

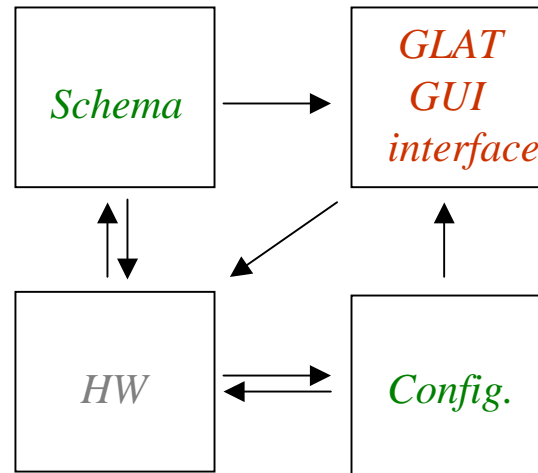


# Schema & Configuration: GUIs / Displays



The GLAT GUI monitoring tools need to take into account the information flow between the User and the Hardware (any GLAT setup under test) in two distinctive ways:

- *Schema: Describes the Hardware that the user is going to test*
- *Configuration: Sets up the Hardware to a known state*



Depending on its functionality a GLAT GUI will Modify and/or Monitor a known state of the Hardware, serving as the primary Command/Control tool

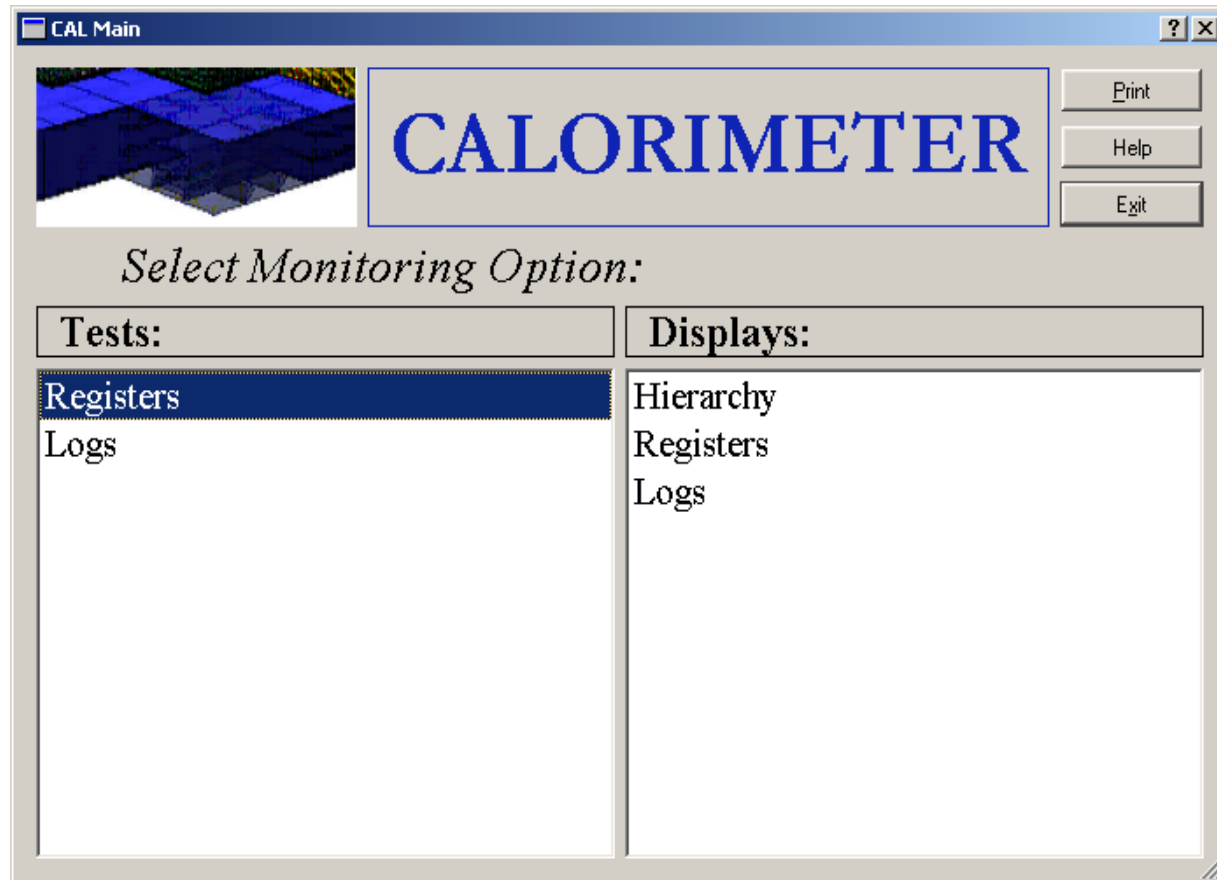


# Schema & Configuration: GUIs / Displays





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# Schema & Configuration: GUIs / Displays



**CAL REGISTERS**

Print  
Help  
Exit

**TEM Registers:**

Register	Type	Value
CAL_TRGSEQ		
COMMAND_RESPONSE		
CONFIGURATION		
DATA_MASKS		
STATUS		
TKR_TRGSEQ		

**GCCC Registers:**

Register	Type	Value
CONFIGURATION		
EVENT_TIMEOUTS		
FIFO_STATUS		
LATCHED_STATUS		
LAYER_MASK_0		
LAYER_MASK_1		
TRG_ALIGNMENT		

Select TEM: All  
Select GCCC: All  
Select GCRC: All  
Select GCFE: All

**GCRC Registers:**

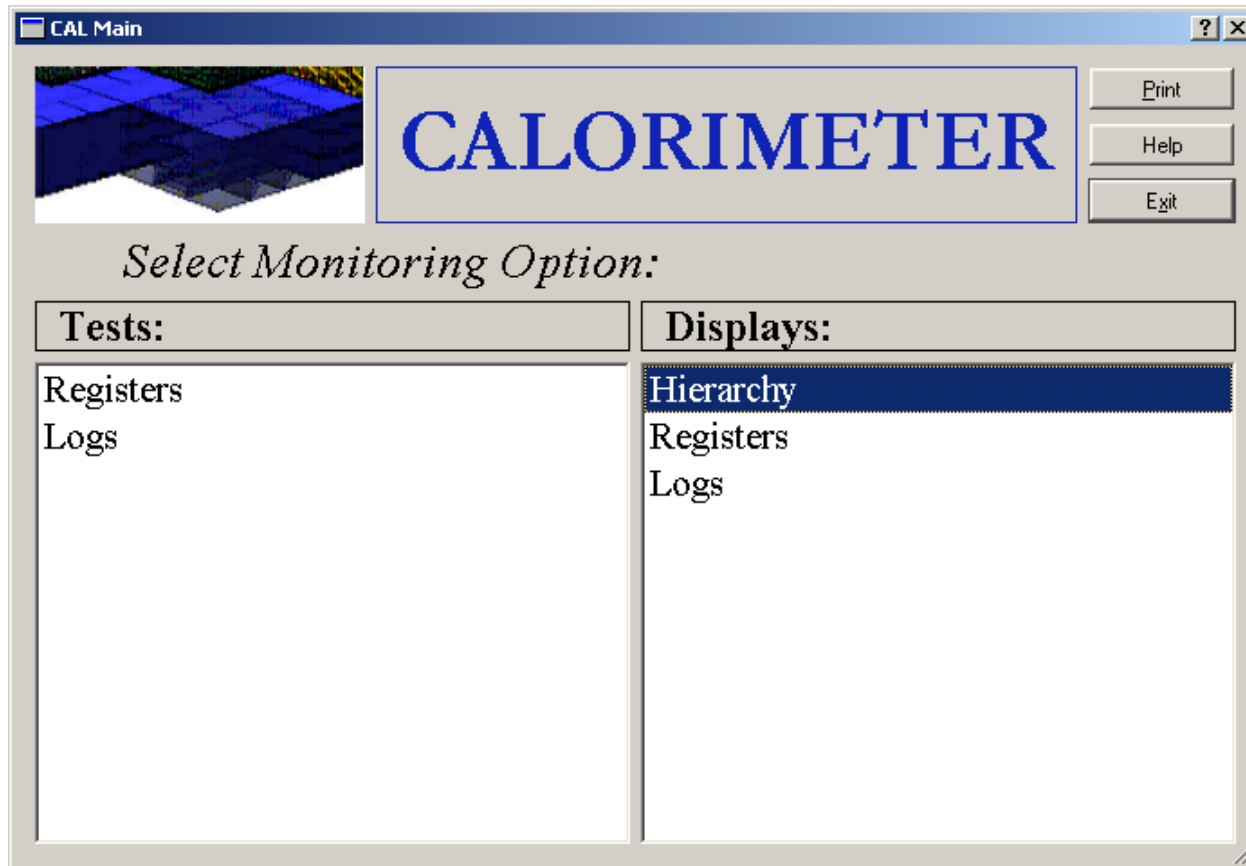
Register	Type	Value
CONFIG		
CSR		
DAC		
DELAY_1		
DELAY_2		
DELAY_3		
LAST_CMD		

**GCFE Registers:**

Register	Type	Value
CONFIG_0		
CONFIG_1		
FHE_DAC		
FLE_DAC		
LOG_ACPT		
REF_DAC		
RNG_ULD_DAC		

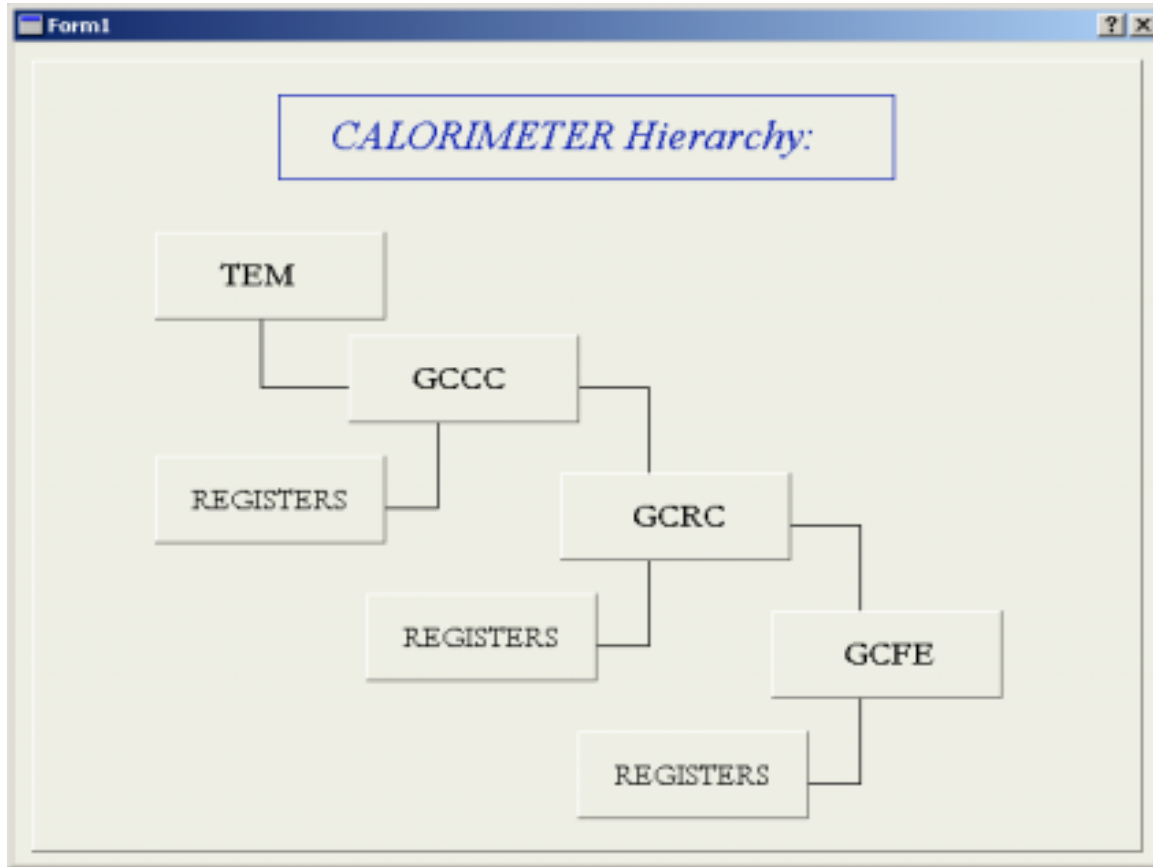


# Schema & Configuration: GUIs / Displays





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# Schema & Configuration: GUIs / Displays



The image displays three overlapping windows from the TRACKER software interface:

- TKR main:** Features the TRACKER logo, a 'Select Monitoring Option:' section with 'Tests:' and 'Displays:' sub-sections, and buttons for 'Print', 'Help', and 'Exit'. An arrow points from the 'Registers' option in the 'Displays:' section to the 'TKR Registers' window.
- TKR Registers:** A detailed window titled 'TKR REGISTERS' showing four tables of registers:
  - TEM Registers:**

Register	Type	Value
CAL_TRGSEQ		
COMMAND_RESPONSE		
CONFIGURATION		
DATA_MASKS		
STATUS		
TKR_TRGSEQ		
  - GTCC Registers:**

Register	Type	Value
CONFIGURATION		
EVENT_TIMEOUTS		
FIFO_STATUS		
INPUT_MASK		
LATCHED_STATUS		
TRG_ALIGNMENT		
  - GTRC Registers:**

Register	Type	Value
CSR_LSW		
CSR_MSW		
SYNC		
  - GTFE Registers:**

Register	Type	Value
CALIB_MASK_LSW		
CALIB_MASK_MSW		
DAC		
MODE		
TRIG_MASK_LSW		
TRIG_MASK_MSW		
- TKR Hierarchy:** A window titled 'TRACKER Hierarchy:' showing a tree diagram of the system components:
  - TEM
  - GTCC
  - REGISTERS
  - GTRC
  - GTFE



# Schema & Configuration: GUIs / Displays



The image displays three overlapping windows from the ACD (Accelerator Control Display) software interface.

**ACD main window:** Features a 3D visualization of a detector structure on the left and the text "ACD" in large red letters. Below this, it says "Select Monitoring Option:". There are two columns of options: "Tests:" and "Displays:". Under "Tests:", "Registers" and "Logs" are listed. Under "Displays:", "Hierarchy" and "Registers" are listed. Buttons for "Print", "Help", and "Exit" are visible in the top right.

**ACD Registers window:** Also features the 3D visualization and the text "ACD REGISTERS" in large red letters. It is divided into three sections:
 

- AEM Registers:** A table with columns "Register", "Type", and "Value". It lists: CABLE\_STATUS, COMMAND\_RESPONSE, COMMON\_STATUS, CONFIGURATION, TRGSEQ.
- GARC Registers:** A table with columns "Register", "Type", and "Value". It lists: ACD\_TACQ, CMD\_REJECT, DIAGNOSTIC, FREE\_ID, GARC\_VERSION, HITMAP\_DEADTIME, HITMAP\_DELAY, HITMAP\_WIDTH, HOLD\_DELAY, HOLD\_HIGH, HOLD\_LOW, HVBS, HVSA, LAST\_CMND, LOOK\_AT\_ME, MAX\_PHA, MODE, PHA\_HIGH, PHA\_LOW, PHA\_THRESHOLD 0.
- GAFE Registers:** A table with columns "Register", "Type", and "Value". It lists: BIAS\_DAC, CHIP\_ADDR, CONFIGURATION, HLD\_DAC, LLD\_DAC, LOOP\_CTR, REJECT\_CTR, TCI\_DAC.

 There are also dropdown menus for "Select GARC:" and "Select GAFE:" both set to "All". Buttons for "Print", "Help", and "Exit" are in the top right.

**ACD Hierarchy window:** Shows a tree diagram titled "ACD Hierarchy:". The root node is "AEM", which branches into "GARC" and "GAFE". "GARC" further branches into "REGISTERS" and "GAFE". "GAFE" branches into "REGISTERS".





# Schema & Configuration: GUIs / Displays



GLAT Schema & Configuration

File Edit Help

GLAT Schema

- GLAT
  - GAEM
    - GARC
    - GAFE
  - GTEM (0)
    - GCCC (0, 2)
      - GCRC (ALL)
        - GCFE (ALL)
      - GTCC
        - GTRC
        - GTFE

GLAT Blocks Configuration

TEM GCCC GCRC GCFE GTCC GTRC GTFE AEM GARC GAFF

GCCC All View

GCCC0 View

GCCC1 View

GCCC2 View

GCCC3 View

GLAT Register Configuration

TEM GCCC (2) GCRC GCFE GTCC GTRC GTFE AEM GARC GAFF

Register	Type	Value
CONFIGURATION	Hex	0x80000000
EVENT_TIMEOUTS	Hex	0x0
FIFO_STATUS	Hex	
LATCHED_STATUS	Hex	
LAYER_MASK_0	Hex	0xFFFFFFFF
LAYER_MASK_1	Hex	0xFFFFFFFF
TRG_ALIGNMENT	Hex	