WARRANTY

MicroImage Video Systems warrants that each CBG520 is free from defects due to faulty materials or improper workmanship for a period of one (1) year. MicroImage Video Systems further warrants that any part which proves defective in materials or workmanship within one (1) year, will be replaced or repaired at no cost to the user. Labor to replace defective parts will be done without charge, provided the equipment is returned to MicroImage Video Systems prepaid, insured and properly packaged. Prior return authorization must be obtained from MicroImage Video Systems.

NOTE

This warranty covers the MicroImage CBG520 Video Titler only.

CONDITIONS

This warranty is void if the warranted part has been altered or subjected to abuse or misuse. Defective parts must be returned to MicroImage Video Systems.

SOLE WARRANTY

This Warranty is in lieu of all other warranties expressed or implied including, without limitation, any implied warranty or any implied warranty of fitness for a particular purpose. MicroImage Video Systems shall have the final right to determination as to the existence and cause of any defect and its appropriate adjustment in accordance with the terms of this warranty. In no event shall MicroImage Video Systems be liable for any consequential or collateral damages.

RETURNS

All returns MUST have an RMA number. Please call, fax or email for an RMA form. The RMA form will have the proper shipping address for returns.

Phone	610-754-6800
Fax	610-754-9766
Email	techsupport@mivs.com

Color Bar Generator
With Text Overlay
Operation Manual

Model CBG520

MicroImage Video Systems
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IN CASE OF DIFFICULTY

If you are experiencing problems with any MicroImage product, you can contact MicroImage Support using the following methods:

Phone	610-754-6800
Fax	610-754-9766
Email	techsupport@mivs.com
Web	www.mivs.com

APPLICATIONS AND ADDITIONAL INFO

Please visit the MicroImage Video Systems web site for applications information about this product line.

SPECIFICATIONS

Output level	(Y, Video) 1 Vpp Composite, 75 Ω
	(Chroma) 0.286 Vpp burst level, 75 Ω
Connectors	(Video) BNC female, (S-Video) 4 pin mini-DIN female
	(Keyboard) 6 pin Mini-DIN (PS/2) front panel mounted
Video System	NTSC/RS-170 or PAL/CCIR (internal switch selected)
Vertical Frequency	NTSC - 59.94Hz, PAL 50Hz
Horizontal Frequency	NTSC - 15.73426Khz, PAL 15.625Khz
Chroma Frequency	NTSC - 3.579545Mhz, PAL - 4.43361875Mhz
Scan Lines	NTSC/RS-170 - 525 lines, PAL/CCIR - 625 lines
Character colors	8
Background colors	8 plus transparent
Pixel size	74nS (H) x 1 scan line (V)
Character size	16 x 20 pixels
Characters	640 per page (32h by 20v)
Display pages	1
Front Panel Switches	2, Power and Text display on/off
Front Panel LEDs	2, Power (green) and Text display (red)
Non-Volatile Memory	EEPROM
Back-up Time	50+ years
System Processor	16/32 bit
Display Controller	Custom MicroImage Video Integrated Display Controller
Keyboard Interface	PS/2, compatible with most AT type keyboards
Remote Interface	None
Temperature	
Operating	0° ~ 50° C (32° ~ 122° F)
Storage	-40° ~ 70° C (-40° ~ 158° F)
Humidity	
Operating	10% ~ 90% (non-condensing)
Storage	5% ~ 95% (non-condensing)
Power	
Voltage	+5 VDC (4.75 to 5.25 VDC)
Consumption	350mA without keyboard
Size	4.15" (W) x 4.43" (D) x 1.13" (H)
	105 mm (W) x 113 mm (D) x 29 mm (H)
Weight	8 oz (226 g)
Power Supply	
Input	120VAC, 50-60Hz (Non-RoHS USA sales)
	120-240VAC 50-60Hz, 2 prong USA plug (RoHS version)
Output	5VDC regulated 1A or greater

The CBG520 is manufactured in USA by MicroImage Video Systems.
The power supply is manufactured in Tawain or China.

UNPACKING

The Video Titler package includes the following items:

CBG500 Video Title Generator
5V regulated power supply (USA)
This operation manual

Please inspect all items carefully and report damaged or missing items to your dealer or MicroImage Video Systems.

CONNECTIONS

Power

The CBG520 uses an external +5VDC power supply. A universal power adapter is included with the unit for USA wall connections. This power supply may be used in other countries with an appropriate adapter. Connect the power module to the CBG520 and to an appropriate power source.

Keyboard

Connect the keyboard to the connector labeled Keyboard on the front of the CBG520 unit. Note the correct orientation of the connector or damage can result. Do NOT connect or disconnect the keyboard while the power is on as damage to either device may result. The CBG520 is compatible with most PS/2 style keyboards (those that have the smaller 6 pin Mini-DIN connector). It will also work with many AT style keyboards and an appropriate adapter, provided the keyboard does not draw too much current (many older types will).

The CBG520 can be operated without a keyboard. The keyboard may be used to initially type text or a phrase. The keyboard can then be removed (only when the power is off) and the phrase will be displayed each time the unit is turned on.

blank text display whenever it is powered up. When disabled, the titler will remember the last displayed text screen.

QUICK COMMANDS

Flash on/off - <F2>
Text Color Menu - <F3>
Text Background Menu - <F4>
Display OFF - <F7>
Display ON - <F8>
Cursor OFF - <F11>
Cursor ON - <F12> (or any letter or number key)

Cursor to top line - <PgUp>
Cursor to last line - <PgDn>
Justify Text Left - <ALT>+<L>
Justify Text Right - <ALT>+<R>
Center Text -<ALT>+<C>
Insert Line - <ALT>+<Ins>
Delete Line - <ALT>+<Del>
Clear Page -<CTRL>+<C>
Delete to End of Line - <ALT>+<End>
Clear Space (makes a clear background space at cursor) - <ALT>+<SPACE>

Background Color - <F4>

Pressing the <F4> function key calls up a menu of 8 color choices, plus transparent. Any text typed after this will appear on a background tile of this color. If transparent is selected, any text typed after this will appear directly on the video image. Any text already typed will be unaffected by the changes. Note that some combinations of text and background colors may appear ragged or blurred, particularly while using composite video, mainly due to the way in which colors are handled by the monitor.

Display Off - <F7>

Pressing the <F7> function key disables the text display overlay, showing the full color bar image with no obstructions. When the display is off, most keystrokes will be ignored except for the F7 (cursor on) command. This will help prevent accidental changes. The display may also be turned off and on via the front panel switch. The display LED (red) on the front of the unit will be extinguished when the display is off.

Display on - <F8>

Pressing the <F8> function key enables the text display overlay, showing text and background color tiles in front of the video image. The display may also be turned off and on via the front panel switch. The display LED (red) on the front of the unit will be illuminated when the display is on.

Cursor Off - <F11>

Pressing the <F11> function key disables the flashing cursor for readability and aesthetics. The cursor may be set from the main menu to be either off or on whenever the CBG520 is powered up.

Cursor on - <F12>

Pressing the <F12> function key activates the flashing cursor to indicate where any newly typed text will appear. This cursor may be moved around the screen using the "arrow" or "cursor" keys on the keyboard. The cursor will also reappear any time new text is typed.

Power Up Clear Memory

Pressing the <F9> key will bring up a menu allowing you to select power up clear options. When enabled, the titler will begin with a

Note: To use the above feature, make sure Power Up Clear Memory is turned off. If the "Power Up Clear Memory" is enabled, this screen will be cleared each time the unit is turned on.

Video

NTSC or PAL mode can be selected via the internal DIP switch #1. When set in the off position, the unit is selected for NTSC. If the switch is in the on position, then the unit will be in PAL mode.

Connect the OUTPUT signal from the Video Titler unit to the video display(s) as required. Each output can only have a single 75 ohm termination. Regardless of input type, both outputs are available simultaneously.

If the signal must drive multiple monitors or other devices, please see the documentation for those devices for multiple unit connections. A Video Distribution Amplifier may be required, especially for S-Video signals. MicroImage Video Systems offers a variety of units for these applications (VDA series).

OVERVIEW

The MicroImage Video Systems Video Color Bar Generator is designed as a video signal source with captioning capability. It is particularly well suited to Professional, industrial, broadcast and infrastructure video applications.

The CBG520 can generate up to a full page of text with 32 columns by 20 rows of characters. Each character can be 1 of 8 colors and each can have 1 of 8 background colors. The background may also be set to transparent (color bars visible).

The CBG520 can be operated from a +5 VDC (4.75 to 5.25 VDC) power supply and each unit has a one year warranty.

POWER BACKUP

The CBG520 can back up all typed text and remembers it when the power is turned off or removed. The backup system is EEPROM based and can last for up to 100 years. It may take up to 5 seconds after typing a character before it is fully committed to memory.

OPERATION

The Video Titler has two switches and two LEDs on the front panel. Most functions are set by use of the keyboard. Following is a brief description of each switch and its functions:

Power Switch

The power switch is used to turn the Video Titler unit on or off. When off, the unit draws minimal power. When on, the power light will illuminate (green) and the Video Titler will be ready to use. The power control system will remember the last setting if the power is removed.

Display Switch

The display switch is used to enable or disable the titler/text display. This will allow the color bar signal to pass through without the title/text display. The red indicator next to this switch will illuminate when the title/text display is enabled.

Keyboard Functions

Most functions of the unit are controlled through the keyboard. See the next section on Using the Titler Function for additional information.

USING THE TITLE FUNCTION

CBG520 Functions

The CBG520 Titler series has been designed for a broad range of applications. A variety of options and features may be selected or changed either through the menu system or by way of a combination of keystrokes. This section describes the use of the function keys and menus. Most selections can be made by pressing the appropriate number key. The 0 (zero) key can be used to exit most menus without changing the current settings.

Flash - <F2>

Each character can be set to flash on a character by character basis. Pressing the F2 key brings up a menu that allows you to choose flash to be off or on. When flash is turned on, it only affects characters typed afterward. The system will remember the flash setting if power is removed or the unit is turned off.

Color Options

Eight colors of text are available from the <F3> Character Color menu, and eight background color tiles may be selected from the <F4> Background menu. Any letters typed will appear on a contrasting background tile which surrounds the letter. A transparent background is also available, which places the text characters directly onto the video image.

The color of each character and its background tile may be set individually. The unit will remember the current character and background color settings while switched off.

Do not set the character and background color the same or the text will not be readable.

Character Color - <F3>

Pressing the <F3> function key calls up a menu of 8 color choices. Pressing the number key listed before each color will select that color. Any text typed after this will use the new color. Any text already typed will be unaffected by the changes.