YMF744/754 PCI SOUND CARD

Hardware Configuration

USER MANUAL

July 1999

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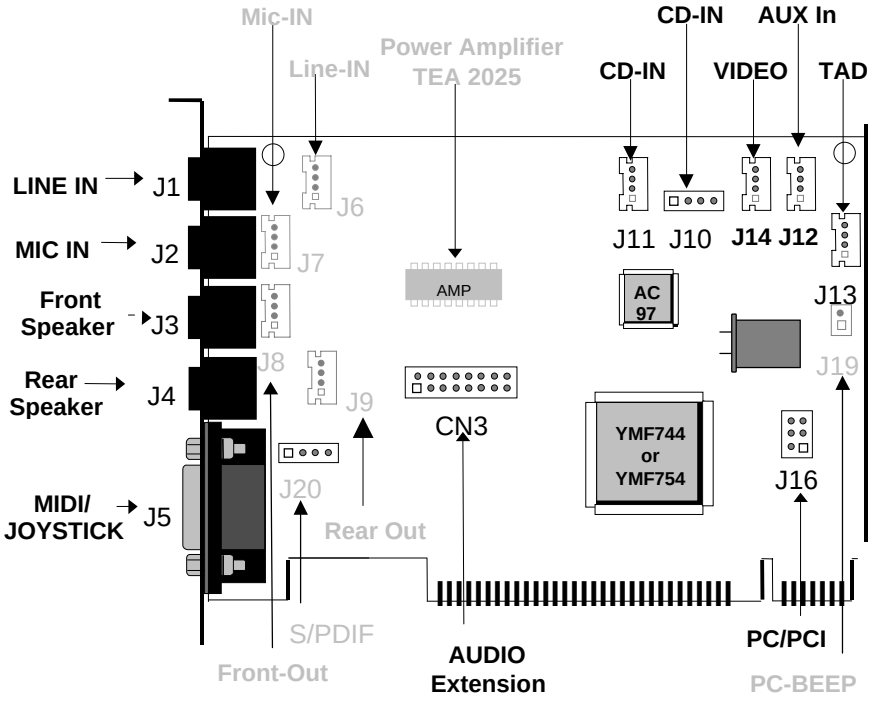
1. DESCRIPTION

Congratulations! You have just acquired a sound card based on the most advanced 3D PCI audio accelerator available today. YMF744/754 PCI sound card is a high performance PCI audio accelerator which combines the most compelling 3D, quadraphonic and music synthesis technologies available with full featured digital outputs. Full H/W acceleration of DirectSound®, 3D audio, music synthesis, and gameport function guarantees exceptional system performance.

1.1 Features

- PCI 2.2 compliant
- PCI Bus Power Management rev. 1.0 compliant
- PCI Bus master for PCI Audio
  - ⇒ True Full Duplex Playback and Capture with different Sampling Rate
  - ⇒ Maximum 64-voice XG capital Wavetable Synthesizer including GM compatibility
  - ⇒ Direct Sound Hardware Acceleration
  - ⇒ Direct Music Hardware Acceleration
  - ⇒ Downloadable Sound (DLS) level-1
- Legacy Audio compatibility
  - ⇒ FM Synthesizer
  - ⇒ Hardware SoundBlaster Pro compatibility
  - ⇒ MPU-401 UART mode MIDI interface
  - ⇒ Joystick
- Supports PC/PCI and distributed DMA for Legacy DMAC (8237) emulation
- Supports Serialized IRQ.
- Optionally support Consumer IEC958 Output(SPDIF OUT)
- Optionally support Consumer IEC958 Input (SPDIF IN)
- Single Crystal operation (24.576 MHz)
- Compliant with AC'97 Requirements
  - ⇒ 4 Stereo Inputs: LINE, CD, VIDEO, AUX
  - ⇒ TAD connector for mono In and Output for modem Audio
  - ⇒ 1 MIC Input
  - ⇒ Stereo LINE Output/ Speaker Output
- 20 dB MIC Amplifier
- Analog Characteristics
  - ⇒ A/D S/N: 85 dB
  - ⇒ D/A S/N: 90 dB
- Low Power Consumption

2 Card Figure for “YMF744/754 N6x”



2.1 Connectors for “YMF744/754 N6x”

2.1.1 External Connectors:

J1: .....∅ 3.5mm Phone Jack for **LINE IN**
J2: .....∅ 3.5mm Phone Jack for **MIC IN**
J3: .....∅ 3.5mm Phone Jack for **FRONT OUT**
J4: .....∅ 3.5mm Phone Jack for **REAR OUT**
J5: .....Connector for **MIDI/JOYSTICK**

2.1.2 Internal Connectors:

J6: .....Internal connector for **LINE IN** (optional)
J7: .....Internal connector for **MIC IN** (optional)
J8: .....Internal connector for **FRONT OUT** (optional)
J9: .....Internal connector for **REAR OUT** (optional)

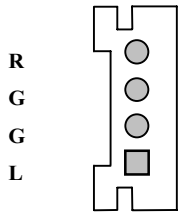
J10: .....Connector for **CD AUDIO IN** (Base Pin)
J11: .....Connector for **CD AUDIO IN** (JST)

J12: .....Connector for **AUX IN.**
J13: .....Connector for **TAD/VOICE MODEM.**
J14: .....Connector for **VIDEO IN.**
J16: .....Connector for **PC/PCI Legacy Audio SIDEBAND SIGNAL.**
J19: .....Connector for **PC-BEEP** (optional)
J20: .....Connector for **SPDIF IN/OUT** (optional)

CN3:.....Extension connector for **6-Channel AUDIO** (optional)

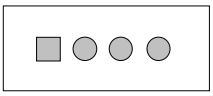
2.2 Audio Connectors Pin Assignment:

J6/J7/J8/J9 (Optional)



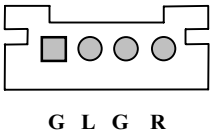
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J10 (CD-IN)



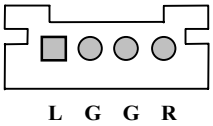
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J11 (CD-IN)



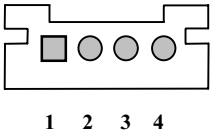
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J12 (AUX-IN)



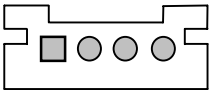
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J13 (TAD/Voice Modem)



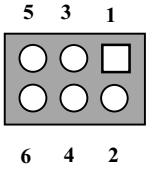
1: PHONE IN
2,3 : GROUND
4: MONO OUT

J14 (VIDEO-IN)



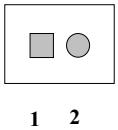
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J16 (PC/PCI)



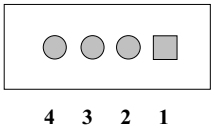
1: PCGNT #
2: GROUND
3: N.C.
4: PCREQ#
5: GROUND
6: SERIRQ#

J19 (PC-BEEP)/optional



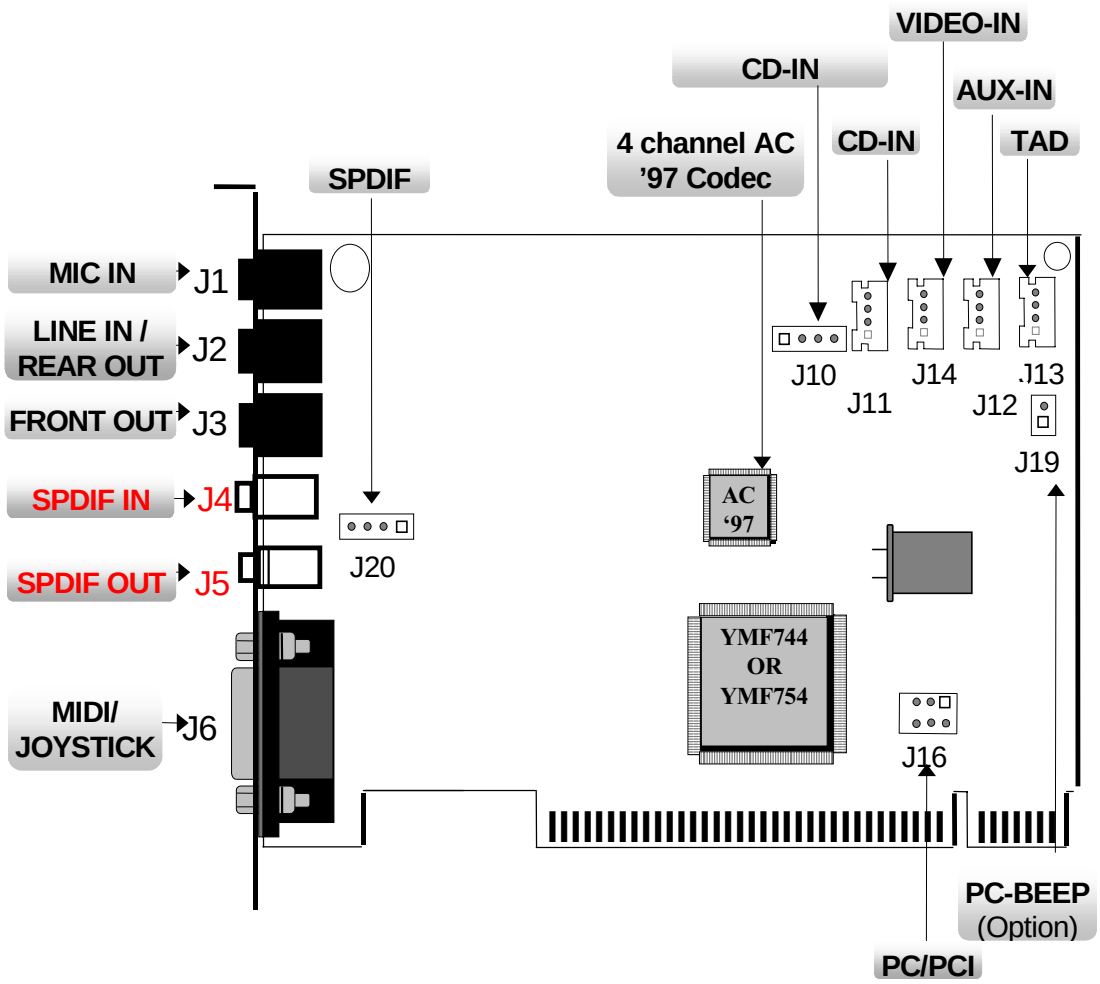
1: PC SPEAKER OUT
2: +5V

J20(SPDIF In/Out) (Optional)



1: S/PDIF INPUT
2,3: GROUND
4: S/PDIF OUTPUT

3 Card Figure for "YMF744/754 R1x"



3.1 Connectors for “YMF744/754 R1x”

3.1.1 External Connectors:

J1: .....∅ 3.5mm Phone Jack for **MIC IN**
J2: .....∅ 3.5mm Phone Jack for **LINE IN/REAR OUT**(Switch by Software)
J3: .....∅ 3.5mm Phone Jack for **FRONT OUT**
J4: .....Phone Jack for **SPDIF IN**(RCA or OPTICAL FIBER)
J5: .....Phone Jack for **SPDIF OUT**(RCA or OPTICAL FIBER)
J6: .....Connector for **MIDI/JOYSTICK**

3.1.2 Internal Connectors:

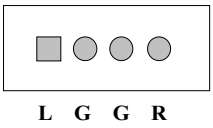
J10: .....Connector for **CD AUDIO IN** (Base Pin)
J11: .....Connector for **CD AUDIO IN** (JST)

J12: .....Connector for **AUX IN.**

J13: .....Connector for **TAD/VOICE MODEM.**
J14: .....Connector for **VIDEO IN.**
J16: .....Connector for **PC/PCI Legacy Audio SIDEBAND SIGNAL.**
J19: .....Connector for **PC-BEEP** (optional)
J20: .....Connector for **SPDIF In/Out** (optional)

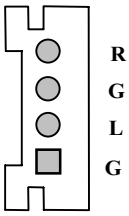
3.2 Audio Connectors Pin Assignment:

J10 (CD-IN)



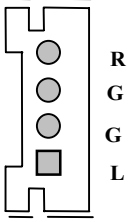
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J11 (CD-IN)



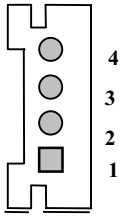
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J12 (AUX-IN)



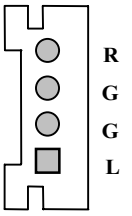
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J13 (TAD/Voice Modem)



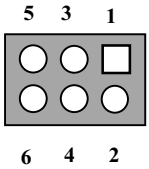
1: PHONE IN
2,3 : GROUND
4: MONO OUT

J14 (VIDEO-IN)



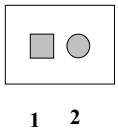
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J16 (PC/PCI)



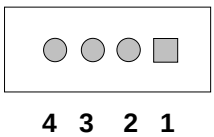
1: PCGNT #
2: GROUND
3: N.C.
4: PCREQ#
5: GROUND
6: SERIRQ#

J19 (PC-BEEP)



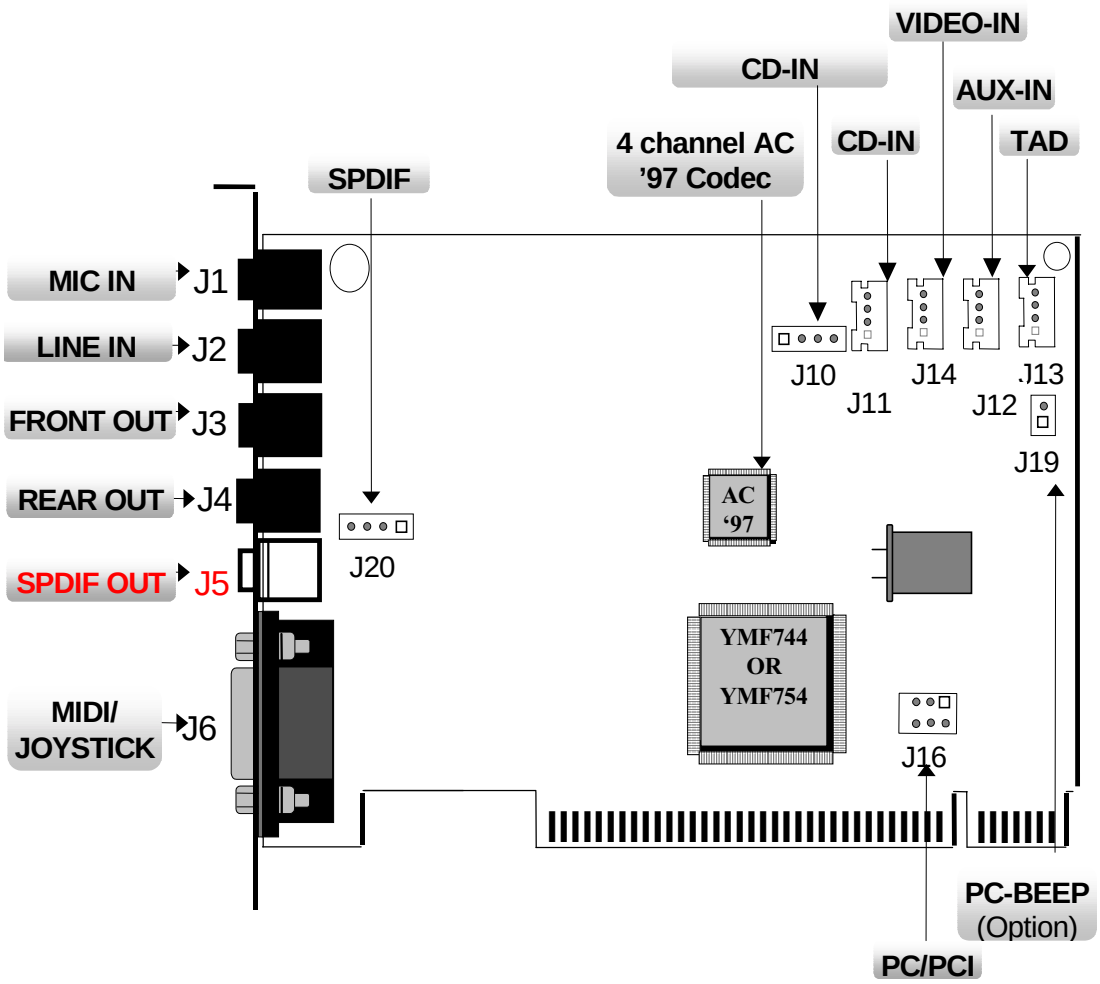
1: PC SPEAKER OUT
2: +5V

J20 (S/PDIF-In/Out) (Optional)



1: S/PDIF INPUT
2,3: GROUND
4: S/PDIF OUTPUT

4 Card Figure for “YMF744/754 R9x”



4.1 Connectors for “YMF744/754 R9x”

4.1.1 External Connectors:

J1: .....∅ 3.5mm Phone Jack for **MIC IN**
J2: .....∅ 3.5mm Phone Jack for **LINE IN**
J3: .....∅ 3.5mm Phone Jack for **FRONT OUT**
J4: .....∅ 3.5mm Phone Jack for **REAR OUT**
J5: .....Phone Jack for **SPDIF OUT**(RCA or OPTICAL FIBER)
J6: .....Connector for **MIDI/JOYSTICK**

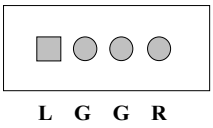
4.1.2 Internal Connectors:

J10: .....Connector for **CD AUDIO IN** (Base Pin)
J11: .....Connector for **CD AUDIO IN** (JST)

J12: .....Connector for **AUX IN.**
J13: .....Connector for **TAD/VOICE MODEM.**
J14: .....Connector for **VIDEO IN.**
J16: .....Connector for **PC/PCI Legacy Audio SIDEBAND SIGNAL.**
J19: .....Connector for **PC-BEEP** (optional)
J20: .....Connector for **SPDIF In/Out** (optiona)

4.2 Audio Connectors Pin Assignment:

J10 (CD-IN)



L: LEFT CHANNEL SIGNAL
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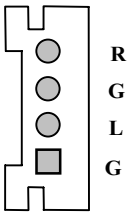
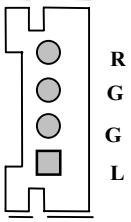
R: RIGHT CHANNEL SIGNAL

J11 (CD-IN)



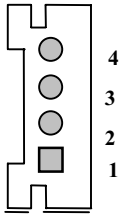
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J12 (AUX-IN)



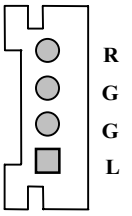
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J13 (TAD/Voice Modem)



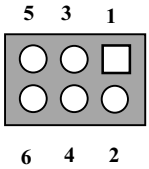
1: PHONE IN
2,3 : GROUND
4: MONO OUT

J14 (VIDEO-IN)



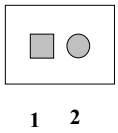
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J16 (PC/PCI)



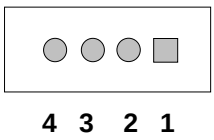
1: PCGNT #
2: GROUND
3: N.C.
4: PCREQ#
5: GROUND
6: SERIRQ#

J19 (PC-BEEP)



1: PC SPEAKER OUT
2: +5V

J20 (S/PDIF-In/Out) (Optional)



1: S/PDIF INPUT
2,3: GROUND
4: S/PDIF OUTPUT

FCC COMPLIANCE STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation; if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. *Reorient / Relocate the receiving antenna.*
2. *Increase the separation between the equipment and receiver.*
3. *Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.*
4. *Consult the dealer or an experienced radio/TV technician for help.*

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment