

Sega/Nanao Model MC-2030-S Repair Guide

Sega part # 200-5044 (20" tube, sort of a universal mount metal frame). Also known as the Kaga model number KZ-20ES.

GENERAL INFORMATION

Chassis has "Nanao KB240331D" silkscreened in white letters on the parts side of the main board. It is almost exactly the same as a model MC-2000-S (KB240331B) except that the main board has been changed slightly to add a second yoke connector for selecting a mirrored image and the neckboard is different. This model uses exactly the same capacitor kit as the MC-2000-S (Zanen Electronics kit # 603). This color raster standard resolution video arcade game monitor operates on 100 volts AC and *requires* the use of an isolation transformer. Note that capacitor C412 and resistor R422 are not installed on this model. Wei-ya model # 2820H can replace this chassis and is available from Alva Amusement. The Wei-ya 2820H does not need an isolation transformer and can operate from 100 volts perfectly fine. If your application can provide 120 volts AC from an isolation transformer, then you can use the Wei-ya 820H replacement chassis (requires isolation transformer and 120 volts).

CRT INFO: # 510WUB22 (10 pin) Uses B&K rejuvenator socket # CR-23, 6 volt heater.

YOKE INFO: Vertical resistance is 50 ohms (yellow & brown wires). Horizontal resistance is 2 ohms (red & blue wires).

FLYBACK INFO: Murata # MSH1FAC13-A or MHF028-21. Neither one are available anymore and were discontinued a long time ago. However, one company has reproduced the MSH1FAC13-A flyback: www.technotronic-dimensions.com/Productucts2b1.htm#target2

CAPACITOR LIST:

C101	100 uf @ 16 volts	C401	1 uf @ 50 volts	C406	470 uf @ 16
	volts				
C407	10 uf @ 50 volts	C409	10 uf @ 160 volts	C410	1 uf @ 50
	volts				
C411	220 uf @ 35 volts	C413	470 uf @ 16 volts	C414	10 uf @ 50
	volts				
C416	10 uf @ 160 volts	C417	220 uf @ 35 volts	C418	3.3 uf @ 160
	volts				
C501	10 uf @ 50 volts	C502	10 uf @ 50 volts	C503	1 uf @ 50
	volts				
C505	1 uf @ 50 volts	C510	1 uf @ 50 volts	C511	220 uf @ 25
	volts				
C523	100 uf @ 50 volts	C524	47 uf @ 250 volts	C526	1 uf @ 250
	volts				
C527	10 uf @ 160 volts	C529	10 uf @ 50 volts	C906	22 uf @ 250
	volts				
C910	47 uf @ 16 volts				

Component notes: Capacitors C409 and C416 have limited mounting clearance since they are mounted so close to the metal frame. You'll probably have to mount them standing a little higher off the board and leaning in order to clear the metal frame. Capacitors C523 and C524 are located inside the flyback cage.

COMMON PROBLEM:

No vertical deflection. Check capacitor C408 (10 uf @ 25 volt tantalum). It is not normally included in capkits. Also check these components: capacitor C523, resistor R416 (22 ohm 1 watt), and vertical output transistors Q401 & Q402 (types 2SC2073 or 2SD1138).

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