QUANTUM DATA®
Model 801GC-ISA & 801GF-ISA
Quick Start Guide

801GC-ISA & 801GF-ISA Quick Start Guide
Part # 68-00152 (Rev. B / 20-Mar-96)

This **Quick Start Guide** is designed to help you get your generator up and running quickly. Detailed operating instructions are in the **Owner's and Programmer's Manual**.

Before you install the Quantum Data 801GC-ISA or 801GF-ISA card

- Determine which port is available for use
- Determine the correct ISA or base I/O address
- Make sure the contents of the kit are near your computer so you can follow the steps in order without stopping.

1. **Make sure your computer and monitor are turned off.**

    This protects the card from possible electrical damage when you connect your system components later.

    Important — For now, leave the line cord for the computer plugged in.

2. **Remove the cover from the computer.**

    See the manual that came with your computer for specific instructions.

3. **Touch the metal part of the power supply case inside the computer to discharge any static electricity that you might have.**

    See the manual that came with your computer to locate its power supply.

4. **Unplug the computer's line cord.**

5. **Locate a full-size, unobstructed slot on your computer.**

    See the manual that came with your computer.

6. **Remove the backplate for this slot.**

7. **Remove the 801GC-ISA or 801GF-ISA card from its static-proof bag.**

    Hold the card by its edges to avoid touching the connector on the card.

8. **Prepare the card for your correct ISA or base I/O address.**

    This is done by placing the provided jumpers in the pattern for your ISA or I/O shown in this table. The card comes with a default setting of ISA 0 (base I/O 300H).

Jumper Locations

0	1	2	ISA	Base I/O (Hex)
			ISA 7	268
			ISA 6	260
			ISA 5	258
			ISA 4	250
			ISA 3	318
			ISA 2	310
			ISA 1	308
			ISA 0	300

■ = jumper in   □ = jumper out

There are two other jumper positions: X and M. Position X is empty and M always has a jumper.

GC   **GF**

Name		Description
Format	P	Details of the format driving the display
	S	Details of any format in memory
ColorBar	P	Full height color bars
	S	Split field color bars
GrayBar	P	Full height gray scale bars
	S	Split field gray scale bars
Raster	P	Active video area set to black pixels
	S	Active video area set to white pixels
BriteBox	P	Single white box in center of screen
	S	Adds 4 corner boxes
QuartBox	P	White box 1/4 of video area
	S	Inverted - black on white
CheckBy3	P	3x3 b and w checkerboard w/ black box
	S	3x3 b and w checkerboard w/ white box
Check511	P	5 patches of 1 on - 1 off pixels
	S	Inverted on a white background
Check_11	P	Full screen of 1 on - 1 off pixels
	S	Inverted (looks almost the same)
Dot_10	P	Single pixel white dots on a black
Dot_12		background at various densities
Dot_24	S	Inverted - black dots on white
Hatch_10i	P	White crosshatches and dots w/ equal
Hatch_12i		size boxes. Partial boxes at edges.
Hatch_24i	S	Inverted - black lines and dots
Hatch_10o	P	Similar to "i" versions but boxes on
Hatch_12o		centerline may be different size
Hatch_24o	S	Inverted - black lines and dots
Hatch8x8	P	8x8 box white crosshatch
	S	Inverted - black lines
Hatch64W	P	White crosshatch and center patch
	S	Inverted - black lines and patch
Hatch_M	P	Magenta crosshatch and dots on black
Hatch_G	P	Green crosshatch and dots on black
Strokes0	P	Horizontal red, green, and blue lines
Strokes1	P	Diagonal red, green, and blue lines
Grill_44	P	Vertical black and white grill lines from
Grill_33		4 on - 4 off to 1 on - 1 off
Grill_22	S	Horizontal black and white grill lines
Grill_11		4 on - 4 off to 1 on - 1 off
Linearty	P	Crosshatch, circles, and tic marks
LinFocus	P	Crosshatch, w/ center mark, circle and
		"@" focus character blocks
	S	Inverted - black on white
CirclesL	P	Multiple white circles
CirclesS	S	Inverted - black circles on white

Name		Description
SMPTE133	P	Based on SMPTE RP-133 pattern
	S	Gray scale boxes replaced with
		color boxes top and bottom
Focus_Cx	P	Full screen of white characters or
Focus_H		symbols. Include a "Cx" symbol, an
Focus_Oo		"Oo" symbol, the letter "H", an "@"
Focus_@6		character in 3 different sizes, a
Focus_@7		Japanese Kanji "Kan" character,
Focus_@8		and a "MEME" cluster.
KanjiKAN	S	Inverted versions - black characters
MEMESony		on a white background
MESony_R	P	Red MEME Sony image on black
MESony_G	P	Green MEME Sony image on black
MESony_B	P	Blue MEME Sony image on black
MEMEPlus	P	White MEME clusters w/ white cross
		between clusters
	S	Inverted - black on white
MEPlus_R	P	Red MEME Plus image on black
MEPlus_G		Green MEME Plus image on black
MEPlus_B		Blue MEME Plus image on black
Text_9	P	2 sizes of white random text
Text_16	S	Reversed text - black on white
Cubes	P	Orbiting color cubes w/ green frame
	S	On white background w/o frame
Persist	P	Moving boxes at various speeds
	S	Inverted - black boxes on white
Regulate	P	Blinking white box w/ thin border
	S	Blinking white box w/ thick border
Flat	P	All active pixels set to white
FlatGray		All active pixels set to gray
Flat_R		All active pixels set to red
Flat_G		All active pixels set to green
Flat_B		All active pixels set to blue
Box_50mm	P	50 and 64 mm boxes w/ format data
Box_64mm	S	Inverted - black boxes on white
Ramp	P	Full screen gray scale (TV)
Burst	P	Ref levels plus sine waves (TV)
TVHatch	P	Crosshatch w/ sine-sq lines (TV)
PulseBar	P	Sine-sq pulses plus white bar (TV)
TVBar100	P	Color bars @ 100 IRE intensity
TVBar_75	P	Color bars @ 75 IRE intensity
Stairs20	P	Gray stairstep @ 20% increments
SMPTEbar	P	Color bars plus encoder ref. signals
Outline_0	P	Outline w/ diagonals and center cross
	S	Inverted - black on white
Outline_1	P	Outline w/ center cross
	S	Inverted - black on white

P = Primary

S = Secondary

9. **Align the card with the slot.**

10. **Insert the card into the slot and press the card firmly until the connector is in place.**

    - ■ Handle the card only by its edges.
    - ■ Don't bend or wiggle the card.
    - ■ Don't force the card into the slot. If there's a lot of resistance, pull it out and try again.

11. **Use the screw to secure the backplate attached to the card.**

12. **Replace the cover on the computer.**

13. **Plug in your computer.**

14. **Make sure all the cable connections are secure.**

Connector

Slot
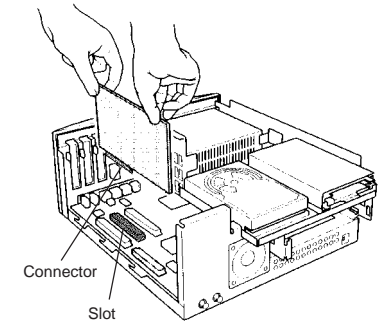
Start-Up

- ■ **Open Windows™, if needed.**
- ■ **Insert the Quantum Data *Video Generator Manager* disk in the disk drive.**
- ■ **Select R̲un from the Program Manager F̲ile menu.**

- ■ **Type —** `a:\setup` **(if disk is in A drive)**
- ■ **Press ENTER or click OK.**
- ■ **After a few seconds, a *VGM Installation Is Complete* message appears.**
- ■ **Press ENTER or click OK.**
- ■ **The VGM icon appears.**
- ■ **Double click on the icon to begin the program.**
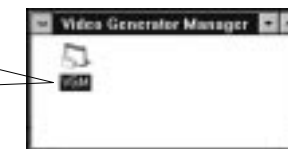
- **Connect to your generator.**
- **Select Port from the Generator menu.**

Generator
Port...
Model...

- **Select the correct Com or ISA port.**
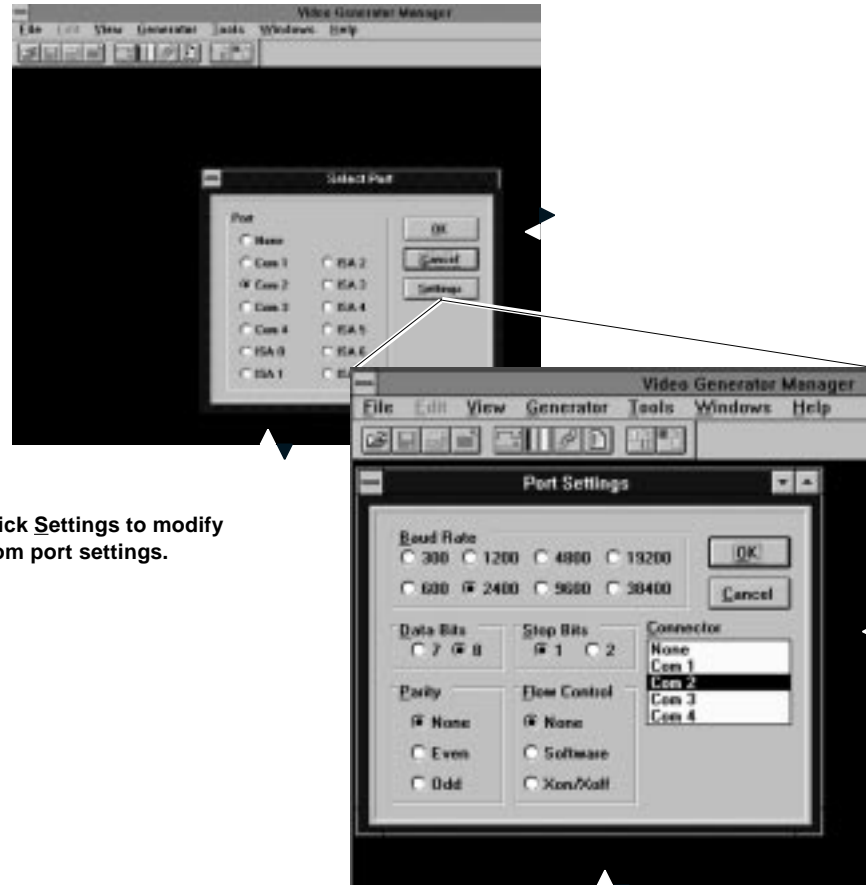
- **Click Settings to modify Com port settings.**

- **Select the appropriate Connector, Baud Rate, Data Bits, Stop Bits, Parity, Flow Control, and Generator for the Com port only.**
- **Click OK.**
- **Confirmation appears in the lower right corner.**

File Name	Video Type	Horiz x Vert Active Pixels	Line Rate	Frame Rate
MDA_M7	M2	720 x 350	18.432	49.816
HGC_text	M2	720 x 350	18.141	49.030
HGCgraph	M2	720 x 348	18.519	50.051
CGA_M14	C4	640 x 200	15.700	59.924
EGA_m2	C6	640 x 350	21.851	59.702
IBM_3179	C3	640 x 400	25.560	60.000
IBM_3164	C3	640 x 400	27.648	64.749
AT&T_SVC	C6	640 x 400	25.862	59.866
AT&T_IVC	C6	640 x 400	25.862	59.866
AT&T_EVC	C6	640 x 350	25.862	59.866
PGA_400	RGB	640 x 400	30.296	59.638
PGA_480	RGB	640 x 480	30.296	59.638
VGA_m1	RGB	720 x 350	31.469	70.087
VGA_m2	RGB	720 x 400	31.469	70.087
VGA_m3	RGB	640 x 480	31.469	59.941
VGA_m4	RGB	1024 x 768	35.522	43.478•
XGA_m4a	RGB	1053 x 754	35.414	43.453•
XGA_m4b	RGB	1056 x 768	35.602	43.470•
XGA_m5	RGB	1024 x 768	56.287	70.008
XGA_m6	RGB	1360 x 1024	56.469	51.476•
XGA6475	RGB	640 x 480	39.375	75.000
XGA1076	RGB	1024 x 768	61.080	75.782
IBM6Km1	RGB	1024 x 1024	63.360	60.000
IBM6Km2	RGB	1280 x 1024	63.363	60.002
IBM6Km3	RGB	1280 x 1024	70.755	67.003
IBM6Km4	RGB	1280 x 1024	70.755	67.003
VG900601	RGB	800 x 600	35.156	56.250
VG900602	RGB	800 x 600	37.879	60.317
VS900603	RGB	800 x 600	48.077	72.188
VS901101	RGB	640 x 480	37.861	72.809
VG901101	RGB	1024 x 768	48.363	60.004
VS910801	RGB	1024 x 768	56.476	70.069
DMT6475	RGB	640 x 480	37.500	75.000
DMT8075	RGB	800 x 600	46.875	75.000

File Name	Video Type	Horiz x Vert Active Pixels	Line Rate	Frame Rate
DMT1075	RGB	1024 x 768	60.023	75.029
DMT1275	RGB	1280 x 1024	79.976	75.025
MAC_TVus	RGB	640 x 480	15.734	29.970•
MAC_TVos	RGB	512 x 384	15.734	29.970•
MAC_12m	Mono	512 x 384	24.480	60.147
MAC_12c	RGB	512 x 384	24.480	60.147
MAC_12ce	RGB	560 x 384	24.480	60.147
MAC_13LC	RGB	640 x 480	34.975	66.619
MAC_13m	Mono	640 x 480	35.000	66.667
MAC_13c	RGB	640 x 480	35.000	66.667
MAC_15	Mono	640 x 870	68.850	75.000
MAC_16	RGB	832 x 624	49.107	75.087
MAC_1960	RGB	1024 x 768	48.193	59.278
MAC_19	RGB	1024 x 768	60.241	74.927
MAC_21	RGB	1152 x 870	68.681	75.062
NECPC400	RGB	640 x 400	24.823	56.416
NECPC750	RGB	1120 x 750	32.857	40.021•
SUN1061	RGB	1024 x 1024	65.267	61.399
SUN1077	RGB	1024 x 768	62.040	77.069
SUN1166	RGB	1152 x 900	61.796	65.950
SUN116B	RGB	1152 x 900	61.846	66.004
SUN1176	RGB	1152 x 900	71.713	76.047
SUN117B	RGB	1152 x 900	71.809	76.149
SUN1267	RGB	1280 x 1024	71.722	66.718
SUN126B	RGB	1280 x 1024	71.678	66.677
SUN1276	RGB	1280 x 1024	81.130	76.107
SUN1667	RGB	1600 x 1280	89.286	66.931
HP1060	RGB	1024 x 768	47.700	60.000
HP1070	RGB	1024 x 768	56.476	70.069
HP1075A	RGB	1024 x 768	62.937	74.925
HP1075B	RGB	1024 x 768	60.241	75.020
HP1260	RGB	1280 x 1024	63.338	59.979
HP1272	RGB	1280 x 1024	78.125	72.005
HP1275	RGB	1280 x 1024	79.976	75.025

File Name	Video Type	Horiz x Vert Active Pixels	Line Rate	Frame Rate
SON1072	RGB	1024 x 768	57.870	71.799
SON1274	RGB	1280 x 1024	78.855	74.112
SON1276	RGB	1280 x 1024	81.206	76.179
INT1160	RGB	1184 x 884	55.200	60.000
INT1176	RGB	1184 x 884	71.712	76.047
INT1660	RGB	1664 x 1248	77.940	60.00
INT1676	RGB	1664 x 1248	100.73	76.020
BAR2060	RGB	2048 x 2048	126.86	60.008
BAR2080	RGB	2048 x 1536	126.86	79.187
BAR2560	RGB	2560 x 2048	126.91	60.034
PAL_Y	RGB	920 x 574	15.625	25.000•
PAL_Yus	RGB	768 x 575	15.625	25.000•
PAL_Yos	RGB	640 x 480	15.625	25.000•
RS170Y	RGB	752 x 484	15.734	29.970•
RS170Yus	RGB	640 x 480	15.734	29.970•
RS170Yos	RGB	512 x 384	15.734	29.970•
PAL_4xSC	EYC	910 x 574	15.625	25.000•
PALTV601	EYC	720 x 574	15.625	25.000•
PAL_TVus	EYC	768 x 574	15.625	25.000•
PAL_TVos	EYC	640 x 480	15.625	25.000•
PAL_N	EYC	910 x 574	15.625	25.000•
NTSC_443	EYC	752 x 484	15.734	29.970•
NTSC4xSC	EYC	752 x 484	15.734	29.970•
NTSC_601	EYC	720 x 484	15.734	29.970•
NTSCTVus	EYC	640 x 480	15.734	29.970•
NTSCTVos	EYC	512 x 384	15.734	29.970•
HDTV_1J	RGB	1920 x 1035	33.750	30.000•
HDTV_2J	RGB	1920 x 1035	33.750	30.000•
HDTV_4J	RGB	1920 x 1035	33.750	30.000•
HDTV_1E	RGB	1920 x 1152	31.250	25.000•
HDTV_2E	RGB	1920 x 1152	31.250	25.000•
HDTV_4E	RGB	1872 x 1152	31.250	25.000•
TEST150	RGB	2048 x 1024	50.403	46.887
TEST250	RGB	2048 x 2048	79.719	35.861•

Notes

Video Types:

C3 = 3-bit digital color. **C4** = 4-bit digital color (CGA). **C6** = 6-bit digital color (EGA).

M2 = 2-bit digital monochrome. **RGB** = separate red green and blue analog color.
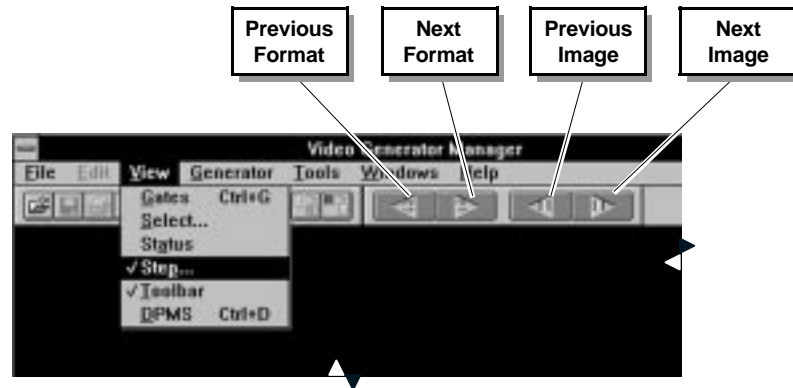
Mono = analog monochrome. **EYC** = analog color television (w/sub-carrier) / S-video (separate lumi and chroma).

Line and Frame Rates:

The line rates are in units of KHz. The frame rates are in units of Hz. Some rates are rounded to three decimal places. A bullet (•) after the vertical rate indicates the number is the frame rate for a 2:1 interlaced format.
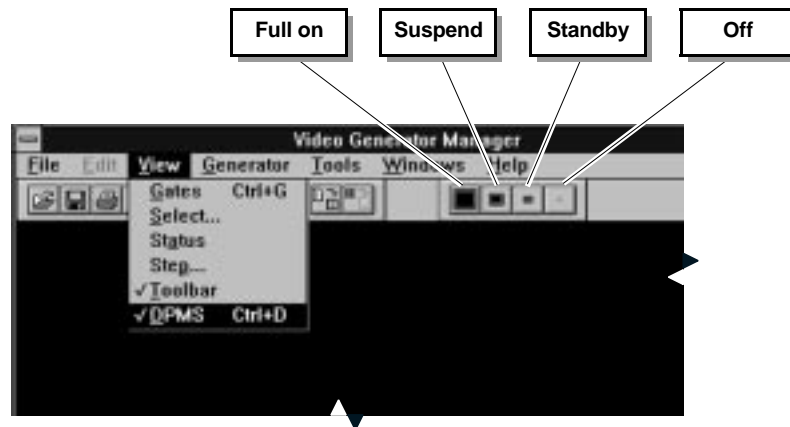
Step…

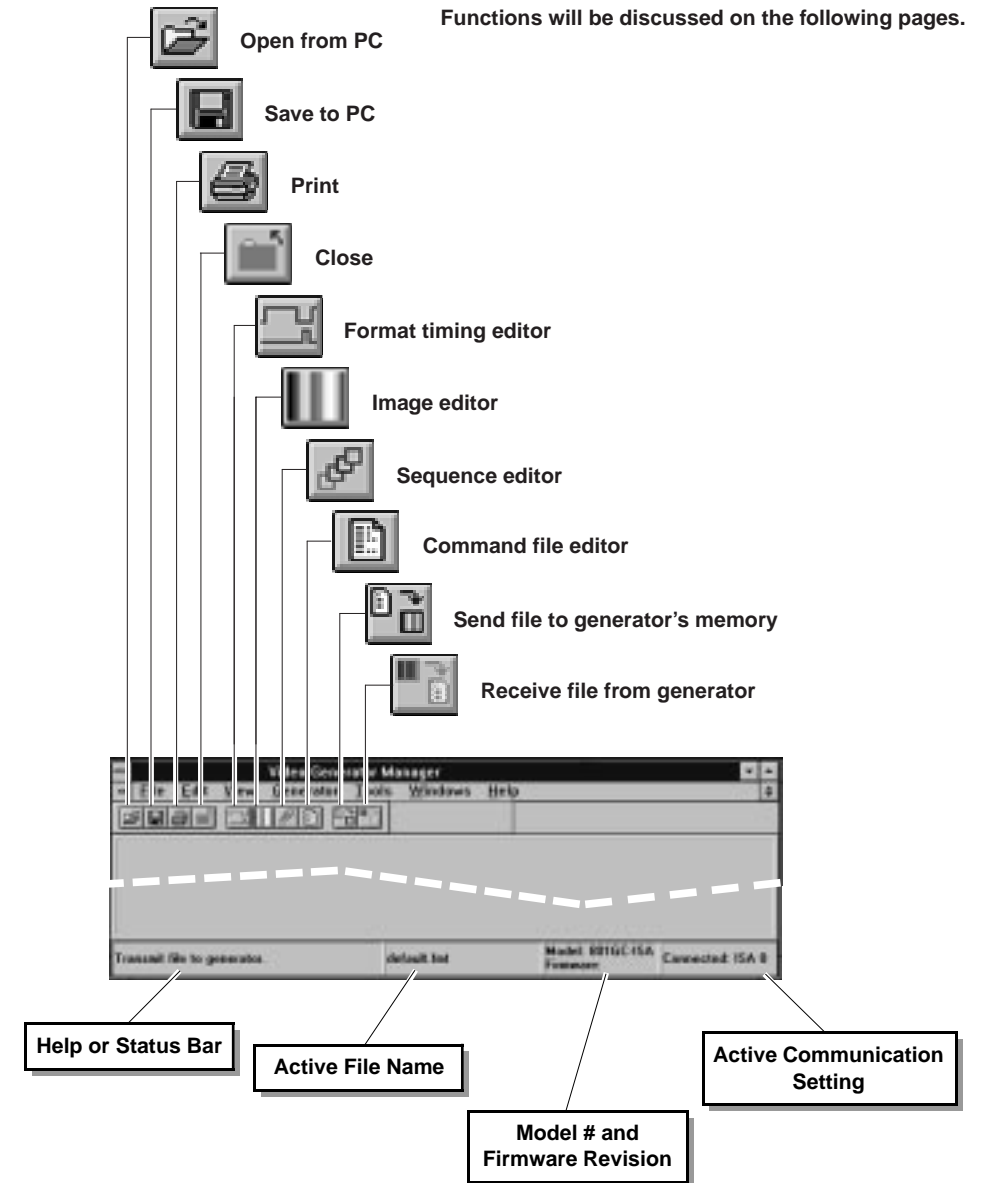The Step … tool lets you move to the next, or previous, saved image or format.

Previous Format | **Next Format** | **Previous Image** | **Next Image**

DPMS

The DPMS screen lets you select various power-saving modes.

Full on | **Suspend** | **Standby** | **Off**

Buttons, Icons, Messages

Functions will be discussed on the following pages.

- Open from PC
- Save to PC
- Print
- Close
- Format timing editor
- Image editor
- Sequence editor
- Command file editor
- Send file to generator's memory
- Receive file from generator

Help or Status Bar

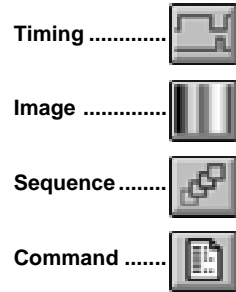**Active File Name**

Model # and Firmware Revision

Active Communication Setting

Create New File

- Select **N**ew from the **F**ile menu.
- Select the File Type you want to create.
- Press ENTER or click OK.
  or
- Click on the appropriate icon …

Timing ....

Image ....

Sequence ....

Command ....

Tool bars float and can be docked on any side. Double click to return to previous position.

It is not necessary to be connected to a generator to work on the Editors.

Select …

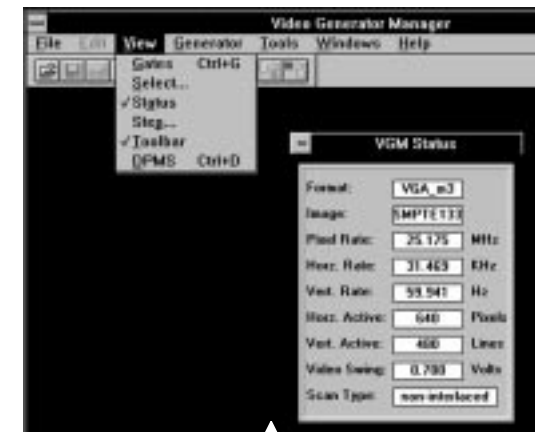The Select screen lets you select any saved image or format.

- Choose **S**elect … in the **V**iew menu.

Scroll to select the desired format or image.
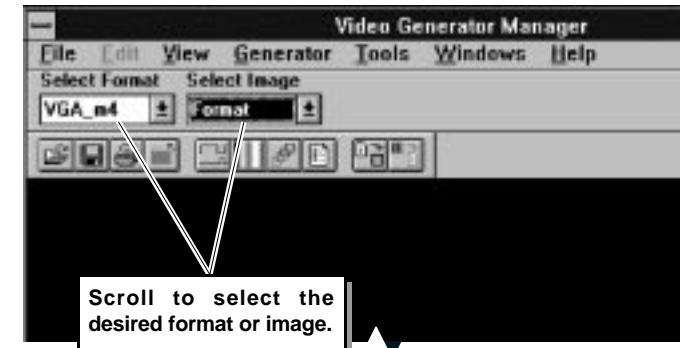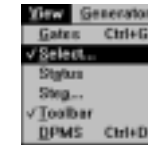
Status

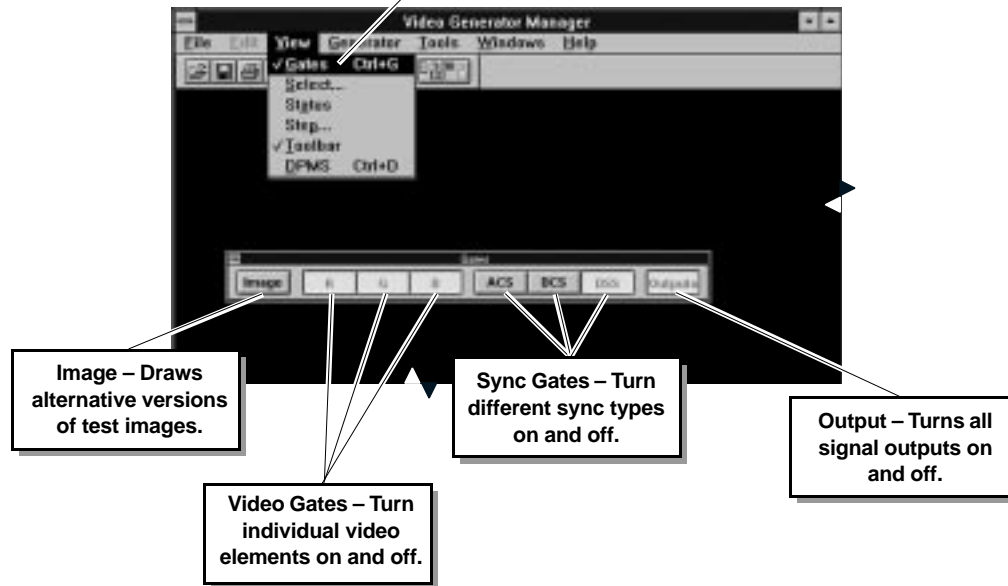The Status screen displays all the current VGM data.

- Select **S**tatus in the **V**iew menu.

Gates

The Gates screen lets you turn individual video elements and sync types on and off.

- Select Gates in the View menu.

Image – Draws alternative versions of test images.

Sync Gates – Turn different sync types on and off.

Output – Turns all signal outputs on and off.

Video Gates – Turn individual video elements on and off.

Multiple Syncs
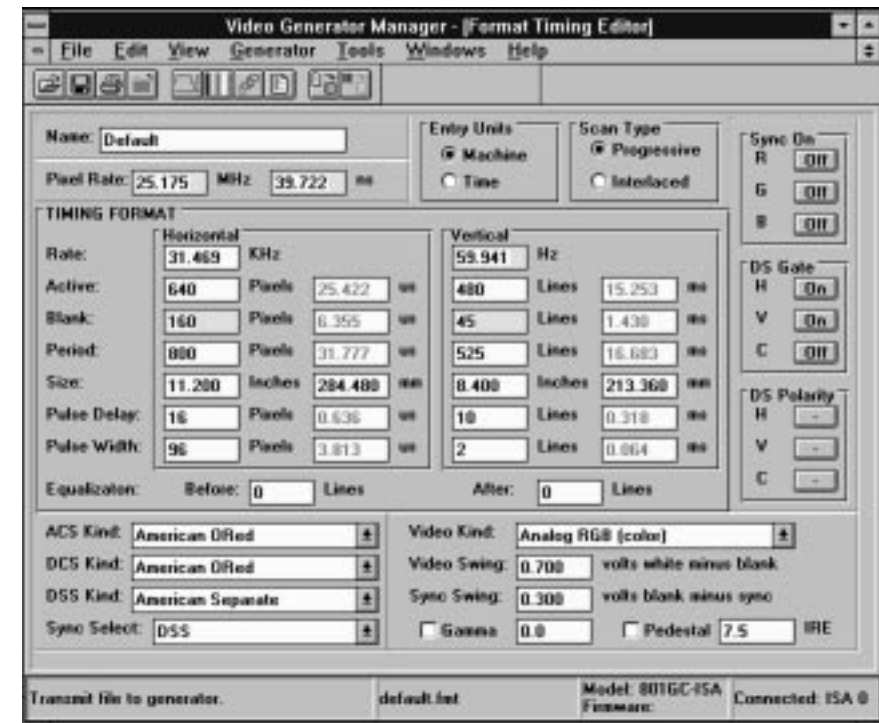
Multiple Syncs in the Tools menu lets you turn on more than one sync at the same time if your monitor supports it.
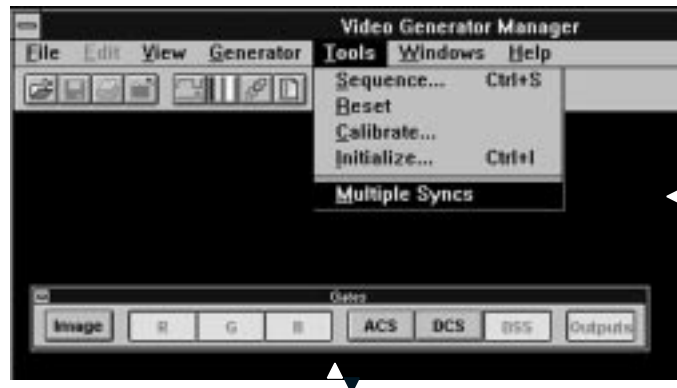
Format Timing Editor

The Format Timing Editor lets you create or edit timing formats. Any of the active fields can be modified. This screen also lets you examine the timing diagram for the image(s) you create.

- Select New in the File menu. Then select Format.

  or

- Select Open in the File menu. Then select the existing timing (.fmt) format you want to edit.

  or

- Click on the Timing format editor icon ......

- Any of the highlighted fields can be edited.

- Transmit to the generator by clicking on the Send file to generator icon ......

  or

- By selecting Transmit from the File menu.

- Save the timing format to the PC by clicking on the Save icon .....
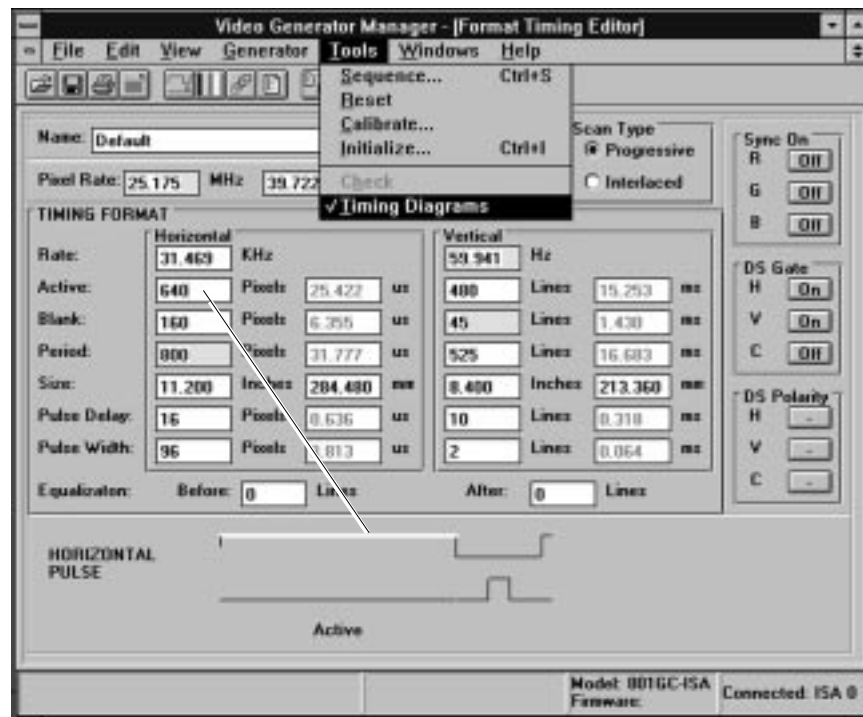
  or

- By selecting Save or Save As from the File menu.

Timing Diagrams

■ Select Timing Diagrams from the Tools menu.

| Tools	Windows	Help
Sequence...		Ctrl+S
Reset		
Calibrate...		
Initialize...		Ctrl+I
Check		
Timing Diagrams		

■ Click on any horizontal or vertical value to highlight that portion of the timing diagram.

■ To turn off and return to video and sync selection, again click on the Timing Diagrams from the Tools menu.

Reset

Reset begins the normal power-on sequence for the generator.

Tools	Windows	Help
Sequence...	Ctrl+S	
Reset		
Calibrate...		
Initialize...	Ctrl+I	
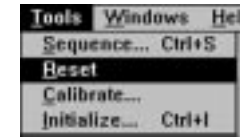
Calibrate

Calibrate compares the generator outputs with an internal precision reference voltage and adjusts the outputs to ensure that accurate signal swings exit the RGB video and pixel clock outputs.

Tools	Windows	Help
Sequence...	Ctrl+S	
Reset		
Calibrate...		
Initialize...	Ctrl+I	
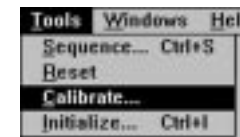
Initialize

Initialize returns the generator to all factory default settings. ALL user-created data stored in non-volatile memory is erased and a self calibration cycle is performed.

Tools	Windows	Help
Sequence...	Ctrl+S	
Reset		
Calibrate...		
Initialize...	Ctrl+I	

! Initialize erases ALL user-created data stored in non-volatile memory.

Sequence Select and Run

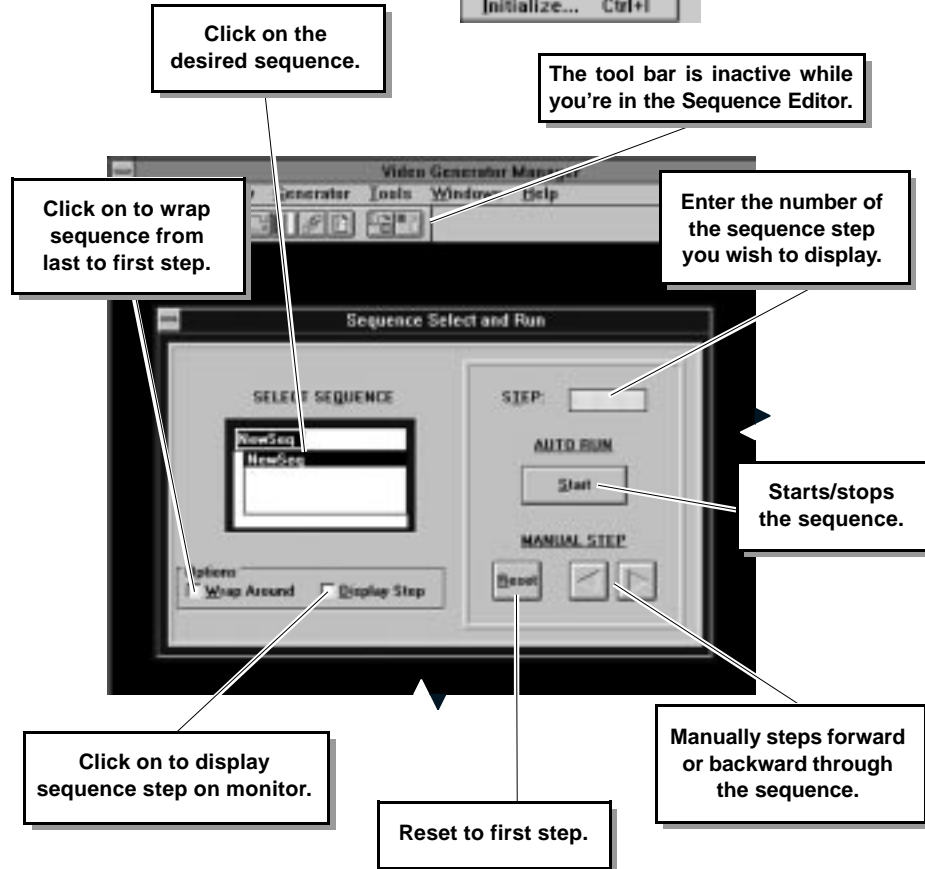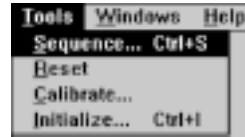As its name implies, the Sequence Select and Run screen lets you select and run any saved sequence.

■ Select Sequence in the Tools menu.

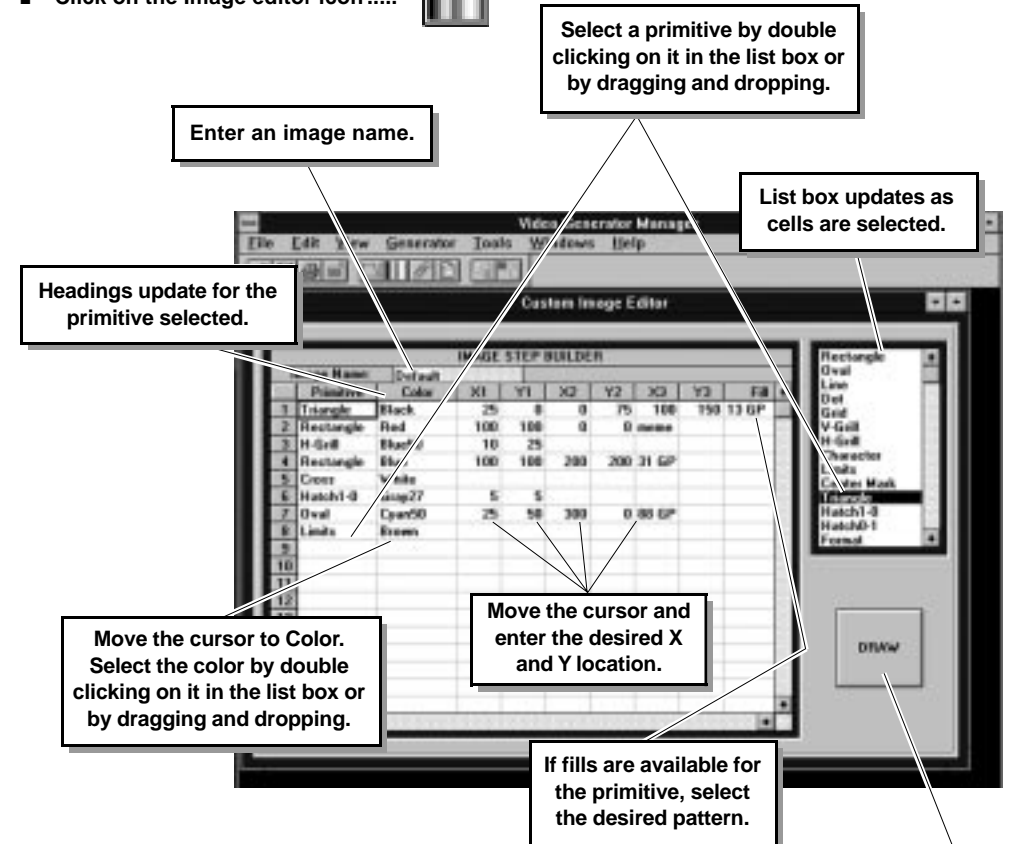Tools Windows Help
Sequence... Ctrl+S
Reset
Calibrate...
Initialize... Ctrl+I

Click on the desired sequence.

The tool bar is inactive while you're in the Sequence Editor.

Click on to wrap sequence from last to first step.

Enter the number of the sequence step you wish to display.

Video Generator Master
Generator Tools Windows Help

Sequence Select and Run

SELECT SEQUENCE
NewSeq
NewSeq

STEP:

AUTO RUN

Start

Starts/stops the sequence.

MANUAL STEP

Reset

Options
Wrap Around   Display Step

Click on to display sequence step on monitor.

Reset to first step.

Manually steps forward or backward through the sequence.

■ Function Keys
  • F1 – Previous step
  • F2 – Next step
  • F3 – Start/stop
  • F4 – Reset

Custom Image Editor

The Image Editor lets you create or edit images. You can select any of the existing primitives, and specify its color, location, and when appropriate, its fill pattern.

■ Select New in the File menu. Then select Image.

  or

■ Select Open in the File menu. Then select the existing image (.img) format you want to edit.

  or

■ Click on the Image editor icon .....

Enter an image name.

Select a primitive by double clicking on it in the list box or by dragging and dropping.

List box updates as cells are selected.

Headings update for the primitive selected.

Video Generator Manager
File Edit View Generator Tools Windows Help

Custom Image Editor

IMAGE STEP BUILDER

Image Name   Default

	Primitive	Color	X1	Y1	X2	Y2	X3	Y3	Fill
1	Triangle	Black	25	8	0	75	100	150	13 GP
2	Rectangle	Red	100	100	0	0 mono			
3	H-Grill	Black	10	25					
4	Rectangle	Blue	100	100	200	200	31 GP		
5	Cross	White							
6	Hatch1-0	asap27	5	5					
7	Oval	Cyan50	25	50	300	0	88	GP	
8	Limits	Brown							
9									
10									
11									
12									

Rectangle
Oval
Line
Dot
Grid
V-Grill
H-Grill
Character
Limits
Color Mask
Triangle
Hatch1-0
Hatch1-1
Format

DRAW

Move the cursor to Color. Select the color by double clicking on it in the list box or by dragging and dropping.

Move the cursor and enter the desired X and Y location.

If fills are available for the primitive, select the desired pattern.

■ If you wish, continue entering other primitives.

■ Transmit the image(s) to the generator and draw it on the monitor by clicking on Draw.

  or

■ Click on the Send file to generator icon ....

■ Save the image(s) to the PC by clicking on the Save icon ......

  or

■ By selecting Save or Save As from the File menu.

Command File Editor

The Command File Editor lets you display and send to the generator any saved format timing, image, or sequence file. Also new format timing, image, or sequence files can be created by selecting <u>N</u>ew in the <u>F</u>ile menu, then selecting Command.

- Select <u>O</u>pen in the <u>F</u>ile menu. Then select the existing command (.cmd) file you want.

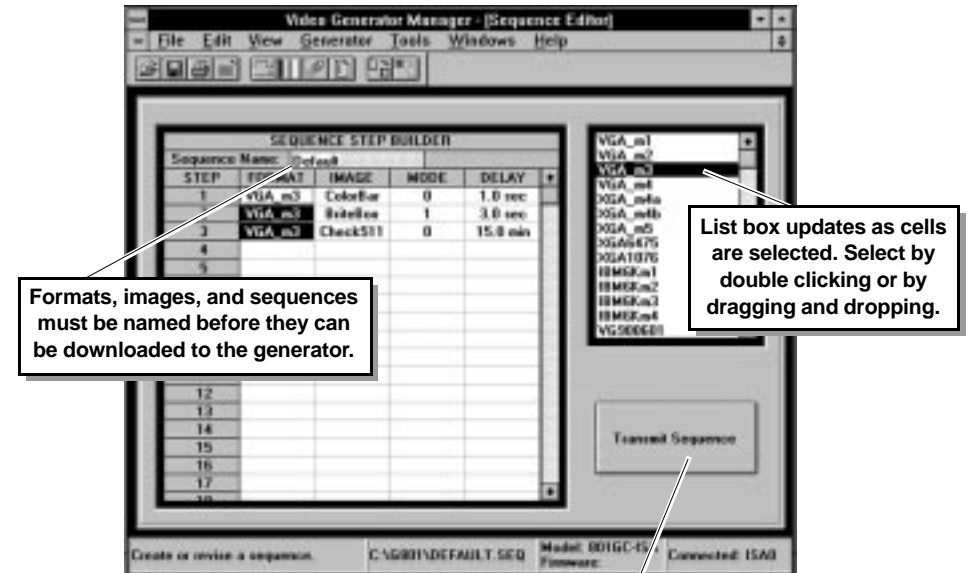 or
- Click on the Command editor icon .....
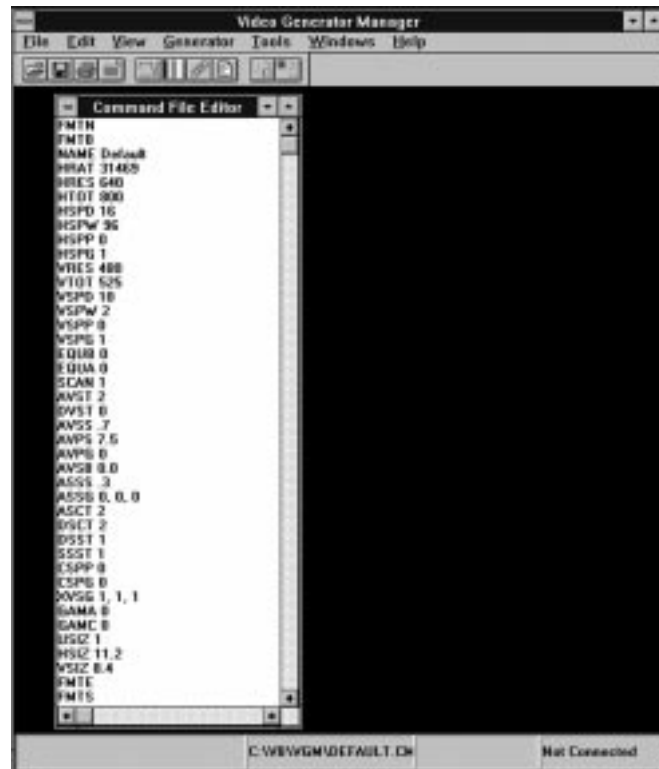
- Command files are created when you save custom format, image, or sequence files.
- For ATE applications, download these command files.
- Command files can be read by any ASCII text editor.

Sequence Editor

The Sequence Editor lets you sequence or edit existing images. You have control over each format, image, mode, and delay.

- Select <u>N</u>ew in the <u>F</u>ile menu. Then select Sequence.

  or
- Select <u>O</u>pen in the <u>F</u>ile menu. Then select the existing sequence (.seq) format you want to edit.

  or
- Click on the Sequence editor icon ......
- Enter a sequence name.
- Select the first format you want in the sequence. Move to Image and select the first image. Then enter the mode and delay for the image.
- Continue to select and enter images for this sequence.

Formats, images, and sequences must be named before they can be downloaded to the generator.

List box updates as cells are selected. Select by double clicking or by dragging and dropping.

- Transmit by clicking on the Transmit Sequence button.

  or
- By clicking on the Send file to generator icon ....
- Save the sequence to the PC by clicking on the Save icon ....

  or
- By selecting <u>S</u>ave or Save <u>A</u>s from the <u>F</u>ile menu.