

MFAST Operating Instructions

What is the MFAST?

The MFAST (Motion & Function Assessment Tool) combines Microsoft Kinect camera with proprietary software designed to reduce range-of-motion assessments (goniometry) from an average of 25 minutes to 2 minutes. For technical support for the MFAST system, please contact Mandeep Brahmhatt at Mandeep@5plustherapy.com or (714) 922-0626.

What's included with the MFAST system?

- Microsoft Kinect Camera
- Samsung Laptop
- Power adapter for the laptop
- 27" LCD TV
- TV stand

Pre-Assessment

The patient should be seated or standing approximately 5-8 feet away from the Kinect camera or as necessary to fit entirely in the frame of the camera's view. The "Test" feature on the MFAST user interface will allow you to calibrate the distance of the patient for optimal assessment results.



Powering Up

1. The power button is located at the top left corner of the keyboard. Be sure to keep the laptop plugged into a power source when in use.
2. When the computer powers up, you will be shown a log-in screen with the 5plus logo. Click on the logo and enter the following:
 - Username: PTsite1
 - Password: betasite1
3. Once you've entered the username and password, the Windows 8 operating system will load. Please give the computer 1-3 minutes to complete loading all necessary applications.



Loading the MFAST Application

1. Locate and double-click the MFAST icon on the desktop.
2. The MFAST application window will open and you will see the following user interface.

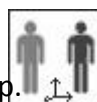
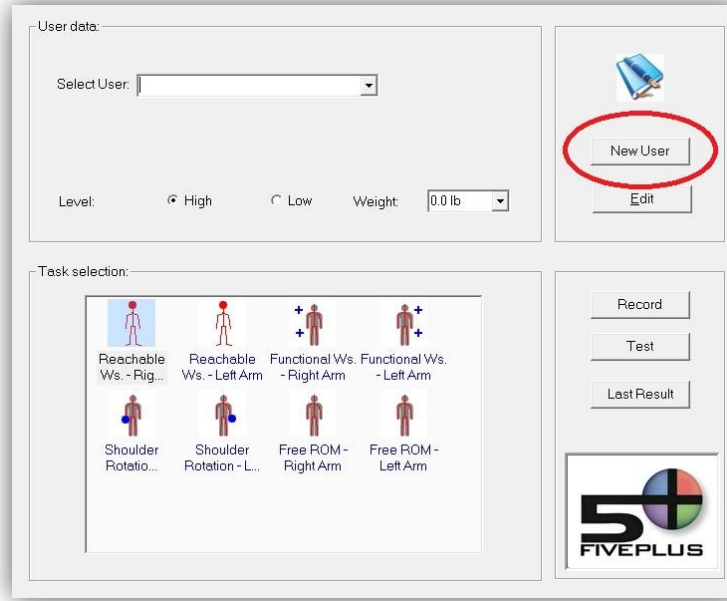
The screenshot shows the MFAST application window. It has a light gray background and is divided into several sections. At the top left, under the heading 'User data:', there is a 'Select User:' dropdown menu. Below this, there are radio buttons for 'Level:' with 'High' selected and 'Low' unselected. To the right of the level selection is a 'Weight:' dropdown menu showing '0.0 lb'. On the right side of the window, there are three buttons: 'New User' (with a blue folder icon above it), 'Edit', and 'Record'. Below the 'User data' section, under the heading 'Task selection:', there is a grid of eight task icons. Each icon shows a human figure with a specific body part highlighted in blue. The tasks are: 'Reachable Ws. - Rig...', 'Reachable Ws. - Left Arm', 'Functional Ws. - Right Arm', 'Functional Ws. - Left Arm', 'Shoulder Rotatio...', 'Shoulder Rotation - L...', 'Free ROM - Right Arm', and 'Free ROM - Left Arm'. On the right side of the task selection grid, there are three buttons: 'Record', 'Test', and 'Last Result'. At the bottom right of the window, there is a large version of the 5plus logo.

Figure 1

Running an Assessment

1. Enter new user information into the MFAsT database by selecting “New User,” either by clicking the New User button on the right, or by clicking the “Add” option from the User drop down menu.



The screenshot shows the MFAsT database user management interface. It is divided into two main sections: "User data" and "Task selection".

User data:

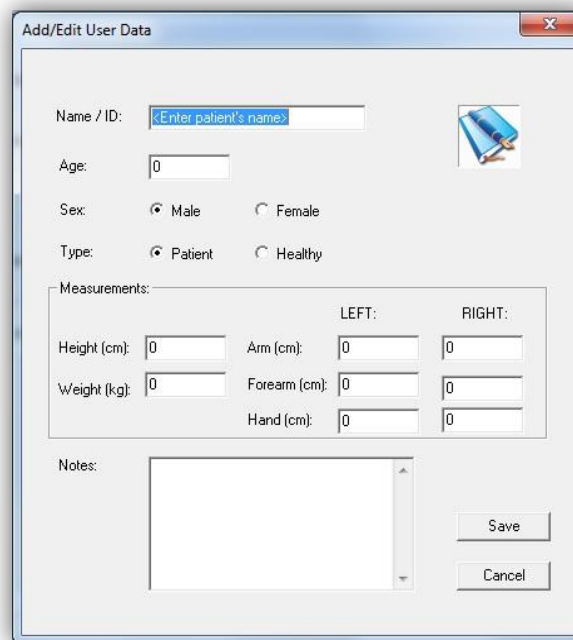
- Select User:** A dropdown menu.
- Level:** Radio buttons for ☒ High and ☐ Low.
- Weight:** A dropdown menu showing "0.0 lb".
- Buttons:** "New User" (circled in red) and "Edit".

Task selection:

- A grid of eight icons representing different assessment tasks: Reachable Ws. - Right Arm, Reachable Ws. - Left Arm, Functional Ws. - Right Arm, Functional Ws. - Left Arm, Shoulder Rotation - Right Arm, Shoulder Rotation - Left Arm, Free ROM - Right Arm, and Free ROM - Left Arm.
- Buttons:** "Record", "Test", and "Last Result".
- Logo:** "5+ FIVEPLUS" logo.

Figure 2

2. For each user, you will be asked to provide name, age, sex, height and weight. Record any additional comments in the “Notes” section. (Filling in all fields is not required, but will ensure more accurate feedback.)



The screenshot shows the "Add/Edit User Data" dialog box. It contains the following fields and options:

- Name / ID:** A text field with a placeholder "Enter patient's name".
- Age:** A text field with "0".
- Sex:** Radio buttons for ☒ Male and ☐ Female.
- Type:** Radio buttons for ☒ Patient and ☐ Healthy.
- Measurements:** A section with two columns: LEFT and RIGHT. Each column has three rows: Height (cm), Arm (cm), and Hand (cm). Each row has a text field with "0".
- Notes:** A large text area for additional comments.
- Buttons:** "Save" and "Cancel".

Figure 3

3. Once user data is entered, click “Save.” You will return to your main screen where you can now select the user from the drop-down menu.
4. Select the desired assessment from the “Task Selection” section. (When selected, a shaded box outline will appear around the task.)

The screenshot displays the Five Plus software interface. The 'User data' section at the top includes a 'Select User' dropdown menu, radio buttons for 'Level' (High and Low), and a 'Weight' dropdown menu set to '0.0 lb'. To the right of this section are 'New User' and 'Edit' buttons. Below the 'User data' section is the 'Task selection' section, which is highlighted with a red rectangular box. This section contains two rows of task icons and labels. The first row includes 'Reachable Ws. - Rig...', 'Reachable Ws. - Left Arm', 'Functional Ws. - Right Arm', and 'Functional Ws. - Left Arm'. The second row includes 'Shoulder Rotatio...', 'Shoulder Rotation - L...', 'Free ROM - Right Arm', and 'Free ROM - Left Arm'. To the right of the 'Task selection' section are 'Record', 'Test', and 'Last Result' buttons. At the bottom right of the interface is the 'FIVEPLUS' logo, which features a stylized '5' and a plus sign.

Figure 4

5. To the right of the “Task Selection” box, you will see three action buttons:
- Record** – This will run an actual assessment with all movements being captured, recorded, and converted to data.

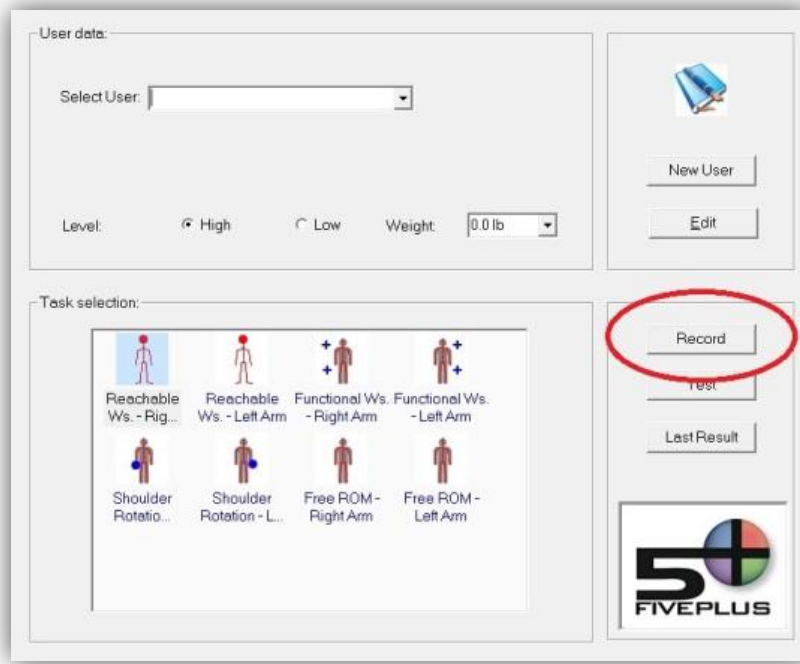


Figure 5

- Test** – This selection will run the simulation without collecting data, allowing you to calibrate seating/standing distance as well as audio and video levels.

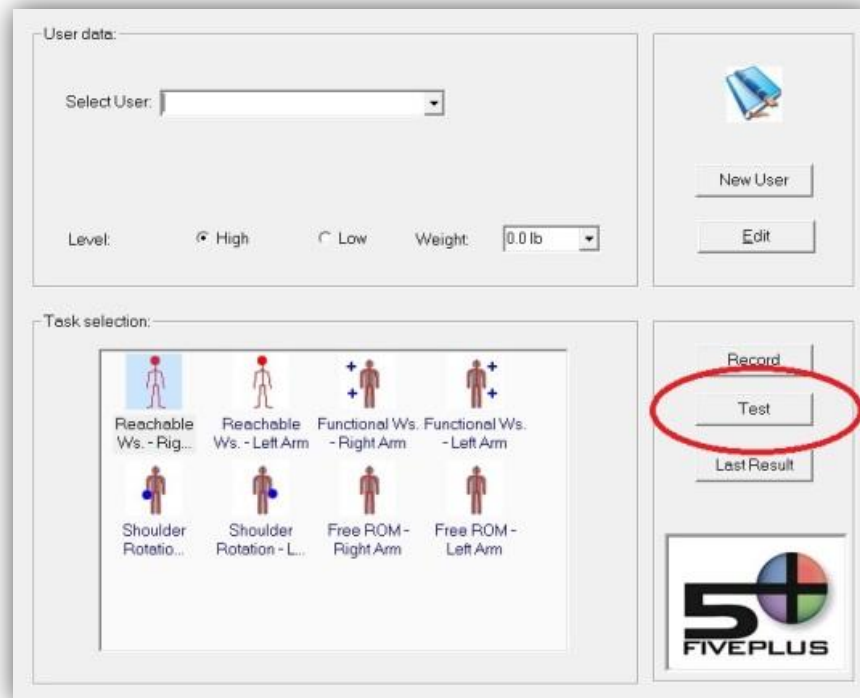


Figure 6

- c. **Last Results** – This selection will output the visual data of the most recent assessment that was run.

The screenshot displays the Five Plus software interface, which is divided into several sections. At the top left, under the heading "User data:", there is a "Select User:" dropdown menu. Below this, the "Level:" is set to "High" (indicated by a selected radio button), and the "Weight:" is set to "0.0 lb" in a dropdown menu. To the right of these fields are two buttons: "New User" and "Edit". Below the "User data:" section is the "Task selection:" area, which contains eight icons representing different assessment tasks: "Reachable W's - Right Arm", "Reachable W's - Left Arm", "Functional Ws. - Right Arm", "Functional Ws. - Left Arm", "Shoulder Rotatio...", "Shoulder Rotation - L...", "Free ROM - Right Arm", and "Free ROM - Left Arm". To the right of the task selection area are three buttons: "Record", "Test", and "Last Result". The "Last Result" button is circled in red. At the bottom right of the interface is the "FIVEPLUS" logo, which features a stylized "5" with a colorful circular graphic.

Figure 7

Loading previous records

1. Using the “Select User” drop-down menu, select the user whose data you wish to view.
2. From the “Task Selection” box, select the type of assessment you wish to view from the lower middle portion of the application interface. (See Figure 4 for reference.)
3. Click on the User menu (drop-down) and select the “Results” option at the bottom of the menu list.
4. A pop-up window will open with the user data graphically displayed.

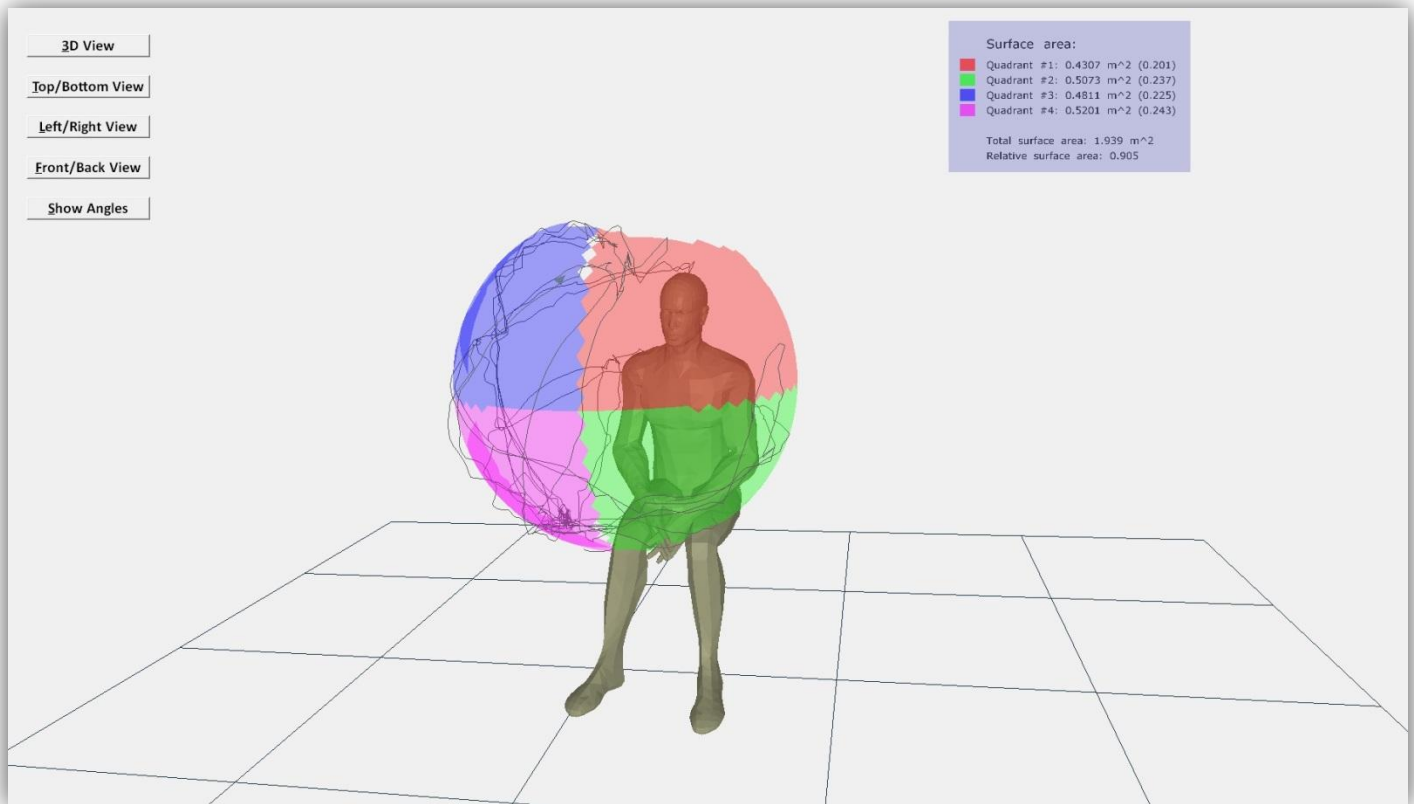


Figure 8

5. For greater detail, maximize the results screen by clicking on the screen maximization button located on the left of the red “X” button on the upper right corner of the window.
6. To leave the results screen, click on the “X” button or use the “Esc” button on the keyboard.
7. Once you exit the results window, you can exit the MFAST interface by clicking on the “X” button use the “Esc” button on the keyboard.