Mult
Tasker™

MANUAL PART NUMBER: 400-0401-001

MT100-108

12-SLOT MULTI-TASKER™

ENCLOSURE

USER'S GUIDE

ᗜALTINEX

SIGNAL
MANAGEMENT
SOLUTIONS

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PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT100-108** 12-Slot Multi-Tasker™ Enclosure. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MT100-108** 12-Slot Multi-Tasker™ Enclosure 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 **MT100-108** 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 your **MT100-108** carefully. Dropping or jarring can damage the unit. If the **MT100-108** is not used for an extended period, disconnect the power cord from the power outlet or turn off the main connection.

1.3 RACK-MOUNT INSTALLATION

• Use only ALTINEX supplied rack-mount ears for mounting the **MT100-108** into a rack.

• The maximum operating ambient temperature is 35ºC (95ºF).

• When installing the **MT100-108** into a rack, distribute individual units evenly, otherwise hazardous conditions may be created by an uneven weight distribution. This will reduce heat build up and will prolong the life of the **MT100-108.** Power should be connected using provided 3-prong power cord only. Furthermore, make sure that the rack is properly grounded.

1.4 CLEANING

• Unplug the **MT100-108** power cord before cleaning.

• Clean surfaces 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 unit.

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 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.

ALTINEX

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ABOUT YOUR MT100-108   2

MT100-108
Multi-Tasker™ 12-Slot Enclosure

- Empty card-cage with 12 slots available
- Basic foundation of Multi-Tasker™ solutions
- 3U high, full rack wide
- Rack ears included

The Multi-Tasker™ 12-Slot Enclosure, **MT100-108**, comes with a front panel installed. However, the front panel **MT101-115** must be ordered separately.

For applications in which the Multi-Tasker™ needs to be controlled using front panel buttons, the **MT101-115** with 36 user-programmable buttons, offers a great deal of flexibility in user control. These buttons may be programmed to control all functions of the front panel and individual system cards.

The buttons offer removable transparent faces, allowing access to removable labels for easy identification of programmed functions. Non-volatile memory protects the programming during power-down. Programming is accomplished through one of two 9-pin RS-232 ports. One port is located on the front of the unit and the other is on the back panel.

The **MT101-115** may be computer controlled directly from a computer terminal or using the front panel buttons.

TECHNICAL SPECIFICATIONS   3

FEATURES/ DESCRIPTION	MT100-108
GENERAL	
RS-232	9-Pin D Connector (GND, RXD & TXD)
Compatibility	Cards designed for the Multi-Tasker™ System

Table 1. **MT100-108** Electrical

MECHANICAL	MT100-108
Weight (without cards)	6.5lbs. (2.95kg)
Weight (with front panel)	8.2lbs (3.72kg)
Width	17.0 in. (432mm)
Depth	12 in. (305mm)
Height	5.2 in. (132mm)
Available Slots	12
Back Panel	Black
T° Operating	10°C-35°C
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calc.)	40,000hrs

Table 2. **MT100-108** Mechanical

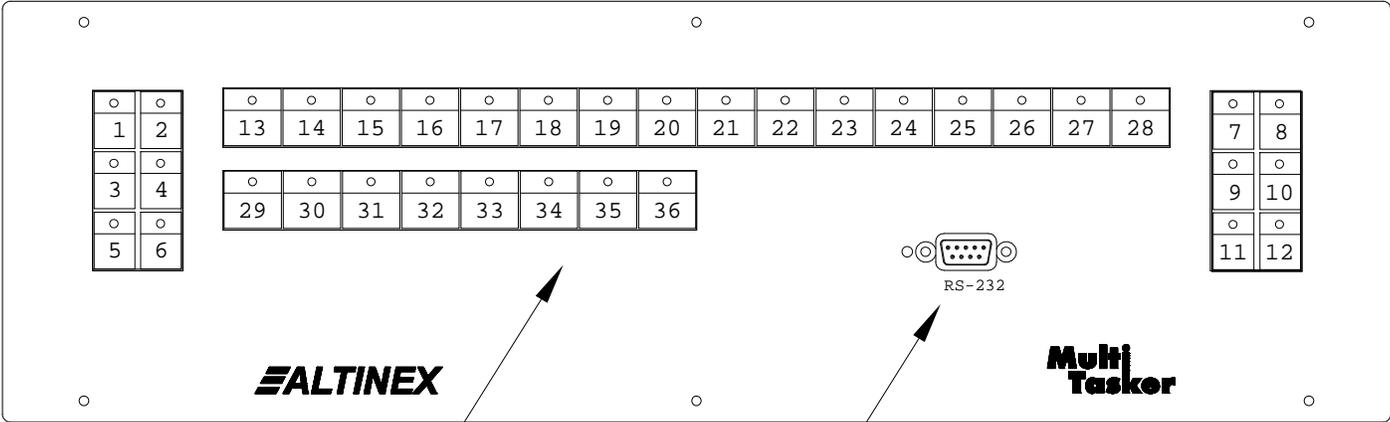| ELECTRICAL	MT100-108
Power Input	85VAC - 264VAC @ 50/60Hz

Table 3. **MT100-108** Electrical

PRODUCT DESCRIPTION   4
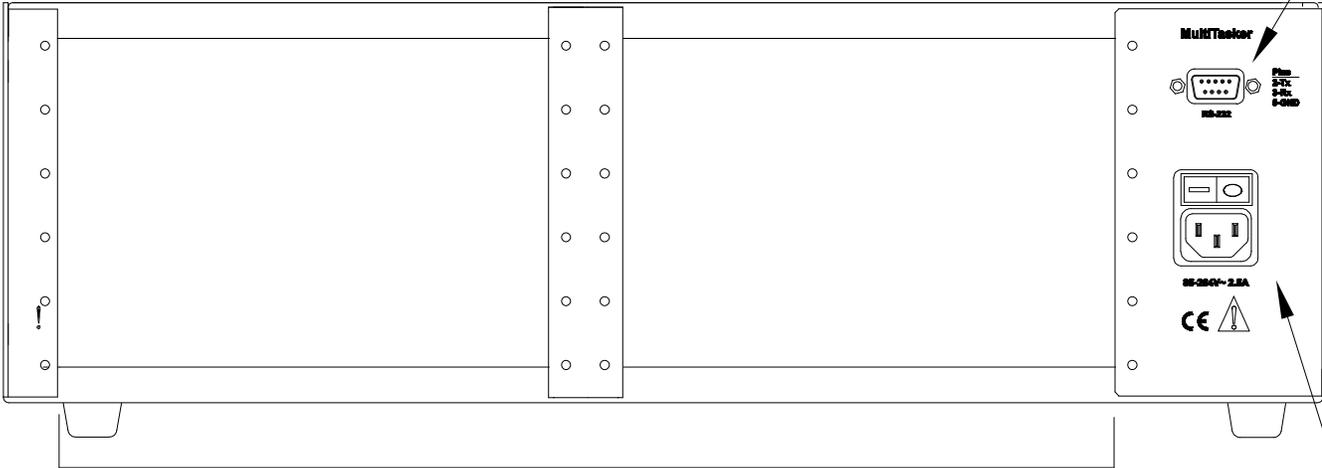
MT100-108 FRONT PANEL OPTION

MT101-115

36 PROGRAMMABLE
BUTTONS

RS-232 CONTROL
FROM FRONT PANEL

MT100-108 REAR VIEW

RS-232 CONTROL

SLOTS 1-12

POWER INPUT

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INSTALLING YOUR MT100-108 5

Step 1. Connect the power entry connector of the **MT100-108** to the power outlet with the provided power cord. The power supply is universal and will work throughout the world with voltages from 110V-240VAC.

Step 2. If a control system is used to control the cards in the **MT100-108**, connect the RS-232 port of the **MT100-108** to the control system's RS-232 port. See Table 4.

Connector on Multi-Tasker™	Computer or Control System
GND (Ground)	Ground
RXD (Receive)	Transmit
TXD (Transmit)	Receive

Table 4. **MT100-108** RS-232 Control

NOTE: Make sure the transmit pin of the control unit is connected to the receive pin of the **MT100-108** and that the receive pin of the control unit is connected to the transmit pin of the **MT100-108**. See Figure 1 and Figure 2.

Step 3. The unit is now operational.

OPERATION 6

The **MT100-108,** along with the **MT101-115** front panel, has many advanced remote control capabilities, which are accessible through standard RS-232 communication. The controlling can be accomplished through a computer, a control system, or any device capable of sending RS-232 commands. The factory settings for the RS-232 port are 9600 baud, 8 bits, 1 stop, and No parity.

Commands used for MultiTasker cards such as [ON], [OFF], and [IO] that end in "S" will be saved to memory. Commands not ending in "S" will still be executed but will not be restored when the system is reset (power off & power on again).

In this section, "Basic Enclosure" or "Unit" has the same meaning. The basic enclosure is a complete and independent card cage that has a controller and 12 slots for plug-in cards. Each unit or basic enclosure has its own Unit ID that is based on a number from 0 to 9. Each plug-in card also has its own Card ID that is a number from 1 to 12.

6.1 RS-232 CONNECTION

If a control system is used to control the cards in the **MT100-108** Multi-Tasker™ Basic Enclosure, connect the RS-232 connector of the **MT100-108** to the control system's RS-232 port. To connect the Multi-Tasker™ (MT) to a computer or a terminal, you must have the proper interface cable.

The RS-232 cable must have the appropriate connector on each end and the internal wiring must be correct. Connectors typically have 9 pins (DB-9 connector) or 25 pins (DB-25 connector) with a "male" or "female" pin configuration. See Figures 1 and 2 for pinout details.
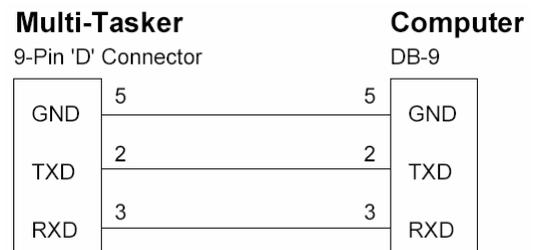
Multi-Tasker
9-Pin 'D' Connector

Computer
DB-9

	Multi-Tasker	Computer	
GND	5	5	GND
TXD	2	2	TXD
RXD	3	3	RXD

Figure 1
DB9 Serial Connection

Multi-Tasker
9-Pin 'D' Connector

Computer
DB-25

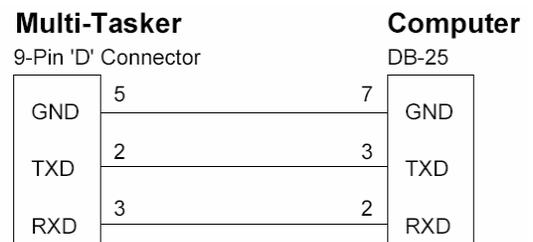|	Multi-Tasker	Computer	
GND	5	7	GND
TXD	2	3	TXD
RXD	3	2	RXD

Figure 2
DB25 Connection

6.2 RS-232 PROTOCOL

The RS-232 protocol for the **MT100-108** uses a simple ASCII character format. See the MT101-115 Front Panel User Guide for Multi-Tasker™ commands and formats.

TROUBLESHOOTING GUIDE 7

We have carefully tested and have found no problems in the supplied **MT100-108**; however, we would like to offer suggestions for the following:

7.1 CARD CAGE IS NOT WORKING

Cause 1: Card cage is not plugged in.

Solution: Plug the card cage in. If the card cage works, the problem is solved. If the card still does not work, see Cause 2.

Cause 2: The input power voltage is incorrect.

Solution: Make sure that the input power range is within 85-264VAC and also make sure that the power is connected to the input power connector. If there is still a problem, call ALTINEX at (714) 990-2300.

7.2 CARD IS NOT WORKING

Cause 1: Card cage slot has a problem.

Solution 1: Test a card in other slots of the card cage. If the slot was damaged, the card may work in other slots. If other slots work, 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, 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. If the original card was not the source of the problem, see Cause 2.

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

Solution 1: Push the card in all the way. If the card still does not work, see Solution 2.

Solution 2: See the troubleshooting section of each the card's user guide or call ALTINEX at (714) 990-2300.

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8.1 LIMITED WARRANTY/RETURN POLICY

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

8.2 CONTACT INFORMATION

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