

Relation des matrices suivantes :

- La matrice de transfert ou chaîne (a),
- La matrice impédance (Z),
- La matrice admittance (Y),
- La matrice hybride (H),
- La matrice en (G)

	[a]	[Z]	[Y]	[H]	[G]
[a]	$\begin{matrix} A & B \\ C & D \end{matrix}$	$\begin{matrix} \frac{Z_{11}}{Z_{21}} & \frac{\Delta Z}{Z_{21}} \\ \frac{1}{Z_{21}} & \frac{Z_{22}}{Z_{21}} \end{matrix}$	$\begin{matrix} -\frac{Y_{22}}{Y_{21}} & -\frac{1}{Y_{21}} \\ -\frac{\Delta Y}{Y_{21}} & -\frac{Y_{11}}{Y_{21}} \end{matrix}$	$\begin{matrix} -\frac{\Delta H}{H_{21}} & -\frac{H_{11}}{H_{21}} \\ -\frac{H_{22}}{H_{21}} & -\frac{1}{H_{21}} \end{matrix}$	$\begin{matrix} \frac{1}{G_{21}} & \frac{G_{22}}{G_{21}} \\ \frac{G_{21}}{G_{11}} & \frac{\Delta G}{G_{21}} \end{matrix}$
[Z]	$\begin{matrix} \frac{A}{C} & \frac{AD-BC}{C} \\ \frac{1}{C} & \frac{D}{C} \end{matrix}$	$\begin{matrix} Z_{11} & Z_{12} \\ Z_{21} & Z_{22} \end{matrix}$	$\begin{matrix} \frac{Y_{22}}{\Delta Y} & -\frac{Y_{12}}{\Delta Y} \\ -\frac{Y_{21}}{\Delta Y} & \frac{Y_{11}}{\Delta Y} \end{matrix}$	$\begin{matrix} \frac{\Delta H}{H_{22}} & \frac{H_{12}}{H_{22}} \\ -\frac{H_{21}}{H_{22}} & \frac{1}{H_{22}} \end{matrix}$	$\begin{matrix} \frac{1}{G_{11}} & -\frac{G_{12}}{G_{11}} \\ \frac{G_{21}}{G_{11}} & \frac{\Delta G}{G_{11}} \end{matrix}$
[Y]	$\begin{matrix} \frac{B}{D} & -\frac{AD-BC}{B} \\ -\frac{1}{B} & \frac{A}{B} \end{matrix}$	$\begin{matrix} \frac{Z_{22}}{\Delta Z} & -\frac{Z_{12}}{\Delta Z} \\ -\frac{Z_{21}}{\Delta Z} & \frac{Z_{11}}{\Delta Z} \end{matrix}$	$\begin{matrix} Y_{11} & Y_{12} \\ Y_{21} & Y_{22} \end{matrix}$	$\begin{matrix} \frac{1}{H_{11}} & -\frac{H_{12}}{H_{11}} \\ \frac{H_{21}}{H_{11}} & \frac{\Delta H}{H_{11}} \end{matrix}$	$\begin{matrix} \frac{\Delta G}{G_{22}} & \frac{G_{12}}{G_{22}} \\ -\frac{G_{21}}{G_{22}} & \frac{1}{G_{22}} \end{matrix}$
[H]	$\begin{matrix} \frac{B}{D} & \frac{AD-BC}{D} \\ -\frac{1}{D} & \frac{C}{D} \end{matrix}$	$\begin{matrix} \frac{\Delta Z}{Z_{22}} & \frac{Z_{12}}{Z_{22}} \\ -\frac{Z_{21}}{Z_{22}} & \frac{1}{Z_{22}} \end{matrix}$	$\begin{matrix} \frac{1}{Y_{11}} & -\frac{Y_{12}}{Y_{11}} \\ \frac{Y_{21}}{Y_{11}} & \frac{\Delta Y}{Y_{11}} \end{matrix}$	$\begin{matrix} H_{11} & H_{12} \\ H_{21} & H_{22} \end{matrix}$	$\begin{matrix} \frac{G_{22}}{\Delta G} & -\frac{G_{12}}{\Delta G} \\ -\frac{G_{21}}{\Delta G} & \frac{G_{11}}{\Delta G} \end{matrix}$
[G]	$\begin{matrix} \frac{C}{A} & \frac{AD-BC}{A} \\ \frac{1}{A} & \frac{B}{A} \end{matrix}$	$\begin{matrix} \frac{1}{Z_{11}} & -\frac{Z_{12}}{Z_{11}} \\ \frac{Z_{21}}{Z_{11}} & \frac{\Delta Z}{Z_{11}} \end{matrix}$	$\begin{matrix} \frac{\Delta Y}{Y_{22}} & \frac{Y_{12}}{Y_{22}} \\ -\frac{Y_{21}}{Y_{22}} & \frac{1}{Y_{22}} \end{matrix}$	$\begin{matrix} \frac{H_{22}}{\Delta H} & -\frac{H_{12}}{\Delta H} \\ -\frac{H_{21}}{\Delta H} & \frac{H_{11}}{\Delta H} \end{matrix}$	$\begin{matrix} G_{11} & G_{12} \\ G_{21} & G_{22} \end{matrix}$

Δ : représente le déterminant d'une matrice