

Appendix A

VM 3000 VGA Status Display

HARDWARE INSTALLATION

The VM 3000 provides a VGA output for system status display. Basic controls for this display are located on the front panel (Figure A-1).

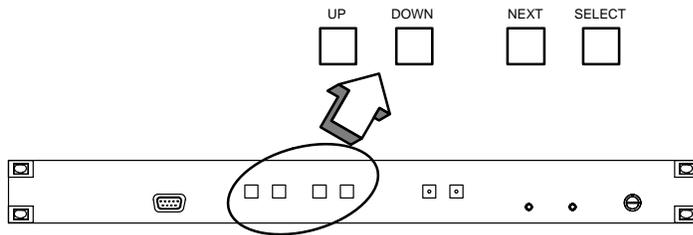


Figure A-1. VGA controls on VM 3000

The VM 3000 VGA Status Display can optionally be operated with the CP 3020, a 1 3/4-inch rack mount panel configured as a device type “VC 3020.” (Figure A-2.) To use the VGA display to best advantage, it should also be connected to a dedicated CP 3000 Switcher Control Panel (configured as a “VCP 3000”) and an MC 3000 Machine Control Panel (configured as a “VMC 3000”). Thomson recommends that all panels be mounted immediately beneath the VGA monitor. These panels can be on different MPK buses, but they must all be connected to the VM 3000 being used to drive the VGA display. See Figure A-3.

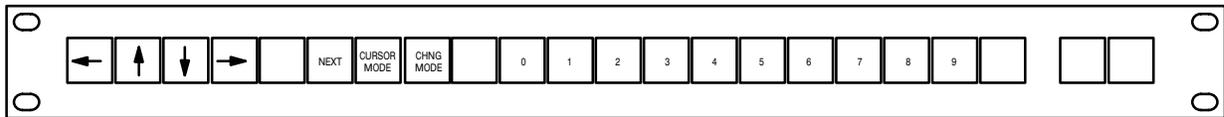


Figure A-2. CP 3020 with suggested VC 3020 labelling.

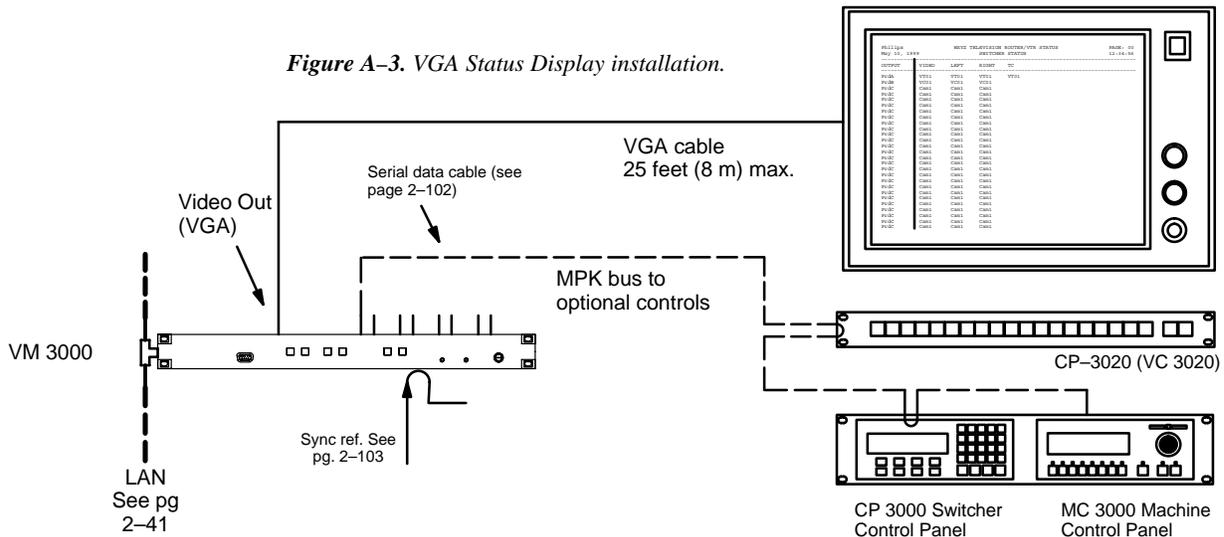


Figure A-3. VGA Status Display installation.

SUMMARY OF SOFTWARE CONFIGURATION PROCEDURE

Following hardware installation:

1. The optional control panels, if any, must be configured as MPK devices:
 - a. A CP 3020 used with the VGA is configured as type “VC 3020” (page 5–115).
 - b. A CP 3000 used with the VGA is a type “VCP–3000” (page 5–115). If the CP 3000 has an expansion panel, it must be entered as a type “VCP3000E.”
 - c. An MC 3000 panel must be entered on the MPK Devices table (page 5–115) and given the device type of “VMC–3000” or, if it has an expansion panel, as a type “VMC3000E.”
2. In order to display time code on an MC 3000 associated with a VGA status display, entries must also be made to the Machine Control table, as shown on page 5–158.
3. Text for the centered header can be entered (if desired) using the Status Display Headers table (page 5–172).
4. The VGA Status Display Table should be filled out (see page 5–173).

This table establishes the name of the Page Description file; i.e., the name of the file that will be created when the “Tools > Generate VGA Files” command is run.

5. The “Tools > Generate VGA Files” command is used to create the Page Description file.

Note 1: The “Generate VGA Files” command is designed for use during initial installation only—it *always* uses the *original* factory default settings when building the Page Description file. If you decide to modify your VGA display with custom formatting, *do not* re–run the Generate VGA Files command. If you do, your modifications will be overwritten.

The Generate VGA Files command will refer to the information in the current Edit set, then use the factory default formats to build two files: the first file will use the name entered on the VGA Status Display Table plus the extension “.vga.” The second file will be created identically to the first but will have the name “vga–desc.vga.” Both files will be written to the \jupiter\config\ *configname* directory, where *configname* is the name of the currently selected edit set.

Note 2: Whenever you run the Generate VGA Files command, you will see the following message:

WARNING VGA files may be overwritten

This message is a reminder that the system is about to use the factory default settings when building the Page Description file. (When first installing the VGA, this is OK.)

6. The Edit set must be compiled and downloaded in the normal manner. This completes the configuration process using factory default formatting. Operating instructions are found on page 6–141.

CUSTOM DISPLAY FORMATTING

This discussion assumes that the reader is familiar with ASCII file editing concepts and that the procedure described on page A-2 has been used to create preliminary VGA display pages based on the factory default layouts.

The VGA status display output of the VM 3000 is designed to give a great deal of flexibility to the user in defining what kind of system information will be displayed at a particular location on the VGA screen. The types of information, or “fields,” that can be displayed are:

- Switcher Output Status (any level)
- Switcher Input Status (any level)
- Machine Status (Play, Stop, Record, etc.)
- Machine Delegation Status
- Machine Linkage Status (Which control panel it’s currently linked to)
- System Time and Date
- System Control Board Status (Active, Inactive)
- System Control Board Time Source (Time Code Reader, File Server, etc.)
- System Control Board Messages (Also displayed by the logger)
- Path Finding (Tie Line) Status (details about Tie Line displays are shown on page A-10)

The type and location of these fields are determined by a user-named text file called the “VGA Page Description File.” This file is located in the \jupiter\config*configname* directory, where *configname* is the name of the currently selected edit set. The file is a standard DOS ASCII Text file with “.vga” as its file name extension. The VGA Page Description File can be edited by the end-user in order to modify existing status pages or create new ones.

Note 1: Initially, there may be two, identical-content .vga files in this directory. Before beginning the customization process, you should move any file named “vga-desc.vga” to another directory for safekeeping. (This file contains display pages with the original factory default formatting.)

The following instructions explain how the display fields are positioned, defined, and colorized. After the VGA Page Description File is edited, the Edit set must be compiled and downloaded in the normal manner. *Be sure to keep copies of known-good VGA Page Description Files (.vga files) in another directory. Once the .vga Page Description File has been customized, the Generate VGA Files command should NOT be used.*

Note 2: The character used to separate “fields” is a <TAB> character, so any text editor used must be able to generate “straight ASCII” and a <TAB> character (WordPad and Notepad work well). Do not use MS-DOS “EDIT” or any other word processor that substitutes spaces for the <TAB> character—this will cause unwanted results on the VGA display.

VGA Page Description File Definitions

Basic Rules:

- 1) All field definitions that are a capital letter define a system name that will be used by following status fields until re-defined with another system name.
- 2) All field definitions that are a lower-case letter are a status field, and use previously-defined system names applicable to the given type of status.

- 3) Field attributes are a single digit number 0–9 immediately following the field definition.
- 4) The field separation character(s) is a <TAB> or <CR + LF>.
- 5) Switcher name is defined for every subsequent line until re–defined with another switcher name field.
- 6) Switcher Input and Output name are defined for the rest of the current line.
- 7) Level status is defined for the current column position until re–defined with another level status.
- 8) To assign a page–worth of data to a specific button number, use “P#4” to assign the page description data that follows to page 4.
- 9) Continued Input Status uses the last defined switcher input and level from the previous line.
- 10) Machine Delegation is defined for the current column position until re–defined with another Machine Delegation.
- 11) All compiled numbers are in four–character ASCII form, NOT BINARY.
- 12) The Tie Line Group field will continue to the rest of the current line.
- 13) The number of pages for each VM 3000 VGA port is limited to 99.

Field Definitions

Field Type	Start Char	Field Length	Definition Syntax
Switcher Name	S	Not Displayed	Sssssssss<TAB>
Output Name	O	8	Onoooooooo<TAB>
Level Status (Output)	l	9	lnlllllllll<TAB>
Input Name	I	8	Iniiiiiii<TAB>
Level Status (Input)	l	Rest of line	lnlllllllll<TAB>
–Continued Input Status	C	Rest of line	C<TAB>
Path Finding Status	G	Rest of line	Gngggee<TAB>
System Time	i	8	in<TAB>
System Date	a	12	an<TAB>
Machine Name	M	8	Mnmmmmmmmm<TAB>
Machine TMC Status	m	8	mn<TAB>
Machine Delegation	d	9	dndddddd<TAB>
Machine Linkage Status	k	8	kn<TAB>
Board Name	B	8	Bnbbbbbbb<TAB>
Board Message	g	Rest of line	gn<TAB>
Board Status	u	8	un<TAB>
Board Time Source	s	17	sn<TAB>
Screen Text	T	Variable	Tn-----<TAB>
Current Page Number	p	2	pn<TAB>
Button Number	P	Not Displayed	P#xx<TAB>

Definition Syntax Key:

```

-----
n                = Color Code
ooooooooo        = 8 char System Output Name
iiiiiii         = 8 char System Input Name
lllllll         = 8 char System Level Name
sssssss         = 8 char System Switcher Name
pppp            = 4 digit Physical Output Number
mmmmmmmm       = 8 char System Machine Control Device Name
ddddddd        = 8 char Delegation Group Name
bbbbbbb        = 8 char System Board Name
-----         = User defined screen text (any length)
xx             = 2 digit Button Number
ggg           = 3 digit group number (0-999)
ee            = 2 digit line number (0-99)

```

VGA Color	Color Code
White	0
Yellow	1
Magenta	2
Red	3
Cyan	4
Green	5
Blue	6
Dark White	7
Brown	8
Dark Blue	9

Box Drawing Characters (IBM Line Characters)

Character	Converted to:
+	Corners of a box, or intersections of vertical and horizontal lines
-	Horizontal Lines
	Vertical Lines

For example, a simple box, divided into four squares inside, would be defined like this:

```

+-----+-----+
|       |       |
|       |       |
+-----+-----+
|       |       |
|       |       |
+-----+-----+

```

As a quick demonstration of the VGA Page Description File syntax, to display the status of the switcher output "VTR1" of the switcher name "DEFAULT," on levels "VIDEO," "LEFT," and "RIGHT," the formatting instructions would look like this (assuming "<TAB>" is substituted with a real <TAB> character):

```

SDEFAULT
OOVTR1<TAB>T0 <TAB>10VIDEO<TAB>T0 <TAB>10LEFT<TAB>T0 <TAB>10RIGHT<TAB>

```

The letters "S," "O," "T," and "l" (small L) define the type of field of the following text. The number "0" after the letters "O," "T," and "l" corresponds with the color the data will appear on the screen.

Page Description Examples

These examples assume that the procedure described on page A-2 has been used to create preliminary VGA display pages based on the factory default layouts, and that the .vga file now needs to be customized.

Switcher Output Status Page

```

P#00
SMAIN
T0Thomsonö          KXYZ TELEVISION FACILITY CONTROL SYSTEM          Page:  p0
a0  T1              MAIN Switcher Output Status                      i0
T6-----+-----
T0OUTPUT           T6 |  T0VIDEO   LEFT   RIGHT   T/C
T6-----+-----
O5PRDA            T6 |      15video   15left   15right   15t/c
O5PRDB            T6 |
O5PRDC            T6 |
.
.
.

O5019            T6 |
    
```

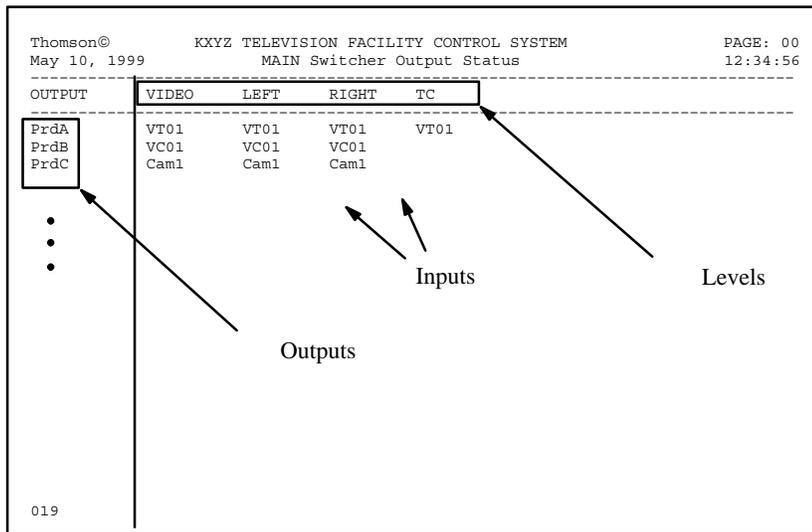


Figure A-4. Text file and resulting status page (example)

Switcher Input Status Page

```

P#01
SMAIN
T0Thomsonö          KXYZ TELEVISION FACILITY CONTROL SYSTEM          Page: p0
a0  T1              Switcher Input Status                            i0
T6-----+-----
T0INPUT          T6 |   T0SDV
T6-----+-----
I0000          T6 |   10SDV
T6             |   C
T6-----+-----
I0001          T6 |
T6             |   C
T6-----+-----
I0002          T6 |
T6             |   C
T6-----+-----
I0003          T6 |
T6             |   C
T6-----+-----
I0004          T6 |
T6             |   C
T6-----+-----
I0005          T6 |
T6             |   C
T6-----+-----
    
```

```

Thomson©          KXYZ TELEVISION FACILITY CONTROL SYSTEM          PAGE: 01
May 10, 1999     MAIN Switcher Input Status                        12:34:56
-----+-----
INPUT           SDV
-----+-----
VTR5           VT01
-----+-----
STUA           VC01
-----+-----
PrdC           Cam1
-----+-----
.
.
.
    
```

Figure A-5. Text file and resulting status page (example)

Machine and Delegation Status Page

```

P#02
T0Thomsonö          KXYZ TELEVISION FACILITY CONTROL SYSTEM          Page:  p0
a0  T1              Machine & Delegation Status                    i0
T6-----+-----+-----+-----+-----+-----+-----+-----+-----+
T0Machine  T6|    T0 Status  T6|    T0 Linkage T6|    T0Jupiter Saturn
T6-----+-----+-----+-----+-----+-----+-----+-----+-----+
M5VTR1     T6|    m0    T6|    k0    T6|    d5Jupiter    d5Saturn
M5VTR2     T6|    m0    T6|    k0    T6|
M5VTR3     T6|    m0    T6|    k0    T6|
    
```

```

Thomson@          KXYZ TELEVISION FACILITY CONTROL SYSTEM          PAGE: 02
May 10, 1999     Machine & Delegation Status                    12:34:56
-----+-----+-----+-----+-----+-----+-----+-----+-----+
MACHINE        STATUS    LINKAGE    JUPITER    SATURN
-----+-----+-----+-----+-----+-----+-----+-----+
VTR1           PLAY     |         |         |         |
VTR2           *OFF*   |         |         |         |
VTR3           *OFF*   |         |         |         |
.
.
.
    
```

Figure A-6. Text file and resulting status page (example)

System Status Page

```

P#03
T0Thomsonö          KXYZ TELEVISION FACILITY CONTROL SYSTEM          Page:  p0
a0  T1              System Status                                i0
T6-----+-----+-----+-----+-----+-----+-----+-----+-----+
T0BOARD      T6|    T0 STATUS  T6|    T0    TIME SOURCE      T6|    T0 MESSAGES
T6-----+-----+-----+-----+-----+-----+-----+-----+-----+
B5VM-Board   T6|    u5    T6|    s5    T6|    g0
B5SI-Board   T6|    u5    T6|    s5    T6|    g0
B5DVP1       T6|    u5    T6|    s5    T6|    g0
B5S-BOARD    T6|    u5    T6|    s5    T6|    g0
    
```

```

Thomson@          KXYZ TELEVISION FACILITY CONTROL SYSTEM          PAGE: 03
May 10, 1999     System Status                                12:34:56
-----+-----+-----+-----+-----+-----+-----+-----+-----+
BOARD        STATUS    TIME SOURCE    MESSAGES
-----+-----+-----+-----+-----+-----+-----+-----+
VM-board     ACTIVE   RTC set by server (m-red): This board is ACTIVE-auto
SI-board     STANDBY RTC set by server (tStartBoard): This board is STANDBY-AUTO
DVP1         ACTIVE   FileServer Time (tPnlClct): TransitionInit: Transition orig
.
.
.
    
```

Figure A-7. Text file and resulting status page (example)

TIE LINE (PATH FINDING) PAGE

(For a general discussion of path finding, please see page 5–196.)

The VGA tie line display allows the user to determine which sources and destinations are using which tie lines. See Figure A–8.

Group 1	line 0	DVE-1	>	Keyer 1	
	line 1	VTR 2	>	Monitor 1	Monitor 4
	line 2	VTR 1	>	G002 L03	
Group 2	line 3	G002 L03	>	Monitor 2	

Figure A–8. Tie line display.

In path finding, there is a “Group” for each switcher level. The Group number for a given level corresponds to the actual row number in the Pathfinding Description table (page 5–199).

The “line” number is the physical tie line in use.

The input (“DVE–1”) and output (“Keyer 1”) names are the logical names from the Switcher Input table (page 5–44) and Switcher Output table (page 5–51).

Jupiter’s tie line management system can consist of multiple tie line usage. In other words, tie lines using other tie lines to access a source. This state is indicated by displaying the group number and line number of the tie line instead of the input or output number. In Figure A–8, Group 1 line 2 is carrying VTR 1; however this tie line is connected to Group 002 line 03, which in turn is connected to Monitor 2.

If an output for a specific group/line has no tie line source connected to it, the source and destination fields will contain the word “unused.”

The **Next** key will move the group/line destination field to show the next group of 1 or more destinations. A double arrow (>>) will be displayed on a group/line row if the current row has no room to show other destinations that are switched to a source. The message “No More” will be displayed if no more destinations for a group/line are available. The other keys are not used.

The user must define the Tie Line display page (as described below), entering the desired tie line group numbers and line numbers. The usual limit of 25 rows per page applies.

Tie Line Status Display

```

P#04
T0Thomsonö          KXYZ TELEVISION FACILITY CONTROL SYSTEM          Page:  p0
a0  T1              VGA Tie Line Status Display                      i0
T6-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
T0Group No.        T6 | T0Line No.  T6 | T0SOURCE      Destination
T6-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
T0G#0  VIDEO      T6 | T0Line0    T6 | G500000
T0      T6        | T0Line1    T6 | G500001
T0      T6        | T0Line2    T6 | G500002
    
```

```

Thomson©          KXYZ TELEVISION FACILITY CONTROL SYSTEM          PAGE: 04
May 10, 1999     Path Finding Path1  -> Path2                      12:34:56
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Group No. | Line No. | Source | Destination
-----+-----+-----+-----+-----+-----+-----+-----+-----+
G#0 VIDEO | Line0    | P2018  | > P1017
          | Line1    | P2020  | > P1018
          | Line2    | Unused  | > Unused
          |          |          |
          |          |          |
          |          |          |
    
```



Figure A-9. Text file and resulting status page (example)