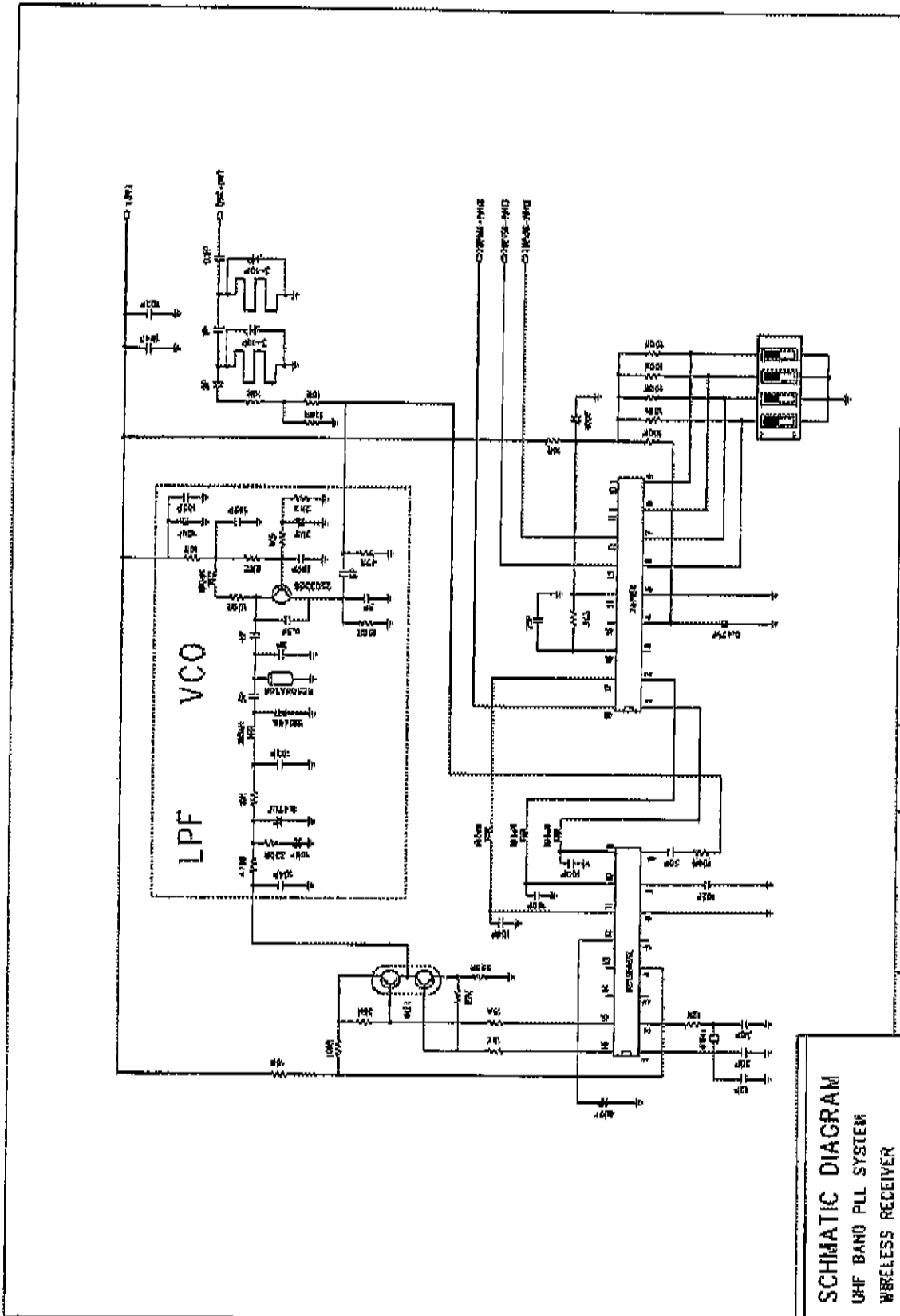


**SCHEMATIC DIAGRAM**  
**UHF BAND PLL SYSTEM**  
**WIRELESS RECEIVER**  
**MODEL: MR-SUS TURNER&AUDIO**

|           |          |         |             |      |
|-----------|----------|---------|-------------|------|
| REV. NO.  | DESIGNER | DATE    | DATE        | VER. |
|           | 小野       |         | FEB 21 2003 | A    |
| FILE NAME | DATE     | APPROVE | DATE        | VER. |
|           |          | 楊協定     |             |      |
| PART NO.  |          |         |             |      |



ET92R-03-036

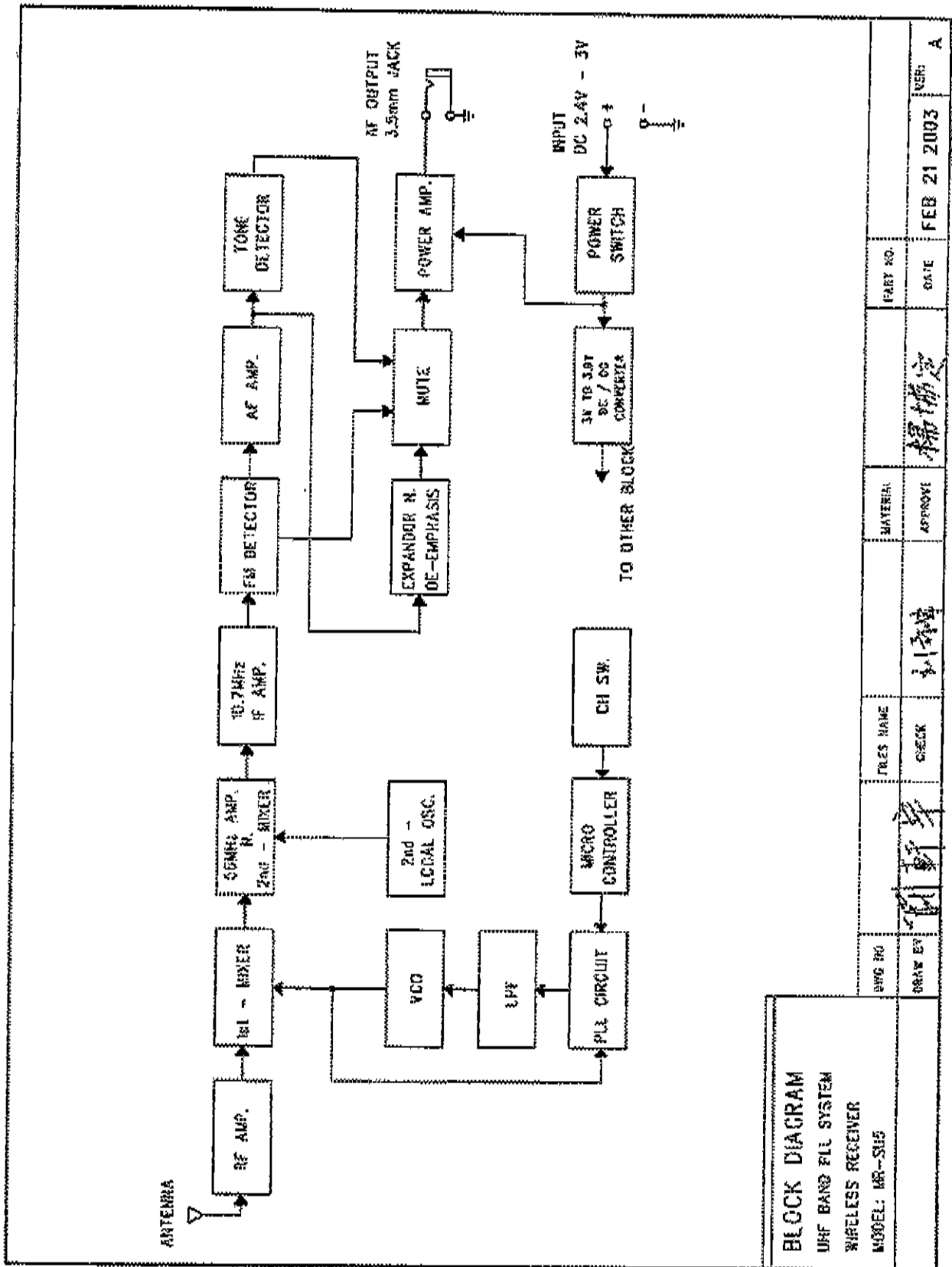


**SCHMATIC DIAGRAM**  
 UHF BAND PLL SYSTEM  
 WIRELESS RECEIVER  
 MODEL: MR-SUS VCO&OSC

|            |             |         |   |
|------------|-------------|---------|---|
| DATE       | FEB 21 2003 | VER.    | A |
| PART NO.   |             |         |   |
| MATERIAL   | 楊協定         | APPROVE |   |
| FINES NAME | 如行路         | CHECK   |   |
| DWG NO     |             | CREW BY |   |



ET92R-03-036



|         |            |          |             |
|---------|------------|----------|-------------|
| SWG NO. | FILES NAME | MATERIAL | PART NO.    |
| DRW EP  | 刘新军        | 杨协定      |             |
|         | CHECK      | APPROVE  | DATE        |
|         |            |          | FEB 21 2003 |
|         |            |          | VER: A      |



List of utilized test equipment

| Used | Kind of Instrument Precision Class | Manufacturer              | Model serial No.    |
|------|------------------------------------|---------------------------|---------------------|
|      | AC Power Supply                    | NF Electronic Instruments | 4220A/43032601-002  |
|      | Clamp Hi Tester                    | HIQKI                     | 3263-01/0938244     |
|      | Leakage Current Tester             | Yokogawa Electric Co.     | 3226/61NJ0200       |
|      | Oscilloscope                       | HP                        | 54600B/US35062439   |
|      | Distortion Meter                   | Good Will Co.             | GAD-201B/9040590    |
|      | Hi-pot Tester                      | Good Will Co.             | GPT-515AD/9060301   |
|      | Insulation Tester                  | Yokogawa Electric Co.     | 2407/01328          |
| ✓    | Multimeter                         | FLUKE                     | 75/54970587         |
|      | Distortion Meter                   | LODESTER                  | DM-3104A/823991     |
| ✓    | Power Meter                        | Yokogawa Electric Co.     | 2534/54BT9215       |
|      | Oscilloscope                       | Good Will Co.             | GOS-622/2690837     |
|      | Micro Meter                        | MITUTOYO                  | 293-621/2389319     |
|      | Recorder                           | Yokogawa Electric Co.     | 4177/40YP0327       |
|      | Stop Watch                         | CASICO                    | HS-5/EOO-5          |
|      | RC Oscillation                     | Nation                    | VP-7201A/6000070122 |
|      | Hi-pot Tester                      | Good Will Co.             | GPT-515AD/2070856   |
|      | Leakage Current Tester             | Yokogawa Electric Co.     | 3226/62NJ0440       |
|      | Insulation Tester                  | Yokogawa Electric Co.     | 2407/03023          |
|      | Power Meter                        | Base                      | 480/017521          |
|      | Recorder                           | Yokogawa Electric Co.     | HR-2500E/41VA0583   |
|      | Force Gauge                        | Alcol                     | HF-50/HF-100068     |
|      | Stop Watch                         | Casico                    | HS-5/EOO-3          |
|      | Leakage Current Tester             | Yokogawa Electric Co.     | 3226/63NJ0149       |
|      | Hi-pot Tester                      | Good Will Co.             | GPT-515AD/1080276   |
|      | Clamp Hi Tester                    | TES                       | 3020/93102356       |
|      | Insulation Tester                  | Yokogawa Electric Co.     | 2407/01455          |
|      | Power Meter                        | Base                      | 480/015752          |
|      | Micro Meter                        | MITUTOYO                  | 293-521-30/5098329  |
|      | Force Gauge                        | Alcol                     | HF-50/HF-100074     |
|      | Stop Watch                         | Casico                    | HS-5/EOO-4          |
|      | Leakage Current Tester             | Yokogawa Electric Co.     | 3226/64NJ0171       |
|      | Insulation Tester                  | Yokogawa Electric Co.     | 2407/2800108        |
|      | Oscilloscope                       | HP                        | 54600B/US35062436   |
|      | Power Meter                        | Yokogawa Electric Co.     | 2534/54BT9214       |
|      | Oscilloscope                       | Nation                    | VP-5230K/600001B122 |
|      | Oscilloscope                       | Good Will Co.             | GOS-622/3670433     |
|      | X-Ray                              | Victreen                  | 440/RFD/223         |
|      | NTSC TV Tester S.G                 | Shibasoku                 | TG-7/1/M-51015001   |
|      | Caliper                            | Mitutoyo                  | 530/310145          |
|      | Micro Meter                        | Mitutoyo                  | 293-521-30/5098329  |
|      | Stop Watch                         | Casico                    | HS-5/EOO-1          |
|      | Distortion Meter                   | HP                        | 339A/2025A06185     |
|      | Hi-pot Tester                      | Tama Proton Co.Ltd.       | PS-1120-AD/8626     |
|      | Freq. Converter                    | Shibasoku                 | RC-51B/M-16828009   |
|      | V/S IF Modulation                  | Shibasoku                 | RM-51AM-16233011    |



| Use | Kind of Instrument Precision Class | Manufacturer          | Model serial No.      |
|-----|------------------------------------|-----------------------|-----------------------|
|     | Power Meter                        | Topward               | 1301/887392           |
|     | Leakage Current Tester             | Yokogawa Electric Co. | 3226/64NJ0170         |
|     | Hi-pot Tester                      | Good Will Co.         | GPT-515AD/8083221     |
|     | Megohmmeter Mega                   | Toa                   | SM-5E/C96604D         |
|     | Oscilloscope                       | Good Will Co.         | GOS-622/3670400       |
|     | Stop Watch                         | Casico                | HS-5/EOO-2            |
|     | Recorder                           | Chino                 | AH3745-N00/AH992E041  |
|     | Recorder                           | Chino                 | AH3745-N00/ AH992E046 |
|     | Grounding Tester                   | Hioki                 | 3157/0331344          |
|     | mΩ Tester                          | Hioki                 | 3227/0531067          |
|     | Dial Indicator                     | Tedlock               | TM-110/21523          |
|     | Power Meter                        | Hioki                 | 3330/232594           |
|     | Power Meter                        | Hioki                 | 3330/333898           |
| ✓   | Recorder                           | Yokogawa Electric Co. | DR130/12VC45686       |
|     | Recorder                           | Yokogawa Electric Co. | DR130/12VC45689       |
| ✓   | Frequency Converter                | A.P.C                 | AFC-3KBB/F10004008    |
|     | Frequency Converter                | A.P.C                 | AFC-5KBB/F10004009    |
|     | Frequency Converter                | A.P.C                 | AFC-10KBB/F10004010   |
|     | Caliper                            | Mitutoyo              | 505-646-50/43587      |
|     | Caliper                            | Mitutoyo              | 505-646-50/44785      |
|     | Caliper                            | Mitutoyo              | 505-646-50/39820      |
|     | Caliper                            | Mitutoyo              | 505-646-50/39845      |
|     | Caliper                            | Mitutoyo              | 505-646-50/39882      |
|     | Caliper                            | Mitutoyo              | 505-646-50/39870      |
|     | Caliper                            | Mitutoyo              | 505-646-50/40267      |
| ✓   | Test Finder                        | ED&D                  | TFP-01/4043           |
|     | Test Nail                          | ED&D                  | FNP-01/40432          |
| ✓   | Gauge                              | ED&D                  | CC-23/1002            |
|     | Ball Pressure Tester               | ED&D                  | BPT-01                |
|     | Test Hammer                        | PTL                   | F22.50/5001291        |
|     | Test Chain                         | Eriorg                | 6306/000718-1         |
|     | Test Plug                          | PTL                   | F53060/5001289        |
|     | Test Hook                          | PTL                   | P10.40/5001292        |
|     | Ball                               | ED&D                  | ITB-01/20574          |
|     | Scratch Pin                        | ED&D                  | SP-01/20573           |
|     | Torque Driver                      | Tohnichi              | 40FTG2-S/428826N      |
|     | Recorder                           | Chino                 | LE1000/LE12530        |
| ✓   | Multimeter                         | Fluke                 | 87 II /75520603       |
|     | Multimeter                         | Fluke                 | 87 II /75520605       |
|     | Multimeter                         | Fluke                 | 87 II /75520606       |
|     | Test Pin                           | ED&D                  | TPP-01/20962          |
|     | Test Probe                         | ED&D                  | TTP-01/20961          |
|     | Optical Power METER                | Advantest Corp.       | TQB215/1005011184     |
|     | Chamber                            | KSON                  | THS-DOH 100/2248      |
|     | Frequency converter                | Exttech               | CFC-130 / 781551      |
|     | Frequency converter                | HWA-I                 | CFC-105S / 750418     |



| Use | Kind of Instrument Precision Class | Manufacturer               | Model serial No.      |
|-----|------------------------------------|----------------------------|-----------------------|
|     | Frequency converter                | HWA-I                      | CFC-120S / 750904     |
|     | Frequency converter                | Board Tech Electronic Co., | BFA-200-50D/010136    |
|     | Frequency converter                | Board Tech Electronic Co., | BFA-200-70D/53054001- |
|     | Frequency converter                | A.P.C.                     | AFC-5KB/880520        |
|     | Frequency converter                | A.P.C.                     | AFC-5KB/8803013       |
|     | Temp. Recorder(1)                  | Yokogawa Electric Co.      | HR 2500E / 42VA0503   |
|     | Temp. Recorder(2)                  | Yokogawa Electric Co.      | HR 2500E / 42VA0504   |
|     | Temp. Recorder(3)                  | Yokogawa Electric Co.      | HR 2500E / 42VA0505   |
|     | Temp. Recorder(4)                  | Yokogawa Electric Co.      | HR 2500E / 42VA0502   |
|     | Temp. Recorder(5)                  | Yokogawa Electric Co.      | GP-IB3081/46SB1947    |
|     | Temp. Recorder(6)                  | Yokogawa Electric Co.      | ER186 /240YS -58      |
|     | Temp. Recorder(7)                  | Yokogawa Electric Co.      | HR 2500E / 40VA139    |
|     | Temp. Recorder(8)                  | Chino                      | EH100-06              |
|     | Temp. Recorder(9)                  | HIQKI                      | AH3475-A01/AH991E014  |
|     | Temp. Recorder(10)                 | HIQKI                      | AH3475-A01/AH991E015  |
|     | Humidity Chamber                   | Yashima Works Ltd.         | R21-308Y-DP2BI-CB/    |
|     | Humidity Chamber                   | Tabai Espec Corp.          | PL-3E/ 951495         |
|     | Humidity Chamber                   | Tabai Espec Corp.          | PSL-4F/12005991       |
|     | Humidity Chamber                   | Tabai Espec Corp.          | PH-2G/ 621369         |
|     | Humidity Chamber                   | ENET                       | FWC9.30.80            |
|     | Humidity Chamber                   | ENET                       | EKK 1000.40           |
|     | Hi-Lo Temp. Chamber                | Yashima Works Ltd.         | LX-DPRA715-2          |
|     | High-pot tester                    | Tokvo Tamadensoku          | TP-5120ALZ            |
|     | High-pot tester                    | Good will Instruments Co., | GPT-515AD / 0120755   |
|     | High-pot tester                    | Yamabishi                  | HVT-50-50             |
|     | Insulation Tester                  | Yokogawa                   | 2403                  |
|     | Insulation Tester                  | Yokogawa                   | 2406                  |
|     | Digital MQ/Hi-tester               | Hioki                      | 3119                  |
|     | Leakage Current Tester             | Simpson Electric Co.       | 229-2                 |
|     | Leakage Current Tester             | Simpson Electric Co.       | 228                   |
|     | Leakage Current Tester             | Yokogawa                   | 3226/61NJ0093         |
|     | Grounding Tester                   | Good will Co.              | GCT-630               |
|     | Grounding Tester                   | Clare Working England      | A217/ M802/ 83908A1   |
| ✓   | Oven                               | Tabai Espec Corp.          | HPS-222 / 2780990     |
|     | Oven                               | Tabai Espec Corp.          | HPS-222 / 3001882     |
|     | Oven                               | Mallier                    | PHQ-2H-P              |
|     | High-temp. oven                    | Tabai                      | PHH-201               |
|     | Power meter                        | Yokogawa                   | 2503-21 / 01576       |
|     | Power meter                        | Yokogawa                   | 2533 /50AU1138        |
|     | Power Meter                        | Yokogawa                   | 2532/ 52AV0074        |
|     | Power Meter                        | Yokogawa                   | 2532/52AV0073         |
|     | Power hltester(Power meter)        | Hioki                      | 3330/0133556          |
|     | Power hltester(Power meter)        | Hioki                      | 3330/0133336          |
|     | Power hltester(Power meter)        | Hioki                      | 3330/0339476          |
|     | Oscilloscope                       | Hewlett Packard            | HP-54810A             |
|     | Digitizing Osc.                    | HP                         | 54501A/ 2930A 07966   |



| Use | Kind of Instrument Precision Class     | Manufacturer    | Model serial No.        |
|-----|--|-----------------|-------------------------|
|     | Digital Storage Osc.                   | Leader          | 3060A/0147384           |
|     | Test finger                            | Excel           | TC-300(U.L.)            |
|     | Test finger                            | PTL             | P-10.01(IEC65)          |
|     | Test probe                             | PTL             | P 10.03(IEC335-1)       |
|     | Test finger                            | PTL             | P-10.05(IEC65)          |
|     | Test nail                              | PTL             | P10.39 &                |
|     | Jointed test finger                    | Fimko Lab.      | EN60950/Fig.            |
|     | Rigid test finger                      | Fimko Lab.      | IEC 65/Fig. 3(IEC335-1) |
|     | Test hook                              | Fimko Lab.      | IEC 65/Fig. 4           |
|     | Test probe                             | Precision       | IEC 65/Fig. 6.1         |
|     | Test probe                             | Fimko Lab.      | IEC 65/1                |
|     | Test probe                             | Fimko Lab.      | IEC 65/2                |
|     | Test probe                             | Fimko Lab.      | IEC 65/4                |
|     | Test sphere(50mm)                      | Fimko Lab.      | EN60529/Tab.VI A.1.     |
|     | Test sphere(12.5mm)                    | Fimko Lab.      | EN60529/Tab.VII 2.1.    |
|     | Test rod.1mm(D)x100mm(L)               | Fimko Lab.      | EN60529/Tab.VI D.1.     |
|     | Test rod.2.5mm(D)x100mm(L)             | Fimko Lab.      | EN60529/Tab.CI C.1.     |
|     | Test probe.12mm(D)x80mm(L)             | Fimko Lab.      | IEC950/Fig.16           |
|     | Steel sphere.50mm(D)/500g              | PTL             | IEC950/Fig.7(with hook) |
|     | Steel sphere.50mm(D)/500g              | PTL             | IEC950/Fig.7(without    |
|     | Steel sphere.50mm(D)/500g              | PTL             | IEC950/Fig.7(with hook) |
|     | Spring impact hammer                   | PTL             | F22.15                  |
|     | Spring impact hammer                   | PTL             | F22.50                  |
|     | Spring impact hammer                   | PTL             | F22.16                  |
|     | Torque leader                          | M. H. H         | 12Kaf cm                |
|     | Push pull gauge                        | PTL             | P-10.32                 |
|     | Push-Pull gauge                        | Aikoh           | AE-50                   |
|     | Caliper                                | Mitutovo        | 505-634-50              |
|     | Micro meter                            | Mitutovo        | 340-101                 |
|     | Motor overload tester.                 |                 | 88127                   |
|     | Water proof tester                     | Shih-Sheng      | SSE-1                   |
|     | Test apparatus for devices forming a   | Fimko Lab.      | EN60065/Fig. 18.1       |
|     | Flammability Glow wire test Instrument | Suga Corp.      | GW-1/ WF488603          |
|     | Flame Test equipment                   | Excel Inc.      | BT-1500A                |
|     | Tracking test apparatus                | PTL             | M-31.10                 |
|     | Ball pressure tester                   | PTL             | T-10.02                 |
|     | Needle frame Tester                    | Suga            | NF-1                    |
|     | Needle frame Tester                    | ED&D            | T21.16                  |
|     | Power cord bending tester              | CHUYI           | C.S-7062A               |
|     | Digital Multimeter                     | Goodwill        | GDM-392/30400496        |
|     | Digital thermometer                    | Yokogawa        | 2455/73JV0071           |
|     | Timer                                  | Self-production | _____                   |
|     | Stop watch                             | Casio           | HS-3                    |



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| Use | Kind of Instrument Precision Class          | Manufacturer             | Model serial No.    |
|-----|---|--------------------------|---------------------|
|     | Hot Line Coil Resistance & Temp. Meter      | Soken                    | DAC-HR450UL/0223    |
|     | Winding insulation tester                   | Chuyi                    | ---                 |
|     | Microwave survey meter                      | Holiday Ind.             | Ser. No.52155       |
|     | True RMS Voltmeter                          | John Fluke Mfg Co.       | 8921A/4800106       |
|     | Overvoltage test station                    | UL                       | ---                 |
|     | Programmable Graphics                       | Chroma Ate Inc.          | C-2000/200919       |
|     | Graphic Generator                           | Chroma ATE. Inc.         | Chroma 2000         |
|     | Convergency Gauge                           | Optical instruments      | CM-7AG/13510501     |
|     | Color Analyzer                              | Minolta Camera Co., Ltd. | TV-2130/ 108019     |
|     | Function generator                          | Leader                   | LFG 1310/087271     |
|     | Distortion meter                            | National                 | VP-7704A/351996E122 |
|     | Color TV pattern generator                  | Philips                  | PM5515/Lo 548609    |
|     | Function generator                          | Leader                   | LFG 1310/087271     |
|     | Distortion meter                            | National                 | VP-7704A/351996E122 |
|     | Voltage surge simulator                     | Noise                    | Nss-843E/8980545    |
|     | Vibration Controller                        | IMV Lab Co., Ltd         | VS-3203/ S-2392     |
|     | Surge simulator                             | Testing                  | T3-05               |
|     | Withstanding voltage tester                 | Precision                | DC 12KV/2mA         |
|     | Regulated DC Power Supply                   | Takasako Ltd.            | GP-035-15           |
|     | Electronic Load                             | Prodigit instrument      | PAL-200& PAL -150   |
|     | Electronic Load                             | ZENTECH                  | 2600R/704194        |
|     | Electronic Load                             | ZENTECH                  | 2600R/704192        |
|     | AC loader                                   | J.J.LLOYD                | LR6                 |
|     | AC load/current simulator                   | Prodigit                 | 3230                |
|     | Slidac                                      | Smile                    | SE-230              |
|     | Slidac                                      | Tai yeesh sing           | -----               |
|     | Slidac                                      | Tai yeesh sing           | -----               |
|     | Switch Endurance test with resistance load  | CHUYI                    | -----               |
|     | Switch Endurance test with capacitance load | CHUYI                    | -----               |
|     | Switch Endurance test with capacitance load | CHUYI                    | -----               |