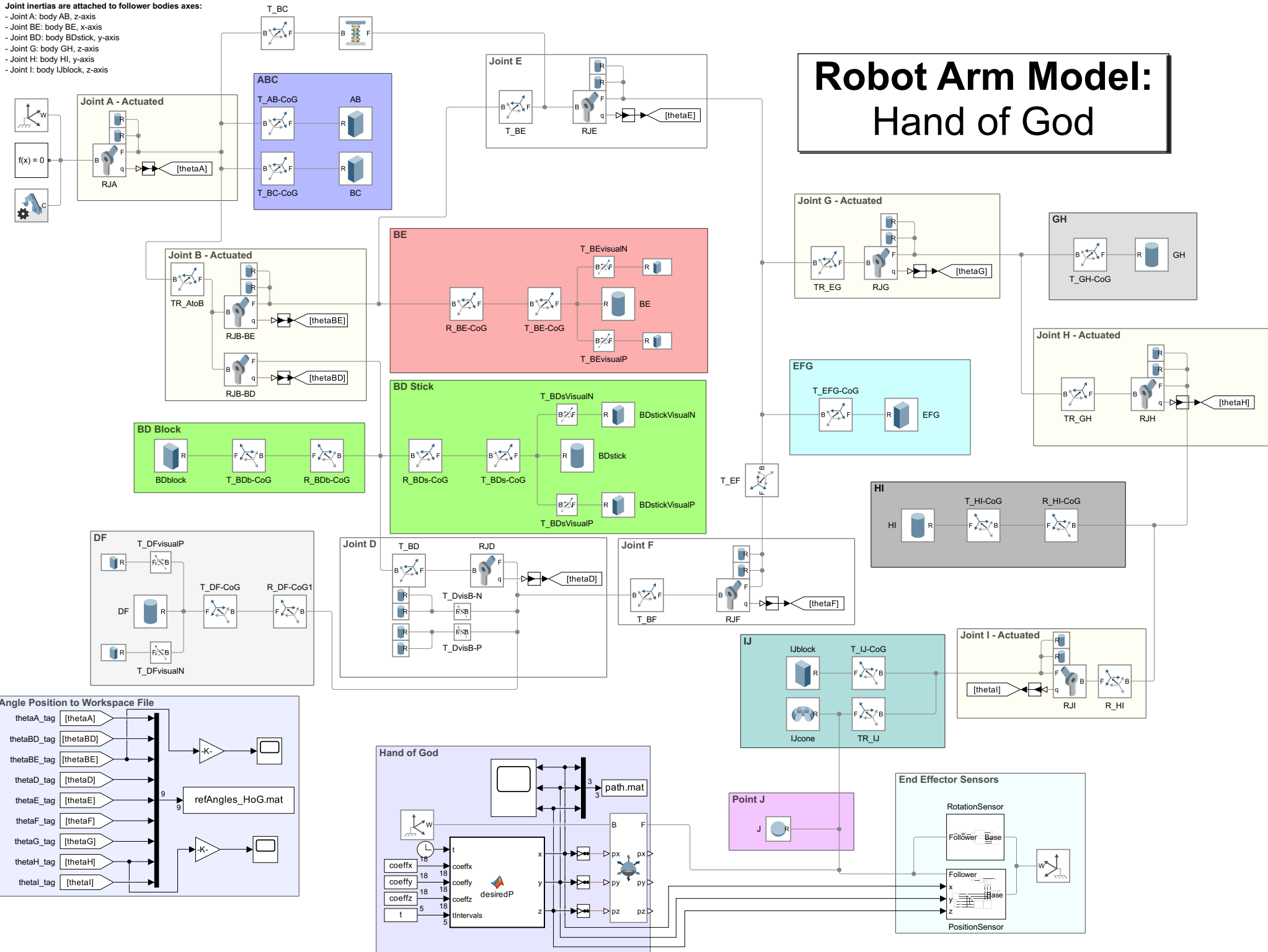


Joint inertias are attached to follower bodies axes:

- Joint A: body AB, z-axis
- Joint BE: body BE, x-axis
- Joint BD: body BDstick, y-axis
- Joint G: body GH, z-axis
- Joint H: body HI, y-axis
- Joint I: body IJblock, z-axis



```
function [x,y,z] = desiredP(t, coeffx, coeffy, coeffz, tIntervals)
```

```
    % tIntervals = tIntervals';
```

```
    if t <= tIntervals(2)
```

```
        x = F4(t)*coeffx(1:5);
```

```
        y = F4(t)*coeffy(1:5);
```

```
        z = F4(t)*coeffz(1:5);
```

```
    elseif t <= tIntervals(3)
```

```
        x = F3(t)*coeffx(6:9);
```

```
        y = F3(t)*coeffy(6:9);
```

```
        z = F3(t)*coeffz(6:9);
```

```
    elseif t <= tIntervals(4)
```

```
        x = F3(t)*coeffx(10:13);
```

```
        y = F3(t)*coeffy(10:13);
```

```
        z = F3(t)*coeffz(10:13);
```

```
    elseif t <= tIntervals(5)
```

```
        x = F4(t)*coeffx(14:18);
```

```
        y = F4(t)*coeffy(14:18);
```

```
        z = F4(t)*coeffz(14:18);
```

```
    else
```

```
        x = F4(tIntervals(1))*coeffx(1:5); % [m]
```

```
        y = F4(tIntervals(1))*coeffy(1:5); % [m]
```

```
        z = F4(tIntervals(1))*coeffz(1:5); % [m]
```

```
    end
```

```
function [out] = F4(t)
```

```
    out = [1    t    t.^2    t.^3    t.^4];
```

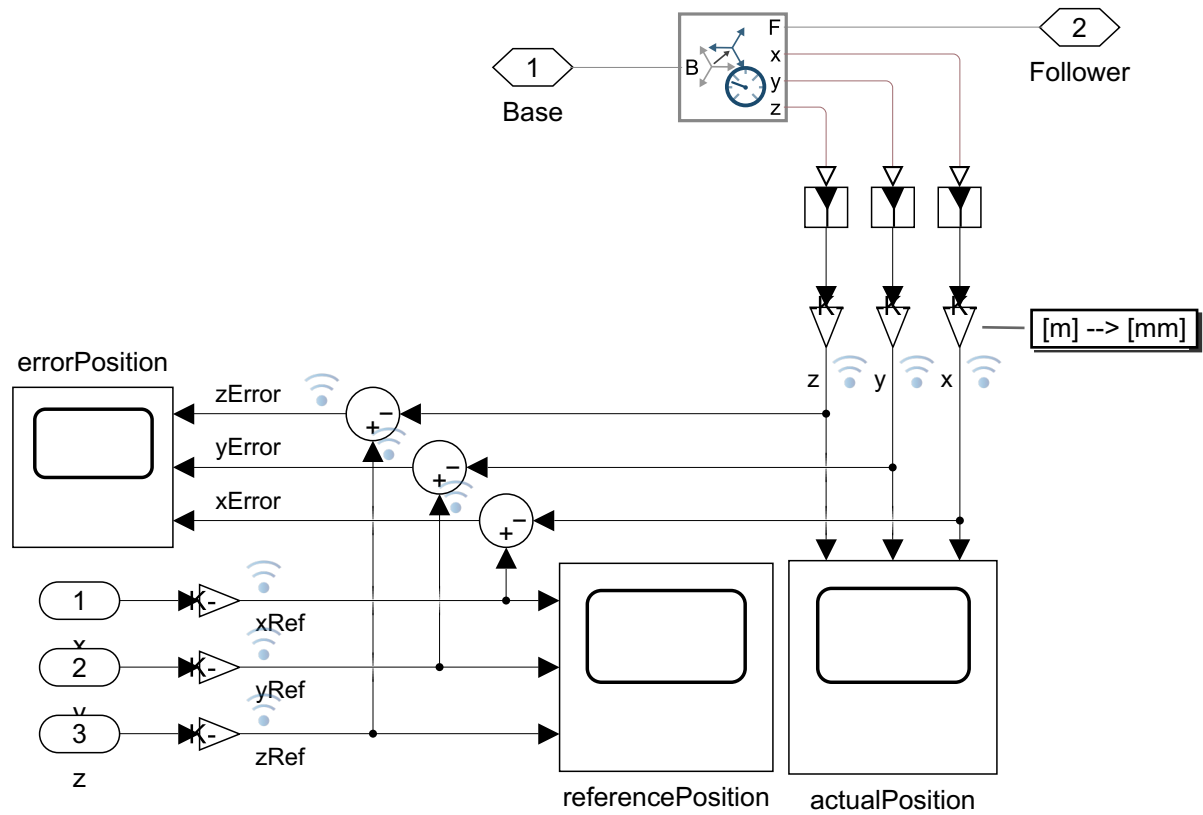
```
end
```

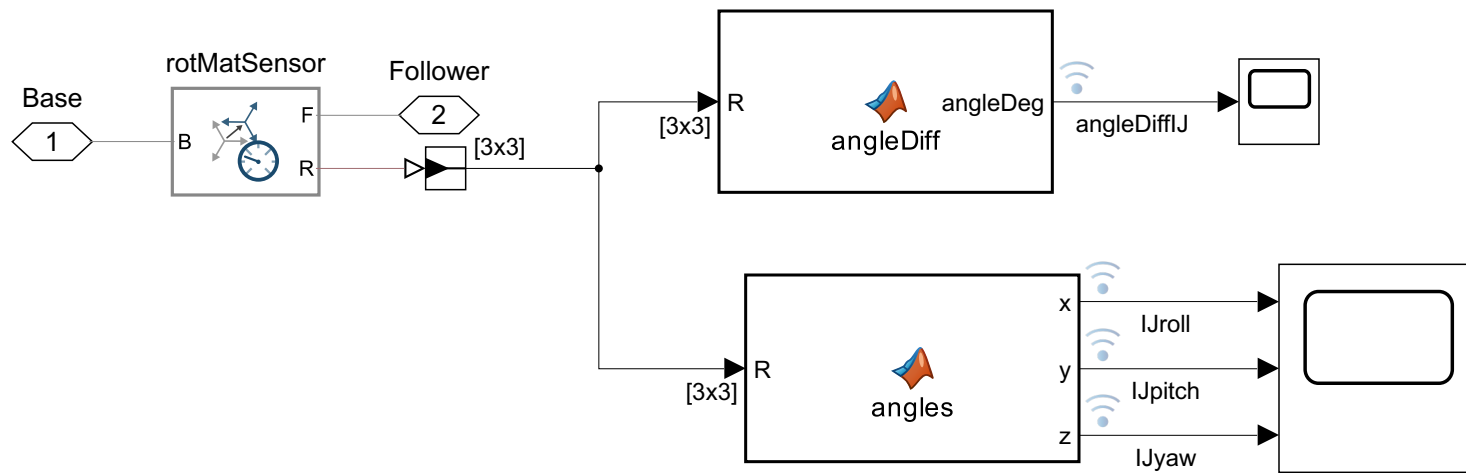
```
function [out] = F3(t)
```

```
    out = [1    t    t.^2    t.^3];
```

```
end
```

```
end
```





```
function angleDeg = angleDiff(R)

axang = rotm2axang(R);

angleDeg = rad2deg(axang(4));
```

```
function [x,y,z] = angles(R)

xEul = rotm2eul(R, 'XYZ');
x = rad2deg(xEul(1));
yEul = rotm2eul(R, 'YXZ');
y = rad2deg(yEul(1));
zEul = rotm2eul(R, 'ZYZ');
z = rad2deg(zEul(1)) + 90; % Since it is rotated about world z-frame :)
```