$$\hat{\rho} \left\{ \begin{array}{c} \boxed{\hat{U}_A} \\ \boxed{\hat{U}_B} \end{array} \right\} \hat{\rho}' \qquad \Longleftrightarrow \qquad \hat{\rho}' = (\hat{U}_A \otimes \hat{U}_B)\hat{\rho}(\hat{U}_A \otimes \hat{U}_B)^\dagger$$