MZ-R900 Operation Failure

Is the lid opened and closed?

- Y

- N Upper Panel Deformed, Chassis Deformed

Is a disc ejected?

- Y

- N Holder Deformed, Upper Panel Deformed

Does the unit enter TEST mode?

- Y

- N IC801 (LCD Module may be defective if the unit can not enter the test mode by key input.)

Is the OP Laser working?

- Y

- N No Laser Emission (Go to "NO Disc Display" page)

Are the focus and tracking working?

- N

- Y Are the focus coil and tracking coil conducting?

- Y

- N IC551 Is the signal input to pins No.18,19, 24,25?

- Y

- N IC801

- N IC551 Is the signal output from pins No.8,10, 33,35?

- Y

- N IC551

- Y CN501 Is there signal on pins No.1,2, 3,4?

- Y

- N L551, L552, L553, L554

Go to Next Page

* Please use this flow chart referring to the operation manual for MZ-R900 available on ESI Homepage.
Continued from the previous page

Is the sled motor working?

Are the motor and flexible cable conducting?

Y

IC551

Is the signal input to pins No.16,17, 26,27?

Y

N

IC801

N

Motor Flexible Cable or Sled Motor(M602)

Is the signal output from pins No.12,14, 29,31?

Y

N

IC551

Are the motor and flexible cable conducting?

N

Spindle Motor(M601) or Motor Flexible cable

Are the spindle motor working?

Y

Are the spindle motor rotating normally?

N

Spindle Motor(M601) or Flexible Cable of Motor

Are the motor and flexible cable conducting?

N

N

IC551

Is the signal output from pins No.37 through 42?

Y

N

RB551, RB552

Is the spindle motor rotating normally?

Y

Are the laser current and RF wave form normal?

N

OP

IC801 (IC501,IC551)

Y

IC801

Is the signal input to pins No.2,3,4,5(UI,VI,SI, PWM)?

N

Spindle Motor(M601) or Flexible Cable of Motor

Are the motor and flexible cable conducting?

N

Is the signal output from pins No.44,46,48(Uo, Vo,Wo)?

Y

IC551

Is the signal output from pins No. 44,46,48(Uo, Vo,Wo)?

N

IC551

* If a strong shock is added to the unit, track patterns of CSP(IC801) are more likely to be peeled off and also a cold solder is easily occur on IC551.
Playback Failure
Sound skip, Stop etc.

IC501
Is the signal input to pins No.8,9,10,11?
N
Is CN501 normal?
Y
N
CN501

Y
Is the signal output from pin No.33(RF OUT)?
N
IC501

Y
Is the laser current normal?
N

Y
Is the RF wave form normal?
N
Is there scope noise?
Y
C529

N
IC501 or IC801

* Failure of RF Wave Form
- OP Failure, Dirty Lens (High jitter, Low RF level)
- CLV Motor (In case of long jitter cycle)
- Deterioration of Chassis (Drop etc.)
- IC501, IC801
No Laser Emission "NO DISC" Display

IC501

Is the voltage input to pin No.19 (APCREF input)?

N

Are R505 and R517 normal?

Y

IC801

N

R505, R517

IC501

Is the voltage output from pin No.20 (PD OUT)?

Y

N

IC501

N

R519, Q501

OP Failure
Recording Failure

- Is the OP laser current normal? (N → OP)
  - Y → is the appearance of over head flexible cable normal? (N)
    - Y → is the over head flexible cable and coil conducting? (N → OP)
      - Y → IC601: Is the signal input to pin No.7 (EFM input)? (N → IC801)
        - Y → Go to Next page

*There is a possibility of CN501 poor connection or IC501 failure.*
Continued from previous page.

Is the over head working?

IC601

Is the signal input to pins No.1,2,3, 5,6?

IC601

Is the signal input to pins No.37, 42?

Failure of Motor(M603) or Motor Flexible Cable

IC601

Is the signal output from pins No.33,35?

Q604,Q605 D606,D608

IC601

Is the signal output from pins No.38,41?

IC601

Is the signal output from pins No.11,14, 21,22?

IC601

Is the signal output from pins No.33,35?

IC601

Is the signal output from pins No.11,14, 21,22?

IC601

Is the signal output from pins No.33,35?

IC601

Is the signal output from pins No.11,14, 21,22?

IC601

Is the signal output from pins No.10,15?

IC601

Is the signal output from pins No.10,15?

UNREG Line

UNREG Line
Audio Section Failure

**IC301**
Is the signal input to pins No.16, 17, 19, 20?

- **Y**
  - **IC301**
    Is the waveform on pins No.26, 28, 1, 27 normal?
    - **Y**
      - **IC301**
        Is the waveform on pins No.2, 3 normal?
        - **Y**
          - **IC301**
            Is the input waveform on pins No.1, 3 normal?
            - **Y**
              - **IC302**
                Is the output voltage on pins No.10, 12 normal?
                - **Y**
                  - C104, C204, R104, R204, J302
                - **N**
                  - C103, C203
            - **N**
              - C101, C201, R101, R201
        - **N**
          - **IC301 Failure**
    - **N**
      - IC801 Failure (CSP Cold Solder, Peeling)

**IC301 Failure**
*Cold solder is especially suspected.*

- **N**
  - **IC301 Failure**

**IC302**
Is the input waveform on pins No.1, 3 normal?

- **Y**
  - **IC302**
    Is the output voltage on pins No.10, 12 normal?
    - **Y**
      - **IC302 Failure**
      - (*Cold solder is especially suspected.*)
    - **N**
      - C104, C204, R104, R204, J302

*In case of No Beep: Cold solder on pin No.14
In case of Muting Noise: Cold solder on pin No.15

**Use a 1KHz signal test disc (TDYS-1 P/N 4-963-646-01)**

**D302, R104, R204 are breakable when adding a higher voltage than Headphones jack's.**
Power Section Failure  
(No power, Low Batt, Hi Dc In)

No power with AC adapter

- Is the voltage of AC adapter normal?  
  - Y: Are J601, T601 conducting?  
    - Y: Q602, D603  
    - N: J601, T601  
  - N: AC Adapter

Low Batt, Hi Dc In

- Are R602, R603 (Hi Dc In) working?  
  - Y: Is R801 (Low Batt) working?  
    - Y:  
    - N: R602, R603  
  - N: R801

Unit shows "Low Batt" just after using a battery.

No power on at all

- Is Q601 working?  
  - Y:  
  - N: S801 (HOLD SWITCH)  
    - Y:  
    - N: Q601

Go to Next page
Battery Charging Section

Is S804 (BATTERY IN DETECT) normal? [N]

Y

IC601
Is the signal input to pins No.55,54 (CHG, GAIN)? [N]

Y

IC601
Is the signal output from pins No.45,49 (CHG SW, RF2)? [N]

Y

IC601
Is the voltage input to pins No.43,44,46 (VB, BATM, RS)? [N]

Y

IC601
Is the voltage output from pin No.51 (CHGMON)? [N]

Y

S804

IC801 Failure

IC601
Cold Solder

IC601 Failure

Q602, R606
R604, R605