

Short Service Book

Date: 2007-03-26 v1.3
MAG: C39
Service-chassis-name: AZ1836



Development-chassis-name: **CD Soundmachine**

Product-description + key features
 Playback Media: MP3-CD, CD, CD-R, CD-RW, MP3-CD, WMA-CD
 Disc Playback Modes:
 Fast Forward/Backward, Next/Previous Track Search, Repeat Play, Shuffle Play
 Loader Type: Top
 Programmable Tracks: 20
 With AM / FM Antenna
 Stereo Sound System with 2x1.0 W output power

Successor of: Not applicable

Complete new/derived: NEW

Own-designed product or OEM: OEM

Supplier/Development lab (BLC): CMT

Supplier/Production Center: ARTS

Which regions are the customer: USA, APAC, LATAM

| Sales per region per CTN: | Model | Stk | First Shipment | FMS Qty | Total Qty |
|---------------------------|---------|-----|----------------|---------|-----------|
| | AZ1836 | /37 | wk610 | 10k | 60k |
| | AZ1836 | /98 | Q4'06 | 10k | TBC |
| | AZ1836B | /55 | wk638 | 10k | 100k |
| | AZ1836W | /85 | wk715 | 2k | TBC |

| Expected going-price: | Model | Stk | Region | Going Price | Currency |
|-----------------------|---------|-----|--------|-------------|----------|
| | AZ1836 | /37 | USA | 59 | USD |
| | AZ1836 | /98 | APAC | TBC | TBC |
| | AZ1836B | /55 | LATAM | TBC | TBC |
| | AZ1836W | /85 | LATAM | TBC | TBC |

B = Black color version of AZ1836, W = white color version of AZ1836

Planning:
 PRS wk604
 CR wk609
 FMS wk610 (/37), wk638 (/55), Q4'06 (/98), Q2'07 (/85)

Service-offering:
Europe No Repair (CCB)
APAC Module Swap, Module Repair
LATAM Module Swap, Module Repair

Estimated CPI at PRS: US=USD28.03, LATAM=USD27.97, APAC=USD15 (per region input)

Field-call rate breakdown: The FCR target is 4.58%

| Key-components and technology | Service Spareparts | Philips 12NC |
|-------------------------------|-------------------------|--------------|
| | AC CORD SET CUL APP 6FT | 994000001688 |
| | ROD ANTENNA 158-600MM | 994000001687 |
| | BATTERY DOOR | 994000005091 |
| | REMOTE CONTROL AZ1836 | 994000005092 |

Expected serviceability rating: Not applicable

Standard-tools check: Not applicable

Extra-tools needed: Not applicable

Backcharging opportunities Yes

Key delta requirements: Not applicable

Service deliverables expected:
 Service BOM of accessory partlist for Europe
 Service BOM of module level for APAC and LATAM

Knowledge Transfer Ready on CCR

Special actions needed Not applicable

Changed opinions after PRS-date: Not applicable

| | | | | | | | | | |
|-----|------------------------|---------------|--------------|--|-----|-----------|-----|------|-----------------|
| Rev | PRODUCT FCR PREDICTION | | | | | | | | |
| 3 | Model No. : AZ1836/37 | Description : | CD/MP3: | Sanyo DA11B3VF | REV | DATE | REV | DATE | Prepared by |
| | Dev. Centre : Commtech | | USB/Ripping: | Motorola solution | 1 | 15-Dec-05 | | | Eldex / PN Jian |
| | Prodn. Centre : ARTS | | Tuner: | Analog (Toshiba TA2111 or compatible IC) | 2 | 09-Feb-06 | | | |
| | Release Milestone : DR | | | | 3 | 13-Feb-06 | | | |

| | | Model No.: AZ1836/37 | | | | | | Remark | |
|---------------------------------------|--------------|----------------------|--------------|--------------|---------------|---------------|---------------|---|---|
| ITEM | reference | Prediction | Target | Percentage | Delta | Uncertainty | Risk | Reference for actual FCR | Proposed Actions |
| CD | 0.400 | 0.380 | 0.380 | 8.1% | -0.020 | medium | medium | | |
| CD-drive | 0.327 | 0.311 | 0.311 | 6.6% | -0.016 | medium | medium | Last two years' data with 5% improvement | Burn in test |
| CD-electronics | 0.020 | 0.019 | 0.019 | 0.4% | -0.001 | medium | medium | Last two years' data with 5% improvement | 0 hour check and burn in test |
| CD-mechanics | 0.053 | 0.050 | 0.050 | 1.1% | -0.003 | low | low | Last two years' data with 5% improvement | |
| Cass | 0.061 | | | | | | | | |
| Cassette deck | 0.036 | 0.000 | | | | | | No cassette | |
| Cassette elect. | 0.008 | 0.000 | | | | | | No cassette | |
| Cassette Mech. | 0.016 | 0.000 | | | | | | No cassette | |
| Tuner | 0.008 | 0.008 | 0.008 | 0.2% | 0.000 | low | low | | |
| TUNER electronics | 0.008 | 0.008 | 0.008 | 0.2% | 0.000 | low | low | Ref. Last two years' data | |
| TUNER mechanics | 0.000 | 0.000 | 0.000 | 0.0% | 0.000 | low | low | Ref. Last two years' data | |
| COMPONENTS | 0.545 | 0.445 | 0.445 | 9.5% | -0.100 | low | low | | |
| CD door switch (latch) | 0.012 | 0.012 | 0.012 | 0.3% | 0.000 | medium | low | Lift to open | |
| Resistor/capacitor/IC | 0.057 | 0.057 | 0.057 | 1.2% | 0.000 | medium | medium | Ref. Last two years' data | No action |
| Woox | 0.040 | 0.000 | 0.000 | 0.0% | -0.040 | | | No Woox | |
| Remote control | 0.024 | 0.024 | 0.024 | 0.5% | 0.000 | | | RC distance test | |
| Power system/transformer | 0.036 | 0.109 | 0.109 | 2.3% | 0.073 | low | low | | Component release/Burn in test for transformer |
| Speaker(s) | 0.008 | 0.008 | 0.008 | 0.2% | 0.000 | low | low | Low power speakers: 1.0 x 2 | |
| Source select switches / Keys | 0.331 | 0.199 | 0.199 | 4.2% | -0.132 | medium | medium | new mech. Part | Switching test |
| Antenna | 0.020 | 0.020 | 0.020 | 0.4% | 0.000 | low | low | Ref. Last two years' data | Old antenna used and will re-demonstrate switching test |
| Battery compartment | 0.000 | 0.000 | 0.000 | 0.0% | 0.000 | low | low | Ref. Last two years' data | |
| PCBA | 0.008 | 0.008 | 0.008 | 0.2% | 0.000 | low | low | Ref. Last two years' data | |
| One of a kind failure (miscellaneous) | 0.008 | 0.008 | 0.008 | 0.2% | 0.000 | low | low | Ref. Last two years' data | |
| CONTROL / FRONT | 0.004 | 0.004 | 0.004 | 0.1% | 0.000 | low | low | | |
| Electronics (uP, resonator) | 0.000 | 0.000 | 0.000 | 0.0% | 0.000 | low | low | Ref. Last two years' data | |
| Display (LCD) | 0.004 | 0.004 | 0.004 | 0.1% | 0.000 | low | low | Ref. Last two years' data | |
| DESIGN / TECHNIQUE | 0.000 | 0.550 | 0.450 | 11.7% | 0.550 | medium | medium | | |
| CD / Playability | 0.000 | 0.050 | 0.050 | 1.1% | 0.050 | medium | medium | Low price MP3 system used, plan to drop to 0.2 | SW release procedure/test case/ all related discs test |
| Mode 1 UDF missing track | 0.000 | 0.100 | 0.000 | 2.1% | 0.100 | medium | medium | Toshiba solution still did not solve this problem | |
| USB direct module/rel. | 0.000 | 0.200 | 0.200 | 4.3% | 0.200 | medium | medium | Module 0.3%, Rel. 0.2% (Figure not committed by CMT as no historical data in CDSM applicaton for ref. However, project team will work out to achieve the target. | SW release procedure/test case/ all related discs test |
| CD ripping | 0.000 | 0.200 | 0.200 | 4.3% | 0.200 | medium | medium | Module 0.3%, operation 0.2% (Figure not committed by CMT as no historical data in CDSM applicaton for ref. However, project team will work out to achieve the target. | SW release procedure/test case/ all related discs test |
| PROCESS | 0.089 | 0.089 | 0.089 | 1.9% | 0.000 | low | low | | |
| Assembly fault (incl. Interconnects) | 0.040 | 0.040 | 0.040 | 0.9% | 0.000 | low | low | Ref. Last two years' data | |
| Dry solder joint / bad soldered | 0.048 | 0.048 | 0.048 | 1.0% | 0.000 | Medium | Medium | | Monitor the process to do improvement. |
| MISCELLANEOUS | 0.993 | 3.208 | 3.208 | 68.5% | 2.214 | Medium | medium | | |
| Fault not found / no fault found | 0.957 | 2.771 | 2.771 | 59.2% | 1.814 | Medium | medium | Ref. Last two years' USA FNF percentage | QSG will be added |
| Other /reason unknow | 0.036 | 0.036 | 0.036 | 0.8% | 0.000 | low | low | Ref. Last two years' USA FNF percentage | QSG will be added |
| USB related FNF | 0.000 | 0.200 | 0.200 | 4.3% | 0.200 | Medium | medium | | QSG will be added |
| Ripping related FNF | 0.000 | 0.200 | 0.200 | 4.3% | 0.200 | Medium | medium | | QSG will be added |
| TOTAL PREDICTED FCR (%) | 2.1 | 4.68 | 4.58 | 100% | 2.644 | | | Year 2006 FCR Target - Europe:1.08%, USA:2.7%, AP:3.6%, Latam2.52% (Updated in Dec. 2004) | |

PHILIPS PDCC
 Signature: OEM/ODM: Project: QA: