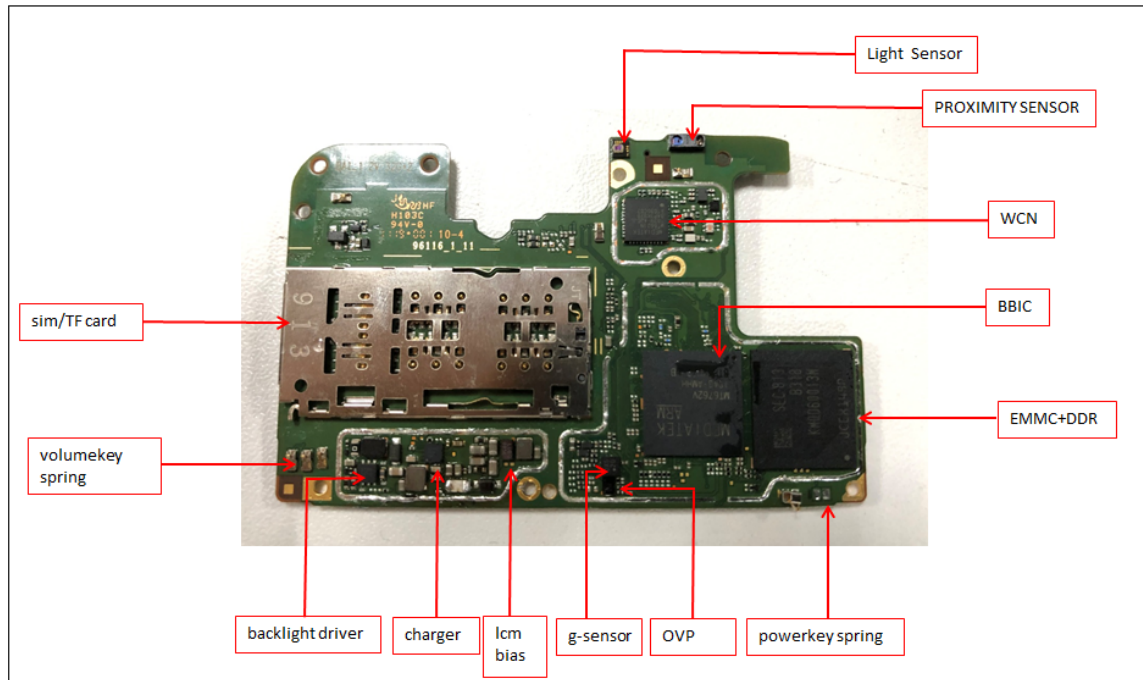


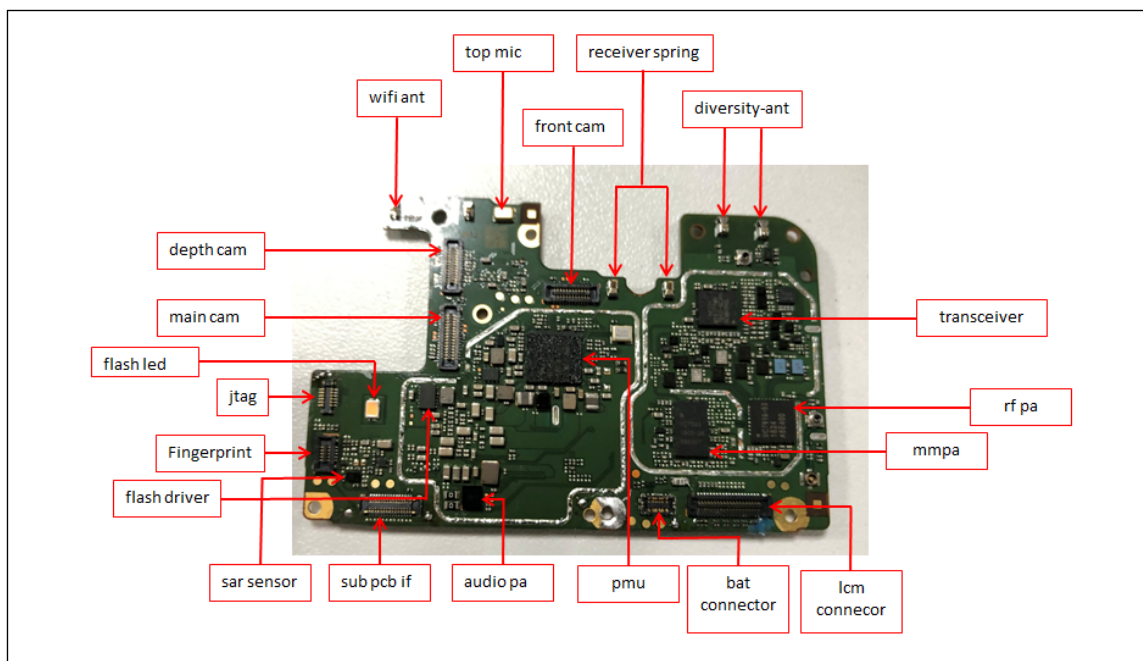
8. Level 3 Repair

8-1. Components Layout

Main board top view

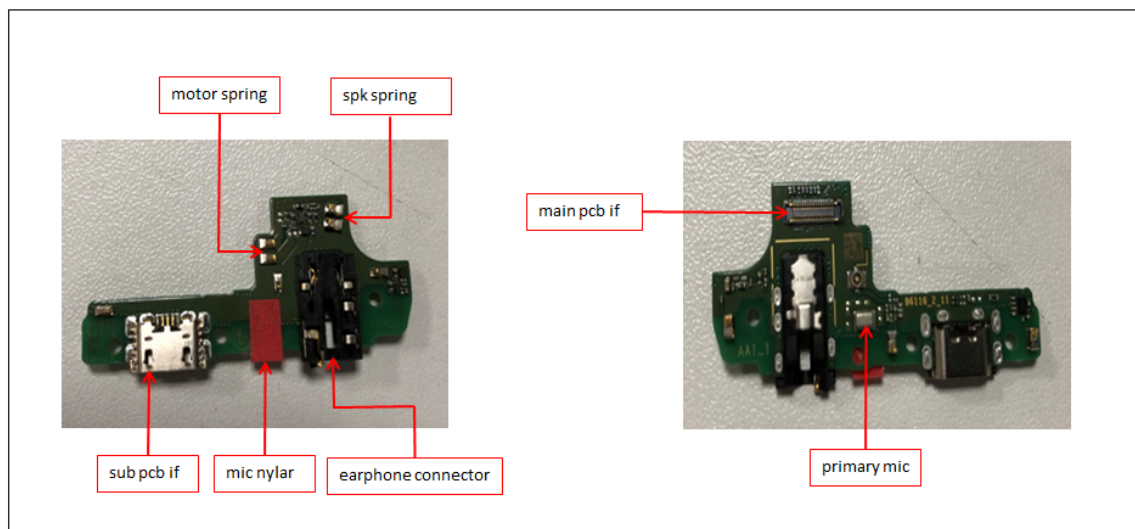


Main board bot view

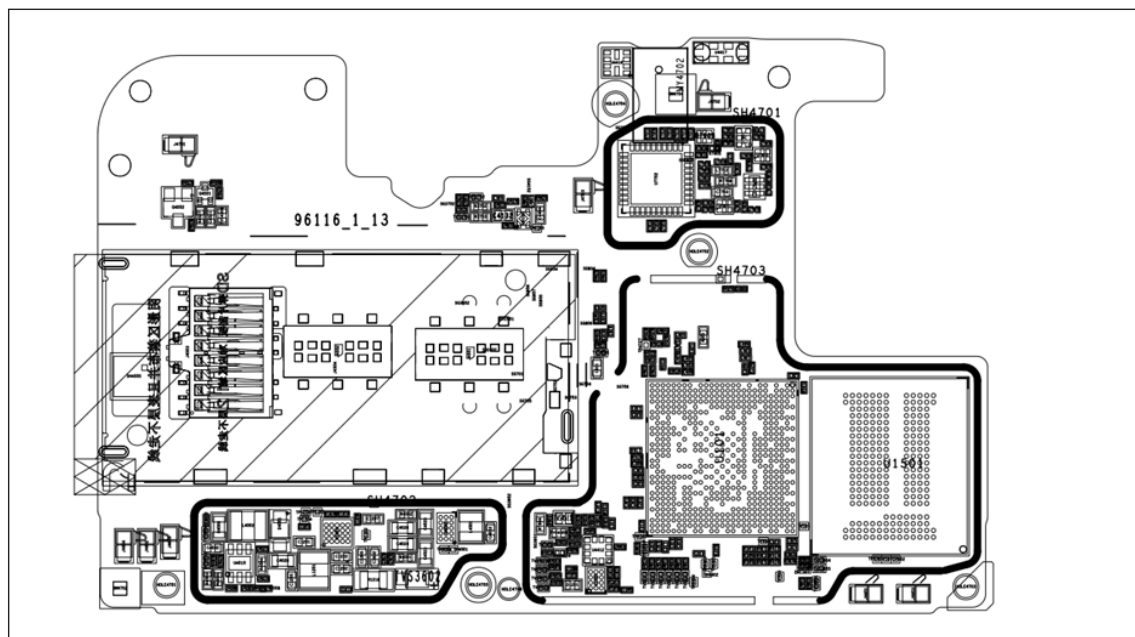


8. Level 3 Repair

Sub board

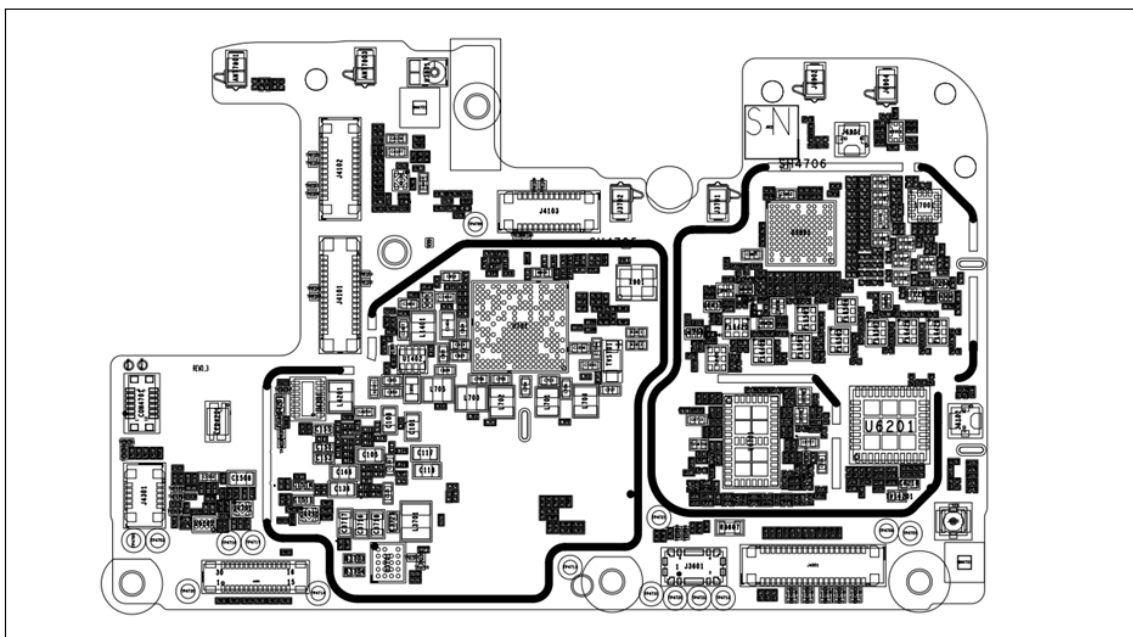


Reference map Mb top view

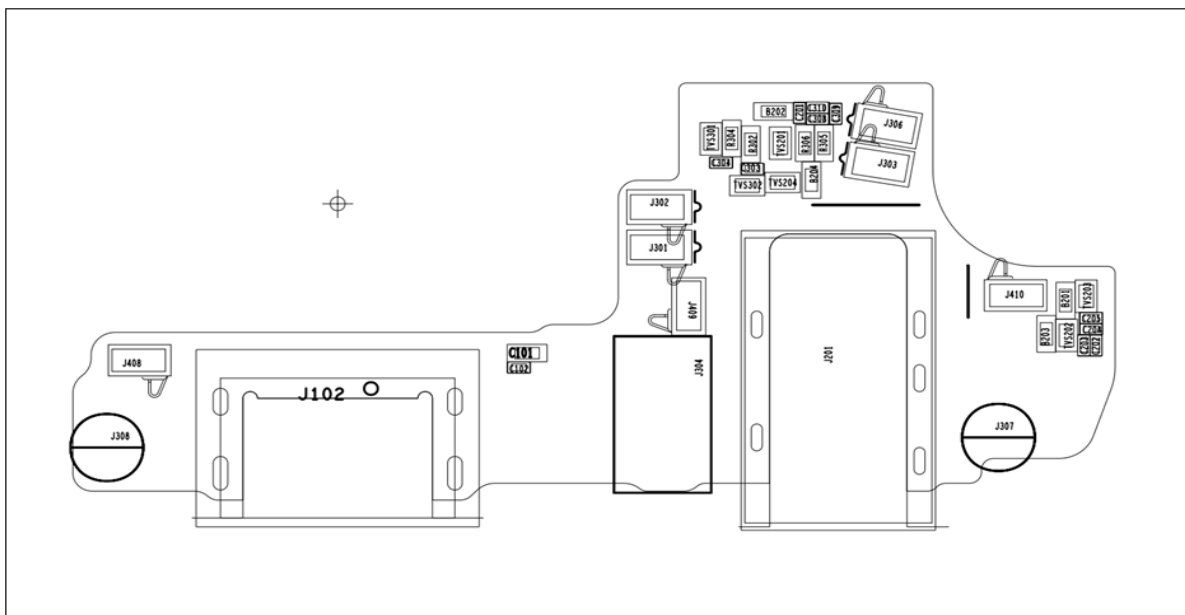


8. Level 3 Repair

Mb bot view

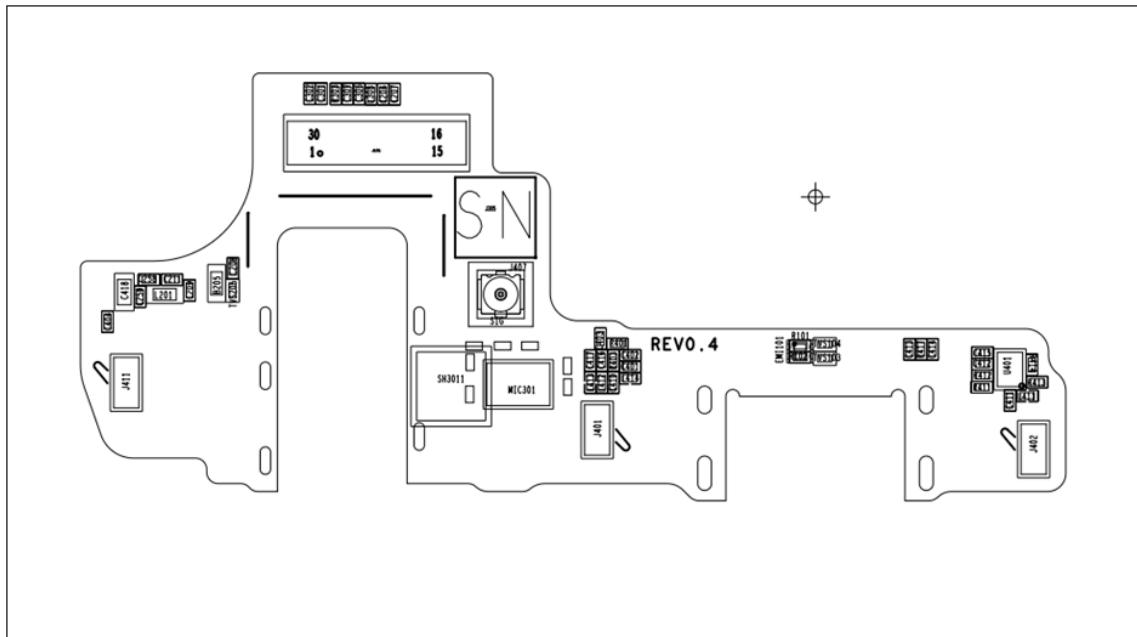


Sub top view

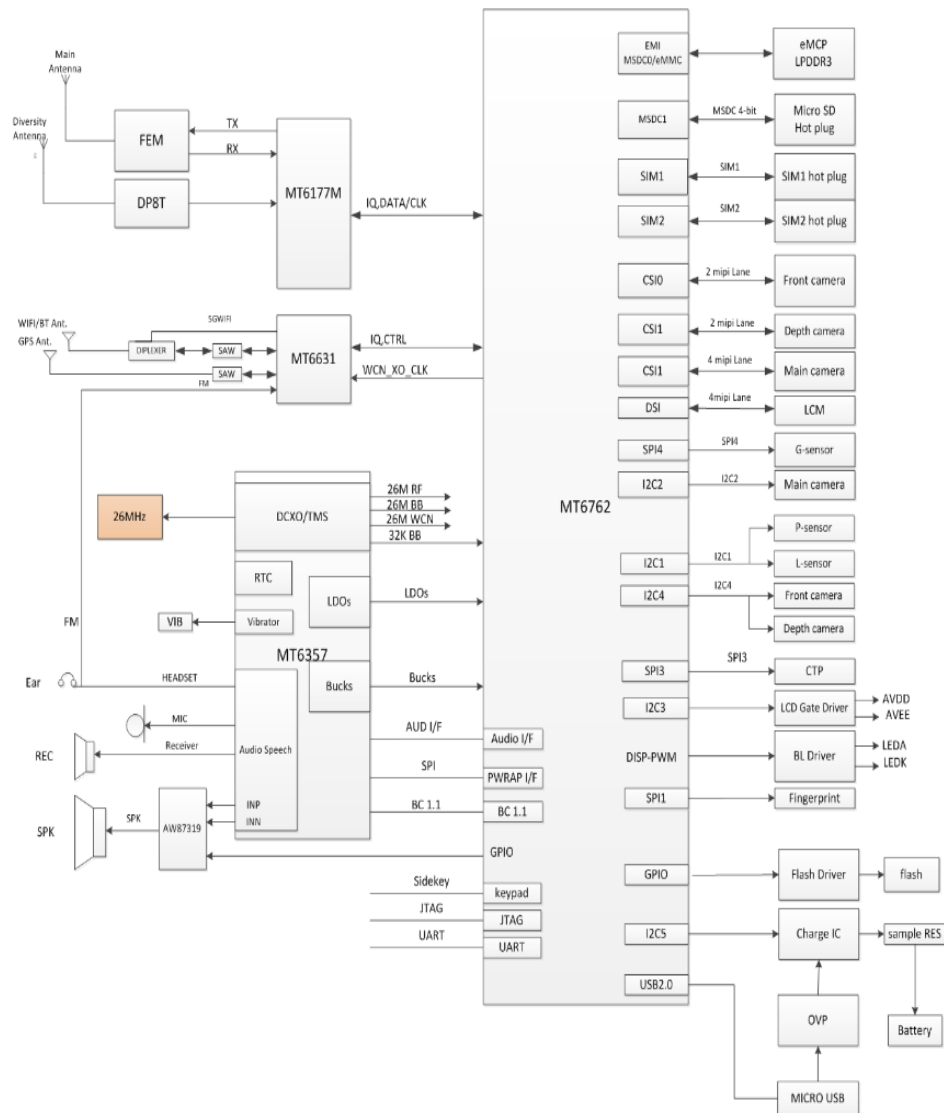


8. Level 3 Repair

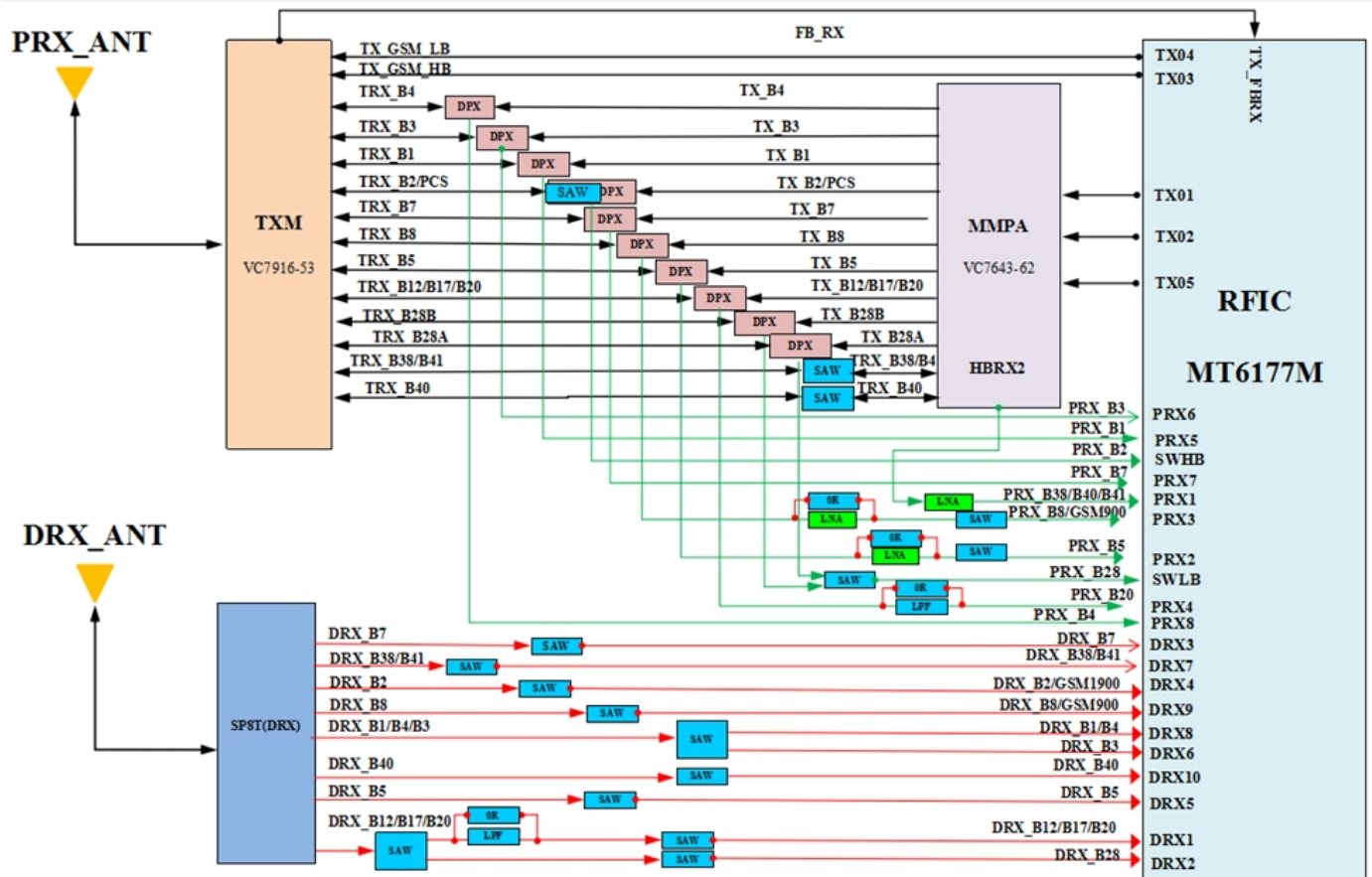
Sub bot view



8. Level 3 Repair

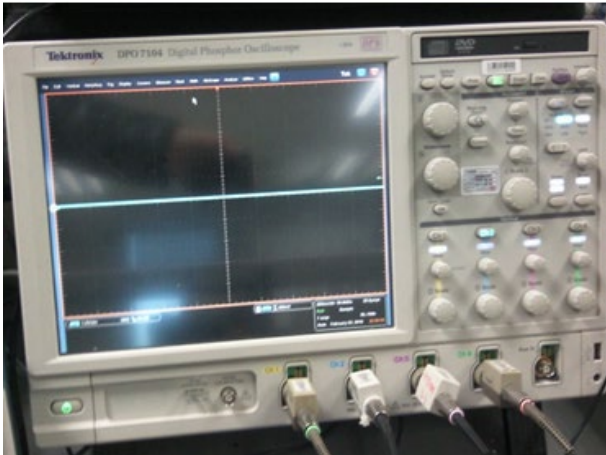


8. Level 3 Repair



8. Level 3 Repair

8-3. Flow chart of Troubleshooting.



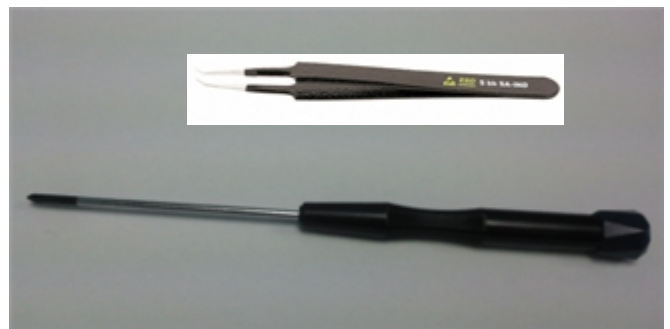
Oscilloscope



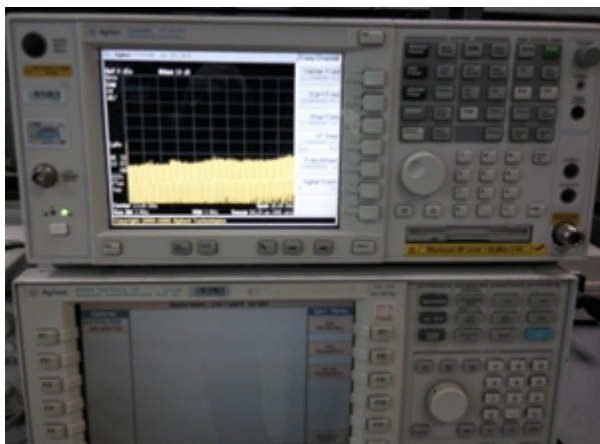
Digital multimeter



Power Supply



+ driver, ESD Safe Tweezer



8960 & Spectrum Analyzer

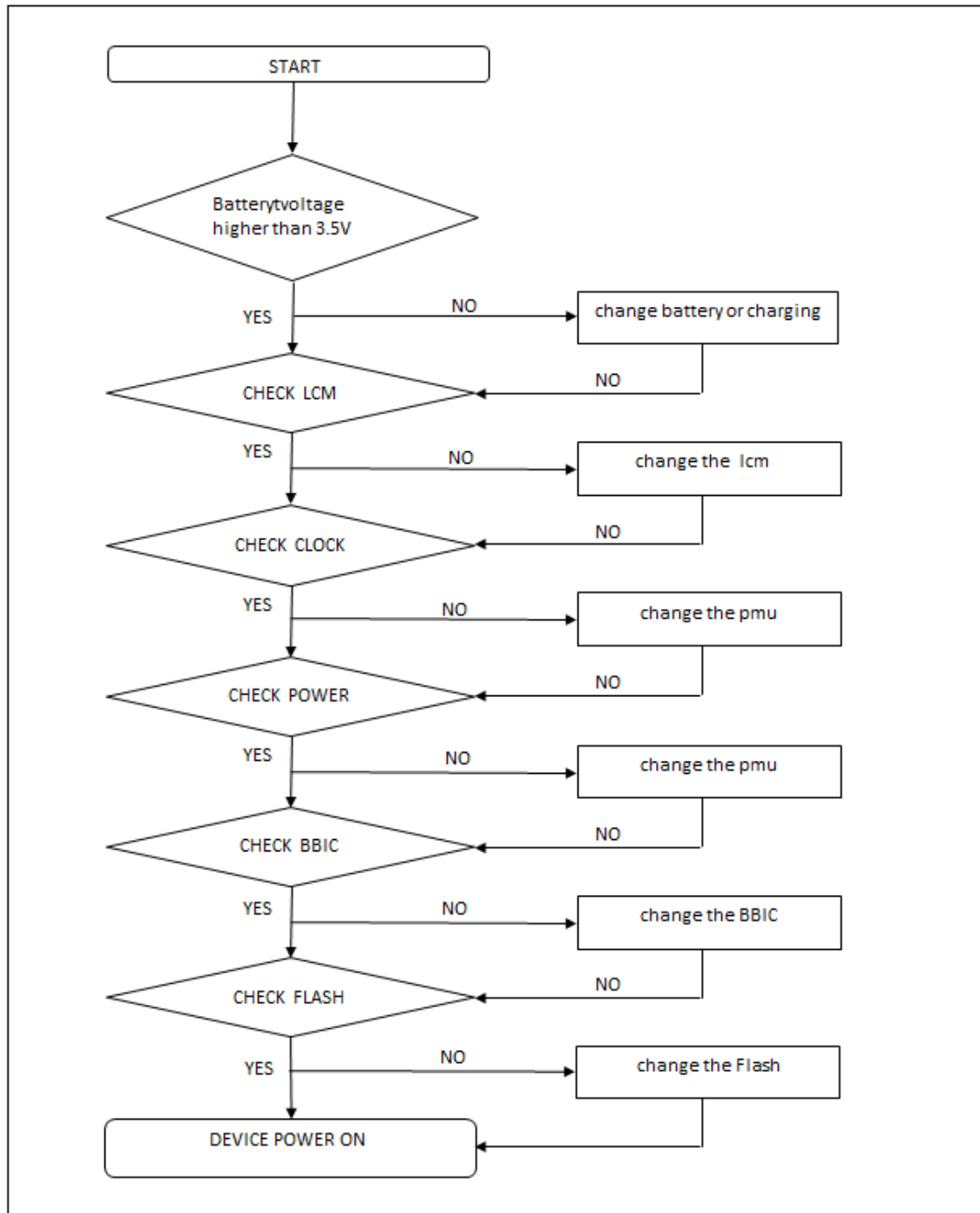


Soldering iron

8. Level 3 Repair

8-4-1. Power On

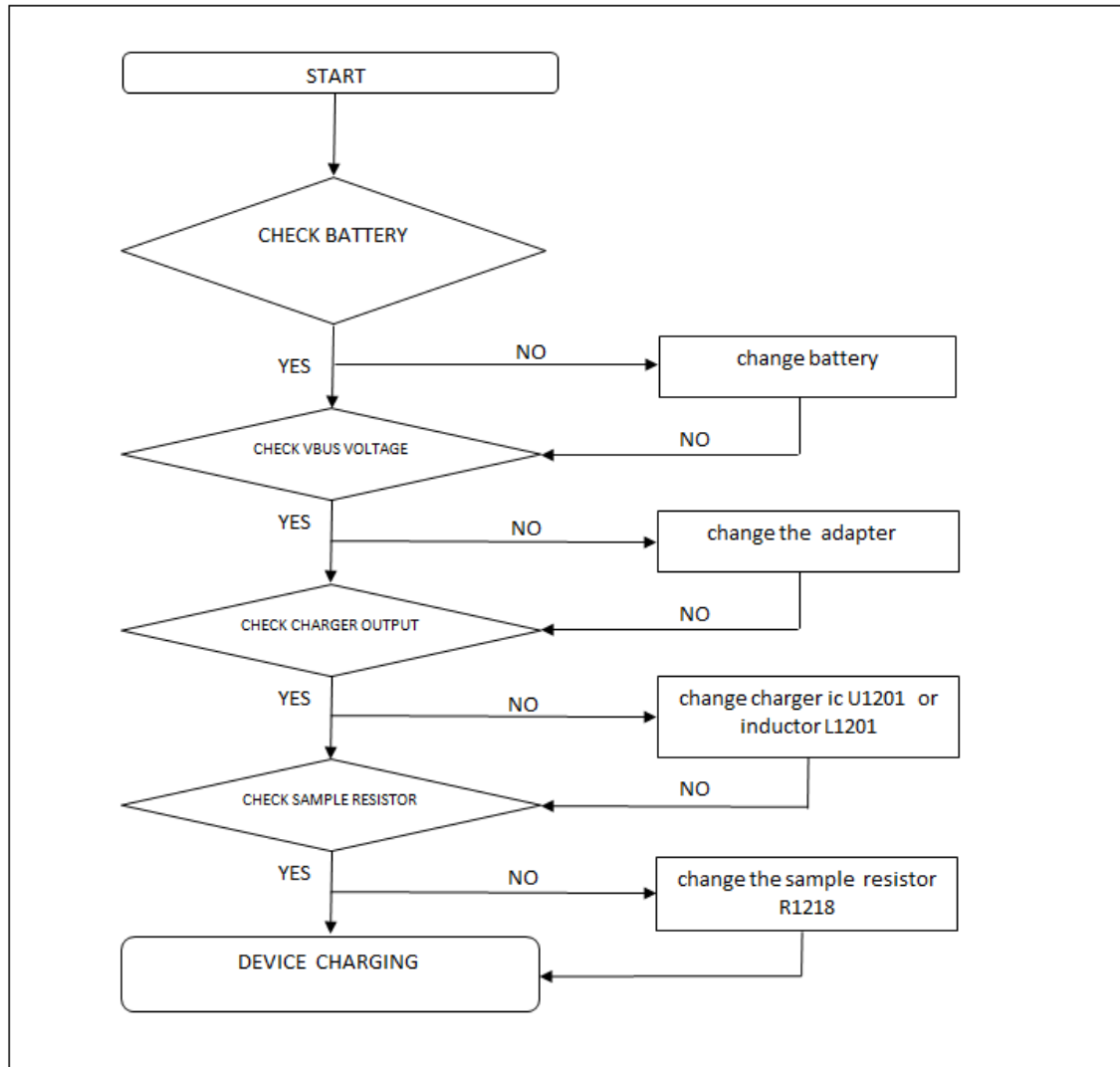
: Checking Power signal (LCM, PMU, Clock)



8. Level 3 Repair

8-4-2. Charging

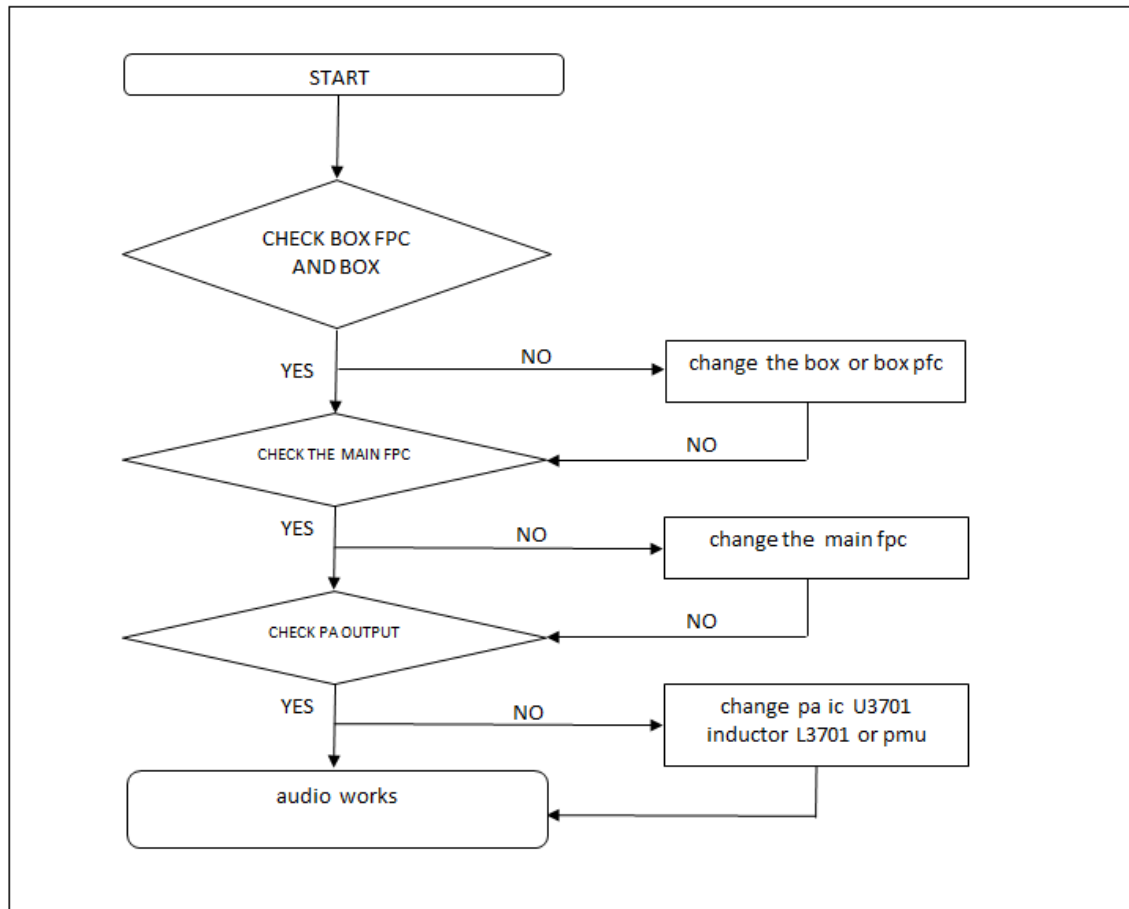
: The charging controlled by third charger chip



8. Level 3 Repair

8-4-3. Audio speaker

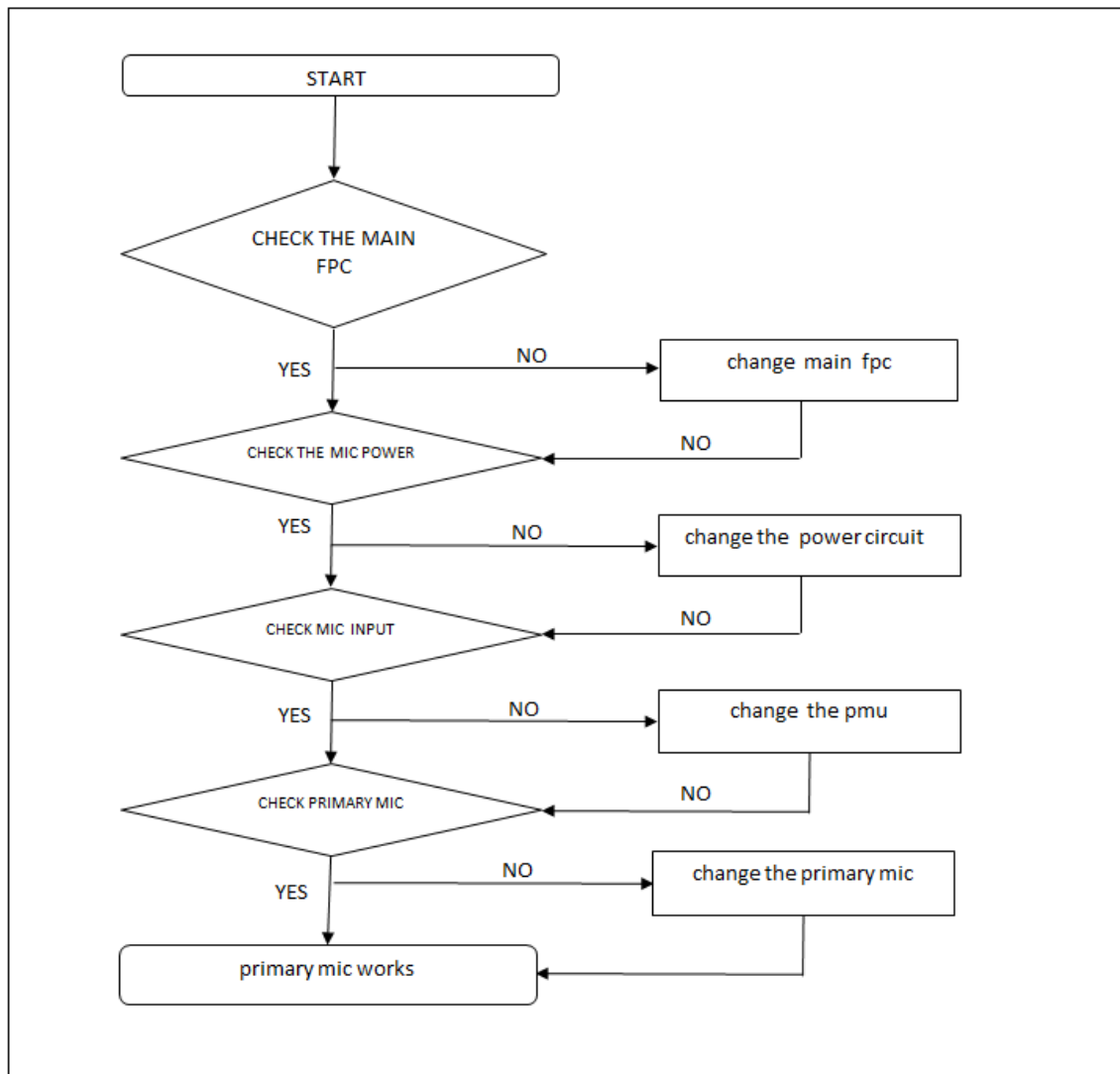
: The Speaker control signals are generated by MT6357 (U701) and PA AW87319 (U3701), the chip, PA and the speaker are to be checked out.



8. Level 3 Repair

8-4-4. Audio Main MIC

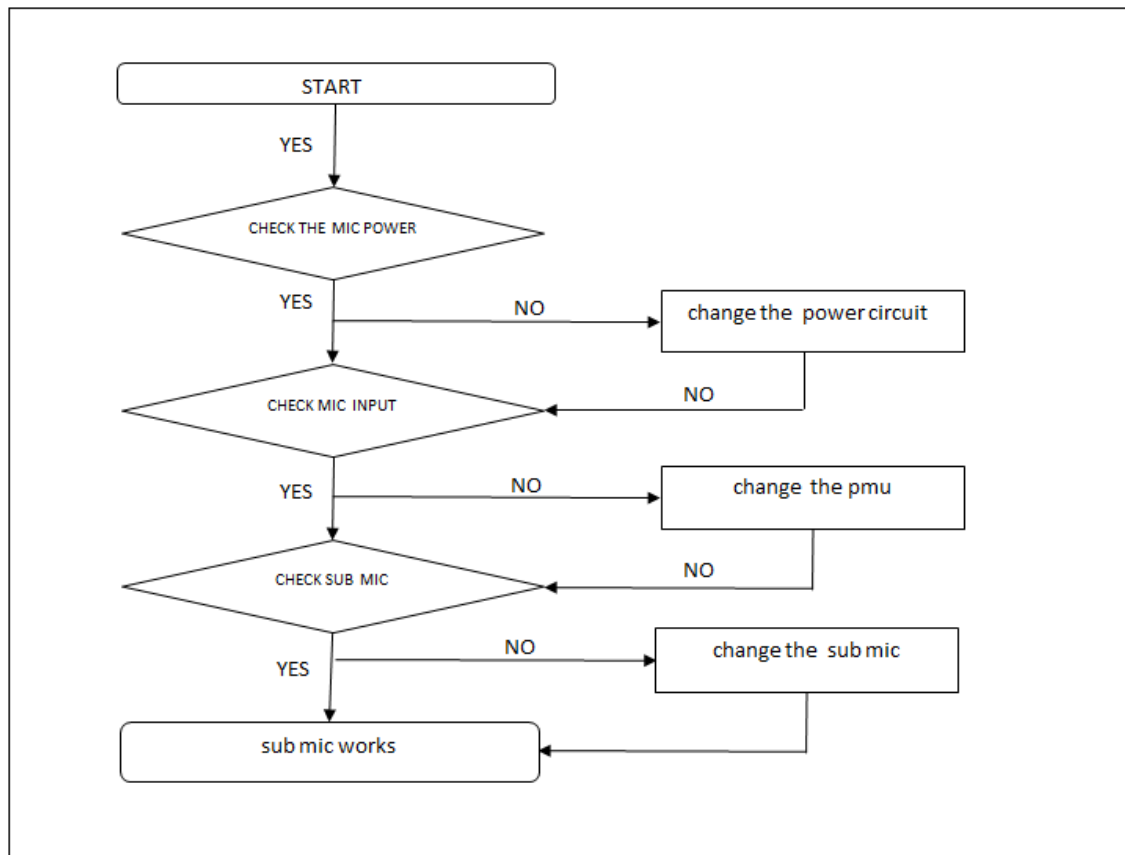
: The MIC control signals are generated by PMU chip MT6357 (U701), the PMU chip and the MIC are to be checked out.



8. Level 3 Repair

8-4-5. Sub MIC

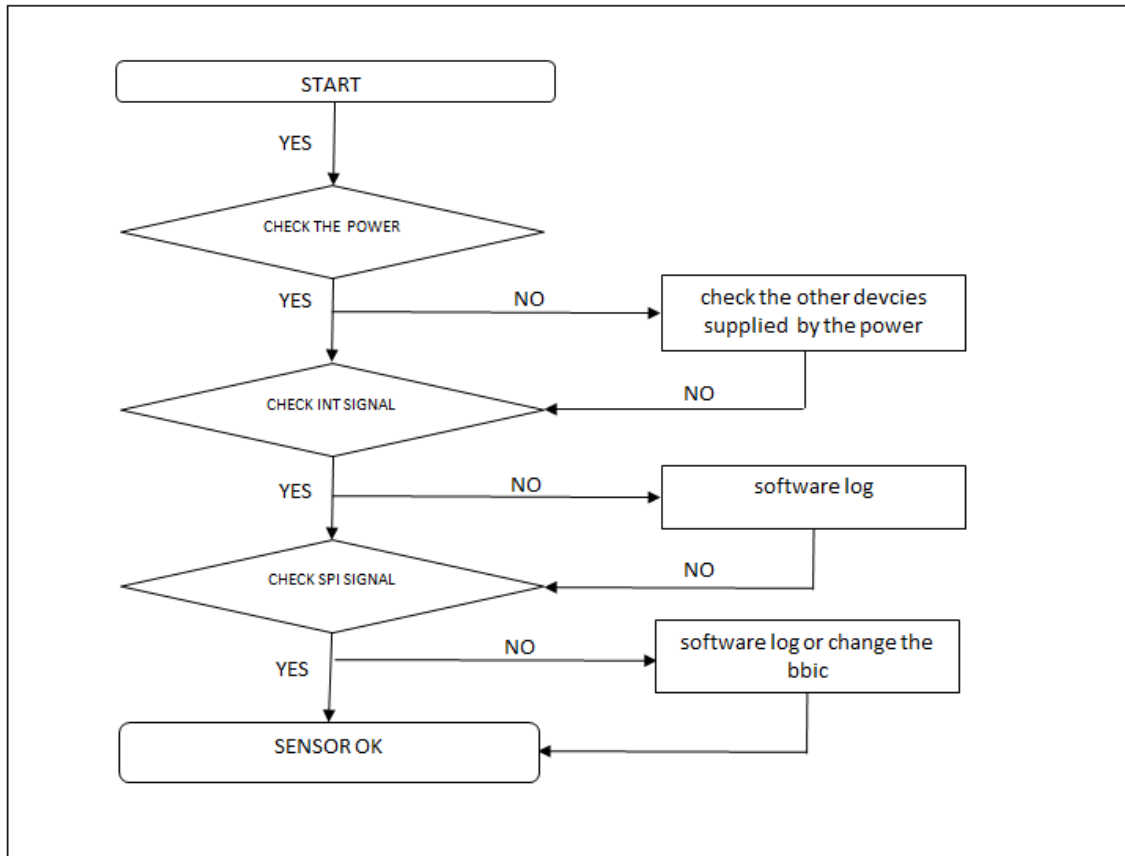
: The MIC control signals are generated by PMU chip MT6357 (U701), the PMU chip and the MIC are to be checked out.



8. Level 3 Repair

8-4-6. Accelerometer sensor

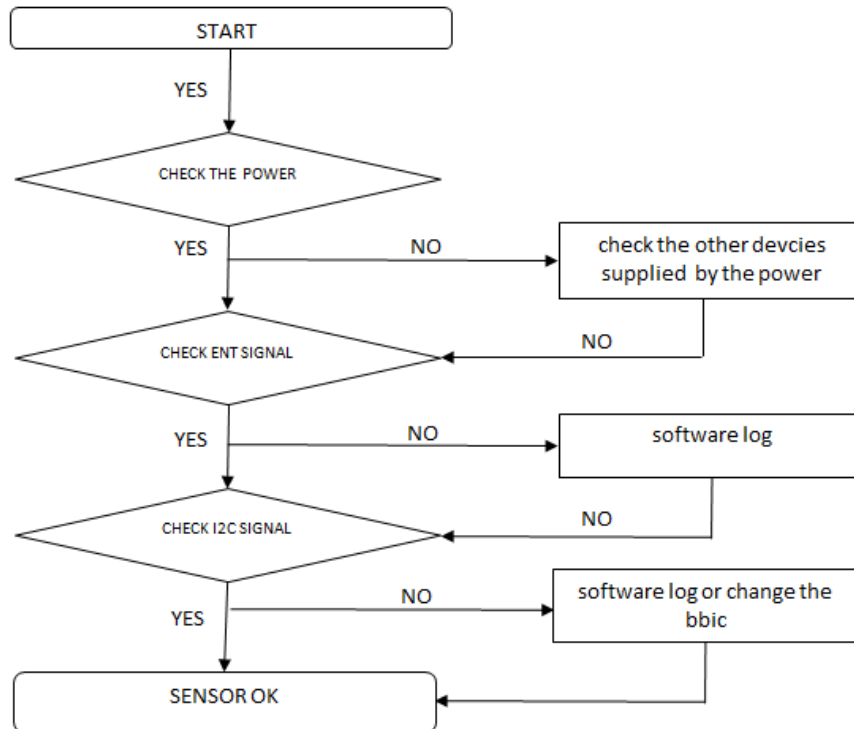
: The Accelerometer sensor is calibrated by using SW algorithm.



8. Level 3 Repair

8-4-7. Proximity and light sensor

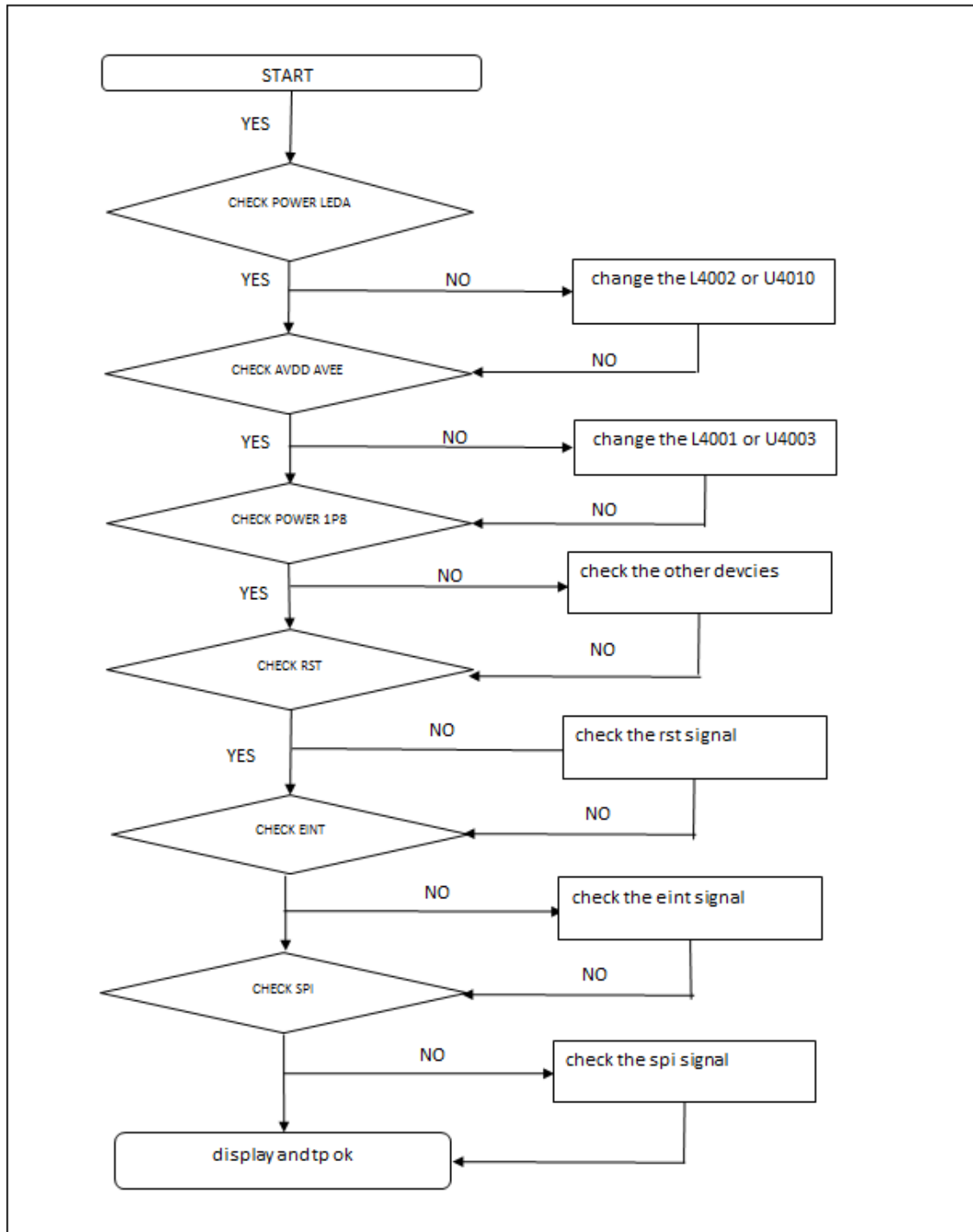
: Proximity (U4417) and Light Sensor (U4416) is worked as below: Control the screen's on/off operation automatically while making phone calls, and adjust the screen brightness according to ambient light.



8. Level 3 Repair

8-4-8. TOUCH SCREEN AND DISPLAY

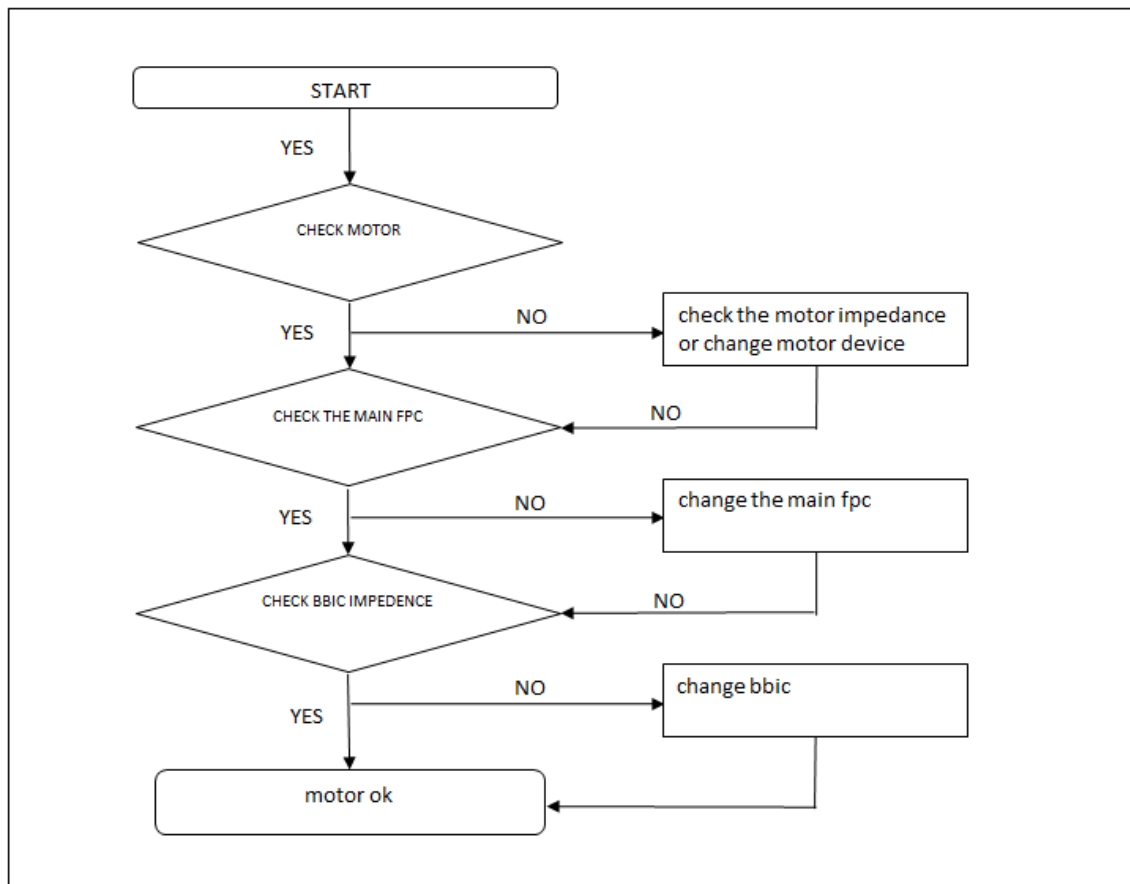
: The Touch control signals are generated by MT6762. It is assembled with LCD.



8. Level 3 Repair

8-4-9. Vibrator

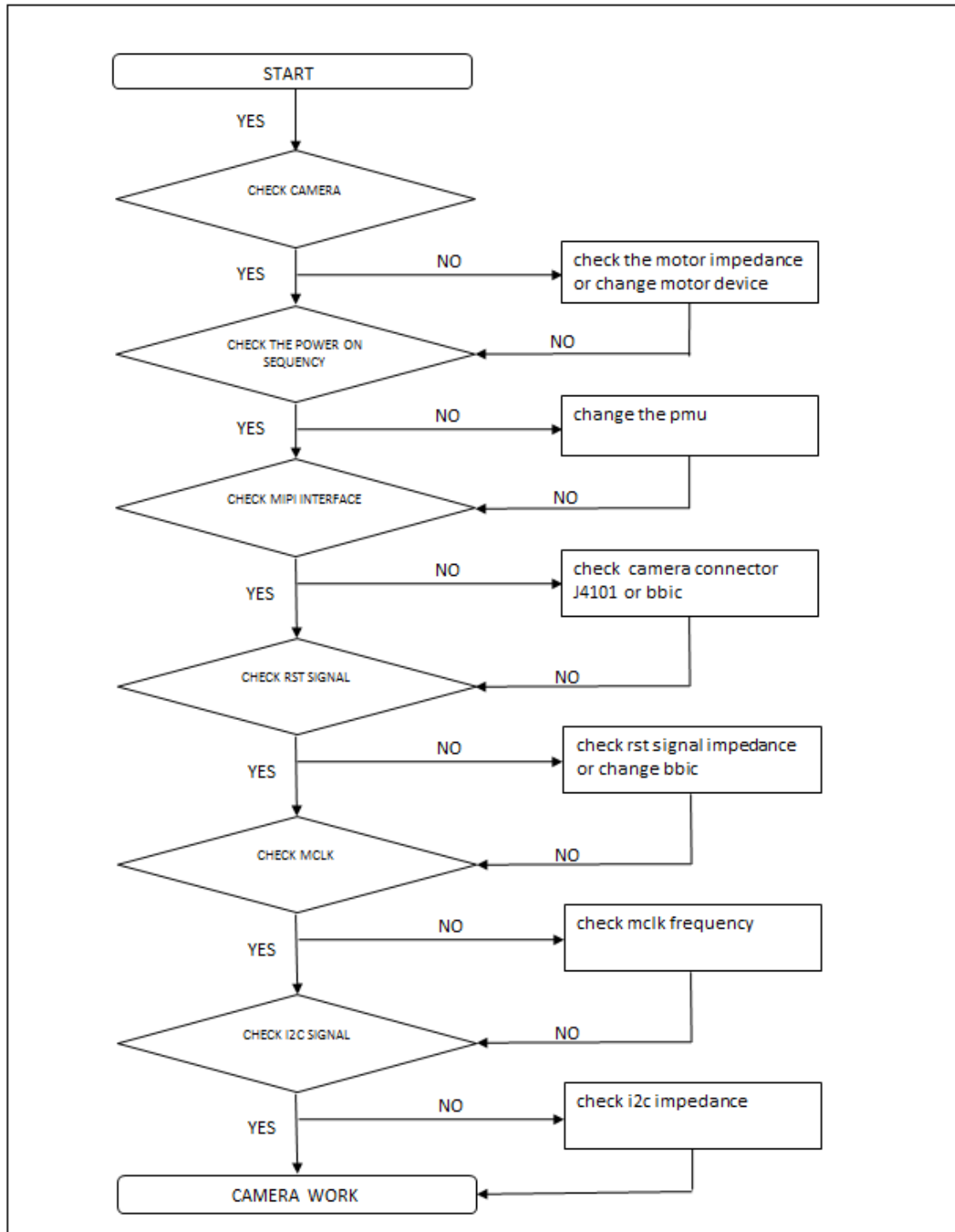
: The Vibrator control signals are generated by MT6357.



8. Level 3 Repair

8-4-10. Rear Camera

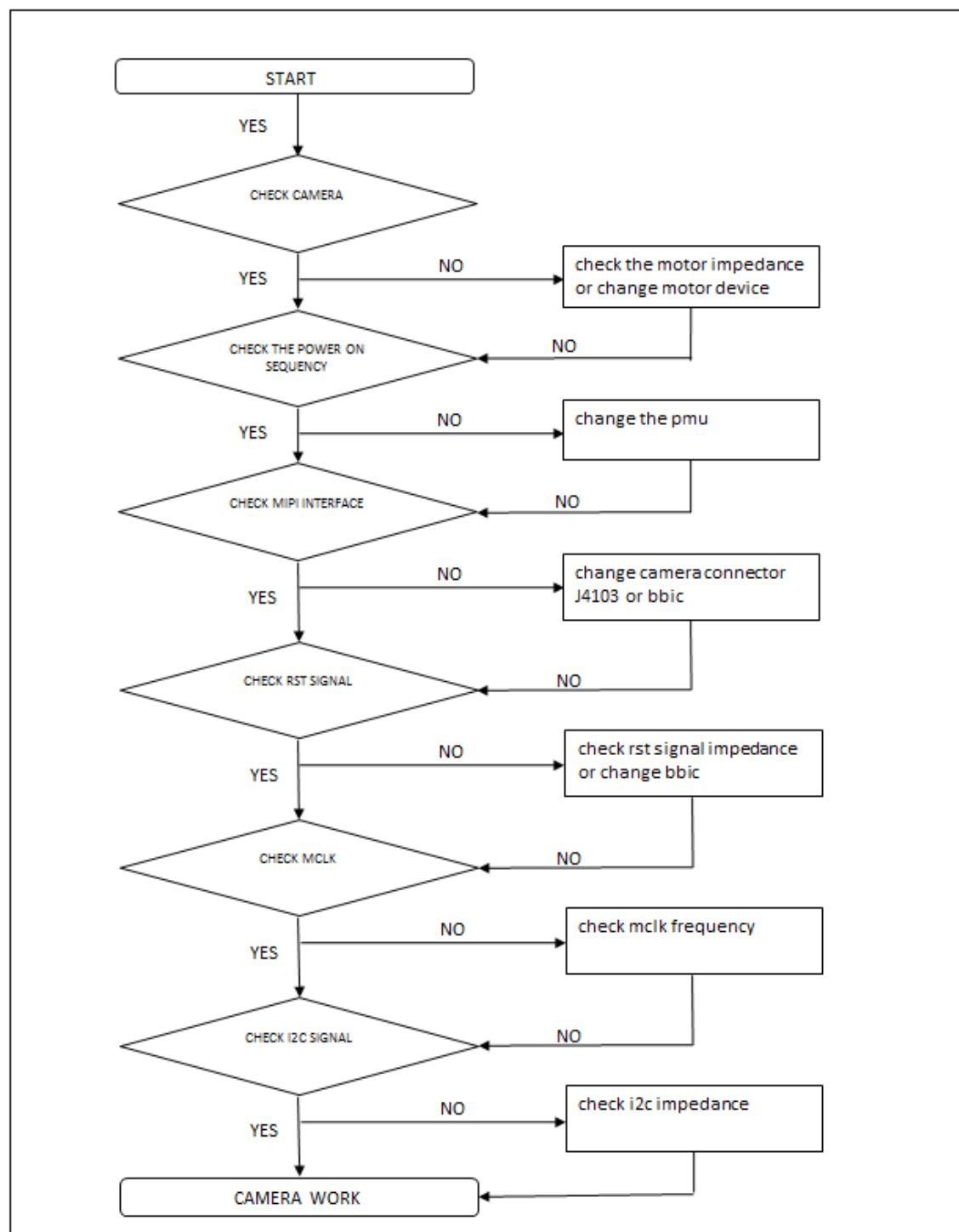
: The Camera control signals are generated by MT6762.



8. Level 3 Repair

8-4-11. Front Camera

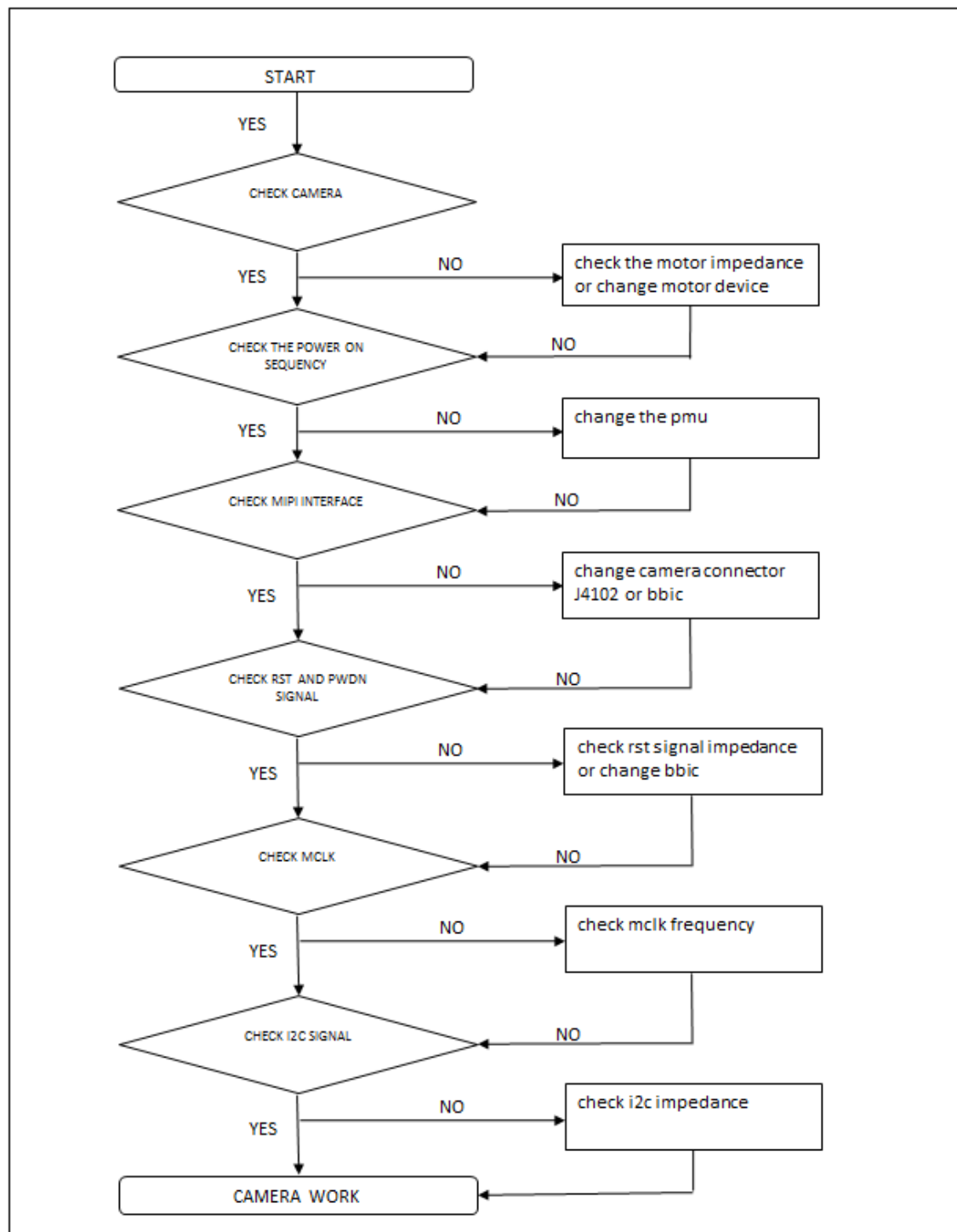
The Camera control signals are generated by MT6762.



8. Level 3 Repair

8-4-12. Depth Camera

: The depth Camera control signals are generated by MT6762.



8. Level 3 Repair

8-5. Service Schematics

- U101_MT6762_BB chip IC , Digital Baseband Processor(Top)

558	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
A	NC	WF_IN	WF_IP	EMIO_CAB		NC		EMIO_CAB		DVSS		DVSS		DVSS		EMIO_DQ0		EMIO_DQ1		EMIO_DQ2		EMIO_DQ3		EMIO_DQ4		EMIO_DQ5		EMIO_DQ6	
B	WF_OP	WF_ON	EMIO_CAB	EMIO_CAB		EMIO_CAB	EMIO_CAB		NC	EMIO_DQ18	EMIO_DQ17	DVSS	EMIO_DQ20	EMIO_DQ21	EMIO_DQ22	EMIO_DQ23	EMIO_DQ24	EMIO_DQ25	EMIO_DQ26	EMIO_DQ27	EMIO_DQ28	EMIO_DQ29	EMIO_DQ30	EMIO_DQ31	EMIO_DQ32	EMIO_DQ33	EMIO_DQ34	EMIO_DQ35	
C		DVSS	AVDD1_2_USB	NC	EMIO_CAB	DVSS	EMIO_CAB		NC	EMIO_DQ18	EMIO_DQ17	DVSS	EMIO_DQ20	EMIO_DQ21	EMIO_DQ22	EMIO_DQ23	EMIO_DQ24	EMIO_DQ25	EMIO_DQ26	EMIO_DQ27	EMIO_DQ28	EMIO_DQ29	EMIO_DQ30	EMIO_DQ31	EMIO_DQ32	EMIO_DQ33	EMIO_DQ34	EMIO_DQ35	
D	BT_IN	BT_IP	DVSS	NC	EMIO_CAB	EMIO_CAB	NC	EMIO_CAB	DVSS	EMIO_DQ18	EMIO_DQ17	DVSS	EMIO_DQ20	EMIO_DQ21	EMIO_DQ22	EMIO_DQ23	EMIO_DQ24	EMIO_DQ25	EMIO_DQ26	EMIO_DQ27	EMIO_DQ28	EMIO_DQ29	EMIO_DQ30	EMIO_DQ31	EMIO_DQ32	EMIO_DQ33	EMIO_DQ34	EMIO_DQ35	
E		BT_OP	DVSS	EMIO_CAB	EMIO_CAB	EMIO_CAB	EMIO_CAB	EMIO_CAB	EMIO_CAB	EMIO_DQ18	EMIO_DQ17	DVSS	EMIO_DQ20	EMIO_DQ21	EMIO_DQ22	EMIO_DQ23	EMIO_DQ24	EMIO_DQ25	EMIO_DQ26	EMIO_DQ27	EMIO_DQ28	EMIO_DQ29	EMIO_DQ30	EMIO_DQ31	EMIO_DQ32	EMIO_DQ33	EMIO_DQ34	EMIO_DQ35	
F	GPS_I	CONN	BT_ON	DVSS	DVSS	DVSS	DVSS	DVSS	EMIO_CAB	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	
G	GPS_Q	CONN	BT_ON	DVSS	DVSS	DVSS	DVSS	DVSS	EMIO_CAB	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	
H		AVDD1_2_USB	CONN	BT_ON	DVSS	DVSS	DVSS	DVSS	EMIO_CAB	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	
J	DVDD1_2_USB	CAM_C_LK2	SC16	SDA6	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	CONN	BT_ON	
K		CAM_P_DN2	CAM_R_ST2	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	ANT_5_E12	
L	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	
M	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	
N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	
P	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	
R	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	
T	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	
U	DVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	AVDD1_2_USB	
V	CAM_R_ST1	CAM_R_ST2	SDA2	SC12	SDA4																								
W		CAM_C_LK1	ENT10	ENT9	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	CAM_C_LK1	
Y	SRCLK	CAM_P_DN1	ENT7	ENT6	ENT5	ENT4	ENT3	ENT2	ENT1	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	
AA	KPRO_W0	UTXD0	URXD0	ENT3	ENT2	ENT1	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	
AB	KPRO_W1	KPCOL_1	KPCOL_0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	ENT0	
AC	SPIO_C_SB	SPIO_M_0	PWM0	SDA0	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT	
AD	SPIO_M_1	SPIO_C_LK	BPL_PA_VM0	BPL_PA_VM1	BPL_PA_VM2	BPL_PA_VM3	BPL_PA_VM4	BPL_PA_VM5	BPL_PA_VM6	BPL_PA_VM7	BPL_PA_VM8	BPL_PA_VM9	BPL_PA_VM10	BPL_PA_VM11	BPL_PA_VM12	BPL_PA_VM13	BPL_PA_VM14	BPL_PA_VM15	BPL_PA_VM16	BPL_PA_VM17	BPL_PA_VM18	BPL_PA_VM19	BPL_PA_VM20	BPL_PA_VM21	BPL_PA_VM22	BPL_PA_VM23	BPL_PA_VM24	BPL_PA_VM25	
AE	SC11	BPL_PA_VM1	BPL_PA_VM2	BPL_PA_VM3	BPL_PA_VM4	BPL_PA_VM5	BPL_PA_VM6	BPL_PA_VM7	BPL_PA_VM8	BPL_PA_VM9	BPL_PA_VM10	BPL_PA_VM11	BPL_PA_VM12	BPL_PA_VM13	BPL_PA_VM14	BPL_PA_VM15	BPL_PA_VM16	BPL_PA_VM17	BPL_PA_VM18	BPL_PA_VM19	BPL_PA_VM20	BPL_PA_VM21	BPL_PA_VM22	BPL_PA_VM23	BPL_PA_VM24	BPL_PA_VM25	BPL_PA_VM26	BPL_PA_VM27	
AF	SDA1	BPL_PA_VM1	BPL_PA_VM2	BPL_PA_VM3	BPL_PA_VM4	BPL_PA_VM5	BPL_PA_VM6	BPL_PA_VM7	BPL_PA_VM8	BPL_PA_VM9	BPL_PA_VM10	BPL_PA_VM11	BPL_PA_VM12	BPL_PA_VM13	BPL_PA_VM14	BPL_PA_VM15	BPL_PA_VM16	BPL_PA_VM17	BPL_PA_VM18	BPL_PA_VM19	BPL_PA_VM20	BPL_PA_VM21	BPL_PA_VM22	BPL_PA_VM23	BPL_PA_VM24	BPL_PA_VM25	BPL_PA_VM26	BPL_PA_VM27	
AG	NC	BPL_PA_VM1	BPL_PA_VM2	BPL_PA_VM3	BPL_PA_VM4	BPL_PA_VM5	BPL_PA_VM6	BPL_PA_VM7	BPL_PA_VM8	BPL_PA_VM9	BPL_PA_VM10	BPL_PA_VM11	BPL_PA_VM12	BPL_PA_VM13	BPL_PA_VM14	BPL_PA_VM15	BPL_PA_VM16	BPL_PA_VM17	BPL_PA_VM18	BPL_PA_VM19	BPL_PA_VM20	BPL_PA_VM21	BPL_PA_VM22	BPL_PA_VM23	BPL_PA_VM24	BPL_PA_VM25	BPL_PA_VM26	BPL_PA_VM27	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	

Figure 2-1. Ball map view