Appendix B

Coupled differential equations of the time dependent coefficients

$$\dot{A}_1 + i\omega_c A_1 = 0$$

$$\dot{A}_2 + i\omega_c A_2 - igA_1 B_1^* = 0$$

$$\dot{A}_3 + i\omega_c A_3 - igA_1 B_1 = 0$$

$$\dot{A}_4 + i\omega_c A_4 - i\xi A_1 = 0$$

$$\dot{A}_5 + i\omega_c A_5 - igA_2 B_1^* = 0$$

$$\dot{A}_6 + i\omega_c A_6 - igA_1 B_2^* - igA_3 B_1^* - igA_1 B_2 = 0$$

$$\dot{A}_7 + i\omega_c A_7 - igA_2 B_1 - igA_3 B_1^* = 0$$

$$\dot{A}_8 + i\omega_c A_8 - igA_3 B_1 = 0$$

$$\dot{A}_9 + i\omega_c A_9 - igA_1 B_2^* - igA_1 B_2 = 0$$

$$\dot{A}_{10} + i\omega_c A_{10} - igA_4 = 0$$

$$\dot{A}_{11} + i\omega_c A_{11} - i\xi A_2 = 0$$

$$\dot{A}_{12} + i\omega_c A_{12} - i\xi A_3 = 0$$

$$\dot{A}_{13} + i\omega_c A_{13} - igA_4 B_1 = 0$$

$$\dot{A}_{14} + i\omega_c A_{14} - i\xi A_4 = 0$$

$$\dot{B}_1 + i\omega_m B_1 = 0$$

$$\dot{B}_2 + i\omega_m B_2 - igA_1 A_1^* = 0$$

$$\dot{B}_3 + i\omega_m B_3 - igA_4 A_1^* = 0$$

$$\dot{B}_4 + i\omega_m B_4 - igA_1 A_4^* = 0$$