



SprinterTM

mainboard

Sp2000

Assembly Guide

PETERS PLUS

ATTENTION!

Turn off the power to your system and discharge your body's static electric charge by touching a grounded surface – e.g., the metal surface of the power supply – before performing any hardware procedure.

In incident of the incorrect installation of the equipment, the manufacturer of mainboard does not bear any liability for any direct or indirect damage of mainboard or any other components of the computer. If you do not feel comfortable performing the installation, consult a qualified computer technician .

Damage to mainboard and injury to yourself may result if power is applied during installation.

1. The technical description.

Introducing.

The mainboard Sp2000 is designed for a model series of computer Sprinter. The mainboard shipping in the collected kind and useful in a basic configuration. The mainboard was designed for the installation in a case AT MiniTower and has standard connectors for set of the keyboard and power (connectors P8 and P9 of the power supply). connectors male for set FDD, devices of IDE, mouse, printer, joystick and taperecorder, video, button of reset, indicators POWER, TURBO, HDD. Two slots ISA-8 do access to cards in them.

Mainboard features:

1. CPU Z84C15 (21MHz / 3.5MHz)
2. RAM (72 pin SIMM, 7MHz) 4Mb
3. VideoRAM 256Kb (up to 512Kb)
4. ROM – 256Kb
5. Fast RAM- 64Kb.
6. PLD EP1K30QC208-3 by ALTERA
7. FDD controller (WD1793). Usage of FDD 3.5" on 720Kb/1.44Mb and 5.25" on 720Kb is possible.
8. IDE interface. Two connectors for set up of HDD and CD-ROM.
9. Bipper, AY-3-8910, stereo DAC (16 bit).
10. Kempston joystick, tape in/out.
11. Controller MS-Mouse.
12. LPT interface.
13. Two slots ISA-8.
14. Capability real time clock CMOS (DALLAS) install.
15. Connectors for the power supply from AT case. Need +5V, -5V, +12V, -12V.

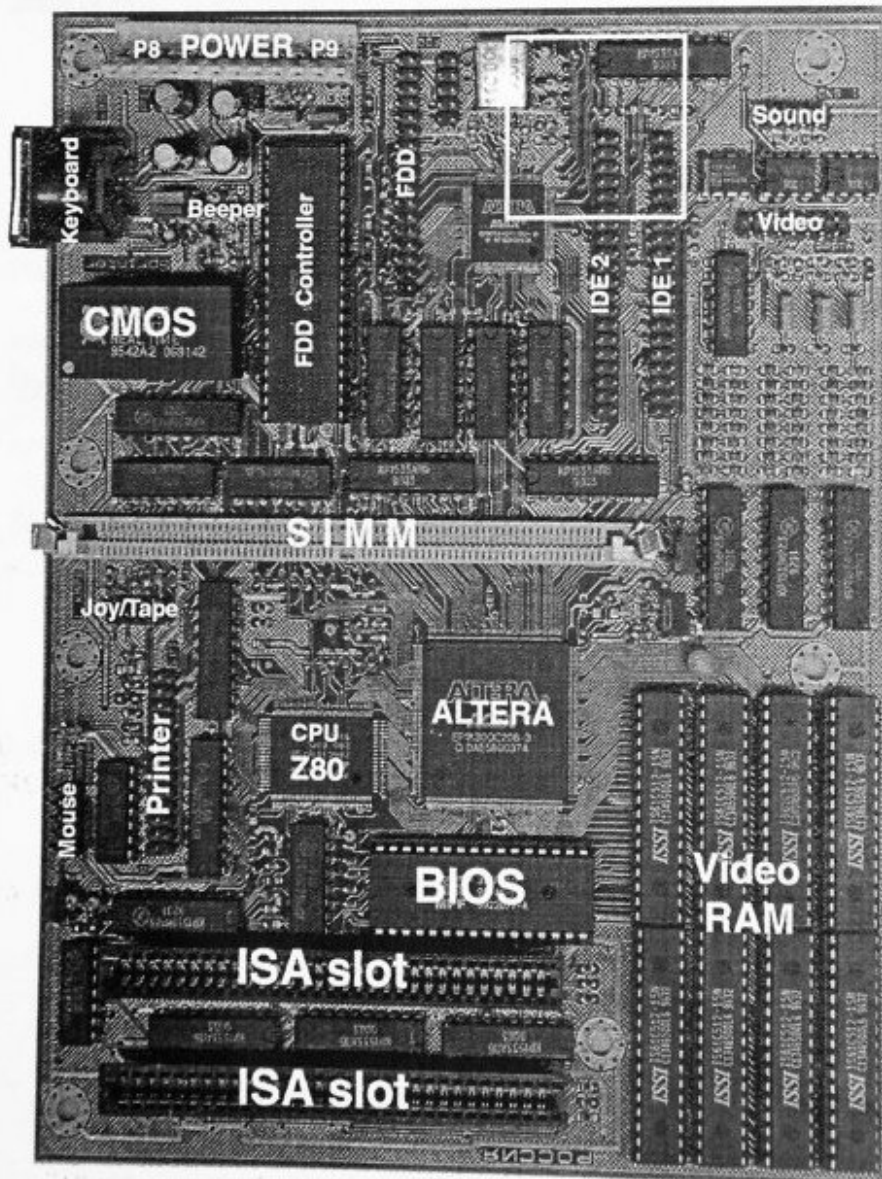
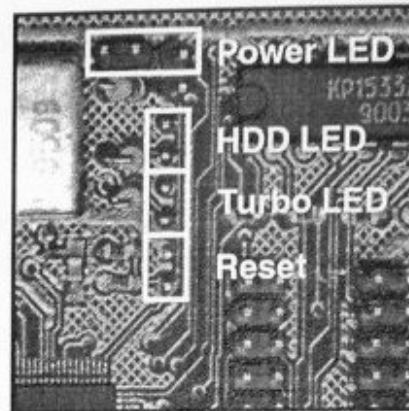


Figure 1

2. Assembly of the computer Sprinter.

The standard configuration of the computer Sprinter.

1. AT Mini Tower case with power supply.
2. Mainboard Sp2000
3. FDD 3.5".
4. AT keyboard.
5. MS-Mouse.

Assembly of the system unit.

1. Scan the mainboard. See figure 1 and find connectors: mouse (mouse), printer (LPT), joystick/tape (KMPS), keyboard (KBD), bipper, power (P8, P9), floppy disk drive (FDD), Power LED, HDD LED, Turbo LED, Reset, IDE interface (IDE 1, IDE 2), sound (SND), video out (video). You must find pin number «1». If you have not found any connectors or have failed to determine the necessary contacts, address to the specialist.

2. Find seven fastening holes.

3. Try on mainboard in a case and determine, for what holes it is possible to put steel props. Usually the steel props are twisted on removable panel of case. Twist the steel props and insert plastic props into the free holes of mainboard.

4. Install the mainboard on the removable panel of case. When mainboard stand in the case, connector of the keyboard should be opposite to a round hole in a back wall of case. The mainboard shouldn't touch anywhere metal of case.

5. Install the removable panel with the mainboard in case..

6. Put on connectors of power supply (P8, P9).

Attention! *Power supply has a lot of connectors. For power of mainboard use P8 and P9 only. Connector P8 use +5V, +12V and -12V. Connector P9 use +5V and -5V.*

7. Put on ribbon cable of the floppy disc drive and hard disc. First pin of ribbon cable is red. Connect this pin and pin of mainboard number "1".

8. Standard package include (figure 2) another five ribbon cables.

- 25-pin D-sub male connector with ribbon cable (tape and joystick)

- 9-pin D-sub male with ribbon cable (for mouse)

- 15-pin D-sub female connector with ribbon cable (for video)

- Printer ribbon cable with 25-pin D-sub female connector

- Audio ribbon cable with jack connector.

First pin of ribbon cable is red. Connect it and pin of mainboard number "1".

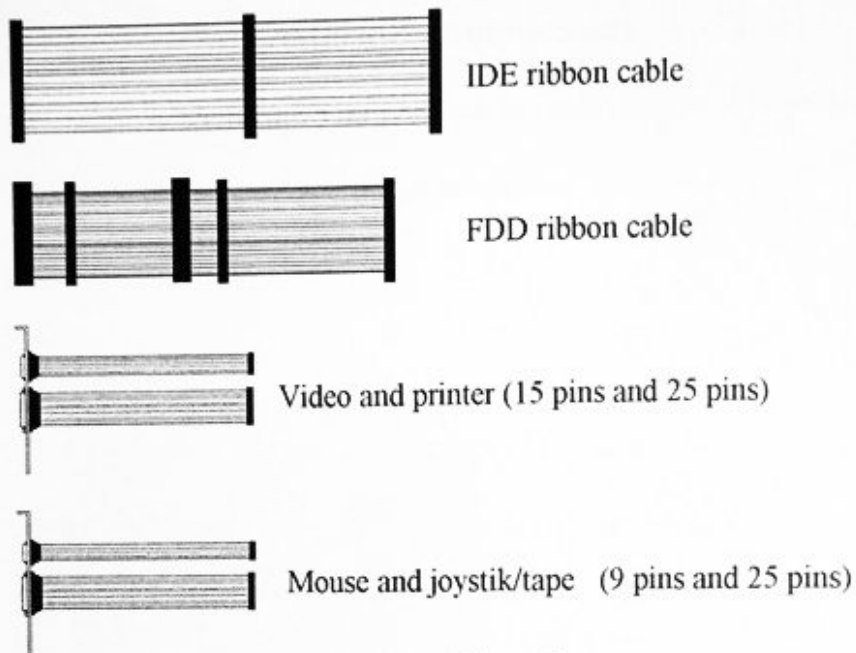


Figure 2.

9. Ribbon cables of the video, printer, mouse and joystick/tape have connectors put on bracket. After connected ribbon cables to mainboard, put brackets on a back wall of case and fasten it.

10. If you want to set stereo speakers to the computer, connect audio cable to the pins SND on the mainboard.

11. Connect cables from button RESET, indicators POWER, TURBO and HDD (on front panel of the case) to connectors of the mainboard (fig. 1).

12. Put the FDD and the HDD in the case and fix it. Connect the ribbon cables of the FDD and the HDD (fig. 2). You should be sure that use correct numbering of contacts indicated on the FDD and the HDD.

13. Connect power cables from power supply to the FDD and the HDD.

The assembly of the system unit is finished. You can see the assembled system unit in a figure 3.

If you are sure that correctly assembled the system unit, you can close the case.

3. Power up at first time.

1. Set the keyboard, cable of video, mouse and power cable to the system unit.

2. Power up the monitor (TV), wait when the screen will be lighted and power up the system unit. The starting system information should appear on the monitor. If the monitor is dark - press the RESET button.

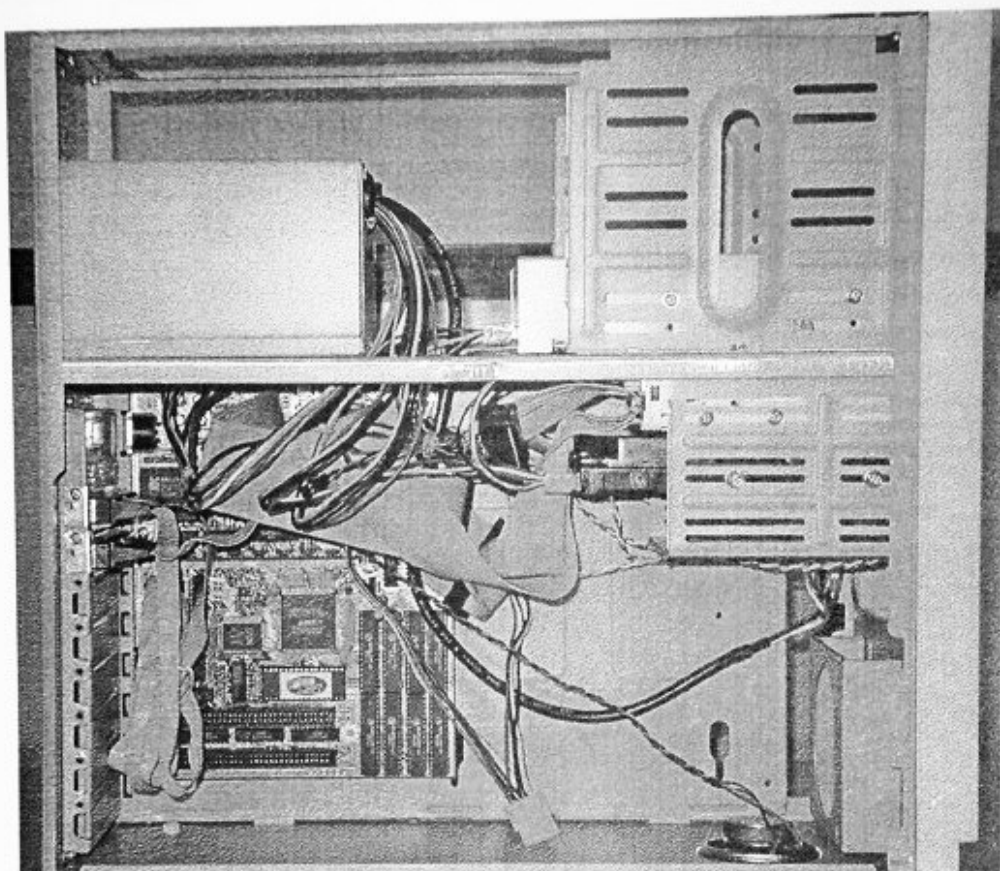


Figure 3.

4. Troubleshooting.

Computer is power up, but not audibly of a sound working cooler.

- Check up the power cable.
- Change the power supply if power cable not damage.

No Video

- Turn off power of system unit.
- Check up correct set up the power connectors to mainboard (P8 and P9) and to FDD.
- Be sure that free connectors of power supply do not touch the metal case.
- Check up correct set up the video cable.
- If video not present contact Technical Support (see User Manual).

5. Appendix.

Video

Signal	Pin on connector	Pin on mainboard
GND	1	1
Analog BLUE	9	2
GND	2	3
Analog GREEN	10	4
GND	3	5
Analog RED	11	6
Sync In	4	7
Frame sync	12	8
Mode Out	5	9
Sync	13	10
Sound Left	6	11
GND	14	12
Sound Right	7	13
VCC / +5V	15	14
Lines sync	8	15
GND	16	16

Joystick/Tape

Signal	Pin on connector	Pin on mainboard
Tape OUT	8	1
GND / Tape	3	2
Tape IN	2	3
Joystick body	20	4
JK0 / RIGHT	7	5
JK1 / LEFT	6	6
JK2 / DOWN	4	7
JK3 / UP	5	8
JK4 / FIRE	22	9
GND		10