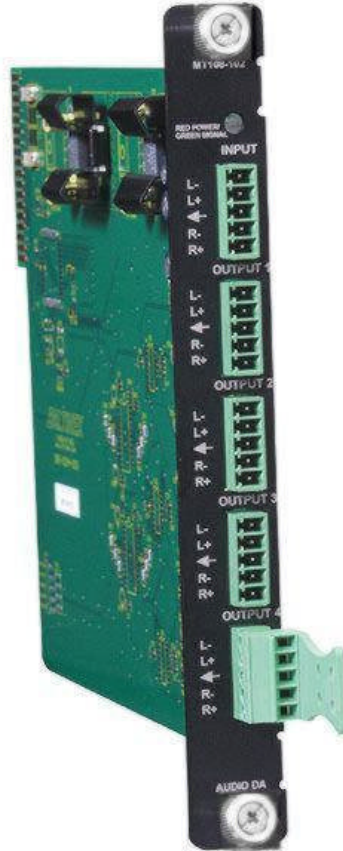


**Mult
Tasker®**



MANUAL PART NUMBER: 400-0162-003

MT108-103

**1-IN, 4-OUT BALANCED STEREO AUDIO
DISTRIBUTION AMPLIFIER
WITH OUTPUT CONTROL
USER'S GUIDE**

ALTINEX®

SIGNAL
MANAGEMENT
SOLUTIONS®

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PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT108-103** and keep it handy for future reference. These safety instructions are to ensure the long life of your **MT108-103** and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

1.1 GENERAL

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

1.2 HANDLING

- Handle the **MT108-103** carefully. Dropping or jarring can damage the card.
- The **MT108-103** contains components that are sensitive to electrostatic discharge (ESD). Always use ESD safety precautions when touching the card.
- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the **MT108-103** in direct sunlight, near heaters, or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Do not pull any cables that are attached to the **MT108-103**.

1.4 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.

1.5 FCC 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 instructions found herein, 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 MT108-103 2

MT108-103 1-In, 4-Out Balanced Stereo Audio DA

The **MT108-103** is a Stereo, Audio Distribution Amplifier Card that allows the connection of a single stereo, audio source to four receiving devices. All inputs and outputs are balanced, allowing longer cable runs and superior noise reduction.

As a “transparent” distribution amplifier, this card utilizes AC coupling on its input for ideal signal transfer characteristics. The power indicator on the card doubles as a signal detection indicator, allowing easy troubleshooting in complex configurations. Each card requires only a single slot in the MultiTasker enclosure.

The **MT108-103** also has the ability to turn its outputs on or off independently using RS-232 commands sent to the MultiTasker from a control system or from the enclosure’s front panel keys.

TECHNICAL SPECIFICATIONS 3

Specifications are subject to change. See www.altinex.com for up-to-date information.

| FEATURES/DESCRIPTION | MT108-103 |
|----------------------|--------------------------|
| GENERAL | |
| Inputs | 1 |
| Input Connectors | 5-pin terminal block (1) |
| Outputs | 4 |
| Output Connectors | 5-pin terminal block (4) |
| Compatibility | Balanced Stereo Audio |

Table 1. **MT108-103** General

| MECHANICAL | MT108-103 |
|--------------------------|--------------------|
| Enclosure Slots Required | 1 |
| T° Operating | 10°C-40°C |
| T° Storage | 0 to 50°C |
| Humidity | 90% non-condensing |
| MTBF (calc.) | 40,000 hrs |

Table 2. **MT108-103** Mechanical

| ELECTRICAL | MT108-103 |
|-------------------------------|------------------------|
| Audio Input | |
| Impedance | 10kΩ |
| Coupling | AC |
| Audio Throughput | |
| Gain | 0 dB ± 0.5 dB |
| Frequency Response | 20Hz to 20kHz ± 0.5 dB |
| Audio Output | |
| Level, Each Channel | 1 Vp-p |
| Impedance | 600Ω |
| Power (from enclosure) | |
| +6V | 100 mA (0.6 W) |
| -6V | 50 mA (0.3 W) |
| +13V | 210 mA (2.7 W) |
| -13V | 200 mA (2.6 W) |
| Total Power | 6.2 W |

Table 3. **MT108-103** Electrical

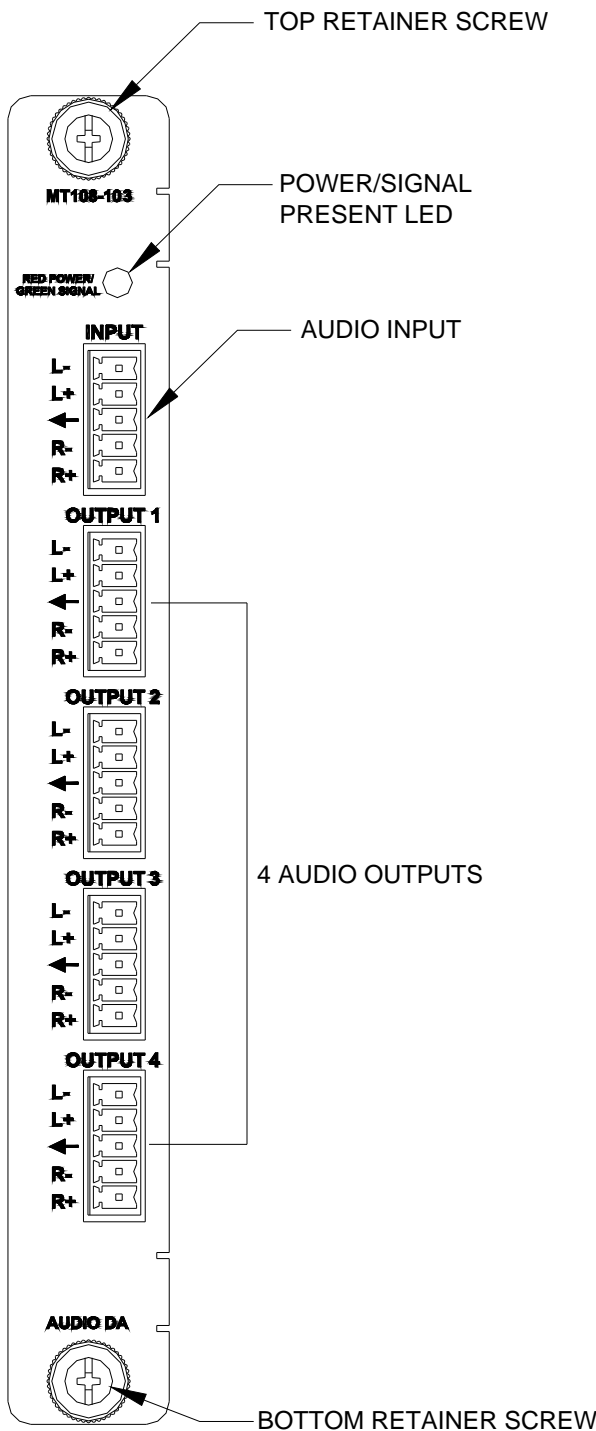


DIAGRAM 1: TYPICAL SETUP

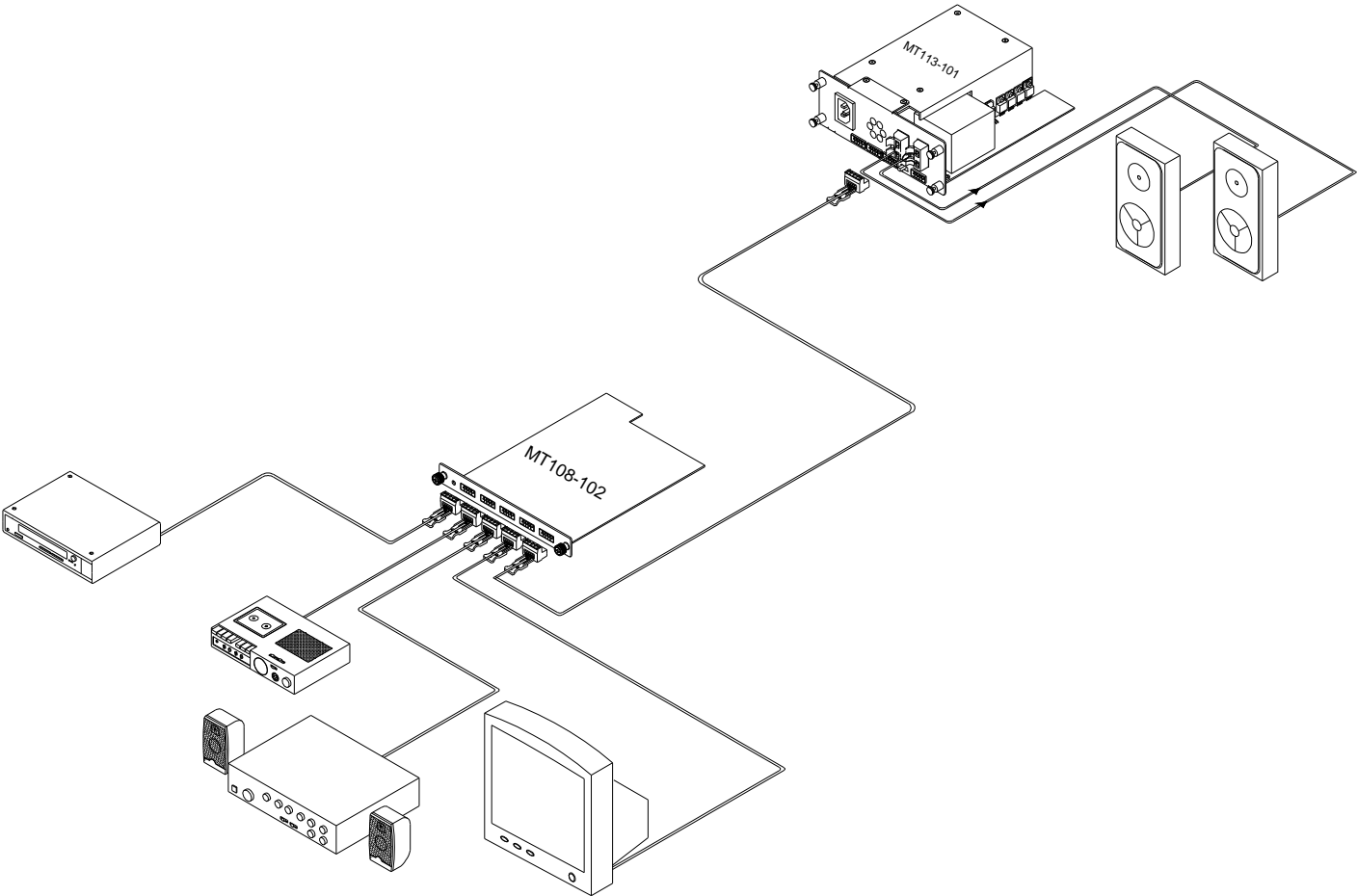
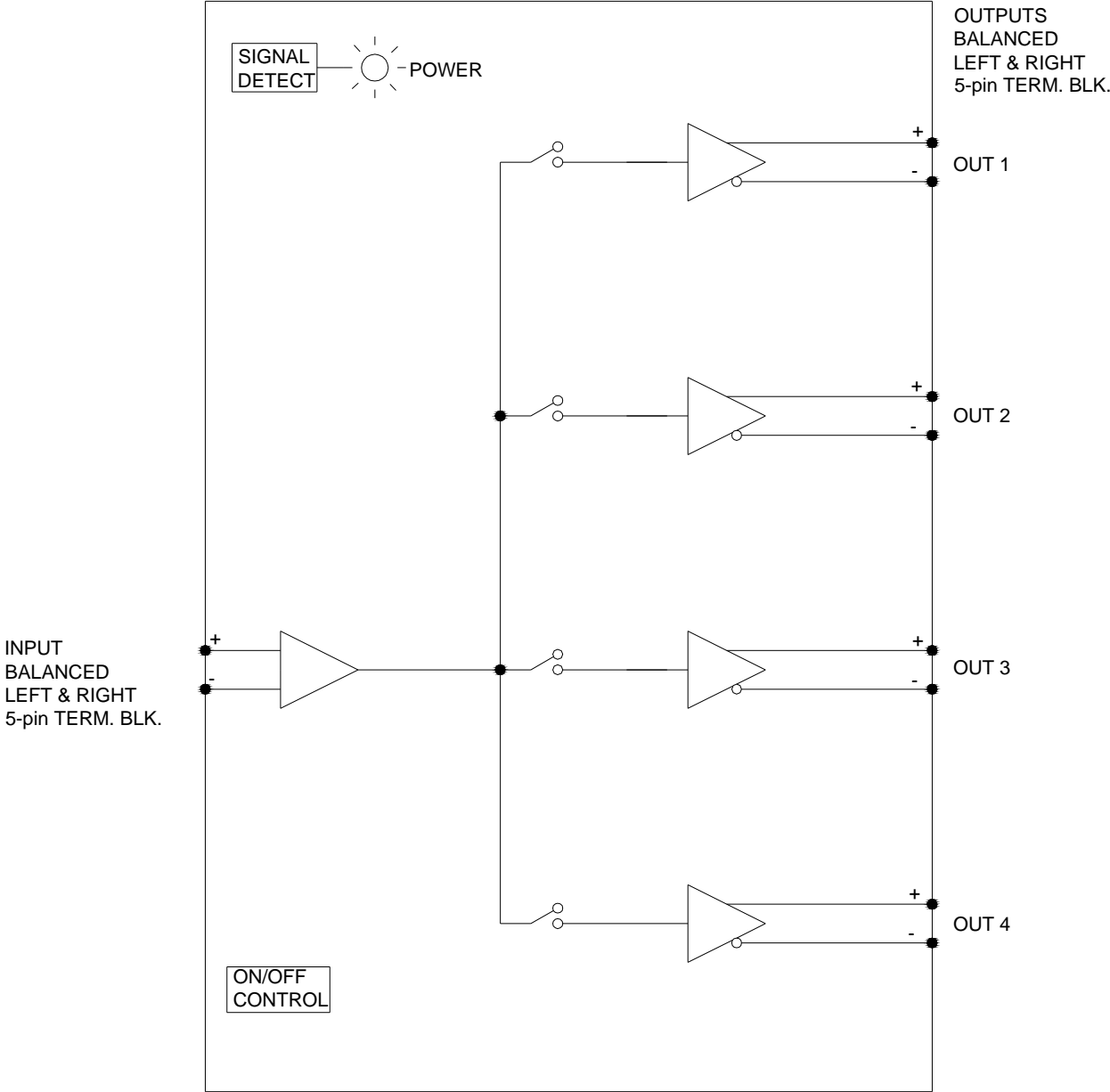


DIAGRAM 2: INTERNAL VIEW



INSTALLING YOUR MT108-103 6

- Step 1.** Turn off power to the MultiTasker system and disconnect from AC power.
- Step 2.** Remove a slot cover (MT200-101) from one of the unused slots. Identify the slot number and note that it is for RS-232 control.
- Step 3.** Slide the **MT108-103** into an available slot in the MultiTasker enclosure in order to connect to the bus. Make sure that the **MT108-103** fits into place. Secure the card to the MultiTasker by tightening the retainer screws located on the top and bottom of the card.
- Step 4.** Connect an audio cable from the audio source to the input connector of the **MT108-103**. Connect any or all of the four available outputs of the **MT108-103** to audio equipment.
- Step 5.** Restore power to the MultiTasker system.
- Step 6.** The LED on the card panel will turn red indicating that the card is in full operation. A green LED indicates that an input signal is present.
- Step 7.** The **MT108-103** is now operational as a distribution amplifier. The outputs can be controlled using a controller sending RS-232 commands, or using front panel keys.

OPERATION 7

7.1 RS-232 CONTROL

The **MT108-103** has many advanced remote-control capabilities accessible through standard RS-232 communication. Control may be accomplished through a computer, control system, or any device capable of RS-232 communication.

7.1.1 RS-232 INTERFACE

The control commands for the **MT108-103**, are in a simple ASCII character format.

1. **Square brackets “[]” are part of the command.**
2. **Use uppercase letters for all commands.**
3. **Spaces are not legal characters.**

The cards in a MultiTasker are capable of performing various functions, as well as providing feedback to the user or control system. Commands instruct a card to perform specific actions or request information from the card. Some commands do both simultaneously.

A command that instructs the card only to perform an action will generate feedback of “[]”. The open bracket immediately followed by a closed bracket indicates 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 that includes “ERR” plus an error code.

Example 1: [ERR001] Error number

Example 2: [ERRC04] Card error C4

After processing a command, an “OK” or error will be returned as feedback if “F” is included at the end of a command string.

Commands ending in “S” will be saved into memory. Commands not ending in “S” will still be executed, but will not be restored when the system is reset or powered off, then on.

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 or Group ID

U2 = Unit ID (optional for Unit ID 0)

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 1-4 up to 1-20 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.

The group ID is a number representing a group of cards defined with the [WR] command. When using the group ID, all cards in the group will perform the given instruction.

NOTE: In this guide, cards are referenced by their IDs (C1, C2...C99). Typically, the ID number will be equivalent to the slot number. Groups will be referenced by their IDs (G1-G8).

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 range from U0 to U20. U0 should be used for single unit operation. If the ID is set to U0, each command may be used without Ui. Use the command [SETU0], as explained in the MT101-101 User's Guide.

Example:

[VERC3]: For U0

[VERC3Ui]: For ID other than U0

[VERC3]: Equivalent to [VERC3U0]

COMMAND ORGANIZATION

The RS-232 commands in this section are organized into the following 5 categories:

Basic Commands

Feedback Control

Card Control

Card IDs

Groups

See the SUMMARY OF COMMANDS (Section 7.3) for one-line descriptions of each command.

BASIC COMMANDS

The basic commands are used to provide general information about the card. These commands are most useful during the initial stages of setting up and operating the card.

1. [VER]

This command displays the software version and card type for the **M108-103** card.

Command Format: [VERCn]

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

Example:

An **MT108-103** card is in slot 4. Send the command [VERC4], and the system will return feedback similar to the following:

[MT108-103 690-0127-009 C04]

MT108-103 = the card model

690-0127-009 = the software version

2. [C]

This command displays the status of the card by listing the outputs that are enabled. If an output is turned off, it is not displayed.

Command Format: [Cn]

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

Example:

There is one **MT108-103** card in slot 4. Send the command [C4] to receive feedback similar to the following:

ON:1,2,3,4C04

ON: 1,2,3,4 = Outputs 1-4 are enabled
C04 = The card is in slot 4

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

3. [CnS]

This command saves the output on/off status. This configuration will be restored after the system is reset or powered off then on.

Command Format: [CnS]

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

S = save configuration

Example:

Outputs 1, 2, and 3 of the card in slot 4 are enabled. Save the settings by sending [C4S]. The feedback will be as follows:

ON:1,2,3C04 [SAVED]

4. [CLR]

This command resets the **MT108-103** to a standard setting. After the [CLR] command, all outputs are disabled.

Command Format: [CLRCn]

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

Example:

Clear the **MT108-103** in slot 4 by sending [CLRC4]. Check the status after clearing the card, [C4], and receive the following:

ON:0C04

5. [TEST]

This command performs a series of tests on the internal memory and displays a pass message if successful. Otherwise, failures are indicated.

Command Format: [TESTCn]

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

Example:

Test C4's memory by sending [TESTC4]. If all tests pass, the following message will be displayed:

MEMORY IS GOOD

Otherwise, failures will be indicated.

6. [HELP]

This command displays information available for the MultiTasker interface commands.

Command Format: [HELPCn]

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

Example:

In order to display the RS-232 commands available for the **MT108-103** card in slot 4, send the command [HELPC4]. The commands along with a brief description will be displayed.

FEEDBACK CONTROL

The next commands are a function of both the card and the front panel and allow flexibility over when and how card information is displayed.

7. [FBD]

This command turns feedback delay on or off. It is necessary when installing some newer cards in older systems. If the system does not receive all of the feedback from the card, the card may be communicating too fast. This command will slow down the card's communication rate.

Command Format: [FBDm]

m = Delay (0= no delay, 1= delay 100mS)

Example:

The command [HELPC4] is sent to the card in slot 4. Some of the HELP file is displayed on the screen, but most is missing. Send the command [FBD1] to slow down the rate at which the card sends feedback to the system.

8. [?]

This command displays general information about a MultiTasker and its installed cards.

Command Format: [?Ui]

Ui = Unit ID (i = from 0 to 20)

Example:

A MultiTasker with unit ID 1 has a front panel with part number MT101-101 and contains an MT103-122, MT103-123, and MT108-103. Send the command [?U1] and receive the following feedback:

```
[(MT101-101U1)(MT103-122C01)
(MT103-123C02)(MT108-103C04)]
```

MT101-101U1 = Panel number/unit ID
MT103-122C01 = MT103-122 is in slot 1
MT103-123C02 = MT103-123 is in slot 2
MT108-103C04 = MT108-103 is in slot 4

9. [?C]

This command displays general information about a card and its status.

Command Format: [?Cn]

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

Example:

The **MT108-103** in slot 4 has Outputs 1-3 turned on and the remaining output is disabled. Send the command [?C4] to receive feedback status similar to the following.

```
[(MT108-103C04)(VR690-0127-009C04)
(ON1110C04)]
```

All status feedback is enclosed in brackets, “[]”. Each data field within the status is enclosed in parentheses. The first two characters identify the status type. The last three characters are the card’s ID.

MT108-103 = Card model number
VR690-0127-009 = Firmware version
ON1110 = Output ON/OFF status

The ON/OFF status line is read from left to right as Outputs 1-4. A "1" indicates the output is on and a "0" indicates the output is off.

10. [STA1]

This command enables automatic feedback from the front panel. The command affects any card with auto-feedback capability, not just the **MT108-103**. The default at power on or reset is STA0, off. For more details, see the [?Cn] command definition.

Command Format: [STA1]

Feedback Prefix Definitions:

MT Card model number
VR Firmware version
ON Output on/off status

Example:

Command = [OFF1C4]

Feedback = (ON0111C04)

ON = Output on/off status
0111 = Out 1 off, 2-4 on
C04 = Card ID/slot number

11. [STA0]

This command disables automatic feedback from the card and front panel. The command affects any card with auto-feedback capability, not just the **MT108-103** card. The default at power on or reset is STA0, OFF.

Command Format: [STA0]

12. [...F] – FEEDBACK

After processing a command, an “OK” or “[ERR001]” will be returned as feedback if ‘F’ is included at the end of a command string.

CARD CONTROL

Card control commands allow the main functions of the card to be executed over the RS-232 bus, or from the front panel's programmable keys.

13. [...S] – SAVE

This command saves the configuration command being sent in memory. Send the command [ON4C4S] to enable Output 4 and save the setting. After reset or power-up, the Output 4 of C4 will be enabled.

14. [ON]

This command will enable an output of a single card, or a group of cards.

SINGLE CARD OPERATION

Command Format: [ONmCn]

m = Output no. (m = # from 1 to 4)

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

Example:

There is an **MT108-103** card in slot 4. All of the outputs are off.

- 1) [ON1C4]: Turns on only Output 1 of C4.
- 2) [ONC4]: Turns on all outputs of C4.

GROUP OPERATION

This command enables output "m" for each card in group "k".

Command Format: [ONmGk]

m = Output no. (m = # from 1-4)

Gk = Group no. (k = # from 1-8)

Example:

[ON1G1]: Turns on Output 1 for each card in G1. See the GROUP commands for a detailed explanation of groups.

PATH OPERATION

This command will set the path for the output, but it is not active until the switch command, [SW], is executed. Commands ending in "P" are not executed immediately. The path for outputs on multiple cards or the same card may be preloaded.

Command Format: [ONmCnP]

m = Output no. (m = # from 1 to 4)

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

P = Path

Example:

There are two **MT108-103** cards, C6 and C7. Enable Output 1 of C6 and Output 3 of C7 simultaneously. To do this, send the following commands:

[ON1C6P]

[ON3C7P]

[SW]

15. [OFF]

This command disables one or all outputs of a single card or a group of cards.

SINGLE CARD OPERATION

Command Format: [OFFmCn]

m = Output no. (m = # from 1 to 4)

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

Example:

C4 has Outputs 1, 2, and 3 turned on. The following commands may be used to turn off the outputs.

- 1) [OFF1C4]: Turn off Output 1 only.
- 2) [OFFC4]: Turn off all outputs.

GROUP OPERATION

This command disables output "m" for each card in group "k".

Command Format: [OFFmGk]

m = Output no. (m = # from 1-4)

Gk = Group ID (k = # from 1-8)

Example:

1. [OFF1G1]: Turns off Output 1 for each card in G1.
2. [OFFG1]: Turns off all outputs for each card in G1.

PATH OPERATION

This command will set the path for the output, but it is not active until the switch command, [SW], is executed. Commands ending in "P" are not executed immediately. The path for outputs on multiple cards or the same card may be preloaded.

Command Format: [OFFmCnP]

m = Output no. (m = # from 1 to 4)

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

P = Path

Example:

There are two **MT108-103** cards, C6 and C7. Disable Output 1 of C6 and Output 3 of C7 simultaneously using the following commands:

[OFF1C6P]

[OFF3C7P]

[SW]

16. [...P] – PATH

This command will set the path for the output, but it is not active until the switch command, [SW], is executed. Commands ending in "P" are not executed immediately. The path for outputs on multiple cards or the same card can be loaded. See examples in ON and OFF commands.

17. [SW] – SWITCH

This command immediately connects inputs and outputs previously set with the PATH command. The command switches all paths set on this card and all other cards in the enclosure.

Example:

[ON1C6P]

[OFF3C7P]

[SW]

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. Once the ID is changed, moving the card to another slot will not change the card ID. If a card in slot 4 is set to ID 1, then moved to slot 10, its ID will remain 1. The [RSI] command forces each installed card to take its slot number as its ID number, regardless of the slot in which it is installed.

Some cards require more than one slot in the MultiTasker system. As an example, some matrix switcher cards require 4 slots. If 5 of these cards are installed, they would be numbered C4, C8, C12, C16, and C20. Changing the 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.

18. [RSI]

This command resets the card IDs in the system. After sending this command, each card ID in the system will match the slot number of the card. If the card is moved to another slot, its ID number will be the new slot number.

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. If the card in slot 1 is then moved to slot 4, the card ID will then be 4.

19. [SIDn]

This command sets all the cards installed in the MultiTasker 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.

20. [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.

21. [SID+]

This command sets the card ID of all 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 default IDs where the card ID is equal to the slot number. The second unit will have the same unit ID, but each card ID will be 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 second enclosure to their slot number plus 20. Reconnect both units to the computer.

The cards in the first unit will be referenced as card IDs 1-20 and the cards in the second unit will be referenced by card IDs 21-40.

22. [RSN]

This command displays the slot number of a card with a specified ID number. If more than one card has the same ID, each will display.

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]

GROUP COMMANDS

Group commands allow several cards with the same functions to be controlled simultaneously with a single command. Up to 8 groups (G1-G8) may be defined. These commands apply to all cards, not only the **MT108-103**.

23. [WR]

This command adds cards to a group. In MultiTasker systems with audio and video cards, the groups are typically as follows:

Group 1 = Video Cards

Group 2 = Audio Cards

Group 3 = Video and Audio Cards

Command Format: [WRC_{n1}C_{n2}...Gk]

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

Gk = Group ID (k = # from 1-8)

Example:

Add C2, C4, and C6 to G5 by sending the command [WRC2C4C6G5]. After executing this command, G5 will consist of C2, C4, and C6.

Now add C8 to G5 by sending [WRC8G5]. C8 is added to G5, and G5 is not overwritten. View the contents of G5 by sending [RDG5] and receiving the following feedback:

```
[G5=C2C4C6C8]
```

24. [RMC]

This command removes one or more cards from a group.

Command Format: [RMC_{n1}C_{n2}...Gk]

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

Gk = Group ID (k = # from 1-8)

Example:

G5 consists of C2, C4, C6, and C8. Remove C6 and C8 by sending [RMC6C8G5]. View the contents of G5 by sending [RDG5] and receiving the following feedback:

```
[G5=C2C4]
```

25. [RMG]

This command deletes one or all groups.

Command Format: [RMGk]

Gk = Group ID (k = # from 1-8, * for all)

Example:

Remove all cards from G52 by sending [RMG5]. The system will return the following feedback:

```
[G5=0]
```

Example 2:

Remove all cards from all groups, effectively deleting all groups, by sending [RMG*]. The system will return the following feedback:

```
G1-G8: EMPTY
```

26. [RD]

This command reads and then displays the members in a group.

Command Format: [RDGk]

Gk = Group ID (k = # from 1-8)

Example:

C2, C4, and C6 make up G5. Read the member data for G5 by sending the command [RDG5]. The system will return feedback as follows:

```
[G5=C2C4C6]
```

The feedback shows G5 and then the cards that make up G5. In this case, G5 includes C2, C4, and C6.

7.3. SUMMARY OF COMMANDS

Basic Commands

- 1) [VER] Display firmware version
- 2) [C] Display card status
- 3) [CnS] Save card settings
- 4) [CLR] Reset card to defaults
- 5) [TEST] Test internal memory ICs
- 6) [HELP] Display available commands

Feedback Commands

- 7) [FBD] Feedback delay on/off
- 8) [?] Display system cards
- 9) [?C] Display card information
- 10) [STA1] Auto-feedback on
- 11) [STA0] Auto-feedback off
- 12) [...F] Display OK after command

Card Control Commands

- 13) [...S] Save command being sent
- 14) [ONm] Turn on output
- 15) [OFFm] Turn off output
- 16) [...P] Sets the path, [SW] preload
- 17) [SW] Switch preloaded outputs

ID Commands

- 18) [RSI] Reset Card IDs to defaults
- 19) [SIDn] Set all Card IDs
- 20) [SIDnCi] Set one Card ID
- 21) [SID+] Set all Card IDs to an offset
- 22) [RSN] Display card slot number

Group Commands

- 23) [WR] Add card(s) to a group
- 24) [RMC] Remove card(s) from group
- 25) [RMG] Delete group
- 26) [RD] Display group members

TROUBLESHOOTING GUIDE

8

We have carefully tested and found no problems in the supplied **MT108-103**; however, we would like to offer suggestions for the following:

8.1 LED IS NOT LIT

Cause 1: Card cage is not plugged in.

Solution: Make sure the enclosure is powered and has AC power turned on. If the LED is still not on, see Cause 2.

Cause 2: Card is not plugged in all the way.

Solution: Push the card in all the way. If the LED is still not on, see Cause 3.

Cause 3: Card cage slot has a problem.

Solution 1: Test the card in other slots of the card cage. If the slot is damaged, the card may work in other slots. If other slots work, and the LED lights, the problem is the card cage slot. The card cage may require service. Call ALTINEX at (714) 990-2300. If the other slots do not work and the LED is still not on, see Solution 2.

Solution 2: Take any other known good card with an LED and verify that the slot used is good by seeing if the other card's LED lights in that slot. If it lights, then the original card may be the source of the problem. Call ALTINEX at (714) 990-2300.

8.2 NO SOUND

Cause 1: The source has a problem.

Solution: Check the source and make sure that it is working at an appropriate volume level and all source connections are correct. If the source is working and there is still no sound, see Cause 2.

Cause 2: The card output is turned OFF.

Solution 1: Turn on the card output that is used. See RS-232 accessible commands in section 7. If no sound is present, see Solution 2.

Solution 2: If there is still no sound, see Cause 3.

Cause 3: Cable connections to the destination are incorrect.

Solution: Make sure the cables are connected properly. Also, ensure that the continuity and wiring are good. If there is still no sound present, see Cause 4.

Cause 4: The destination amplifier has a problem.

Solution 1: Make sure that the destination amplifier is powered. If there is still no sound, see Solution 2

Solution 2: Set the volume of the destination amplifier to a reasonable level. If there is still no sound, call ALTINEX at (714) 990-2300.

8.3 SOUND DISTORTION

Cause 1: The source level is above 1V p-p.

Solution: Make sure that the source level is below 1 Vp-p. If the sound is still distorted, see Cause 2.

Cause 2: The destination amplifier provides excessive amplification.

Solution 1: Make sure that the source signal level is high enough so that the destination amplifier does not have to provide excessive amplification and thereby distort the signal. If there is still sound distortion, call ALTINEX at (714) 990-2300.

8.4 SOUND LEVEL IS LOW

Cause 1: The volume levels are inappropriate.

Solution 1: Turn up the source volume. If sound level is still low, see Solution 2.

Solution 2: Turn up the destination amplifier volume. If the sound level is still low, see Cause 2.

Cause 2 Poor signal transmission.

Solution: Check the cables for continuity and make sure that connections are wired properly to verify that there is good signal transmission.

Note: Test the system by removing the **MT108-103** card from between the source and the destination amplifier. If problem persists, call ALTINEX at (714)-990-2300.

ALTINEX POLICIES

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9.1 LIMITED WARRANTY/RETURN POLICIES

Please see the ALTINEX website at www.altinex.com for details on warranty and return policies.

9.2 CONTACT INFORMATION

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