

**Mult
Tasker**



MANUAL PART NUMBER: 400-0400-001

MT112-200

**300 MHZ CPU WITH 2xRJ45, 2xUSB,
VGA, KEYBOARD/MOUSE, RS-232 PORTS
FOR MULTI-TASKER™
USER'S GUIDE**

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PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT112-200**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MT112-200** and to prevent fire and shock hazard. Please read them carefully and heed all warnings.

1.1 GENERAL

- Qualified ALTINEX service personnel, or their authorized representatives must perform all service.

1.2 INSTALLATION

- To prevent fire or shock, do not expose this unit to rain or moisture. Do not place the **MT112-200** in direct sunlight, near heaters or heat radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the **MT112-200** carefully. Dropping or jarring can damage the card.
- Do not pull the cables that are attached to the **MT112-200**.
- Insert the card carefully into the slots of the Multi-Tasker™ without bending any edges.

1.3 CLEANING

- Clean only the connector area with a dry cloth. Never use strong detergents or solvents, such as alcohol or thinner. Do not use a wet cloth or water to clean the card. Do not clean or touch any component or PCB.

1.4 FCC / CE NOTICE

- 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.

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

ABOUT YOUR MT112-200 2

MT112-200 300MHz CPU Card

The **MT112-200** is a compact 300MHz CPU card designed to be used as a control computer for Altinex Multi-Tasker™ systems. The CPU card comes complete with a built-in 20GB hard drive and Windows XP Professional installed. The **MT112-200** has USB and net ports, keyboard/mouse port, audio input and output ports, video port, com port and reset button.

The **MT112-200** is a fully functional computer system. It can drive a VGA display up to SXGA resolution. The **MT112-200** is also capable of receiving audio inputs from line and microphone sources. The audio output is line level for powering amplifiers or headphones. The computer may be directly connected to the Internet or a local network using the two built-in Ethernet ports. The two USB ports allow the use of external USB devices such as memory sticks, printers, memory card readers and so on.

The **MT112-200** may be used to control a MultiTasker™ AV system and other devices, without the need of a dedicated PC. Store control files or media files directly on the **MT112-200's** hard drive, make use of the USB ports, by using USB memory sticks for transferring data, or pull data from the LAN via the built-in Ethernet ports. The **MT112-200** uses only 2 slots in a Multi-Tasker™ system, saving at least another 1U rack space for an external computer.

Microsoft Windows, AVSnap and related software tool are pre-installed on the MT112-200.

TECHNICAL SPECIFICATIONS 3

FEATURES/ DESCRIPTION	MT112-200
GENERAL	
Connectors	
Video	(1) 15-pin HD female
Keyboard/Mouse	(1) 6-pin Mini-DIN
Com Port	(2) 9-pin HD male
Audio	(3) 3.5mm female
Ethernet	(2) RJ-45 female
USB	(2) Type A female

Table 1. **MT112-200** General

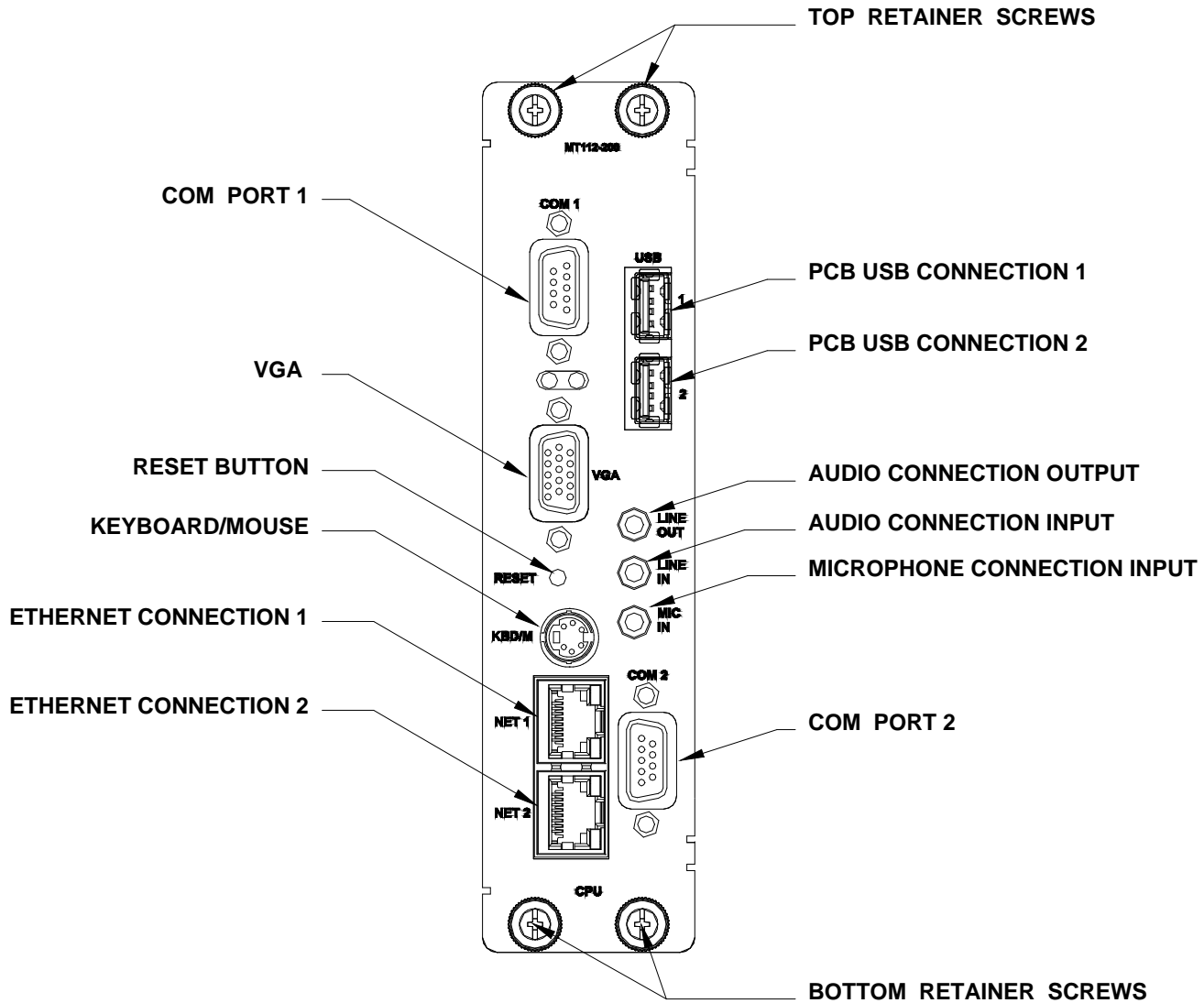
MECHANICAL	MT112-200
Enclosure Slots Required	Two
Weight	1.3 (0.59 kg)
T° Operating	10°C to 35°C
T° Maximum	0°C to 50°C
Humidity	90% non-condensing
MTBF (calc.)	40,000 hrs

Table 2. **MT112-200** Mechanical

ELECTRICAL	MT112-200
CPU Speed	300MHz
Operating System	Windows XP
Com (Serial) Port	RS-232
Display Type	non-interlaced CRT
Display Resolution	up to 1280x1024x8
Ethernet 100/10Mbps	IEEE 802.3U
Keyboard/Mouse	PS/2 mouse
Line In	-10dBu
Line Out	1/4W into 8ohms
Mic In	-60dBV to -20dBV
Voltage	5VDC
Maximum Current	2.1A

Table 3. **MT112-200** Electrical

MT112-200



APPLICATION DIAGRAM

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DIAGRAM 1: TYPICAL CONFIGURATION

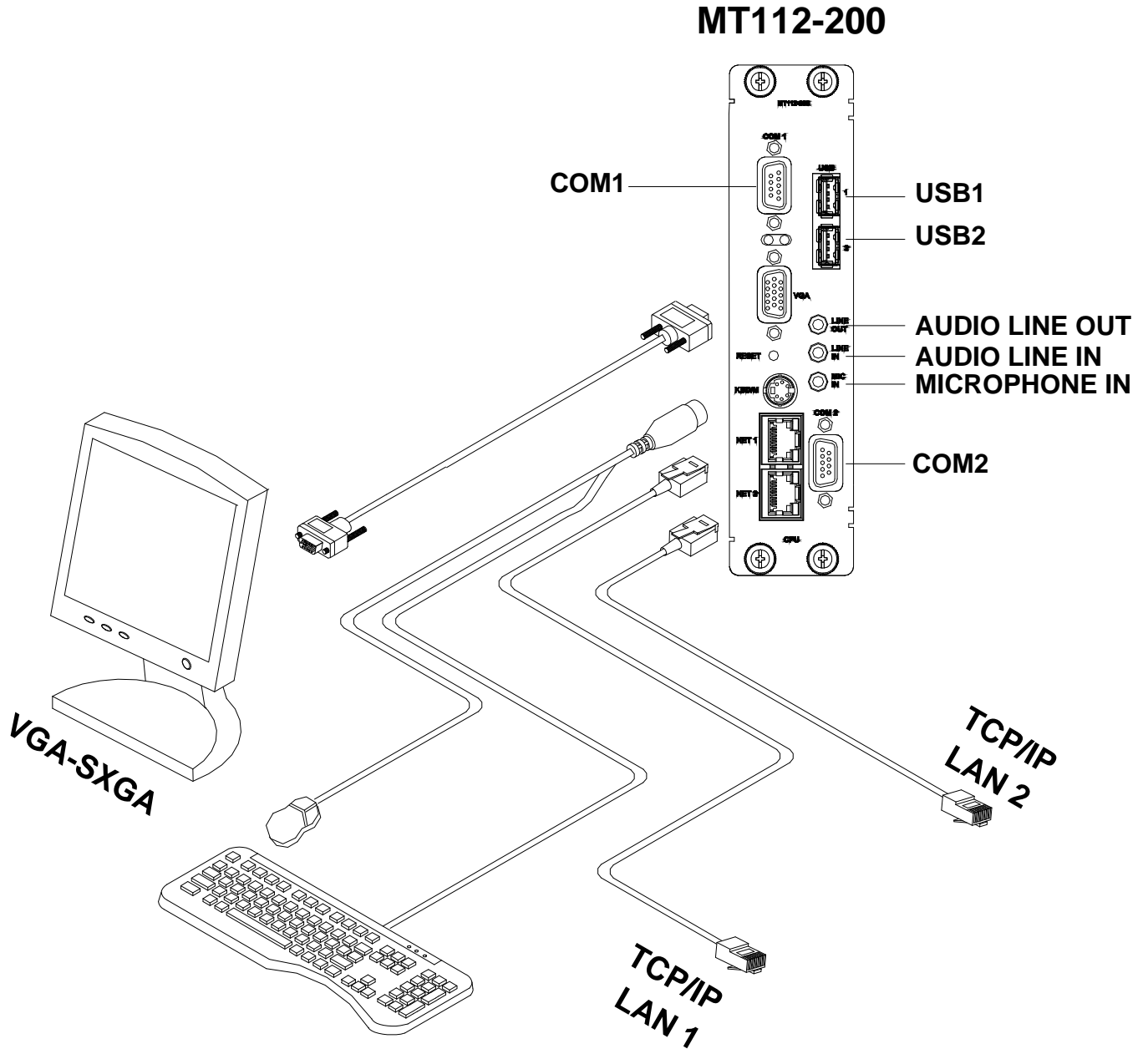
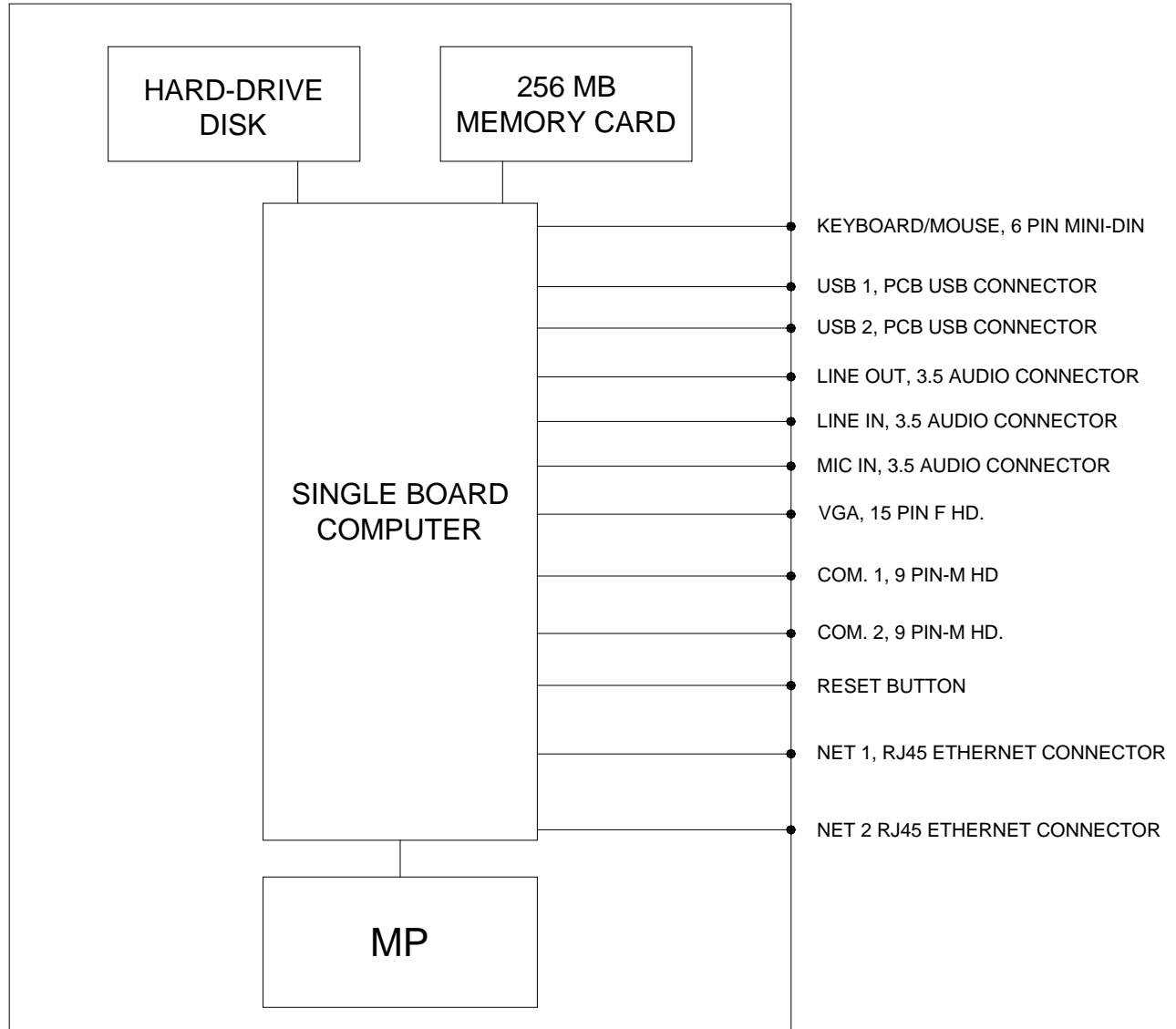


DIAGRAM 2: INTERNAL VIEW

MT112-200 BLOCK DIAGRAM

300MHZ CPU W/2XRJ45, 2XUSB 2.0 XVGA KEYBOARD/MOUSE PORT



INSTALLING YOUR MT112-200 6

- Step 1.** Turn off power to the Multi-Tasker™ system.
- Step 2.** Slide the **MT112-200** into available slots in the MultiTasker™ Basic Enclosure in order to connect to the bus. Make sure that the **MT112-200** card fits into place. Secure the card to the Multi-Tasker™ by tightening the retainer screws located on the top and bottom of the **MT112-200** card.
- Step 3.** Connect the keyboard and mouse to the **MT112-200** using a PS/2 male to dual PS/2 female Y-cable.
- Step 4.** Connect the display to the 15-pin HD female connector on the CPU card.
- Step 5.** Connect the **MT112-200** to the internet or internal network using a standard CAT-5 type cable. Either of the two LAN ports may be used.
- Step 6.** Starting from the left, identify the slot number where the **MT112-200** card is plugged into the Enclosure and note that it is for RS-232 control.
- Step 7.** Before proceeding, have the Windows XP security key ready.
- Step 8.** Turn on power to the Multi-Tasker™ enclosure. The system will now initialize and launch Windows XP. The first time the unit is turned on, it will take a few minutes to boot up.
- Step 9.** The Microsoft Windows XP installation wizard will begin automatically. Follow the setup wizard from this point on until the installation is complete.
- Step 10.** If using the **MT112-200** to control the Multi-Tasker™ system, connect a standard RS-232 cable from either the COM 1 or COM 2 port on the **MT112-200** to the Multi-Tasker™.

- Step 11.** There is an installer icon on the desktop. Use the setup files in this folder to install various Altinex software programs.

OPERATION 7

7.1 RS-232 CONTROL

The **MT112-200** has additional remote control capabilities, which are accessible through standard RS-232 communication. Actual control may be accomplished through a computer control system or any other device capable of sending RS-232 commands.

7.1.1 RS-232 INTERFACE

The RS-232 commands, for the **MT112-200**, are in a simple ASCII character format.

1. Square brackets “[]” are part of the command.
2. Use uppercase letters for all commands.

The cards in a Multi-Tasker™ system are capable of performing various functions, as well as providing feedback to the user or control system. Some commands instruct a card to perform specific actions. Other commands request information about the status of the card. Other commands do both at the same time.

A command that instructs the card to simply perform an action will generate feedback of “[]”. The open and close brackets indicate the card received a valid command. If the command requested information from the card, the feedback generated by the card is the acknowledgement of having received a valid command. Invalid commands generate feedback of “[ERR001]”.

7.2 DESCRIPTION OF COMMANDS

Each command consists of three parts: Function, Card ID, and Unit ID.

[Function , Card ID , Unit ID]

Example: [VERC3U2]

VER = Function
C3 = Card ID
U2 = Unit ID

For Function, see a detailed explanation under each command description.

The Card ID is a unique identifier. It is equal to the enclosure slot number, or it may be an assigned value. As the slot number, the value can range from 1 to 4 up to 1 to 20 depending on the enclosure. If the value is assigned, the ID may be a maximum of 99.

Card ID 0 (C0) is used for the controller and cannot be reassigned.

Changing the position of a card will significantly affect the commands recorded on software definitions or third party control systems.

The Unit ID has a value from 0 to 9. Unit ID 0 should be used for single unit operation. If the Unit ID is set to zero, each command may be used without Ui. Use the command [SETU0], as explained in the MT100-100 User's Guide.

Example:

[VERC3]: For Unit ID Zero
[VERC3Ui]: For Unit ID other than Zero
[VERC3]: Equivalent to [VERC3U0]

1. [C]

This command receives the status of the card.

Command Format: [CnUi]

Cn = card ID (n = # from 1 to max slots)

Ui = unit id (i = 0 to 9)

Example:

There is one **MT112-200** card in slot #4. Sending the command [C4] to the Multi-Tasker™ will yield feedback similar to the following:

300MHz CPU CARD ACTIVE (WindowsXP)

If there is no card in slot #4, sending the [C4] command will not return any feedback.

2. [VER]

This command displays the software version and card type for the card.

Command Format: [VER]

Cn = Card ID (n = # from 1 to max slots)

Ui = Unit ID (i = # from 0 to 9)

Example:

Send the command **[VERC4]** to check the version of the **MT112-200** with card ID #4. The system will return the following feedback:

[MT112-200 690-0194-001 C04]

MT112-200 = model number

690-0194-001 = software version

C04 = card ID

3. [HELP]

This command displays information available for the Multi-Tasker interface commands.

Command Format: [HELPCnUi]

Cn = card ID (n = # from 1 to max slots)

Ui = Unit ID (i = # from 0 to 9)

Example:

In order to display the RS-232 commands available for the **MT112-200** card in slot #2, send the command [HELPC2]. The commands along with a brief description will be displayed in the Terminal Window.

CARD ID COMMANDS

The default Card ID is the same as the card slot number. The next several commands allow the user to change the Card ID to a value other than the slot number.

The ID commands work with all Multi-Tasker™ Front Panel systems. However, front panels that have firmware releases prior to the following will not be able to address Card ID's greater than the number of slots in the system:

690-0122-019 = Version 019 or later.

690-0123-005 = Version 005 or later.

690-0124-019 = Version 019 or later.

NOTE: In MTSetup™, send the command [VER] from the Terminal Window. The system will respond with feedback which includes:

690-0122-015 690-0123-005 690-0124-019

Check the last three digits against the numbers above to determine if the Card ID commands can address all 99 Card ID's.

Some cards require more than one slot in the Multi-Tasker™ system. As an example, some matrix switcher cards require 4 slots. If there are 5 of these cards installed, they would be numbered C4, C8, C12, C16 and C20. Changing the Card ID allows the user to define the cards as C1, C2, C3, C4 and C5.

Another use for changing the Card ID is to be able to use multiple systems without having to set each unit to a different Unit ID. All systems may be left as Unit ID 0 for ease of programming. The cards in the first unit may be numbered 1-10 and in the second unit 11-20.

4. [RSI]

This command resets the card ID's in the system. After sending this command, each card ID in the system will match the slot number of the card.

Command Format: [RSI]

Example:

Send the command [RSI] to the system with Unit ID 0. The card in slot 1 will have ID 1, the card in slot 2 will have ID 2 and so on.

5. [SIDn]

This command sets all the cards installed in the Multi-Tasker™ system to the same Card ID. After sending this command, all cards will be addressed with the same ID. Use caution when sending this command to a system with multiple board types.

Command Format: [SIDn]

n = Card ID (n = # from 1 to 99)

Example:

Send the command [SID1] to the system. All the cards in the system now have ID 1. Any commands that are sent to Card ID 1 will be received and executed by each card.

6. [SIDnCi]

This command sets the Card ID of a single card to a number from 1 to 99.

Command Format: [SIDnCi]

n = Card ID (n = # from 1 to 99)

Ci = Slot Number (i = # from 1 to max slots)

Example:

Send the command [SID50C10] to set the ID of the card in slot #10 to an ID of 50.

7. [SID+n]

This command sets the Card ID of all the cards in a system to their slot number plus the offset value.

Command Format: [SID+n]

n = Offset amount (n = # from 0 to 99)

The maximum Card ID is 99, so subtract the highest slot number from 99 to find the maximum offset. For example, in an 8 slot enclosure, the maximum offset would be 91. The slot number, 8, plus the offset, 91, equals 99.

Example:

There are two, 20 slot enclosures to be connected together during normal operation. The first unit will use the Card ID defaults which are equal to their slot numbers. The second unit will have the same Unit ID, but will have the card ID's offset by 20.

Connect the computer to the second unit only and send the command [SID+20] to set the ID of all the cards in the enclosure to their slot number plus 20. Reconnect both units to the computer.

The cards in the first unit will be referenced as Card ID's 1-20 and the cards in the second unit will be referenced by Card ID's 21-40.

8. [RSN]

This command reads the slot number of the card with a specified ID number, and returns the value to the system to be displayed in the terminal window. If more than one card has the same ID, each slot number will be displayed.

Command Format: [RSNCi]

Ci = Card ID (i = # from 1 to 99)

Example:

The card in slot #4 takes up four slots in the enclosure. Its ID was set to 1 since it is the first card installed in the system, reading from left to right. Send the command [RSNC1] to find the slot number of this card. The system responds with the following feedback:

[4]

7.3 SUMMARY OF COMMANDS

Card Commands

- 1) [C] **Receives status of the card**
- 2) [VER] **Receives software version**
- 3) [HELP] **Display available commands**
- 4) [RSI] **Reset Card ID's**
- 5) [SIDn] **Set all Card ID's**
- 6) [SIDnCi] **Set one Card ID**
- 7) [SID+n] **Set Card ID offset**
- 8) [RSN] **Read Card slot number**

TROUBLESHOOTING GUIDE 8

We have carefully tested and have found no problems in the supplied **MT112-200**. However, we would like to offer suggestions for the following:

8.1 NO DISPLAY

Cause 1: Cable connections are incorrect.

Solution: Make sure the cable from the display is securely connected to the MT112-200 VGA port and that the keyboard and mouse are connected to the correct ports on the 'Y' cable. Also, make sure that the continuity and wiring are good. If there is still no display present, see Cause 4.

Cause 2: The display has a problem.

Solution: Make sure the display has power and is turned ON. Connect the display to another computer and verify it is working. If there is still no display, please call Altinex at (714)-990-2300.

ALTINEX POLICY

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9.1 LIMITED WARRANTY/RETURN POLICY

Please see the Altinex website at www.altinex.com for details on warranty and return policy.

9.2 CONTACT INFORMATION

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