

QUICK REFERENCE FOR PROBLEM SOLVING

HELP FOR INSTALLATION

Read this if you have problems installing your CT1350 card. Also refer to "Common Problems Encountered" in this document. When installing the CT1350 card, beware of possible hardware conflicts with other adapter cards. Each adapter card may contend for various CPU resources. There are three possible hardware conflict sources:

-DMA channel conflict.

-IRQ (Interrupt Request) lines conflict.

-I/O address conflict.

In The Case of your CT1350:

-DMA Channel 1 is the default for its digitized voice input/output DMA operations.

-The Interrupt default is set at IRQ7 (used for voice/MIDI operations). Other jumper selects are IRQ2, IRQ3, IRQ5.

-I/O address default 220H. Jumper selectable to 240H. FM music chip also uses addresses 388H and 389H. Joystick port uses the standard address of 200-207H.

DMA CONFLICT

The DMA jumper on the board either enables or disables the DMA. Removing this jumper will disable digitized voice input and output. However, FM music will continue to operate. Remove this jumper if you are operating with another adapter card which can only use DMA channel 1. The CT1350 card can share a DMA channel with other adapter cards, provided that these cards can also share DMA channels. When using CT1350 with other cards that have selectable DMA channels, we suggest that you change the others cards DMA Channel to either Channel 0 or 3, if a conflict occurs. This is only feasible on an AT (286) machine where DMA channels 0, 1 and 3 are free.

If you are using an XT machine, it has only one free DMA channel, i.e. channel 1. If you have another adapter card that uses DMA channel 1 is shareable. Otherwise you have to choose between installing CT1350 or the other card.

INTERRUPT LINE (IRQ) CONFLICT

The CT1350 uses interrupt line IRQ7 as default. Some printer interface (LPT1) snatch away the IRQ7 even though it never requires the interrupt.

If a conflict occurs, you can change the interrupt of the CT1350 to IRQ2 or IRQ5.

(See DMA and INTERRUPT ASSIGNMENT TABLE for the best IRQ line to use).

I/O ADDRESS CONFLICT

The possibility of conflict on the default I/O address of 220H is very small. We advise against changing this I/O port address. Changing from this default I/O address means that you will have to reinstall software programs that support CT1350. If there is a conflict with another card in your system, we suggest you change the I/O port address of the other card. Remember to reinstall the I/O port address for programs running that card. Also set the BLASTER environment.

INTERRUPT	AT MACHINE	XT MACHINE
IRQ 0	Used by System Timer	Used by System Timer
IRQ 1	Used by Keyboard	Used by Keyboard
IRQ 2	Used by System	FREE
IRQ 3	FREE (or COM Port 2)	FREE (or COM Port 2)
IRQ 4	Used by COM Port 1	Used by COM Port 1
IRQ 5	FREE	Used by Fixed Disk
IRQ 6	Used by Diskette Controller	Used by Diskette Controller
IRQ 7	FREE (Maybe LPT1)	FREE (Maybe LPT1)

PC INTERRUPT TABLE

DMA CHANNEL	AT MACHINE	XT MACHINE
DMA 0	FREE	Used for RAM Refresh.
DMA 1	Used by CT1350	Used by CT1350
DMA 2	Used by Diskette Controller	Used by Diskette Controller
DMA 3	FREE	Used by Fixed Disk

COMMON PROBLEMS

PROBLEM Test-SBC error found on Interrupt.

CAUSE Conflict on IRQ7, your system uses up IRQ7.

PROBLEM Remove the CT1350 card from your system, and reinstall its Interrupt jumper from IRQ7 to IRQ2 or IRQ5.

If you have used up IRQ2 and IRQ5 for some other card, you can try to look at IRQ7 again. If it is also used up, try to look for the jumper on your system board or Parallel I/O card that allows you to disable IRQ7 for LPT1. You can

consult the respective manual or your computer vendor on how to do this.

PROBLEM Voice recording is too soft.

CAUSE A device plugged into both the microphone and line-in jack. Microphone used is not sensitive enough.

SOLUTION Remove one of the devices. Use a microphone that has a 600 ohm impedance and a sensitivity of -75 dB or better for good recording. (As a rule of thumb, one that costs more than US \$30 should do the job). Remember to buy a 1/4 inch to 1/8 inch adapter-jack if the microphone has a 1/4 inch jack. A condenser microphone also works well.

PROBLEM Background static noise from the speakers.

CAUSE Noisy power supply of the computer system.

SOLUTION Computer systems are well-known to be the greatest producers of electrical noise. Much care had been taken in the design of CT1350's built-in amplifier to reduce as much noise from the computer's power supply as possible. There are, however, some computer systems that simply produce too much noise. The noise is picked up and amplified to a audible range when the power amplifier is set at a high volume. There is no good remedy here, except to turn down the volume control. If louder volume is desired, try to amplify using an external amplifier.

PROBLEM Noise in recording.

CAUSE The built-in microphone amplifier has an Automatic Gain Control (AGC) that can accept signal ranging from 0.004 to 0.7Vrms. Any input signal greater than 0.7Vrms will be clipped. This clipping will produce noise in recording. Noise can also be caused by a device connected to the microphone jack and line-in jack at the same time.

SOLUTION Remove one device if more than one is connected. Reduce input signal level to within 0.004 to 0.7Vrms range.

PROBLEM "No Interrupt vector available" error when running SBFMDRV.

CAUSE All the DOS software interrupt vectors (INT 80H - 0BFH) are taken up by a resident program (TSR) that is not functioning.

SOLUTION: The most common type of erroneous resident program is a DOS MENU program executed by your AUTOEXEC.BAT file. You can avoid problem with these kinds of resident programs in the following ways:

-Boot the system from a DOS diskette and then run SBFMDRV from the /SB directory to confirm that the problem is solved.

-During the booting process of the fixed disk, press CTRL-BREAK to abort the AUTOEXEC file. Then type SB\SBFMDRV and press ENTER.

-Execute \SB\SBFMDRV before running the erroneous program from your AUTOEXEC.BAT file by inserting the line \SB\SBFMDRV before the erroneous program in your AUTOEXEC.BAT file. This might only solve some cases with a partially erroneous program. For a resident program that is almost completely erroneous, you might have to remove the command that loads the TSR program from your AUTOEXEC.BAT file.

PROBLEM Joystick port is not working.

CAUSE CT1350's Joystick port conflicts with existing joystick port in the system.

SOLUTION Take out the CT1350 card and remove the Joystick Enable jumper (JP8) and use the joystick port in your system instead.

NOTE: Removing JP8 will not remove the MIDI function of the card. The MIDI pins are still active on CT1350's joystick port.

PROBLEM Joystick is not working properly in some programs.

CAUSE This is a classic problem with PC's joystick port which uses the CPU timing to calculate joystick position. When a CPU is too fast and the program does not take good care of the change in CPU speed, the wrong calculation would cause the joystick port to move to its unusable range.

The CT1350 adheres to this PC standard and hence would inherit the same problems. You could confirm that the joystick port is working if some programs can handle the joystick properly.

SOLUTION A possible remedy here is to switch the computer to its lowest possible speed.

PROBLEM CT1350 MIDI port is not compatible to Roland MPU 401.

CAUSE The CT1350 complies with the International MIDI Association recommended standard. The MPU 401 has some intelligence in it's MIDI implementation. This intelligence could be easily emulated by a small driver routine in the PC. Hence, programs that run on the MPU 401 cannot work directly on the CT1350. They must be modified by their respective software companies in order to run on the CT1350.

SOLUTION Before buying any MIDI software, please ensure that they support Sound Blaster.

PROBLEM Computer hangs after running one of the CT1350 programs.

CAUSE Conflict with other adapter cards in the system.

SOLUTION To identify the possible conflicting card, remove all the non-essential cards one by one from the system; leaving only the essential cards: Diskette/Fixed Disk Controller Card and video Adapter Card in the system.

After each card is removed, run the same program that hangs the system. If the problem is solved, then the last card removed has a possible conflict with CT1350. Try to determine whether it is a DMA conflict, Interrupt conflict or I/O address conflict by looking in the manual of this card.

PROBLEM Talking Parrot talks with a very low and slow voice.

CAUSE Running the Talking Parrot on an XT machine.

SOLUTION The Talking Parrot needs an AT (286) machine to work properly. If you are using an XT, you will have to do away with this demonstration program.

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