For spin $\frac{7}{2}$ system:

$$
J_x =
\begin{pmatrix}
0 & \frac{\sqrt{7}}{2} & 0 & 0 & 0 & 0 & 0 & 0 \\
\frac{\sqrt{7}}{2} & 0 & \frac{\sqrt{3}}{1} & 0 & 0 & 0 & 0 & 0 \\
0 & \frac{\sqrt{3}}{1} & 0 & \frac{\sqrt{15}}{2} & 0 & 0 & 0 & 0 \\
0 & 0 & \frac{\sqrt{15}}{2} & 0 & 2 & 0 & 0 & 0 \\
0 & 0 & 0 & 2 & 0 & \frac{\sqrt{15}}{2} & 0 & 0 \\
0 & 0 & 0 & 0 & \frac{\sqrt{15}}{2} & 0 & \frac{\sqrt{3}}{1} & 0 \\
0 & 0 & 0 & 0 & 0 & \frac{\sqrt{3}}{1} & 0 & \frac{\sqrt{7}}{2} \\
0 & 0 & 0 & 0 & 0 & 0 & \frac{\sqrt{7}}{2} & 0
\end{pmatrix}
\tag{1}
$$

$$
J_y =
\begin{pmatrix}
0 & -\frac{\sqrt{7}}{2}i & 0 & 0 & 0 & 0 & 0 & 0 \\
\frac{\sqrt{7}}{2}i & 0 & -\frac{\sqrt{3}}{1}i & 0 & 0 & 0 & 0 & 0 \\
0 & \frac{\sqrt{3}}{1}i & 0 & -\frac{\sqrt{15}}{2}i & 0 & 0 & 0 & 0 \\
0 & 0 & \frac{\sqrt{15}}{2}i & 0 & -2i & 0 & 0 & 0 \\
0 & 0 & 0 & 2i & 0 & -\frac{\sqrt{15}}{2}i & 0 & 0 \\
0 & 0 & 0 & 0 & \frac{\sqrt{15}}{2}i & 0 & -\frac{\sqrt{3}}{1}i & 0 \\
0 & 0 & 0 & 0 & 0 & \frac{\sqrt{3}}{1}i & 0 & -\frac{\sqrt{7}}{2}i \\
0 & 0 & 0 & 0 & 0 & 0 & \frac{\sqrt{7}}{2}i & 0
\end{pmatrix}
\tag{2}
$$

$$
J_z =
\begin{pmatrix}
\frac{7}{2} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & \frac{5}{2} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & \frac{3}{2} & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & \frac{1}{2} & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & -\frac{1}{2} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & -\frac{3}{2} & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & -\frac{5}{2} & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & -\frac{7}{2}
\end{pmatrix}
\tag{3}
$$