

Processing ROM (Actor Setup) see deborahfowler.com/ProcessROM

Reconstruct

Create Labeling Setup

Label ROM

Calibrate

(remember to check settings)

After Reconstruct
Hint: 3.5 – adjust marker size

After Create Labeling Setup

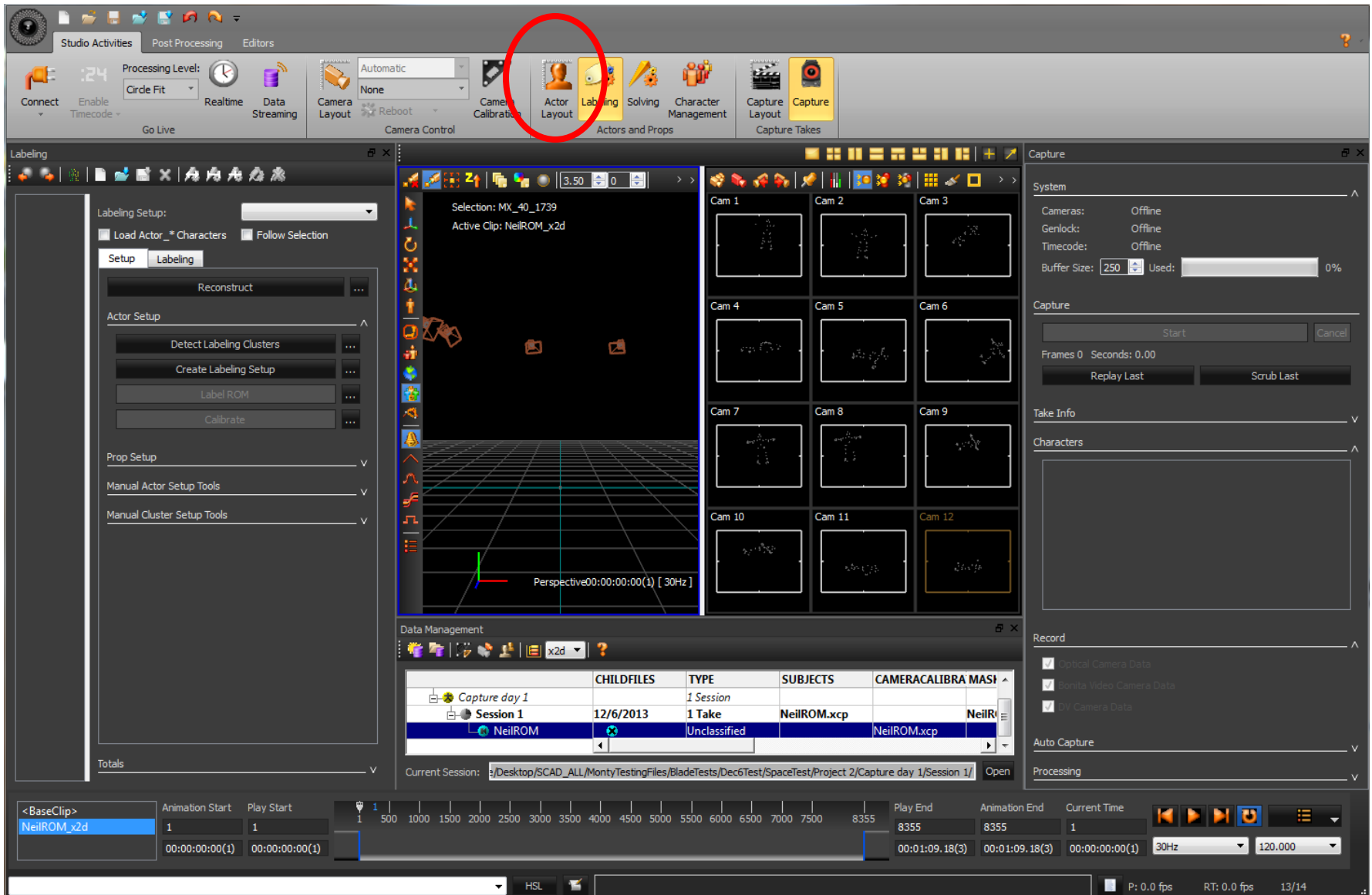
After Label ROM

After Calibrate
(grey areas indicate covariance errors)

After Solving

double click the blue icon in Data Management to process the x2d data from the ROM

Click **Actor Layout** to bring up the Labeling and Solvers dialogue box on the left



Labeling Steps: 1. Reconstruct with Options (settings)

The screenshot displays the software interface for the 'Labeling' step. The 'Reconstruct' button is highlighted with a red circle, and a yellow arrow points from it to the 'Reconstruction Settings' dialog box. The dialog box is also highlighted with a green border. The 'Reconstruction Settings' dialog box contains the following table of parameters:

Parameter	Value
Environmental Drift Tolerance	1.50
Minimum Cameras to Start Trajectory	3
Minimum Cameras to Continue Trajectory	2
Reconstruction Minimum Separation	0.00
Minimum Centroid Radius	0.00
Maximum Centroid Radius	50.00
Minimum Reconstruction Radius	0.00
Maximum Reconstruction Radius	1,000.00
Apply Radius	<input checked="" type="checkbox"/> True
Trajectory Fitting Method	2D Tracks (Faster)
Prediction Match Factor	2.00
Minimum Trajectory Length	2
Trajectory Startup Error	150.00
Trajectory Prediction Error	300.00
Number of threads	0
Min Volume	
Volume min X	-100,000.00
Volume min Y	-100,000.00
Volume min Z	-100,000.00
Max Volume	
Volume max X	100,000.00
Volume max Y	100,000.00
Volume max Z	100,000.00

At the bottom of the dialog box, there is a note: "Trajectory fitting prediction error in mm per second."

Labeling Steps: 2. Create Labeling Setup (parameters expanded)

The screenshot displays the 'Create Labeling Setup' dialog box in a software application. The dialog is titled 'Create Labeling Setup' and contains the following parameters and values:

Bone Naming Scheme	MotionBuilder
Finger Markers	None
Middle Waist Markers Location	Sides
Global PreScale Method	Automatic
Manual Scale Factor	100.00
Label Order	ARIEL, LFHD, LBHD, RFHD, ...
▶ Marker Color Left	Yellow [255, 255, 0] (255)
▶ Marker Color Middle	Olive [150, 150, 0] (255)
▶ Marker Color Right	Green [0, 255, 0] (255)
▶ Stick Color Left	Yellow [255, 255, 0] (255)
▶ Stick Color Middle	Olive [150, 150, 0] (255)
▶ Stick Color Right	Green [0, 255, 0] (255)
▶ Bone Color	Green [0, 180, 0] (255)
Auto Bone Color	Off
Bone Color Multiplier	1.00

The background shows a 3D perspective view of a character model with a skeletal structure overlaid. The character is named 'Neil' and is in a standing pose. The interface includes a top menu bar with options like 'Studio Activities', 'Post Processing', and 'Editors'. A central toolbar contains icons for 'Connect', 'Realtime', 'Data Streaming', 'Camera Control', 'Actors and Props', and 'Capture Takes'. The bottom status bar shows the current time as 00:00:00.09(3) at 30Hz, with a frame rate of 0.0 fps and a render time of 0.0/245.

Labeling Steps: 3. Label ROM

The screenshot displays a motion capture software interface with the following components:

- Top Panel:** Studio Activities (Connect, Enable Timecode, Go Live), Processing Level (Circle Fit), Realtime, Data Streaming, Camera Layout (Automatic, None, Reboot), Camera Calibration, Actor Layout, Labeling (highlighted), Solving, Character Management, Capture Layout, and Capture (Capture Takes).
- Left Panel (Character List):** A list of characters including ARIEL, LFHD, LBHD, RFHD, RBHD, C7 (highlighted), T10, CLAV, STRN, LFSH, LBSH, LUPA, LELB (circled in red), LIEL, LOWR, LIWR, LWRE, LIHAND, LOHAND, RFSH, RBSH, RUPA, RELB, RIEL, ROWR, RIWR, RWRE, RIHAND, ROHAND, LFWT, LMWT, LBWT, RFWT, RMWT, RBWT, LHIP, and LKNE.
- Labeling Setup Panel:** Shows 'Labeling Setup' for 'Neil'. It includes checkboxes for 'Load Actor_* Characters' and 'Follow Selection'. The 'Label ROM' button is circled in red. Below it, a table shows parameters: Standard deviation (50.00), Separation distance (750.00), Current Frame Only (False), and AutoLabel (True). There are also 'Reconstruct', 'Reset', and 'Calibrate' buttons.
- 3D Viewport:** Displays a skeletal model of a character in a perspective view. The model is colored with green, yellow, and blue joints. Text above the viewport reads 'Selection: Neil' and 'Active Clip: NeilROM_x2d'. The bottom right of the viewport shows 'Perspective' and '00:00:00.09(3) [30Hz]'.
- Right Panel (Capture):** Contains system settings (Cameras: Offline, Genlock: Offline, Timecode: Offline, Buffer Size: 250, Used: 0%), capture controls (Start, Cancel, Replay Last, Scrub Last), and recording options (Optical Camera Data, Bonita Video Camera Data, DV Camera Data).
- Bottom Panel (Timeline):** Shows a clip named 'NeilROM_x2d' starting at 00:00:00:00(1) and ending at 00:01:09:18(3). It includes playback controls and a frame counter at 39.

Labeling Steps: 4. Calibrate

The screenshot displays a motion capture software interface with the following components:

- Top Bar:** Studio Activities, Post Processing, Editors, Processing Level (Circle Fit), Realtime, Data Streaming, Camera Control (Automatic, None, Reboot), Camera Calibration, Actor Layout, Labeling, Solving, Character Management, Capture Layout, Capture Takes.
- Left Panel (Labeling):** A list of character parts (ARIEL, LFHD, LBHD, RFHD, RBHD, C7, T10, CLAV, STRN, LFSH, LBSH, LUPA, LELB, LIEL, LOWR, LIWR, LWRE, LIHAND, LOHAND, RFSH, RBSH, RUPA, RELB, RIEL, ROWR, RIWR, RWRE, RIHAND, ROHAND, LFWT, LMWT, LBWT, RFWT, RMWT, RBWT, LHIP, LKNE). The 'Labeling Setup' for 'Neil' is shown, with the 'Calibrate' button highlighted in red.
- Center View:** A 3D perspective view of a character model with a skeletal rig. The selection is 'Neil' and the active clip is 'NeilROM_x2d'. The view is labeled 'Perspective' and shows a frame at '00:00:00:00(1) [30Hz]'.
- Right Panel (Capture):** System settings (Cameras: Offline, Genlock: Offline, Timecode: Offline), Buffer Size (250), Capture controls (Start, Cancel, Frames 0, Seconds: 0.00, Replay Last, Scrub Last), Take Info, Characters (Neil checked), Record (Optical Camera Data, Camera Video Camera Data, DV Camera Data checked), Auto Capture, Processing.
- Bottom Panel:** Animation Start (1), Play Start (1), Timeline (0 to 8355), Play End (8355), Animation End (8355), Current Time (1), Playback controls, and a status bar showing 'Calibration took 40 seconds.', 'P: 0.0 fps', 'RT: 0.0 fps', and '1/156'.

Solving Steps: 5 and 6. Create Solving Setup and solve All Frames

The screenshot displays the Autodesk MotionBuilder interface. The central 3D view shows a character skeleton in a blue and yellow color scheme. The left sidebar contains several panels:

- Solving Setup:** A dropdown menu shows 'Neil'. Below it, the 'Actor Setup' section has a 'Create Solving Setup' button. Under 'Setup type', the 'Production' radio button is selected. A table of settings is visible below:

Property	Value
Bone Naming Scheme	MotionBuilder
Finger Setup	None
Solve Motion	<input type="checkbox"/> False
Automatically Color Bones	Off
Bone Color	[0, 128, 255] (255)
Bone Color Multiplier	1.00
Lower arm roll bone	<input type="checkbox"/> False
Upper arm roll bone	<input type="checkbox"/> False
Lower leg roll bone	<input type="checkbox"/> False
Upper leg roll bone	<input type="checkbox"/> False
Use labeling skeleton as guide	<input checked="" type="checkbox"/> True

Below the Solving Setup panel is the 'Manual Setup Tools' section, which includes the 'Solve' panel. In the 'Solve' panel, the 'Neil' clip is listed with a checked box. The 'All Frames' button is highlighted with a red circle. Other buttons include 'Ranges', 'Current Frame', 'Interactive', and 'Clear Solve'. A 'Multiplier' of 1.5 is also visible.

The bottom of the interface shows the timeline with a clip named 'NeilROM_x2d' selected. The timeline controls show 'Play End' at 8355, 'Animation End' at 8355, and 'Current Time' at 1. The status bar at the bottom indicates 'Solving using Axiom Post solver and settings.' and 'P: 0.0 fps RT: 0.0 fps 1/270'.