



**Mult  
Tasker™**

MANUAL PART NUMBER: 400-0096-004

**MT106-100**

**SCAN REDUCER CARD FOR  
MULTI-TASKER™ USER'S GUIDE**

## TABLE OF CONTENTS

	Page
PRECAUTIONS / SAFETY WARNINGS .....	2
1.1 GENERAL .....	2
1.2 INSTALLATION .....	2
1.3 CLEANING .....	2
1.4 FCC / CE NOTICE .....	2
ABOUT YOUR MT106-100.....	3
TECHNICAL SPECIFICATIONS .....	3
DESCRIPTION OF MT106-100 .....	4
APPLICATION DIAGRAM.....	5
INSTALLING YOUR MT106-100.....	7
OPERATION.....	7
7.1 RS-232 CONTROL.....	7
7.2 DESCRIPTION OF COMMANDS .....	7
7.3 SUMMARY OF COMMANDS.....	13
TROUBLESHOOTING GUIDE .....	13
8.1 LED IS NOT LIT .....	13
8.2 LED IS BLINKING RED .....	14
8.3 NO DISPLAY .....	14
ALTINEX POLICY.....	14
9.1 LIMITED WARRANTY/RETURN POLICY	14
9.2 CONTACT INFORMATION.....	14

## PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT106-100**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MT106-100** 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 **MT106-100** 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 **MT106-100** carefully. Dropping or jarring can damage the card.
- Do not pull the cables that are attached to the **MT106-100**.
- Insert the card carefully into the slots of the Multi-Tasker™ without bending any edges.
- When removing a card, please make sure that the card to which it is attached is also pulled out simultaneously.

### 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 MT106-100 2

### MT106-100 Scan Reducer Card

The **MT106-100** is a Scan Reducer Card designed for use in a Multi-Tasker™ enclosure. When installed in a Multi-Tasker™, this card allows the connection of a computer video source to a display or VCR capable of accepting composite or S-Video signals.

The **MT106-100** automatically supports VGA (640 x 480) and SVGA (800 x 600) input signals with refresh rates up to 100 Hz, and XGA (1024 x 768) input signals with refresh rates up to 75 Hz. The **MT106-100** converts these non-interlaced computer video signals to interlaced NTSC/PAL video signals, offering simultaneous Composite Video and S-Video outputs. The **MT106-100** also provides a built-in 1-in 3-out Composite Video distribution amplifier. All three Composite Video outputs and the S-Video output are simultaneously available.

The **MT106-100** has a number of features that can be controlled via RS-232 control through the Multi-Tasker™ Basic Enclosure. These features include horizontal and vertical positioning, quadrant zoom as well as, brightness and sharpness controls.

The **MT106-100** offers a 15-pin HD female (VGA-type) computer video input connector. Though this can easily be adapted to 5 BNC connectors for RGBHV using an ALTINEX VGA to RGBHV adapter cable. The composite video outputs are provided through female BNC connectors and the S-Video output is provided on a standard 4-pin mini-DIN connector. The 4-pin mini-DIN connector can be adapted to 2 BNC connectors using ALTINEX adapter cables.

## TECHNICAL SPECIFICATIONS 3

FEATURES/DESCRIPTION	MT106-100
<b>GENERAL</b>	
<b>Inputs</b>	
Input Connector	(1) 15-pin HD Female
<b>Outputs</b>	
Composite Video	(3) BNC Female Connectors
S-Video	(1) 4-pin Mini-DIN Connector
<b>Compatibility</b>	
Input	VGA, SVGA (to 100Hz) XGA (up to 75 Hz)
Output	Composite, S-Video (NTSC or PAL)

Table 1. **MT106-100** General

MECHANICAL	MT106-100
Enclosure Slots Required	One
Weight	1.0 lb (0.45 kg)
Connector Panel	Black
T° Operating	10°C-35°C
T° Storage	50°C
Humidity	90% non-condensing
MTBF (calc.)	40,000 hrs

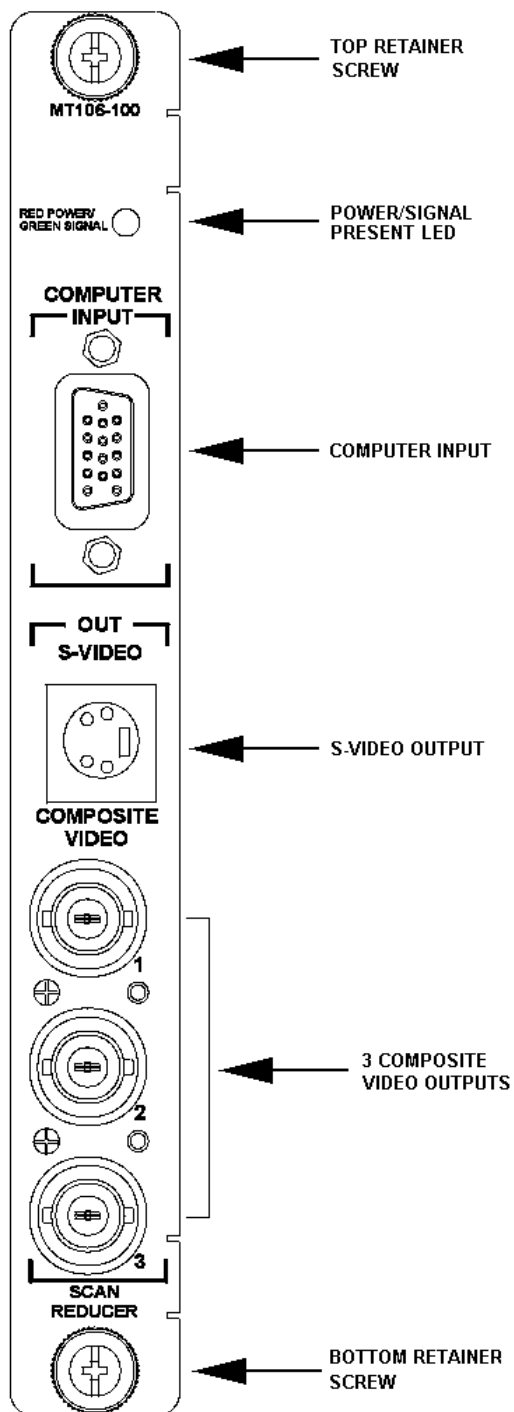
Table 2. **MT106-100** Mechanical

ELECTRICAL	MT106-100		
<b>Input Video Signals</b>			
Analog	1.7V max.		
Impedance	75 Ohms +/-1% (terminated)		
<b>Input Sync Signal</b>			
Horizontal, Vertical	TTL (+/-)		
Impedance	10k Ohms		
<b>Video/S-Video Output Signal</b>			
Analog	Gain of 1.05% (+/-)		
Fall/ Rise Time	1.4ns		
Impedance	75 Ohms		
<b>Power</b>			
Power from MT100-100	+6V	-6V	Power Consumption
MT106-100	370 mA	30 mA	2.4 watts

Table 3. **MT106-100** Electrical

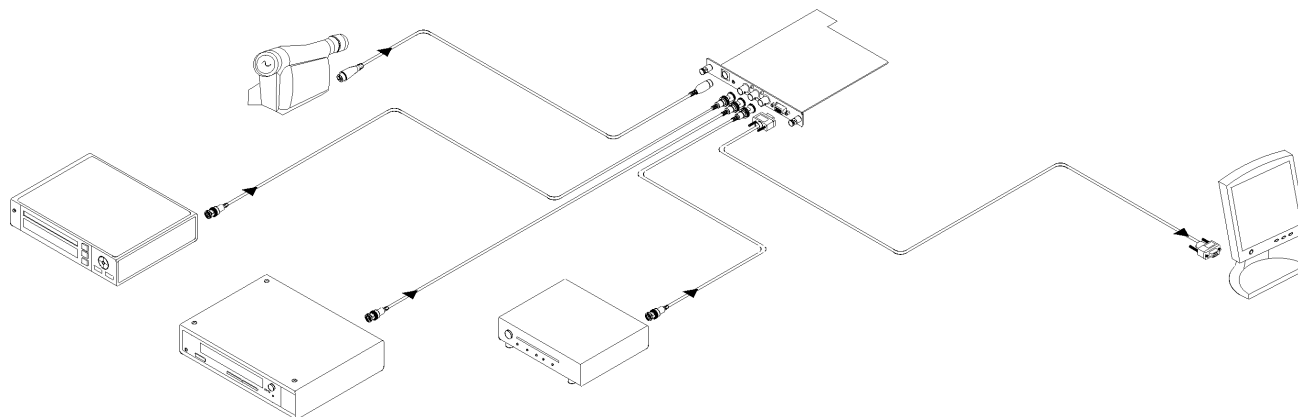
## DESCRIPTION OF MT106-100

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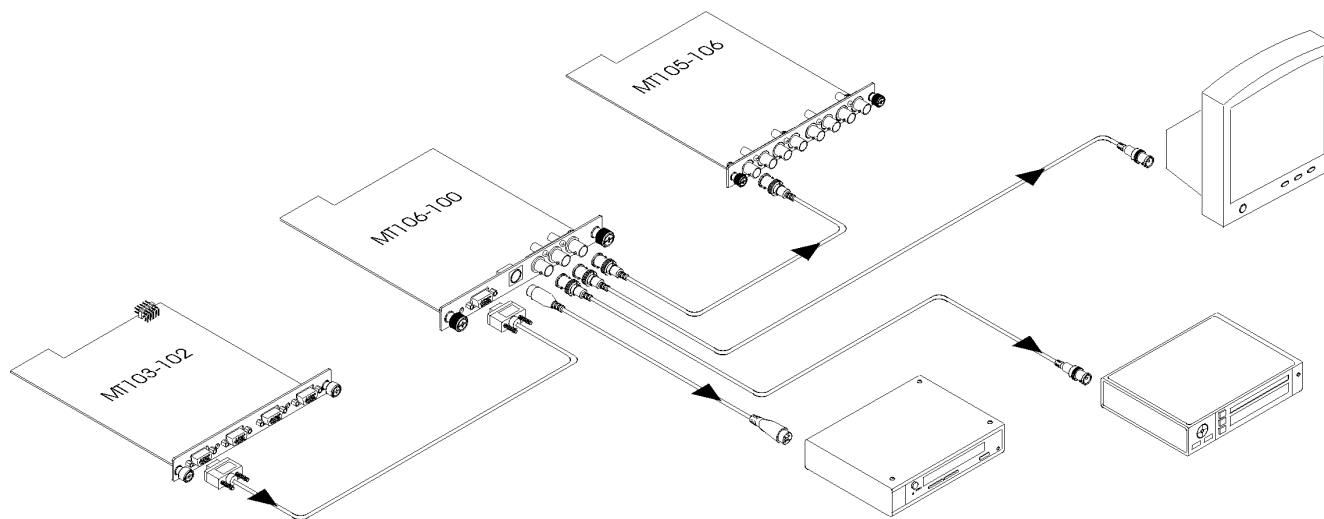


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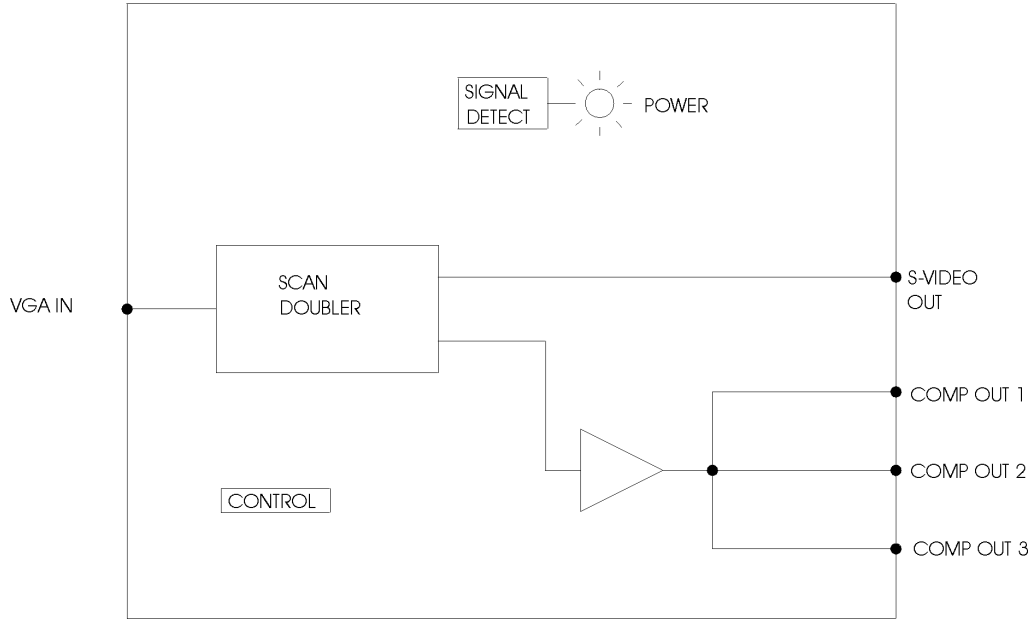
### Application 1



### Application 2



## Application 3: Internal View of the MT106-100



## INSTALLING YOUR MT106-100 6

- Step 1.** Slide the **MT106-100** into an available slot in the Multi-Tasker™ Basic Enclosure in order to connect to the bus. Make sure that the **MT106-100** Scan Reducer card fits into place. Secure the card to the Multi-Tasker™ by tightening the retainer screws located on the top and bottom of the **MT106-100** Scan Reducer card.
- Step 2.** 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. An LED that is blinking red indicates that the card is experiencing a problem. If the LED is blinking, see Troubleshooting Guide in Section 8.
- Step 3.** Connect a coaxial cable from the video source to the input connector of the **MT106-100**. Connect the output connectors of the **MT106-100** to the display devices through a coaxial cable.
- Step 4.** Starting from the left, identify the slot number where the **MT106-100** card is plugged into the Enclosure and note that it is for RS-232 control.

## OPERATION 7

### 7.1 RS-232 CONTROL

When used in the Multi-Tasker™ Basic Enclosure, the **MT106-100** has many advanced remote control capabilities, which are accessible through standard RS-232 communication. The actual controlling can 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 **MT106-100** are in a simple ASCII character format.

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

After processing a command, an OK or ER string will be returned as feedback if "F" is included at the end of a command string or if the unit ID is zero.

### 7.2 DESCRIPTION OF COMMANDS

Each command consists of three parts: function, card ID, and unit ID. [Function, Card ID, Unit ID].

**Example:**

**[VER C3 U2]**

VER= function

C3 = Card ID

U2= Unit ID

The Card ID is an assigned value from 1 to 19, based on which slot the card is put in. Card ID 0 (C0) is used for the controller (see user's guide for the **MT100-100**). Changing the position of a card will significantly affect the commands recorded on software definitions or a third party control system.

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 0, then each command can be used without Ui (use command **[SETU0]**; see user's guide for the MT100-100).

**Example:**

[VERC3]: for unit ID zero

[VERC3Ui]: for unit ID other than zero

[VERC3]: equivalent to **[VERC3U0]**

#### 1. [VER]

This command receives the software version and card type for the **MT106-100** card.

**Command Format: [VERCnUi]**

Cn = card ID No. (n = slot # from 1 to 19)

Ui = Unit ID (i = # from 0 to 9) (*refer to the MT100-100 user's guide for explanation*)



**Example:**

One **MT106-100** card is in slot #2 of unit 3. Sending the command **[VERC2U3]** to the Multi-Tasker™ Basic Enclosure will yield the following feedback:

**MT106-100 690-0129-004**

MT106-100 = card type  
690-0129-004 = software version

**2. [C]**

This command receives the status of the card.

**Command Format: [CnUi]**

Cn = card ID (n = a slot # from 1 to 19)  
(1-8 for MT100-101 or 1-4 for MT100-106)

Ui = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is one MT106-100 card in slot #2 of unit 3 set for NTSC outputs. Sending the command **[C2U3]** to the Multi-Tasker™ will provide the following feedback:

**INPUT:640x480; OUTPUT:NTSC C02**

INPUT:640x480 = Input resolution  
OUTPUT:NTSC = Output mode  
C02 = card is in slot 2

If there is no card in slot #2 of unit 3, sending the **[C2U3]** command will not return any feedback from the card.

**3. [CLR]**

This command resets the card configuration to factory defaults.

**Command Format: [CLRCi]**

Ci = card ID (n = a slot # from 1 to 19)  
(1-8 for MT100-101 or 1-4 for MT100-106)

**Example:**

There is an MT106-100 in slot 4 of unit 0. All controls are set to various levels and the output is in PAL mode. Sending the command **[CLRC4]** will set the level controls to their

default values and place the card in NTSC format.

**4. [+ ] or [- ]**

These commands allow the user to increase or decrease the selected attribute value. They must be used immediately following one of the following STATUS commands.

STATUS Command	MIN Value	MAX Value	Default Value
[ HPOSCi ]	0	20	10
[ VPOSCi ]	0	20	10
[ HSIZECi ]	0	20	10
[ VSIZECi ]	0	20	13
[ BRIGCi ]	1	4	1
[ SHARPCi ]	1	8	5
[ QZOOMCi ]	0	4	0

Attempting to cycle past the minimum or maximum values will have no effect on the attribute's value. Only QZOOM will cycle back around through its range of values.

Any command other than [+ ] or [- ] will reset the previous selection and the STATUS command will need to be reissued.

**Example:**

There is an MT106-100 in slot 4 of unit ID2. The current Horizontal Position is set to a value of 10. Use the [+ ] and [- ] controls to find the best horizontal position. Starting from 10, first increment the value to 12.

Next, decrement the value back down to 8 for the best picture.

**[HPOSC4U2] 10 [+ ][+ ][- ][- ][- ][- ]**

[HPOSC4U2] = STATUS/Current value  
10 = Feedback of current value  
[+ ][+ ] = Increment twice to 12  
[- ][- ][- ][- ] = Decrement 4 times to 8  
[HPOSC4U2] = STATUS/Current Value  
8 = Feedback of new value

## 5. [HPOSnCi] - Set Value

This command sets the Horizontal Position to an absolute value. It also makes the Horizontal Position adjustment the active control.

### Command Format: [HPOSnCiUy]

n = a value from 0 to 20

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 7 of unit ID4. Set the Horizontal Position to the maximum value of 20 by sending the command [HPOS20C7U4].

## 6. [HPOSCi] - Status/Adjust

This command selects the Horizontal Position adjustment and makes it the active control. It is also used to return the status of the current Horizontal Position. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

### Command Format: [HPOSCiUy]

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 4 of unit ID1. View the current Horizontal Position and make Horizontal Position the active control.

### [HPOSC4U1] 10

[HPOSC4U1] = STATUS command  
10 = Feedback of current value  
[ + ] & [ - ] = Adjust as required

## 7. [VPOSnCi] - Set Value

This command sets the Vertical Position to an absolute value and makes the Vertical Position adjustment the active control.

### Command Format: [VPOSnCiUy]

n = a value from 0 to 20

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 2 of unit ID3. Set the Vertical Position to the value of 12 by sending the command [VPOS12C2U3].

## 8. [VPOSCi] - Status/Adjust

This command selects the Vertical Position adjustment and makes it the active control. It also returns the status of the current Vertical Position. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

### Command Format: [VPOSCiUy]

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 2 of unit ID3. View the current Vertical Position and make Vertical Position the active control.

### [VPOSC2U3] 10

[VPOSC2U3] = STATUS/Current value  
10 = Feedback of current value  
[ + ] & [ - ] = Adjust as required

## 9. [HSIZEnCi] - Set Value

This command sets the Horizontal Size to an absolute value and makes the Horizontal Size adjustment the active control.

### Command Format: [HSIZEnCiUy]

n = a value from 0 to 20

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is an MT106-100 in slot 2 of unit ID3. Set the Horizontal Size to the value of 12 by sending the command [HSIZE12C2U3].

**10. [HSIZECi] - Status/Adjust**

This command selects the Horizontal Size adjustment and makes it the active control. It also returns the status of the current Horizontal Size. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

Command Format: **[HSIZECiUy]**

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is an MT106-100 in slot 2 of unit ID3. View the current Horizontal Size and make Horizontal Size the active control.

**[HSIZEC2U3] 10**

[HSIZEC2U3] = STATUS/Current value  
 10 = Feedback of current value  
 [ + ] & [ - ] = Adjust as required

**11. [VSIZEnCi] - Set Value**

This command sets the Vertical Size to an absolute value and makes the Vertical Size adjustment the active control.

Command Format: **[VSIZEnCiUy]**

n = a value from 0 to 20

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is an MT106-100 in slot 1 of unit ID1. Set the Vertical Size to the value of 6 by sending the command [VSIZE6C1U1].

**12. [VSIZECi] - Status/Adjust**

This command selects the Vertical Size adjustment and makes it the active control. It

also returns the status of the current Vertical Size. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

Command Format: **[VSIZECiUy]**

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is an MT106-100 in slot 2 of unit ID3. View the current Vertical Size and make Vertical Size the active control.

**[VSIZEC2U3] 10**

[VSIZEC2U3] = STATUS/Current value  
 10 = Feedback of current value  
 [ + ] & [ - ] = Adjust as required

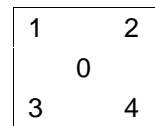
**13. [QZOOMnCi] - Set Value**

This command sets the Quadrant Zoom to a specific value. It also makes the Quadrant Zoom adjustment the active control.

Command Format: **[QZOOMnCiUy]**

n = 0 to 4

- 0 = Center
- 1 = Upper Left
- 2 = Upper Right
- 3 = Lower Left
- 4 = Lower Right



Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is an MT106-100 in slot 3 of unit ID1. Set the Quadrant Zoom to the center of the display by sending the command [QZOOM0C3U1].

**14. [QZOOMCi] - Status/Adjust**

This command selects the Quadrant Zoom adjustment and makes it the active control. It also returns the status of the current Quadrant

Zoom value. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

Command Format: **[QZOOMCiUy]**

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 2 of unit ID3. View the current Quadrant Zoom value and make Quadrant Zoom the active control.

**[QZOOMC2U3] 0**

[QZOOMC2U3] = STATUS/Current value  
0 = Feedback of current value  
[ + ] & [ - ] = Adjust as required

The zoom value will cycle through all five values repeatedly when using the [ + ] and [ - ] controls. For example, when the zoom value is at 4 and the increment command is sent, the next zoom value will be 0.

## 15. [BRIGNCi] - Set Value

This command sets the Brightness to an absolute value and makes the Brightness adjustment the active control.

Command Format: **[BRIGNCiUy]**

n = a value from 1 to 4

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 4 of unit ID2. Set the Brightness to the value of 2 by sending the command [BRIG2C4U2].

## 16. [BRIGCi] - Status/Adjust

This command selects the Brightness adjustment and makes it the active control. It also returns the status of the current Brightness level. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

Command Format: **[BRIGCiUy]**

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 2 of unit ID3. View the current Brightness and make Brightness the active control.

**[BRIGC2U3] 2**

[BRIGC2U3] = STATUS/Current value  
2 = Feedback of current value  
[ + ] & [ - ] = Adjust as required

## 17. [SHARPnCi] - Set Value

This command sets the Sharpness to an absolute value. It also makes the Sharpness adjustment the active control.

Command Format: **[SHARPnCiUy]**

n = a value from 1 to 8

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

### Example:

There is an MT106-100 in slot 4 of unit ID2. Set the Sharpness to the value of 2 by sending the command [SHARP2C4U2].

## 18. [SHARPCi] - Status/Adjust

This command selects the Sharpness adjustment and makes it the active control. It is also used to return the status of the current Sharpness level. As the active control, it may be adjusted using the [ + ] and [ - ] commands.

Command Format: **[SHARPCiUy]**

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) (refer to the MT100-100 user's guide for explanation)

**Example:**

There is an MT106-100 in slot 2 of unit ID3. View the current Sharpness and make Sharpness the active control.

**[SHARPC2U3] 2**

[SHARPC2U3] = STATUS/Current value  
2 = Feedback of current value  
[+] & [-] = Adjust as required

**19. [OUT]**

This command selects the output signal format for the video signal. There are two modes to select, either NTSC or PAL.

Command Format: **[OUTnCiUy]**

n = format type (0=NTSC, 1=PAL)

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) *(refer to the MT100-100 user's guide for explanation)*

**Example:**

To change the format from the MT106-100 in slot 3 of unit ID 2, from PAL to NTSC, send the command [OUT0C3U2].

The default mode is NTSC.

**20. [BAR]**

The BAR command allows the user to choose among outputting the applied input video signal, a color test pattern or a grey scale test pattern.

Command Format: **[BARnCiUy]**

n = 0 to 2  
0 = Video  
1 = Color Test Pattern  
2 = Grey Scale Test Pattern

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) *(refer to the MT100-100 user's guide for explanation)*

**Example:**

Supply a color test pattern from the MT106-100 in slot 4 of unit ID 0. Send the command [BAR1C4U0] to enable the color test pattern

output. In order to view the actual video signal again, send the command [BAR0C4U0].

**21. [HELP]**

In MTSetup.exe, this command displays a list of the commands available for the MT106-100 along with a brief description.

Command Format: **[HELPCiUy]**

Ci = card ID (i = slot number)

Uy = unit id (i = 0 to 9) *(refer to the MT100-100 user's guide for explanation)*

**22. [WR]**

This command groups multiple cards in the Enclosure. Each unit contains a maximum of nine groups.

Command Format: [WRCn...GkUi]

Cn = card ID No. (n = slot # from 1 to 19) *(1-8 for MT100-101 or 1-4 for MT100-106)*

Gk = group number (k = # from 1-9)

Ui = unit number (i = # from 0-9)

**Example:**

To group cards #1, 2, and 3 as group 5 of unit #1, send the command [WRC1C2C3G5U1]. After executing this command, cards 1, 2 and 3 will be grouped together as group 5 of unit 1.

**23. [CLR]**

This command clears the members for a single group or for all nine groups.

Command Format: [CLRGkUi]

Gk = group number (k = # from 1-9)

Ui = unit number (i = # from 0-9)

**Example:**

- 1) To clear group #1, send the [CLRG1U1] command. This command clears the members for the specified group only.
- 2) To clear all groups of unit 1, send the [CLRG[U1] command.

## 24. [G]

This command is used to request group data. With the command, the user can identify which input or output of a particular group is on.

Command Format: [GkUi]

Gk = group number (k = # from 1-9)

Ui = unit number (i = # from 0-9)

### Example:

In unit ID0, if group 1 has DA Cards with outputs 1 and 2 on, while group 2 has SW Cards with input 2 on:

**[G1]:** will return feedback as **ON12 G1U0.**

**[G2]:** will return feedback as **ON2 G2U0.**

## 25. [RD]

This command displays the members in each group.

Command Format: [RDGkUi]

Gk = group number (k = # from 1-9)

Ui = unit number (i = # from 0-9)

member = C1 - C19 (card 1 to 19)  
(1-8 for MT100-101 or 1-4 for MT100-106)

### Example:

The cards in slots 1, 2 and 19 are part of group 5 in unit 1. Read the member data for group 5 of unit 1, by sending the command [RDG5U1]. The system will return feedback as follows:

C1C2C19 G5U1.

## 7.3 SUMMARY OF COMMANDS

- |               |  |
|---------------|--|
| 1) [VER]      | Receives software version                      |
| 2) [Ci]       | Receives status of the card                    |
| 3) [CLR]      | Resets card to defaults                        |
| 4) [+]<br>[-] | Increments and Decrements<br>selected commands |
| 5) [HPOS]     | Set the Horizontal Position                    |
| 6) [HPOS]     | Adjust/Read Horiz. Position                    |

- |             |                               |
|-------------|-------------------------------|
| 7) [VPOS]   | Set the Vertical Position     |
| 8) [VPOS]   | Adjust/Read Vert. Position    |
| 9) [HSIZE]  | Set the Horizontal Size       |
| 10) [HSIZE] | Adjust/Read Horizontal Size   |
| 11) [VSIZE] | Set the Vertical Size         |
| 12) [VSIZE] | Adjust/Read the Vertical Size |
| 13) [QZOOM] | Zoom to a quadrant            |
| 14) [QZOOM] | Adjust Zoom by quadrant       |
| 15) [BRIG]  | Set Brightness level          |
| 16) [BRIG]  | Adjust/Read Brightness        |
| 17) [SHARP] | Set Sharpness level           |
| 18) [SHARP] | Adjust/Read Sharpness         |
| 19) [OUT]   | Select NTSC or PAL format     |
| 20) [BAR]   | Video or test pattern         |
| 21) [HELP]  | Display available commands    |
| 22) [WR]    | Group multiple cards          |
| 23) [CLR]   | Clear group configurations    |
| 24) [G]     | Request group data            |
| 25) [RD]    | Display group members         |

## TROUBLESHOOTING GUIDE 8

We have carefully tested and have found no problems in the supplied **MT106-100**; 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:* Plug card cage in. If the LED lights, the problem is solved. 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 was 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 lit, 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 LED IS BLINKING RED**

### **Cause 1: The CPU on the card is not working properly.**

*Solution 1:* Look at the card and verify that there is no damage. If there is no damage, see Solution 2.

*Solution 2:* Verify that all IC's are seated in their sockets. If the LED is still blinking red, see Cause 2.

### **Cause 2: The card and its serial device are not communicating.**

*Solution 1:* Turn the system OFF and then ON again. If there is still an error, see Cause 3.

### **Cause 3: RS485 communication error**

*Solution 1:* Make sure that the card is pushed all the way into the slot. If there is still an error, see Solution 2.

*Solution 2:* Turn the system OFF and then ON again. If there is still an error, see Solution 3.

*Solution 3:* Call ALTINEX at (714) 990-2300.

## **8.3 NO DISPLAY**

### **Cause 1: The source has a problem.**

*Solution:* Check the source and make sure that there is a signal present and all source connections are correct. If the source is working and there is still no display, see Cause 2.

### **Cause 2: The card output is not selected.**

*Solution:* Select the card output. See RS-232 accessible commands in Section 7. If no display is present, see Cause 3.

### **Cause 3: Cable connections are incorrect.**

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

### **Cause 4: The display has a problem.**

*Solution:* Make sure the display has power and is turned ON. If there is still no display, please call Altinex at (714) 990-2300.

## **ALTINEX POLICY**

**9**

### **9.1 LIMITED WARRANTY/RETURN POLICY**

Please see the Altinex website at [www.altinex.com](http://www.altinex.com) for details on warranty and return policy.

### **9.2 CONTACT INFORMATION**

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