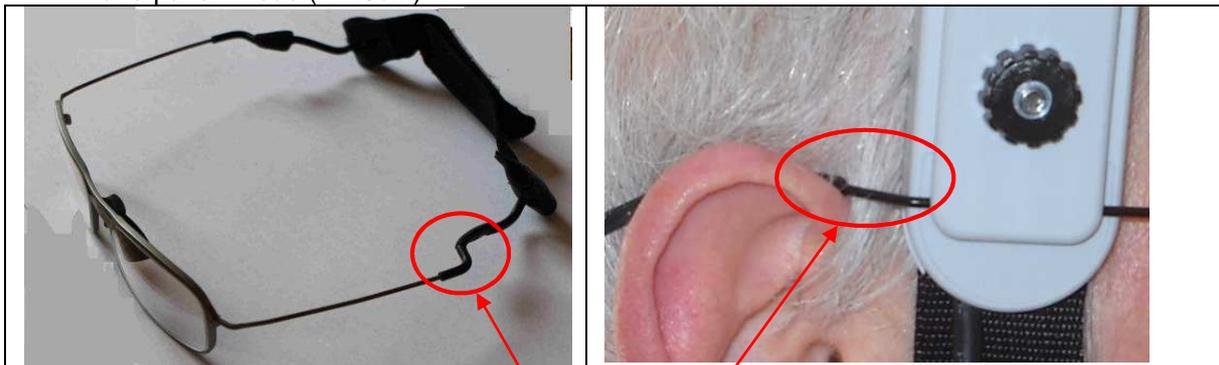
Click OK

- Insert the SD card in the TCD-X.

3 Probe positioning on patient head

- Select the spectacle frame more suitable for patient head (**SMALL:** blue, **MEDIUM:** yellow, **LARGE:** red)

→ The 90° angle should be found very close the ear, and a finger should go between the branch and patient head (≈ 1.5cm)



This angle should not go over the patient ear

- Fix the robotized probe on the suitable branch for examination
- Fix counterweight on opposite side, as back as possible (close to the 90° angle).
- Put some gel on the probe and/or on the acoustic window
- Position spectacle frame on patient head.
- Position probe on supposed acoustic window (or preferentially on posterior window).
- Tight rear headband
- Adjust top head band and probe cable

4 Doppler parameter settings

- Connect motorized probe to TCD-X
- Connect USB cable to PC (preferentially use always the same USB port, else a modification of USB port number in setting dialog will be needed)
- Connect USB cable on TCD-X module
- Switch on TCD-X module (press over 2s on the switch ON/OFF until green light is visible)

- Double-click on



If no connection problem, a yellow vertical marker sweeps the screen

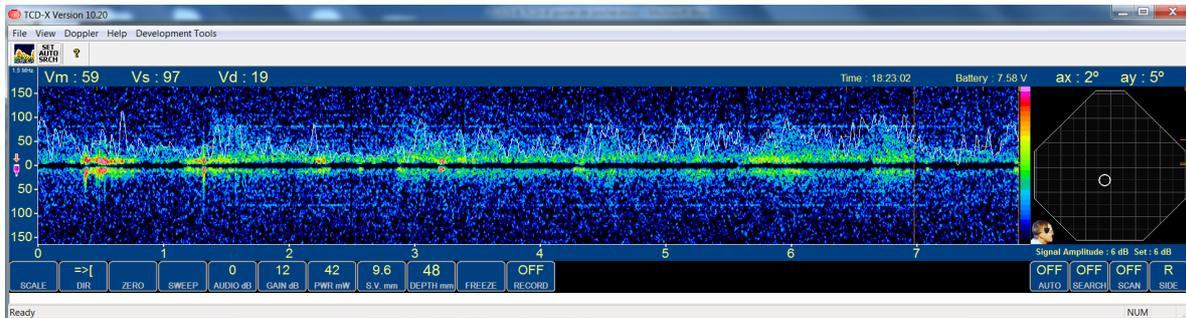


- Enlarge this window if necessary: the keys must not be truncated.



If the vertical cursor sweeps the screen, but if no sound can be heard, check the sound level of the PC and right lick on the spectrum window.

- Adjust Doppler parameters as follow:
 - o Scale = -150 +150 cm/s (spectrum should not be truncated)
 - o DIR = toward the probe
 - o ZERO = baseline position. Preferentially in the middle of the screen.
 - o SWEEP = 6s
 - o AUDIO = -15dB (if more sound is required on the TCD-X module, can be set to 0dB)
 - o GAIN ≈ 12 or 14
 - o PWR (Power) > 50 mW
 - o S.V. (Sample Volume)= 9 mm
 - o DEPTH = 49 → 51 mm



| | |
|---|--|
| - Start a research of the Doppler signal | |
| - Click on the upper part of this key | |
| - If no signal has been found, move the probe and click again on SCAN. | |
| - Once the Doppler signal has been found, click on the upper part of the SEARCH key. It starts an optimisation of the probe orientation around the position found by the previous SCAN. | |

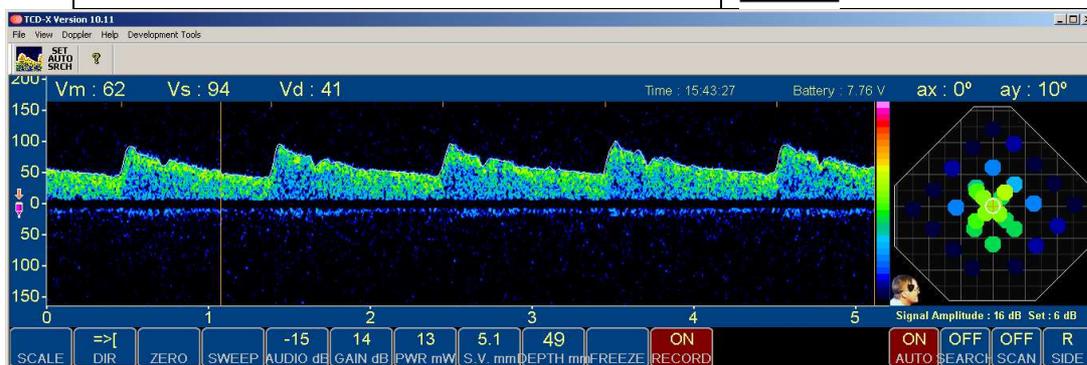
- Once the signal quality is satisfying, for emboli detection only, adjust the parameters as follows:
 - o PWR \approx decrease it « as low as reasonably possible ».
 - o S.V. \approx 5,1 mm
 - o DEPTH = 49 \rightarrow 51 mm (search optimal spectrum for several depth between 45 and 60 mm)

However, the quality of the signal must remain good enough to allow recording over several hours.

So a compromise must be found. If a decrease of the sample volume results in a poor Doppler signal, then the sample volume must not be decreased.

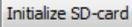
It is the same for the power.

| | |
|---|--|
| - Redo a SEARCH, click on the upper part of |  |
|---|--|



5 Starting recording on memory flash card

| | |
|---|---|
| - click on the upper part of |  |
| - A sound (bip) can be heard, and the RECORD button becomes red |  |

| | |
|---|--|
|  | <p>If the opposite window is not closed automatically, do not close it clicking on </p> <p>Click on </p> <p>If the windows does not close: click on Initialize SD-card again.</p> <p>After two unsuccessful attempts to close this window, close it  clicking on the</p> <p>Rewrite the patient data on the SD card</p> |
|---|--|

Check that the green light flashes regularly.

NB: If the LED is not blinking or if the RECORD button has not become "RED" or if a continuous BIP can be heard, recording has not been started normally. Check SD card initialization and retry.

6 Preparing patient for ambulatory monitoring

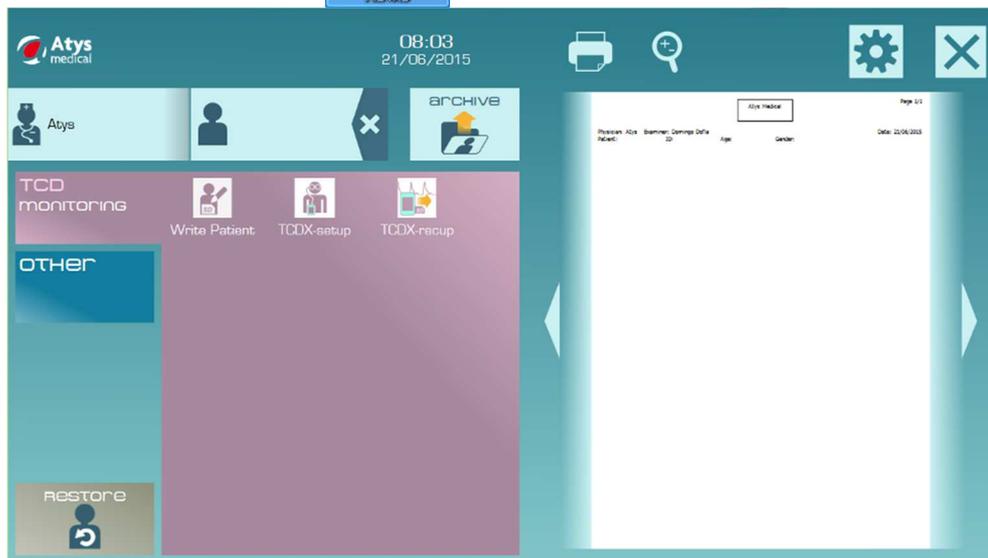
- Disconnect USB cable from TCD-X module.
- Install TCD-X module inside carrying bag.
- Install carrying bag over patient shoulders.

7 End of monitoring

- Check that the record LED is still blinking normally
- Switch off the TCD-X by pressing about 8s on switch button (until green light switch off).
- Remove spectacle frame from patient. Clean robotized probe. Remove gel from patient head.

8 Storage of the Doppler recording on the PC

- Take out SD card from TCD-X module.
- Insert TCD-X card inside PC driver.
- Double-click on



- Click on



A DOPX file is automatically copied in the Archives folder (initially defined) and the monitoring software is opened.

- For emboli detection check the following adjustments
 - o Intensity: 9 dB
 - o High Pass Filter: 150 Hz