

**Multi
Tasker™**



MANUAL PART NUMBER: 400-0165-001

MT101-105

**FRONT PANEL FOR THE 8-SLOT
MULTI-TASKER™ ENCLOSURE WITH
36 PROGRAMMABLE BUTTONS**

TABLE OF CONTENTS

	Page
PRECAUTIONS / SAFETY WARNINGS.....	2
GENERAL.....	2
INSTALLATION	2
RACK MOUNT INSTALLATION.....	2
CLEANING	2
FCC / CE NOTICE	2
ABOUT YOUR MT101-105	3
TECHNICAL SPECIFICATIONS	3
DESCRIPTION OF MT101-105	4
INSTALLING YOUR MT101-105	5
OPERATION.....	5
RS-232 CONNECTION.....	5
RS-232 PROTOCOL.....	5
RS-232 COMMANDS.....	6
ASSIGNING THE SAME ID TO MULTIPLE UNITS.....	11
SUMMARY OF COMMANDS.....	11
WINDOWS BASED CONTROL SOFTWARE ..	11
TROUBLESHOOTING GUIDE	12
ALTINEX POLICY	13
LIMITED WARRANTY	13
RETURN POLICY	13
CONTACT INFORMATION.....	13



PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT101-105**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MT101-105** 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 **MT101-105** 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 **MT101-105** carefully. Dropping or jarring can damage the unit. If the **MT101-105** 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 **MB1001** rack-mount ears for mounting the **MT101-105** into a rack.
- The maximum operating ambient temperature is 45 degrees Centigrade.
- When installing the **MT101-105** 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 **MT101-105** should be maintained by connecting using the provided 3-prong power cord only. Furthermore, make sure that the rack is properly grounded.

1.4 CLEANING

- Unplug the **MT101-105** 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.

ABOUT YOUR MULTI-TASKER™ 2

MT101-105 Multi-Tasker® 8-Slot Enclosure

The Multi-Tasker™ 8-Slot Enclosure, **MT101-105**, comes with a front panel installed. However, the front panel must be ordered separately to insure that you select the best solution for your application. ALTINEX currently offers three front panel choices: part numbers MT101-103, MT101-104 and **MT101-105**.

For applications in which the Multi-Tasker needs to be controlled from the front panel, select the **MT101-105**. This panel provides 36 buttons, which are completely user-programmable. This is accomplished by connecting a PC computer to the **MT101-105** through its 9-pin D sub RS-232 communications port and programming the functionality of each button using Windows software provided by ALTINEX. Once programmed, the buttons can be used to effect the pre-programmed switching functions, and offer operational functions such as single-click, click-and-hold, and on-off LED's. The buttons offer removable transparent faces, allowing access to removable labels, for easy identification of programmed functions. The button layout on the **MT101-105** resembles a typical switcher or matrix switcher configuration, with larger buttons used for input/output control and smaller buttons used for special features.

TECHNICAL SPECIFICATIONS 3

FEATURES/DESCRIPTION	MT101-105
GENERAL	
Compatibility	Designed for use in the Multi-Tasker™ 8-slot Enclosure

Table 1. **MT101-105** General

MECHANICAL	MT101-105
T° Operating	10°C-40°C
T° Maximum	0 to 50°C
Humidity	90% non-condensing
MTBF (calc.)	65,000 hrs

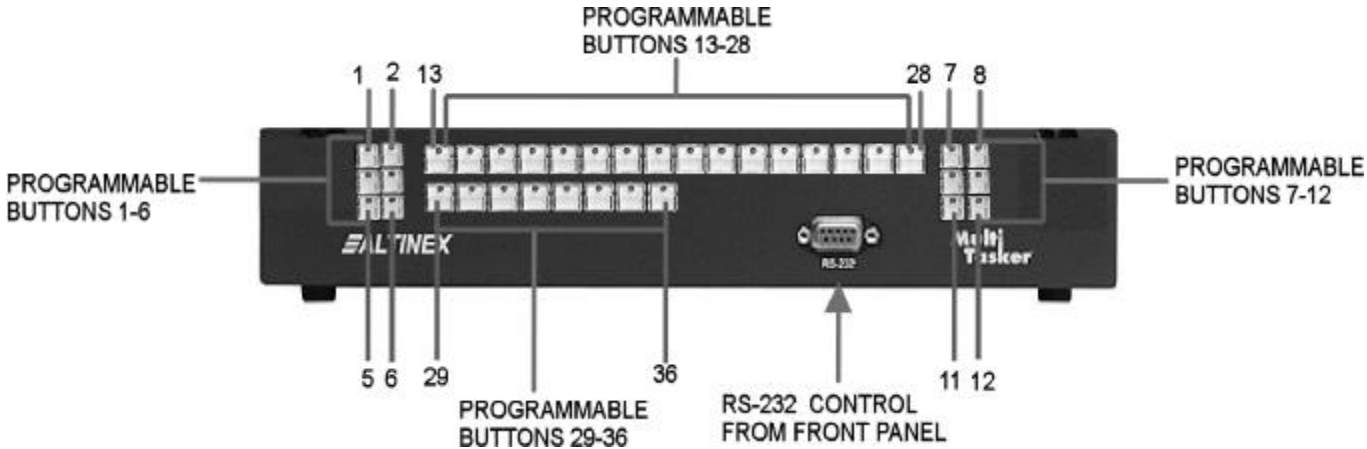
Table 2. **MT101-105** Mechanical

ELECTRICAL	MT101-105
Power	
Power	+5V -5V
Power Consumption	.25 watt max.

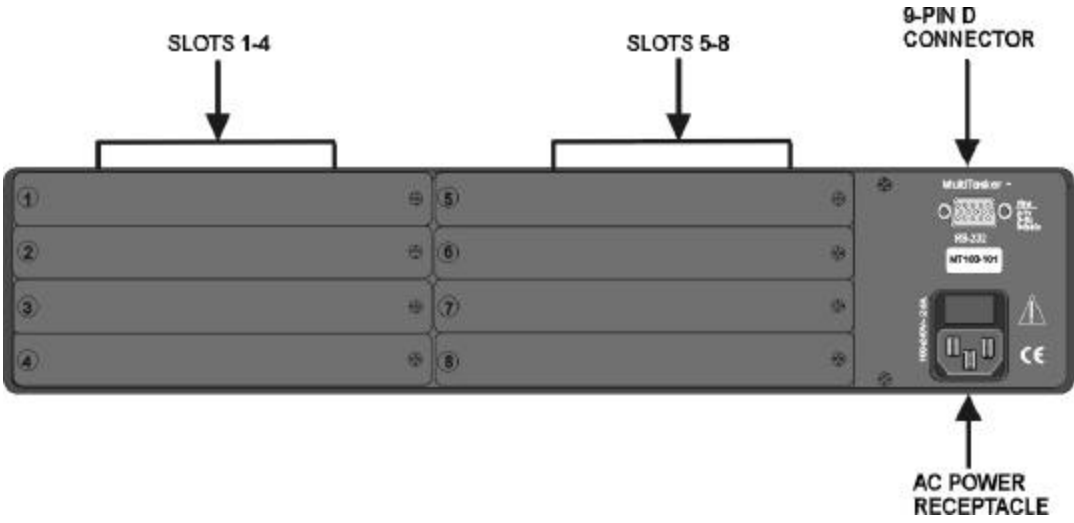
Table 3. **MT101-105** Electrical

DESCRIPTION OF MULTI-TASKER™ 4

FRONT PANEL: 36 Programmable Buttons



BACK PANEL



INSTALLING YOUR MULTI-TASKER™ 5

Step 1. Connect the power entry connector of the **MT101-105** to the power outlet with the provided power cord. The power supply is universal and will work throughout the world with voltages from 85V to 264VAC.

Step 2. If a control system is used to control the cards in the Multi-Tasker™, connect the 9-pin D connector of the **MT101-105** to the control system's RS-232 port as shown in Table 4.

9-pin D Connector of Multi-Tasker™	Computer or Control System
GND (Ground)	Ground
RXD (Receive)	Transmit
TXD (Transmit)	Receive

Table 4. **MT101-105** RS-232 control

*Note: Make sure that the transmit pin of the control unit is connected to the receive pin of the **MT101-105**. Also, make sure that the receive pin of the control unit is connected to the transmit pin of the **MT101-105**. See figure 1 and 2.*

Step 3. Turn on the power switch of the **MT101-105** Multi-Tasker™.

OPERATION 6

The **MT101-105** has many advanced remote control capabilities, which are accessible through standard RS-232 communication. The actual controlling can be accomplished through a computer, a control system, or any other 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.

At power up or reset, subroutine #1 will be executed. The user can program subroutine 1 to default setting for the cards in the system (see {WRS} command for front panel).

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

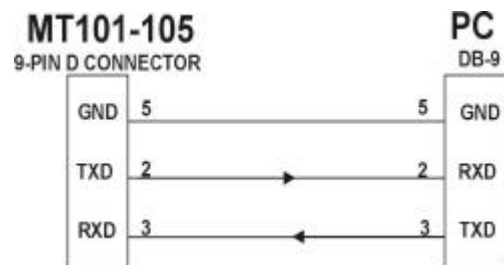
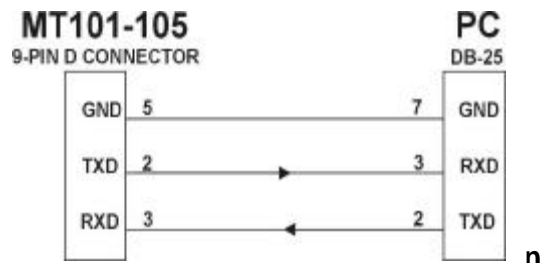
The memory buffer is used to save key and subroutine programs. It is non-volatile with a storage capacity of 64895 bytes. This allows the user to create a single subroutine with 64895 bytes maximum or many subroutines that share 64895 bytes.

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 8 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 unit ID that is a number from 1 to 9.

6.1 RS232 CONNECTION

If a control system is used to control the cards in the Multi-Tasker™ Basic Enclosure, connect the 9-pin D connector of the **MT101-105** 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 interface cable must also 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.



6.2 RS-232 PROTOCOL

The RS-232 protocol for the **MT101-105** uses a simple ASCII character format.

1. Brackets “[]” are part of the command for controller or plug-in card. Marks the beginning and ending of a command string.
2. Brackets "{ }" are part of the command for panel display. Marks the beginning and ending of a command string.
3. Use uppercase letters for all commands.
4. Commands may be executed with or without a space.

The input buffer is a volatile 256-character ring buffer with a storage capacity of 256 bytes. Use caution when sending consecutive commands from a computer or control system. To avoid an overflow of the command buffer, the user may send commands with the delay time.

Each character requires 1ms to reach the buffer. Each command will be executed every 50ms. After the first 50ms interval, the first command has been executed and removed, therefore the buffer has extra space available to accept another command. The user may send consecutive commands, if the total number of characters does not exceed 300.

There are two ways to send commands, see examples below.

- 1) Send commands with a delay time of 50ms.

```
[ON123456C2U1]
```

```
    Delay 50ms
```

```
[OFF123C2U1]
```

```
    Delay 50ms
```

```
[OFF6C2U1]
```

- 2) Send consecutive commands without delay up to 300 characters and then send the rest of the commands with a 50ms delay as shown above. The user may also calculate time to execute all commands in the buffer by multiplying the number of commands by 50ms. After the execution time, the user can send another 300-character string without delay.

6.3 RS-232 COMMANDS

1. [RES], [VER C0], [C0], [SET], [ID] - For controller
2. {WRS}, {WRK}, {RDS}, {RDK}, {CLRS}, {CLRK}, {LED}, {KEY}, {SUB}, {TEST} - For front panel

6.3.1 COMMANDS FOR CONTROLLER

[RES], [VER C0], [C0], [SET], [ID]

1. [RES]

The [RES] command resets the Enclosure. The controller and all cards in the Enclosure will be reset.

If the unit has a unit ID of zero, it will beep once and return feedback to the controller or computer in the form of ASCII text that says PLEASE WAIT. After 3 seconds when all initializations are complete, the unit will beep twice and return feedback to the controller or computer in the form of ASCII text that says **READY**. This will let the user know that the unit is ready for operation. The reset process will take 3 seconds.

If the unit ID is any number other than zero (# from 1 -9), the unit will beep once. After 3 seconds when all initializations are complete, the unit will beep two times.

2. [VERC0Ui]

This command displays the current version of the firmware for the controller unit located in the **MT101-105**.

C0 = card ID (0 is for controller card of the **MT101-105**)

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

Example:

- [VERC0U1]: will return feedback as [Ver 122001 123001 124001]
- 122001: software version of control CPU
- 123001: software version of process CPU
- 124001: software version of Panel CPU

Note: Controller card has 3 different CPU's: Control CPU, Process CPU, and Panel CPU (LED/KEY).

3. [C0Ui]

This command receives the status of the controller card.

C0 = ID 0 is for the controller card of the **MT101-105**.

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

Example:

To see the status of Controller unit #1, send the [C0U1] command.

The Multi-Tasker™ system will return feedback as [CONTROL:OK] if the controller card is working properly.

[CONTROL: ER03] will be returned as feedback if there is an error 3 on controller card.

ERROR CODES

ER01: CPU Error

This error indicates that the CPU is not working properly.

ER02: I²C Communication Error

This means that the communication between the controller and its serial device has failed.

ER03: RS485 Communication Error

This type of error is a communication error between the serial device and Controller unit and the cards in the Multi-Tasker™ Enclosure.

4. [SETUi]

This command sets the unit ID number for the **MT101-105** Multi-Tasker™ Enclosure.

Ui = Unit ID (i is a number from 0 to 9)

Example:

To assign an ID for a unit, first turn ON that particular unit leaving other units OFF.

a) [SETU0]

After this command is executed, the unit ID will be changed to zero. Feedback will be returned as:

NEW UNIT ID: 0
TURN OFF TO RESET

The user must turn off the unit now.

All commands for this unit with an ID of zero may either include U0 or not include U0.

Example: [Cn] = [CnU0]

[VERCn] = [VERCnU0]

[ON123Cn] = [ON123CnU0]

b) [SETU6]

After this command is executed, all commands for this unit must include U6 (i.e. [CnU6], [VERCnU6], etc). This command can be used for single or multiple unit operation. If there are 3 enclosures being used, set unit ID's using the following procedure:

1) Turn OFF all units.

a) Turn ON the unit that you want to assign unit ID no. 1

b) Send the [SETU1] command.

2) Turn OFF all units.

a) Turn ON the unit that you want to assign unit ID no. 2

b) Send the [SETU2] command.

3) Turn OFF all units.

a) Turn ON the unit that you want to assign unit ID no. 3

b) Send the [SETU3] command.

5. [IDUi]

This command identifies the **MT101-105** using a specific unit ID. The status LED on the front panel will blink green for 10 seconds to indicate which unit has the ID.

6.3.2 COMMANDS FOR FRONT PANEL

{WRS}, {WRK}, {RDS}, {RDK}, {CLRS}, {CLRK},
{LED}, {KEY}, {SUB}, {TEST}

1. {WRS}

This command writes or programs a subroutine by adding functions to the subroutine.

Command Format: {WRSnUi=function1, function2, function3, function4...}

Sn = Subroutine ID (n = # from 1 to 180)

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

, (comma) = must be used between functions

Example:

To program subroutine 1 of unit 2 with the following functions: ON1C3, ON2C3 and LED1=1, use the {WRS1U2=ON1C3,ON2C3,LED1=1} command.

Note: A comma must be used between functions.

To add more functions such as ON3C3 and ON4C3 to the subroutine, use the following command: {WRS1U2=ON3C3,ON4C3}

After sending the command above, the content of subroutine 1 will be as follows:

ON1C3,ON2C3,LED1=1,ONC3,ON4C3

The {WRS} command length is unlimited. It is only limited to buffer size (64,895 bytes). The user can add as many functions as desired.

Example:

```
{WRS2U2 = ON1C1U2, ON2C2U2, I1O1C3U4, I2O2C5U6,LED2=2,LED1=0,ON3C4U19,ON5C18 U18,LED3=1,OFFC7U1,ONC2U3,OFF2C4U4...}
```

Note: If there are any discrepancies or if the buffer has not been initialized, the user will receive a message such as PLEASE PERFORM BUFFER TEST. Use the {TEST} command to initialize the buffer (see {TEST} command).

To verify the content of subroutine 1, use the {RDS1U2} command.

2. {WRK}

This command writes or programs a key by assigning a subroutine ID to a key's state. A key may have up to 5 different states so it can be assigned to execute 5 different subroutines.

Key states are:

State 1: Key pressed when LED is off

State 2: Key pressed when LED is on

State 3: Key pressed when LED is flashing

State 4: Key pressed and held for at least 2.5 seconds

State 5: Key pressed and held for 2.5 seconds when power is up or system is reset

Command Format: {WRKnUi=s1,s2,s3,s4,s5}

Kn = key programs (n = # from 1 to 36)

s = # from 0 to 180 (for subroutine ID's).

Subroutine 0: do nothing.

s1 = subroutine ID for state 1, s2, s3, s4, s5 are for state 2, 3, 4, and 5.

Ui = # from 0 to 9 (for unit ID)

Example:

{WRK36U2=10,20,30,40,00}:

10: go to subroutine 10 when key 36 is pressed & LED is off (state 1)

20: go to subroutine 20 when key 36 is pressed & LED is on (state 2)

30: go to subroutine 30 when key 36 is pressed & LED is flashing (state 3)

40: go to subroutine 40 when key 36 is pressed & held for 2.5 seconds (state 4)

00: go to subroutine 00 when key 36 is pressed & held for 2.5 seconds (reset) (state 5)

subroutine 0: Do nothing.

Note: If there are any discrepancies or if the buffer has not been initialized, the user will receive a message such as PLEASE PERFORM BUFFER TEST. Use the {TEST} command to initialize the buffer (see {TEST} command).

3. {RDS}

This command reads and displays the content of one or more subroutines.

Command Format: {RDSnUi}: Reads and displays the content of subroutine n of unit i.

Sn = Subroutine ID (n = # from 1 to 180)

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

a) {RDSn} : Display content of subroutine n.

b) {RDS*} : Display content of all subroutines.

Example 1:

{RDS1U2}: Will display content of subroutine 1.

Display will be as follows:

SUB 1:

ON1C2,OFFC3,LED36=1...

Example 2:

{RDS*U2}: Will display content of all subroutines of unit 2.

Display will be as follows:

SUB-LIST:

SUB1:
ON1C2,OFFC3,LED36=1...
SUB2:
ON2C2,OFF3C3,LED2=...
SUB5:
ON3C2,OFF6C3,LED3=0...

Only the existing subroutines will be displayed.
Empty subroutines will be discarded.

4. {RDK}

This command displays the content of one or more key programs.

Command Format: {RDKnUi}: Reads and displays program of key n of unit i.

Kn = key programs (n = # of key programs)

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

- a) {RDKn}: Displays content of a key's program.
- b) {RDK*}: Displays content of all keys' program.

Example 1:

{RDK1U2}: Will display program of key 1 program of unit 2.

Display will be as follows:

KEY1= 2,5,10,20,30

If state 1 is used: Go to subroutine 2 (if key 1 is pressed when LED is off).

If state 2 is used: Go to subroutine 5 (if key 1 is pressed when LED is on).

If state 3 is used: Go to subroutine 10 (if key 1 is pressed when LED is flashing).

If state 4 is used: Go to subroutine 20 (if key 1 is pressed and held for more than 2.5 seconds).

If state 5 is used: Go to subroutine 30 (if key 1 is pressed and held for more than 2.5 seconds when system is reset).

Example 2:

{RDK*U2}: displays content of all keys of unit 2.

Display will be as follows:

KEY-LIST:

KEY1 = 2,3,4,5,0
KEY2 = 6, 2, 7, 3, 8
KEY3 = 10, 11, 12, 0, 0

KEY4 = 178, 179, 180, 0, 0
KEY5 = 0, 0, 0, 0, 0
KEY6 = 0, 0, 0, 0, 0
KEY7 = 0, 0, 0, 0, 0
KEY8 = 0, 0, 0, 0, 0
KEY9 = 0, 0, 0, 0, 0
KEY10 = 0, 0, 0, 0, 0
KEY11 = 0, 0, 0, 0, 0
KEY12 = 0, 0, 0, 0, 0
KEY13 = 0, 0, 0, 0, 0
KEY14 = 0, 0, 0, 0, 0
KEY15 = 0, 0, 0, 0, 0
KEY16 = 0, 0, 0, 0, 0
KEY17 = 0, 0, 0, 0, 0
KEY18 = 0, 0, 0, 0, 0
KEY19 = 0, 0, 0, 0, 0
KEY20 = 0, 0, 0, 0, 0
KEY21 = 0, 0, 0, 0, 0
KEY22 = 0, 0, 0, 0, 0
KEY23 = 0, 0, 0, 0, 0
KEY24 = 0, 0, 0, 0, 0
KEY25 = 0, 0, 0, 0, 0
KEY26 = 0, 0, 0, 0, 0
KEY27 = 0, 0, 0, 0, 0
KEY28 = 0, 0, 0, 0, 0
KEY29 = 0, 0, 0, 0, 0
KEY30 = 0, 0, 0, 0, 0
KEY31 = 0, 0, 0, 0, 0
KEY32 = 0, 0, 0, 0, 0
KEY33 = 0, 0, 0, 0, 0
KEY34 = 0, 0, 0, 0, 0
KEY35 = 0, 0, 0, 0, 0
KEY36 = 0, 0, 0, 0, 0

All key programs will be displayed.
Unprogrammed keys will be displayed as 0.

5. {CLRS}

This command clears one or more subroutines.

Command Format: {CLRSnUi} Clears subroutine n of unit i.

Sn = Subroutine ID (n = # from 1 to 180)

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

- a) {CLRSn}: Clears one specified subroutine
- b) {CLRS*}: Clears all 180 subroutines. This process will take up to 20 seconds until OK is displayed.

Example 1:

{CLRS180U2}: clears subroutine 180 of unit 2.

Example 2:

{CLRS*U2}: clears all 180 subroutines of unit 2.

After executing this command, feedback will be returned as:

PLEASE_WAIT_20_SECONDS

After all subroutines are cleared, OK will be displayed.

6. {CLRK}

This command clears all key programs or one specified key program.

Command Format: {CLRKnUi} Clears key n programs (clears all 5 states).

Kn = key programs (n = # of key programs)

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

- a) {CLRKn} Clears one specified key program
- b) {CLRK*} Clears all 36 keys' programs

Example 1:

{CLRK3U2}: clears program key 3 of unit 2.

Example 2:

{CLRK*U2}: clears all 36 keys' programs of unit 2.

7. {LED}

This command activates the LED.

Command Format: {LEDnUi=s} - Sets LED n of unit i per state s.

n = # from 1 to 36 for LED's (n= * for all LED's)

s = # from 0 to 2: (0 for off, 1 for on, 2 for flash)

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

To turn on, off or flash one or all LED's:

Example:

{LED36Ui=2}: Flashes LED 36.

{LED10Ui=1}: Turns on LED 10

{LED*Ui=0}: Turns off all LED's

{LED*Ui=1}: Turns on all LED's

{LED*Ui=2}: Flashes all LED's

8. {KEY}

This command activates a key through RS-232 control.

Command Format: {KEYnUi} press key n of unit i.

n = key number from 1 to 36

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

Example:

{KEY36U9} press key 36 of unit 9.

9. {SUB}

This command executes a subroutine through RS-232 control.

Command Format: {SUBnUi} executes subroutine n of unit i.

n = (n = # from 1 to 180 for subroutine ID)

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

Example:

{SUB10U1} executes subroutine 10 of unit 1.

10. {TEST}

This command performs tests for memory buffer, keys, and LED's before the buffer can be used. Buffer data will be cleared after the test is performed.

Command Format: {TEST Ui}

Example:

{TESTU1}

This command tests panel display for unit 1. The {TESTU1} command will prompt to the buffer test and the key/LED test. The following messages will be displayed:

BUFFER TEST.....

PLEASE_WAIT_90_SECONDS

When 90 seconds are up, the system will display the buffer test results. After the test results are displayed, the system will prompt to the key/LED test and display the following:

BUFFER_IS_GOOD

KEY_LED_TEST: PRESS_A_KEY

...TURN OFF TO EXIT...

In this test, when a key is pressed, its LED should be on. Otherwise the key or its LED is bad.

To exit this test, the user must turn off the unit.

6.4 ASSIGNING THE SAME ID TO MULTIPLE UNITS

When there is more than one unit being used, unit ID 0 to 9 can be used for each unit. If identical units are used, the user may assign the same unit ID in order to operate these units simultaneously with the same command.

Example:

To assign unit ID 1 for 3 different units:

- a) Turn on only these 3 units.
- b) Send this command: [SETU1]

After sending the [SETU1] command, all of the 3 units will have unit ID=1.

Command [ON1C2U1] will turn on input/output#1 on card 2 of these 3 units at simultaneously.

Caution must be used when multiple units are assigned the same unit ID.

- 1) Do not use the following commands for multiple units with the same unit ID:

[Ci], [VER] and [RD]

These commands will request feedback such as card status, version, or content of a register.

- 2) Do not use suffix "F" in a command for multiple units with the same unit ID. (note: using F will request feedback)

Note: Using commands [Ci], [VER] and [RD] or suffix "F" for multiple units with the same unit ID may return an unwanted response because more than card will send feedback simultaneously.

6.5. SUMMARY OF COMMANDS

6.5.1. Commands for unit controller

- 1) [RES]: Resets the Enclosure to power on or off.
- 2) [VER C0]: Displays the current firmware version for the controller unit.
- 3) [C0]: Receives the status the controller card.
- 4) [SET]: Sets unit ID number for the Enclosure.

- 5) [ID]: Recognizes the location of the unit by sending an ID number

6.5.2. Commands for front panel

- 1) {WRS}: Writes/programs a subroutine.
- 2) {WRK}: Write/program a key program.
- 3) {RDS}: Reads and displays content of a subroutine.
- 4) {RDK}: Reads and displays a key program.
- 5) {CLRS}: Clears a subroutine.
- 6) {CLRK}: Clears a key's program.
- 7) {LED}: Turns on, off or flashes an LED.
- 8) {KEY}: Activates a key via RS232.
- 9) {SUB}: Activates a subroutine via RS232.
- 10) {TEST}: Tests memory buffer, keys and LED's.

6.6 WINDOWS BASED CONTROL SOFTWARE

This Windows 95/98/NT based control software is available from the ALTINEX website at www.altinex.com in the Download section.

TROUBLESHOOTING GUIDE 7

We have carefully tested and have found no problems in the supplied **MT101-105**; however, we would like to offer suggestions for the following:

- **7.1 CARD CAGE IS NOT WORKING**
- **7.2 CARD IS NOT WORKING**

7.1 CARD CAGE IS NOT WORKING

A) Cause 1: Card cage is not plugged in.

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

B) Cause 2: Card cage slot has a problem.

Solution 1: Test the 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 3.

C) Cause 3: 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

A) Cause 1: 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 Multi-Tasker™ Card user's guide or call ALTINEX at (714) 990-2300.

ALTINEX POLICY

8

8.1 LIMITED WARRANTY

ALTINEX warrants that its products and cables are free from defects in materials under normal use and service. This warranty is limited to repairing at company's factory any part or parts of the product, which upon company's examination shall disclose to be, thus defective. Products considered defective should be returned to company with transportation charges pre-paid within 2 years (90 days for cables) from date of shipment to the purchaser. The warranty is expressly instead of all other warranties expressed or implied. ALTINEX neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale of the products. This warranty shall not apply to any product that shall have been repaired or altered outside of company's factory in any way so as, in its judgment, to affect its stability or reliability, or that has been subject to misuse, negligence, or accident.

8.2 RETURN POLICY

It is very important to ALTINEX that you receive the products that you have ordered and that this product meets your expectations. In the unlikely event, that an ALTINEX product needs to be returned please follow the policy below:

ALTINEX will accept product returns for a period of 30 days from authorized ALTINEX dealers. Products must be returned in an unopened package.

If a product has been opened, the restocking fees will apply. For the restocking fee amount, please contact an ALTINEX Sales Representative.

If the product is in your possession for more than 30 days, the restocking fees will apply.

ALTINEX will not accept any returns on cables or custom products.

If your product is in warranty and needs service, contact the ALTINEX Sales Department for an RMA (Return Material Authorization). Products returned without an RMA number may experience a delay in service.

If your product is out of warranty and needs service, contact the ALTINEX Sales Department for an RMA (Return Material Authorization). Products returned without an RMA number may experience a delay in service. The service charges will be quoted to you before the actual repairs are done.

8.3 CONTACT INFORMATION

ALTINEX, INC.

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Brea, CA 92821 USA

TEL: 714-990-2300

TOLL FREE: 1-800-ALTINEX

WEB: www.altinex.com

E-MAIL: solutions@altinex.com

FAX: 714-990-3303