CLAIMS

1. RF power amplifier comprising two transistors, said transistors (Q1, Q2) being field-effect transistors controlled in a push-pull mode, wherein during the operation of said amplifier, said transistors operate asymmetrically, the drain-source currents (IDS1, IDS2) of said transistors in the on state being different, said currents being controlled by the gate voltages (V_{G1}, V_{G2}) of said transistors (Q1, Q2), the values of said voltages are functions of operating parameters, pairs of said values functions of said parameters being stored in a memory (21) accessible to said amplifier.

2. Power amplifier according to Claim 1, characterized in that the values of said gate voltages (V_{G1}, V_{G2}) are a function of frequency.

3. Power amplifier according to either one of Claims 1 or 2, characterized in that the values of said gate voltages (V_{G1}, V_{G2}) are a function of the output power of said amplifier.

4. Power amplifier according to any one of the preceding claims, characterized in that the values of said gate voltages (V_{G1}, V_{G2}) are a function of temperature.

5. Power amplifier according to any one of the preceding claims, characterized in that said values of the gate voltages (V_{G1}, V_{G2}) are determined in a calibrating

phase in which, linearity criteria of said amplifier being set in advance, the retained pairs are those that meet said criteria.

6. Power amplifier according to Claim 5, characterized in that EVM measurements are used to check whether said criteria are met.

7. Power amplifier according to Claim 5 or 6, characterized in that AM/AM and AM/PM measurements are used to check whether said criteria are met.

8. RF transmitting and receiving system, characterized in that it includes a power amplifier according to any one of the preceding claims.

9. RF transmitting and receiving system according to Claim 8, characterized in that it is carriable.