SIP-T2X Defective Phones Checking List and Repairing Instruction

Defective Sort	Category	Checking List	Possible Defective Reason	Suggested Fix Manner
Audio	□A1、No audio or abnormal audio	□A11、The system can finish the bootup □A12、Has voice in handset □A13、Speaker once worked well □A14、Once connected with a non-original AC adapter □A15、Has voice in speaker □A16、Handset once worked well □A17、Works well with a new handset	1、Fit A11, A12, 95% generally the audio amplifier break down. 2、Fit A11, A12, A13, A14, 99.9% must be audio amplifier burnout. 3、Fit A17, handset defect. 4、Fit A11, don't fit A12, A15, generally because of no operation of VPM, no oscillation starting of 8.192M crystal oscillator or damaged master chip Codec.	1、Replace audio amplifier (T28/T26: U1, model: TPA6211A1, packing: SSOP-8; T22/T20: U5, model: TPA6203A1, packing: SSOP-8). 2、Replace a handset if the handset has problem but the speaker works well. 3、Upgrade software if no audio both in handset and speaker, then replace Y1, if still the same problem, replace the mainboard.
	□A2、Noise in conversation	□A21、Noise in local speaker □A22、Noise in local handset □A23、Noise in local headset □A24、When using speaker in handfree mode, the other party hears noise □A25、When using handset in handset mode, the other party hears noise □A26、When using headset in headset mode, the other party hears noise	1、Headset has noise in send generally because of the former shielded speakers. It uses a power supply with Y capacitance and when you hold the helix cable with a hand, there is acoustoelectric current in send, new headsets have fixed the problem. 2、Speaker & handset noise (electricity or background noise) generally because of electroacoustical component defect, or insufficient solder in devices.	1、Handset noise: replace a new handset. 2、Speaker noise: check if there is insufficient solder or short in the speaker circuit, then try to replace a new speaker.
	□A3、The volume heard on the other party is low.	□A31、The sending volume of local handset is low	1、Line sequence of handset is wrong welded. 2、Mistake the positive and negative of microphone cables.	1、Re-weld the cable. 2、Replace the handset.
Display	□D1、Display white screen	□D11、Power indicator is on □D12、Has voice in handset □D13、Once worked well, display white screen after upgrading failed	1、Fit D11, D12, D13, possibility: LCD defect, productoin problem, FPC cable broken. 2、Fit D11, don't fit D12, D13, generally because of 25M crystal oscillator problem, SDRAM damage or flash software loss.	1、Replace a new LCD, if still the problem, check if there is insufficient solder or short in FPC, if so, fix the problem, and replace to the original LCD. 2、Replace two capacitors 0402-33pF beside crystal oscillator Y2(T28/T26: C96&C97; T22/T20: C11&C12), if still the same problem, replace a new crystal oscillator Y2. 3、Replace the SDRAM U5(T26&T28) or U1(T20&T22). 4、Re-burn the Flash U2. 5、Replace a new mainboard if all failed in above solutions.
Display	□D2、Display error	□D21、No display of certain horizontal line or vertical line □D22、No display of certain icons □D23、Display messy code	Fit certain items of D21, D22, D23, generally LCD defect.	Replace a new LCD.
	□D3、Display fuzzy	□D31、Return to normal after contrast of T28(P)'s LCD is set to 6	1、Fit D31, because of failed software upgrade, return to normal after contrast is set to 6. 2、Don't fit D31, possibility: LCD defect, production problem.	1、Set contrast to 6. 2、Replace the LCD . 3、Replace the LCD, if still the same problem, check if there is insufficient solder or short in FPC, if so, fix the problem, and replace to the original LCD.

Network	□N1、Internet port can't acquire IP	□N11、MAC address displayed on the LCD is different from that displayed on the back label □N12、Switch or router indicates connection (indicator LED is on) after Ethernet cable being plugged into the Internet port of the phone □N13、LCD screen prompts "network unavailable" □N14、LCD screen prompts "updating network" □N15、LCD screen prompts "obtaining IP address" □N16、Can ping through with 'Static IP'	1、Failed in burning MAC address. 2、Fit N12, N13, N14, N15, generally Internet port has soldering problem. 3、Problems caused by setting system clock to 87.5MHz. 4. Fit N12, N13, N14, N15, N16, maybe software problem, Internet port has problem with initialization or failed in initializing. 5、Fit N12, N13, N14, N15, N16, maybe Internet port PHY fail. 6、Network transformer defect.	1、Re-burn the MAC address if it's incorrect. 2、Check if there is insufficient solder, if so, fix the solder. 3、Upgrade the software to the latest version through burner. 4、Replace the network transformer T1 or T2. 5、Replace the mainboard if all failed in above solutions.
	□N2、PC port can't acquire IP	□N21、PC indicates connection (indicator LED of network card is on) after Ethernet cable being plugged into the PC port of the phone □N22、PC can't acquire IP with router mode □N23、PC can't acquire IP with bridge mode □N24、PC port set to router: WAN port lost packages; PC port set to bridge: WAN port works well		
Keys		□K11、All keys can not work □K12、Some keys can not work □K13、Only one key can not work □K14、Input a wrong key value □K15、The phone reboots once by pressing a certain key	1、Bad pin contacts of mainboard & KB1 board. 2、Contaminated of golden pad or rubber. 3、Key stuck results in all keys can't work.	1、Check the connection of mainboard and KB1 board, and then reassemble them. 2、Check if contaminated of golden pad or rubber, wipe and clean if less contaminated, replace KB1 board & rubber if heavy polluted. 3、Reassemble the rubber & keys, fix the stuck key.
Hook		□M11、Hook can not pop up after being pressing down	1、Poor hook.	1、Replace a switchboard if the switchboard is independent. 2、Replace the mainboard if hook is on the mainboard.
Power		□P11、Can't power on with AC adapter □P12、Can't power on with PoE □P13、Can't power on with certain PoE switch	1、Fit P11, generally bad contact of adapter, damaged adapter or bad MOS tube. 2、Exclude the possibility of adapter problem, generally DC-DC IC damage. 3、Abnormal PoE circuit.	1、Unplug and plug the adapter again or replace a new adapter. 2、Replace the U9, U10. 3、If difficult to replace the adapter, replace the mainboard directly.
Software		□S11、LCD screen stops at 'initializing' interface □S12、LCD screen enters safety mode □S13、Can't access to web user interface □S14、The phone restarts constantly	Software problems.	1、Upgrade software through web user interface if it can be accessed to. 2、Upgrade software through recovery mode, refer to the specific documentation for operation guidance. 3、If cannot access to the recovery mode, replace the mainboard directly.