Gauss Meter 325:

  Buttons:

    Layout:

      Normal:
        Range   Up   Log
        Left   Enter   Right
        Maximum   Down   Shift

      Shifted:
        Zero   Mode   Reserved
        Frequency Reserved   Reserved
        Alarm   Reserved   Reserved

  Functions:

    Up / Down / Left / Right:
      Menu navigation and changing options

    Enter:
      Selects menu options

    Shift:
      Switch to select secondary button functions
      'S' will be displayed in the lower right corner of the screen

    Range Selection:
      Press Range
      Press Up or Down to select a range (300.0 G, 3000 G, 30.00 kG, or Auto)
      Press Enter to switch to the selected range
      Press Left to exit without changing the range
      'R' will be displayed in the lower right corner of the screen while
        the meter is in the autoranging mode

    Frequency Display (Shift -> Left):
      Press Shift -> Left to switch to the frequency display mode
      Press Up, Down, Left, Right, or Enter to exit frequency display mode
      Note: The frequency reading is accurate when the magnetic field is
      higher than 4 G.
    Maximum:
      Press Maximum to change to the maximum reading mode
      Press Up, Down, Left, Right, or Enter to exit maximum mode
      'M' will be displayed in the lower right corner of the screen while
        the meter is in the maximum mode

    Zero (Shift -> Range):
      Press Shift -> Range to change to automatic zero mode
      Press Up, Down, Left, Right, or Enter to exit automatic zero mode

    AC/DC (Shift -> Up):
      Press Shift -> Up to switch to the next AC/DC mode
      (AC/DC [+] -> AC [a] -> DC [d])

    Alarm (Shift -> Maximum):
      Press Shift -> Maximum to enter the alarm threshold mode
      Set the alarm threshold:
        Use the Left and Right buttons to select a digit or the units
        and use the Up and Down buttons to change the value.
        Press Enter to set the alarm threshold and activate the alarm
      'A' will be displayed in the lower right corner of the screen while
        the alarm is activated

Press Up, Down, Left, Right, or Enter to deactivate the alarm

Log:
  Press Log to enter the data logging menu:
    Logging Status
    Log Style Full / Single
    Logging Interval submenu
    Enter to Start / Stop Logging
    Clear Log
    List Log
    View Log
  Use the Up and Down buttons to navigate through the menu
  Press Enter to select an option, toggle an option, or enter a submenu
  Press the Left button to exit the menu or submenus

  Start / Stop Logging:
    Future state is always displayed (present state is opposite of display)
    Press enter to switch to the new state
    Examples:

      Meter is not logging data
        Press Log
        Enter to Start Logging (is displayed)
        Press Enter to start logging data
        Press Left to exit to the main display

      Meter is logging data
        Press Log
        Enter to Stop Logging (is displayed)
        Press Enter to stop logging data
        Press Left to exit to the main display

    'L' will be displayed in the lower right corner of the screen while
      the meter is logging data

  Logging Interval submenu:
    Press Log to enter the data logging menu
    Press Up to navigate to the Logging Interval submenu
    Press Enter to enter the logging interval submenu
    Set the logging interval:
      Use the Left and Right buttons to select a digit or the units
      and use the Up and Down buttons to change the value.
      Press Enter to set the logging interval
    Press Left to exit to the main display

  Log Style Full / Single:

    Note: Switching between the single and full mode requires erasing all
          previously logged data.

    Single Style = x data without frequency data
    Full Style = x data with frequency data

    Press Log to enter the data logging menu
    Press Up twice to navigate to the Logging Style option
    Present state is always displayed
    Press Enter to switch to the new state
    Press Down to confirm the data log will be erased
    Examples:

      Meter is using the single log style:
        Press Log
        Press Up twice

                Log Style Single (is displayed)
                Press Enter to swith to the full log style
                Press Down to erase the log data and start using the full style
                  Pressing Enter, Left, Right, or Up will save the log and stay
                  in the single log style.
                Press Left to exit to the main display or Up and Down to navigate
                  to the other log menu items

             Meter is using the full log style:
                Press Log
                Press Up twice
                Log Style Full (is displayed)
                Press Enter to switch to the single log style
                Press Down to erase the log data and start using the single style
                  Pressing Enter, Left, Right, or Up will save the log and stay
                  in the full log style.
                Press Left to exit to the main display or Up and Down to navigate
                  to the other log menu items

        Logging Status:
           Press Log
           Press Up three times
           Press Enter to display the logging status:
             R: x / y
             I: t s

             x = number of data readings that have been logged
             y = total number of memory locations available for
                 present logging style
             t = logging interval in seconds

           Press Up, Down, Left, Right, or Enter to return to the log menu

        View Log (manual log viewing):
           Press Log
           Press Down three times
           Press Enter to view individual log entries
           Use the Up and Down buttons to move forward or backward one log entry
           Press Enter to return to the log menu

        List Log (automated log viewing):
           Press Log
           Press Down two times
           Press Enter to automatically list each log entry sequentially
           Press Up, Down, Left, Right, or Enter to return to the log menu

        Clear Log:
           Press Log
           Press Down
           Press Enter to erase all the logged data

   RS232 Configuration:
     Start -> Programs -> Accessories -> Communications -> HyperTerminal

     Connection Description:
        Name: Gauss Meter
        Click OK

     Connect To:
        Connect using: COM1 = Serial Port A
                       COM2 = Serial Port B
        Click OK

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   COMx Properties:
     Bits per second: 9600
     Data bits: 8
     Parity: None
     Stop bits: 1
     Flow control: Xon / Xoff
     Click OK
```

RS232 Command Set:

   Notes:

     <bksp> = the backspace key in the upper right corner of a
               standard US keyboard
     <enter> = the enter key

     All the RS232 commands are listed in double quotes, which
     should not be included when typing the commands in HyperTerminal.
     All commands must be followed by pressing <enter>.

     Only <bksp> can be used for editing the commands while using
     the RS232 interface. The arrow keys cannot be used and may
     lock up the interface. When <bksp> is pressed, the cursor
     will move back one space, but the previous character will
     not be deleted. Just type over the existing character to
     make corrections.

     The RS232 interface defaults to the "display off" mode, which
     does not continuously display the meter readings. Once the
     RS232 connection is made with HyperTerminal, the user must type
     "display on<enter>" to turn on the continuous display if needed.
     The meter will continue to display readings as the user
     types, and continues until <enter> is pressed.

   "range"
     Same as pressing the Range button on the meter

   "range up"
     Select the next range (order: Auto, 200 mG, 2000 mG)

   "range dn"
     Select the previous range

   "range ?"
     Display the present range setting:
        Automatic -> 200.0 mG
        Automatic -> 2000 mG
        Manual -> 200.0 mG
        Manual -> 2000 mG

   "zero"
     Same as pressing the Zero button on the meter

   "zero on"
     Enable the automatic zero mode

   "zero off"
     Exit the automatic zero mode

   "zero ?"
```

    Display the present state of the zero mode:
        zero mode on
        zero mode off

"log"
  Same as pressing the Log button on the meter

"log on"
  Enable data logging

"log off"
  Disable data logging

"log ?"
  Display present data logging state:
        logging mode on
        logging mode off

"log sty si"
  Switch to the single logging style

"log sty fu"
  Switch to the full loggging style

"log sty ?"
  Display the present logging style:
        logging style single
        logging style full

"log status"
  Displays the present log status:

        Style: s
        Reading: x of y
        Interval: t s

        s = Single or Full
        x = number of data readings that have been logged
        y = number of memory locations available for present logging style
        t = logging interval in seconds

"log list"
  Automatically lists all the logged data

"log clear"
  Erases the logged data

"log view# "x
  Shows data entry x

"log intvl "t
  Set the log interval to t seconds

"rs232"
  Reserved

"freq"
  Same as pressing the Frequency button on the meter

"freq on"
  Enable the frequency display mode

"freq off"

  Disable the frequency display mode

"freq ?"
  Display the present state of the frequency display:
    frequency mode on
    frequency mode off

"max"
  Same as pressing the Maximum button on the meter

"max on"
  Enable maximum mode

"max off"
  Disable maximum mode

"max reset"
  Reset maximum reading and stay in maximum mode

"max ?"
  Display present state of maximum mode:
    maximum mode on
    maximum mode off
    max x = <value>

"alarm"
  Same as pressing the Alarm button on the meter

"alarm on"
  Enable the alarm

"alarm off"
  Disable the alarm

"alarm ?"
  Display present state of the alarm mode:
    alarm mode on
    alarm mode off

"alarm set "
  Set the alarm threshold in G.

"alarm lmts"
  Display the present alarm thresholds:
    alarm threshold = <value> G

"up"
  Same as pressing the Up button on the meter

"down"
  Same as pressing the Down button on the meter

"left"
  Same as pressing the Left button on the meter

"right"
  Same as pressing the Right button on the meter

"enter"
  Same as pressing the Enter button on the meter

"shift"
  Same as pressing the Shift button on the meter

```
"display on"
  Enable continuous display of meter readings and exit command mode.

"display of"
  Disable continuous display of meter readings and enter command mode.

"meas f"
  Display the preset frequency measurement:
    f = <value> Hz

"meas x"
  Display the preset x field measurement:
    x = <value> mG
    x = <value> G
    OVER RANGE

"acdc_mode 0"
  Switch to combined AC/DC measurement

"acdc_mode 1"
  Switch to AC measurement

"acdc_mode 2"
  Switch to DC measurement


Capturing Data with HyperTerminal:

  Start HyperTerminal as described in the "RS232 Configuration" section:

    Transfer -> Capture Text...
      File: VLFMeterLog.txt
      Click Start

    At the RS232 command prompt in the HyperTerminal window type:
      log list

    Transfer -> Capture Text -> Stop

    Edit VLFMeterLog.txt with a text editor (WordPad, etc.) to view
    the data or write a script to convert the data for post processing
    with MATLAB or Excel.

-----------------------------------------------------------------------------
```