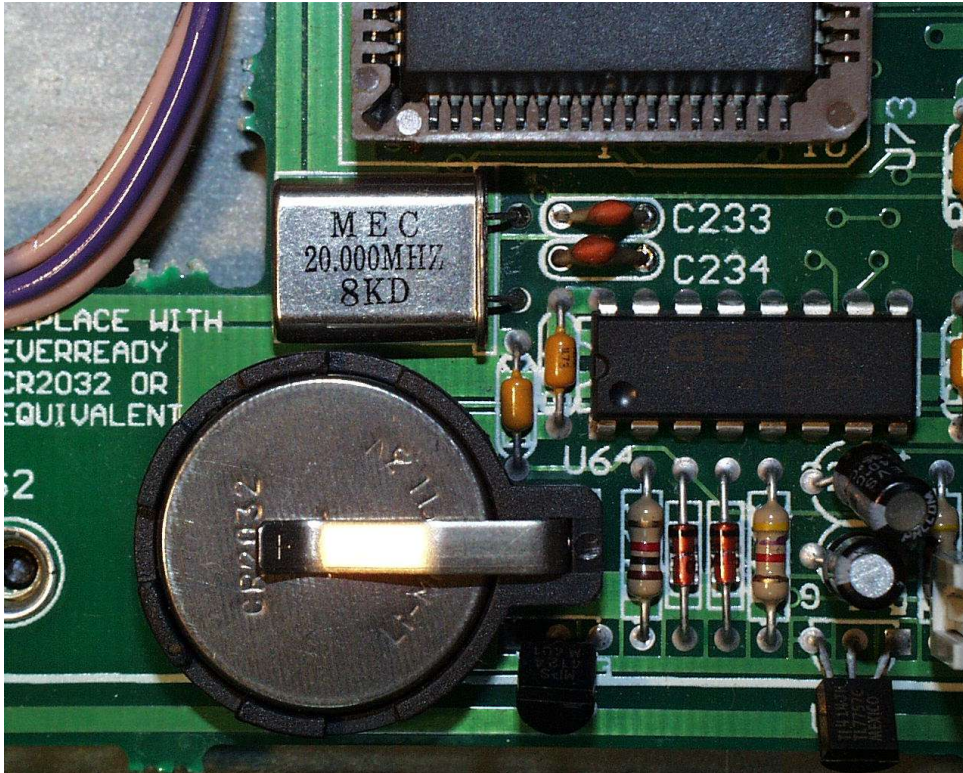


## Installation- Manual for 20 MHz- Upgrade Set: Digitech GSP 2101



This document describes how to do the frequency- doubling of the Z 80- processor at the GSP 2101.

You need the following Tools:

- A Hex Key 7/64"
- A Screwdriver Pozidrive 2
- A Screwdriver Philips 2
- A Screwdriver Philips 1
- A metal- bracelet or a wrist watch with metal- bracelet or aluminium-foil or something.
- A piece of wire
- A waterproof pen
- A wrench 15 mm
- A wrench 8 mm
- A wrench 5,5 mm
- A small screwdriver (flat)
- A cutter
- An unsoldering- pump
- A forceps
- A piece of plumber's solder
- A small soldering iron

### Important:

- Observe all the electric specifications! (Risk of electric shock ....)
- Take care of the rules for static protection. If you don't know them, you'll find them at: <http://home.sprynet.com/~clpastor/gfaq-7.html>
- If you have any problems or questions- send me an eMail.

## Instructions:

1. Store a Bulk- Dump. (This is not absolute necessary, but only for safety). If you don't know how to do: Install the program "2101 Patch Dumper" on your PC. You'll find it on the Disc (Path: "A:\PatchDum\Patchdum.exe"). Connect the MIDI - IN and MIDI - OUT ports on the GSP 2101 to your midibox or your soundcard. If you have a midibox connect it to the game-port on the soundcard. Switch on the GSP 2101. Start the program GSP-2101 Patch Dumper. Type in the Window "Dump to file" the path where you want to store the Bulk dump (Example: "C:\BulkDump.syx"). Press the Button "Receive Bulk Dump". Now the 2101 starts to transmit the whole memory- data to your PC. A window appears "Receive Bulk Dump". When the 2101 is ready, you should write down the "Bytes received". Then press the Button "Digitech GSP 2101 is done sending Bulk Dump". Then press "OK". Press the "MIDI"- Button on the 2101. Then press "Next", and again "Next" and the "2" for the function "Dump System Data" Look at the Display.... "xxxxx Bytes total"..... compare it with the received Bytes.... now you can be sure, that the Bulk Dump you've stored is error-free. Press the "MIDI"- Button two times to leave the menu.
2. Switch off the GSP 2101.
3. Pull all plugs out of the GSP. IMPORTANT!!
4. Remove the six side-panel screws
5. Remove the rear-panel top center screw
6. Remove the front-panel top center hex- bolt. Use the Hex Key 7/64"
7. Remove the lid
8. Connect the cable to the metal- bracelet (it must be on your arm!)
9. Connect the other side of the cable to the housing of the 2101. Connect it to a place where the metal is blank.
10. Press on the cable- holder on the mainboard which holds the pins of the cable of the output- potentiometer and pull on the cable. The cable must slip out of the cable holder. Hey man... be careful don't damage the cable-holder or tear the cable apart! It must slip very facile out of the holder! You have PRESS (!) on the cable holder to remove the cable!
11. Pull the plug from the front-panel-board, which is connected to the mainboard (the lower plug of the ribbon cable)
12. Remove the 5 front-panel hex- bolts
13. Remove the complete frontpanel.
14. Pull off the knob of the cabinet- emulator- switch. use a small screwdriver.
15. Remove the 4 XLR-connector screws
16. Remove the 4 XLR-connector- board screws
17. Pull the XLR-connector- board
18. Remove the valve- holder- screw
19. Mark the valves with V1 and V2 with a waterproof pen.
20. Pull the valves (this is not necessary- but only for protection of smashing)
21. Remove the hexagon- valve- holder- standoff
22. Cut the two cable- straps which hold the cables from the secondary side of the power- transformer.
23. Pull the two power- transformer- plugs.
24. Remove the 2 lower screws of the heat sink
25. Remove the 7 phone-plug-plastic-nuts
26. Remove the 4 DIN-plug screws (there are different versions! At the older 2101s there are no screws!)
27. Remove all the screws which hold the mainboard (Also different versions... you have to look!)
28. Uncase the mainboard.
29. Connect the cable on the bracelet to ground (GND) of the mainboard. connect it to any conducting path.
30. Locate the 10 MHz- crystal (X2). You find it between the Z80- processor and the battery.
31. Locate the capacitors C 233 and C 234. You find it right beneath the crystal. There is a writing "25" on them.
32. Unsolder the crystal. It's a double- sided board, so don't use a unsoldering- pump, use a forceps, heat the pins and pull it out of the vias.
33. Unsolder C 233. Same process
34. Unsolder C 234. Same process
35. Now suck the rest of the plumber's solder out of the vias. Use a unsoldering- pump to do this.

36. Solder the 20 MHz- crystal to the board at the same position where the 10 MHz- crystal was. Be careful, don't cause soldering- bridges!
37. Solder the two 15 pF- capacitors to the board at the same position where C 233 and C 234 was. Same process.
38. Make sure that there are no soldering- bridges.
39. Mount the main board.
40. Mount the 4 DIN-plug screws
41. Mount the 7 phone-plug-plastic-nuts
42. Mount the 2 lower screws of the heat sink
43. Mount the two power- transformer- plugs
44. Fix the cables of the transformer with the two cable- straps
45. Mount the hexagon- valve- holder- standoff
46. Mount the valves. V1 where V1 was, V2 where V2 was.
47. Mount the valve- holder
48. Mount the XLR-connector- board
49. Mount the knob of the cabinet- emulator- switch
50. Mount the frontpanel
51. Mount the ribbon cable- plug from the front-panel-board
52. Put the ribbon cable from the output-potentiometer back into the cable- holder
53. Check if everything is in the right position.
54. Check again, if everything is in the right position.
55. Mount the lid
56. Switch on the GSP 2101 and watch the display. The Software- version is shown some seconds later. An "a" appears after the software- version. (e.g. 3.00.00.a if you had an 3.00.00 past)

Congratulations! Now you are frequency- doubled.

Dieter