



Interest Points:

- A - LowerLeftLowerLip₄
- B - LowerRightLowerLip₄
- C - UpperLeftLowerLip₄
- D - UpperRightLowerLip₄
- E - LowerLeftUpperLip₃
- F - LowerRightUpperLip₃
- G - LowerLeftSnout₃
- H - LowerRightSnout₃
- I - UpperLeftSnout₃
- J - UpperRightSnout₃
- K - LeftMicrophone₃
- L - RightMicrophone₃
- M - HeadButton₃

The positions of joints 1 and 3 (tilt and nod) are shown at -30° and 30° respectively. When both are at 0° , the neck is vertical, and the head is in the same orientation (level horizontally)

The near and far IR beam has been measured from calibration on an actual ERS-7, chest IR is only from diagrams

ERS-7 Head

	Δx	Δy	Δz
1. - tilt ₀	67.5	0	19.5
2. - pan ₁	0	0	0
3. - nod ₂	0	0	80
4. - jaw ₃	40	-17.5	0
cam. - camera ₃	81.06	-14.6	0
IRn. - NearIR ₃	76.9	1.917	2.795
IRf. - FarIR ₃	76.9	1.052	-8.047
IRc. - ChestIR ₀	109.136	-3.384	0
	$x_3 \angle x_4 = -23.6294^\circ$		
	$x_3 \angle E, F = -7.3301^\circ$		