Free Format Log Form Instructions

HM12-560

Implementation
Engineering Operations - 1

Free Format Log Form Instructions

HM12-560
Release 500
8/95

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About This Publication

This publication explains how to fill in Free Format Log Forms (see References). A companion publication, Free Format Logs Data Entry, explains how to enter the form data into a Universal Station.

This publication supports Release 500 software.

Change bars are used to indicate paragraphs, tables, or illustrations containing changes that have been made to this manual effective with Release 500. Pages revised only to correct minor typographical errors contain no change bars.

Table of Contents

INTRODUCTION
Section 1

This manual describes a procedure that uses paper forms to design Free Format Logs. The first section explains the procedure, while the remaining sections describe various entries on the forms. The completed paper forms are then used as a reference when entering data into the Universal Station. During on-line operation, the Free Format Log is printed on-demand or at fixed intervals. The system allows a maximum of 400 Free Format Logs and up to 100 reports (in any combination), which can consist of standard logs, printed trends, journals, and reports.

Free Format Logs provide a way to generate custom printed reports that typically furnish information about the process. The Free Format Log can capture status information and values that are current at the time of printing. Typical information includes pressures, temperatures, flow rates, etc. Figures 1-1 and 1-2 show examples of Free Format Logs.

Free Format Logs can be built at any time and stored on removable media (floppy or cartridge disks) until needed. They must eventually be compiled into the system before the Operating Personality can use them; tasks 26 and 29 in the *System Startup Guide* tell how this is done.

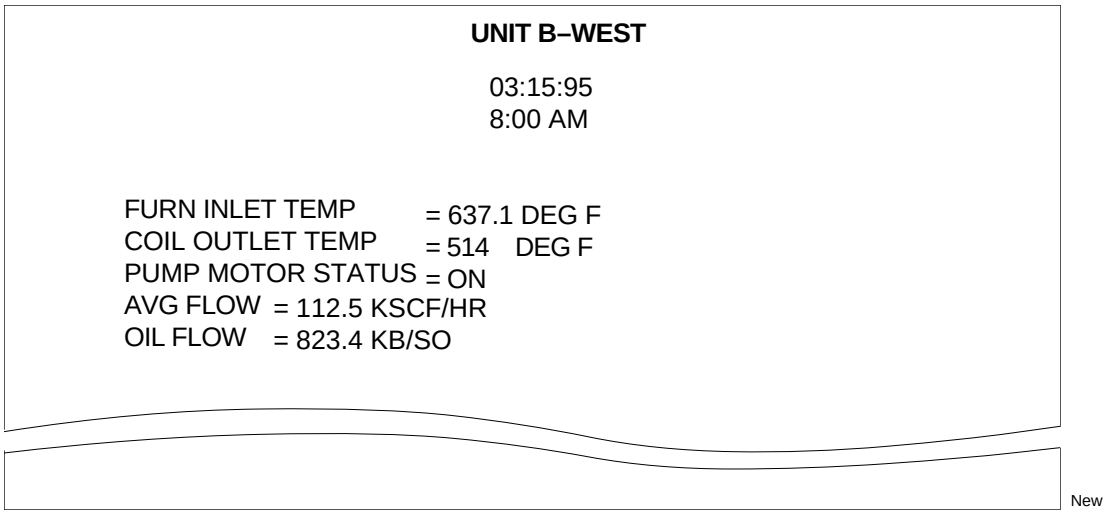


Figure 1-1 — Typical Free Format Log

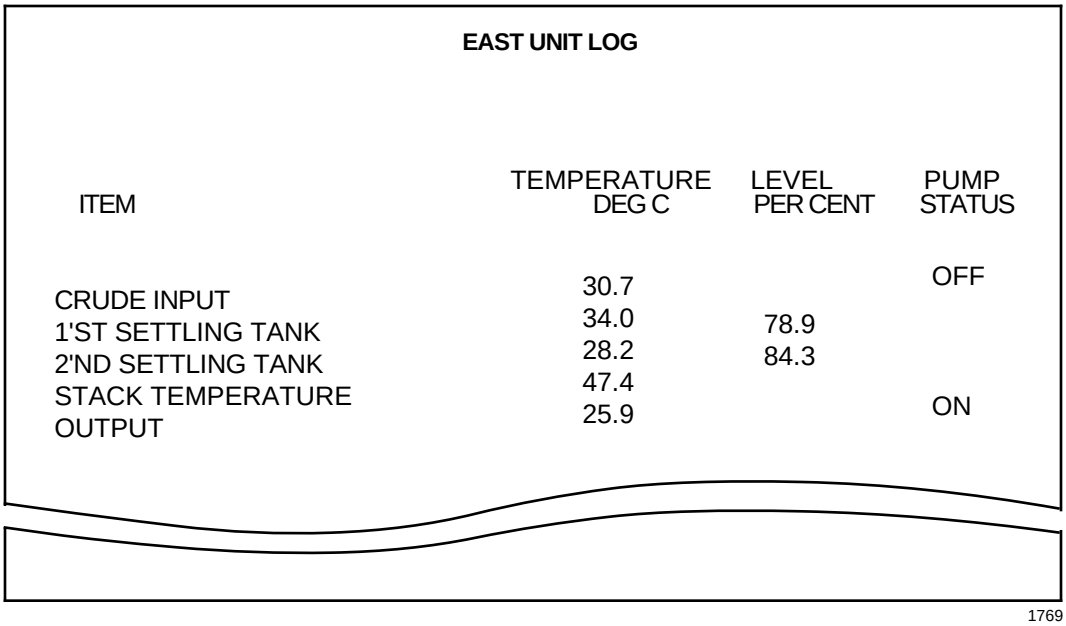


Figure 1-2 — Free Format Log with Columns

1.1 REFERENCES

Title	Publication No.	Binder
Free Format Log Forms	HM88-560	Implementation/ Configuration Forms
Free Format Log Configuration	HM88-561	Implementation/ Configuration Forms
Value Information for Free Format Log	HM88-562	Implementation/ Configuration Forms
Picture Editor Forms	SW88-550	Implementation/ Configuration Forms
Values	SW88-553	Implementation/ Configuration Forms
Variants	SW88-556	Implementation/ Configuration Forms
Subpictures	SW88-557	Implementation/ Configuration Forms
Subpicture Detail	SW88-558	Implementation/ Configuration Forms
Free Format Log Data Entry	HM11-560	Implementation/Engineering Operations - 1
Configuration Data Collection Guide	SW12-500	Implementation/Startup & Reconfiguration - 2
Picture Editor Reference Manual	SW09-550	Implementation/Engineering Reconfiguration - 1
System Startup Guide, Cartridge Drive	SW11-504	Implementation/Startup & Reconfiguration - 1

THE FREE FORMAT LOG CONFIGURATION FORM
Section 2

This section describes the main Free Format Log Configuration form.

2.1 Log Configuration Form

Honeywell form *HM88-561* is used to lay out the Free Format Log. This paper form allows 132 columns for each line. The front and back of the form provides a total of 66 lines, which is compatible with the printer output. The actual printed log can be up to 132 columns wide and 66 lines long. Figure 2-1 shows the Free Format Log Configuration form. The numbers across the top and down the side are for reference only. They do not appear on either the display or on the printed log.

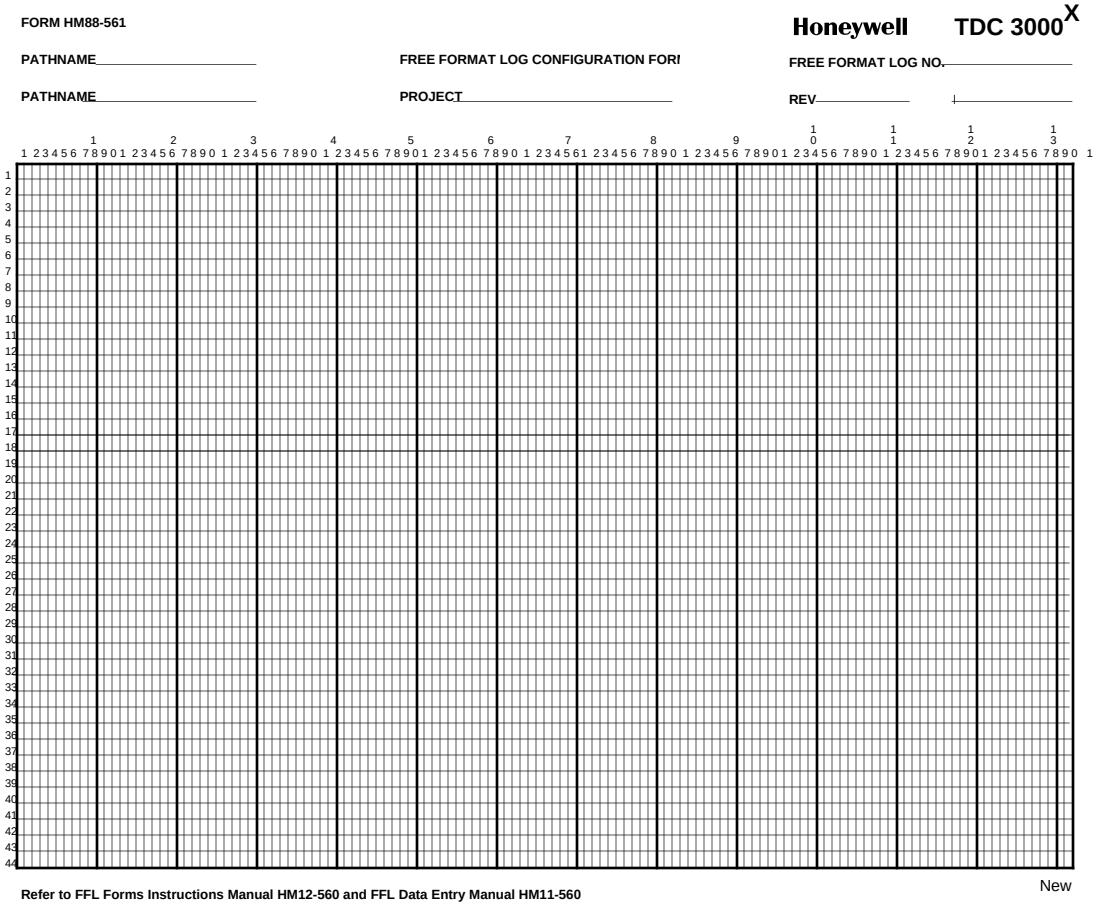


Figure 2-1 — HM88-561 Free Format Log Configuration Form

2.1.1 Pathname

The pathname entry on the configuration form tells where to store the Free Format Log. The pathname consists of the word NET or a valid logical-device identifier (LDID) such as $F1

- followed by a greater than symbol, >
- followed by a valid volume/directory identifier such as HMV1, VOL1, etc.
- followed by a greater than symbol, >
- followed by a valid file name, (excluding a suffix) such as FFL001.

Examples—

NET>HMV1>FFL001 (where HMV1 is a History Module user-volume/directory name in the History Module; NET means it is accessed through the Local Control Network.)

$F1>V123>FFL001 (where V123 is a floppy or cartridge disk volume/directory name and $F1 indicates access is through floppy or cartridge disk drive number 1.)

The Set Pathname command description in the *Picture Editor Reference Manual* explains the requirements for valid logical-device and volume/directory identifiers.

A valid file name can contain up to eight characters. Alphabetic, numeric, underscore ( ), and dollar sign ($) characters can be used in any position. Embedded spaces are not allowed. Typical file names for Free Format Log are FFL001, FFL002, etc.

Figure 3-1 in the next section shows how the pathname was written at the top-left of the configuration form.

Space is provided on the HM88-561 form for a second pathname. You can store the log on another media as a precaution in case the primary media fails. You must use the same file name, but either the Volume ID or the Logical Device ID must be different. For example you could create the directory HMV2 on a second history module and use the pathnames: NET>HMV1>FFL001 and NET>HMV2>FFL001. Both search paths and the file name must be entered in the Pathname Catalog, as described in the Area Configuration procedures.

2.1.2 Free Format Log Number

Number each Free Format Log configuration form drawing. Depending on the complexity of the log, one or more support forms may be needed to explain or amplify items on the main configuration form. These supplementary forms refer to the form they support by number.

TEXT
Section 3

This section describes text entries for a Free Format Log Configuration form.

3.1 Text Entries

Figure 3-1 shows the first few text entries on a Free Format Log Configuration form. These are typical entries, and include a title and several line entries. Text can be entered on any available line or column; there is no required format. Note that space was left under the log title for the date and time (if you want these to appear in the printed log) and for measured values from the process (temperatures, status, etc.), which, of course, are unknown at this time.

Text characters can be any of the printable characters that appear on the Universal Station's Engineering Keyboard. Table 3-1 lists these characters.

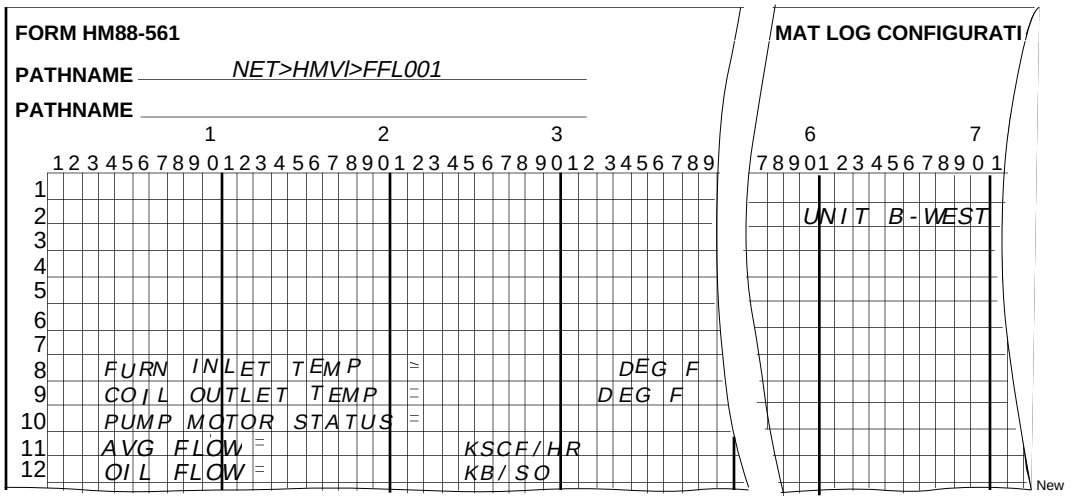


Figure 3-1 — Free Format Log Configuration Form with Text Entries

Table 3-1 — Printable Characters

Character Type	Characters Allowed
Alphabetic	A through z
Numeric	0 through 9
Other	. , ! " # $ % & ( ) { } : ; = - ~ ^ / \ [ ] *

VALUES
Section 4

This section describes Value entries for a Free Format Log Configuration form.

4.1 VALUE ENTRIES

A Value is inserted into the log to provide a "live" number or status that represents some process condition. You can also include Values that provide the current date and time.

Figure 4-1 shows where Values were used in a typical Free Format Log. Like text, Values can be placed at any position in the log.

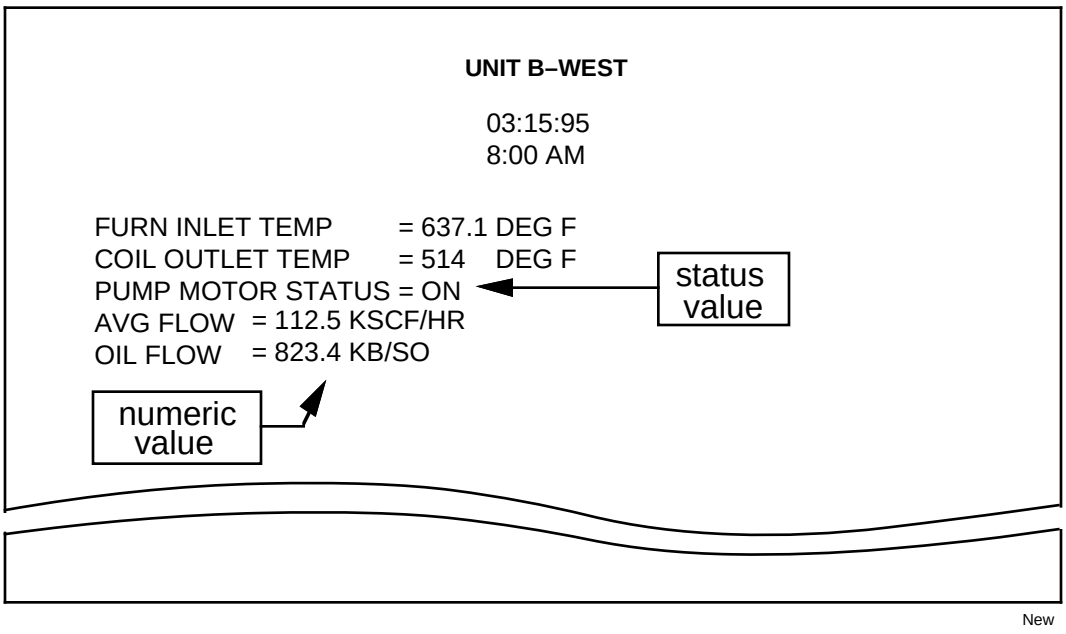


Figure 4-1 — Values in a Printed Log

4.1.1 Value Keys

When laying out the Free Format Log Configuration form, Values are indicated by using a key to the proper entry on the Value Information form. The circled keys V-1, V-2, V-3, etc., in Figure 4-2 indicate that entries 1, 2, 3, etc. on the Value Information form correspond to and explain these Values (in this case, keys V-1 and V-2 are for the date and time).

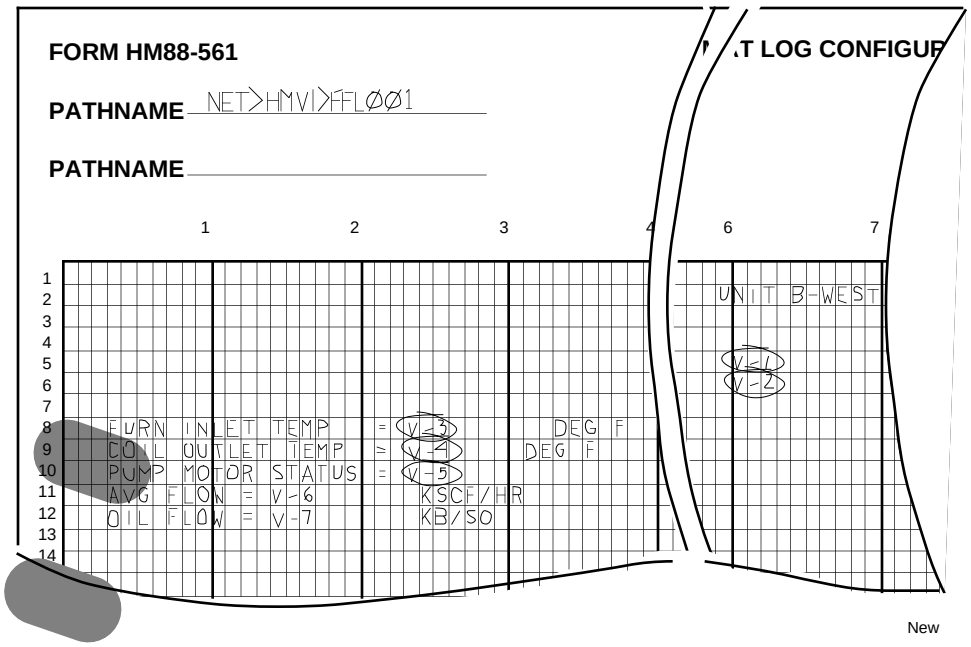


Figure 4-2 — Value Keys (circled) in the Configuration Form

4.1.2 Collectors

Collectors are similar to Values, in that they are added to the picture in the same way and both return data. Appendix H in the Picture Editor Reference Manual contains a complete listing of collectors and explains their operation.

One use of the System Time collector is illustrated in Figure 4-4. Depending on the format, it can be used to return the date or the time.

Other collectors are available to provide history and status information. For example, if history is being collected on the point HG1001, the following collectors could be used in a Free Format Log to find the average set point one hour from the start of the current shift and to indicate if enough values were used to compute the average:

```
HOUR_T(HG10001.SP,2,1)
HOUR_V(HG1001.SP,2,1,1)
HOUR_S(HG1001.SP,2,1)
```

The result might typically appear in the Free Format Log as:

```
11:00 378.6 *  if the status was bad (*)    or
11:00 378.6    if the status was good
```

where the time is 11:00 and the average SP value is 378.6.

4.1.2.1 Collector Keys

Refer to collectors in the same way as for values (e.g., V-4, V-5, etc.); however, you must use the correct collector expression as explained in subsection 4.2.

4.2 VALUE INFORMATION FORM ENTRIES

The Value Information form is used to supply information about Values that appear in the Free Format Log. "Key numbers" on this paper form correspond to keys on the paper Configuration form. Figure 4-3 illustrates the Value Information form.

4.2.1 Key Numbers

"Key-number" lines on the Value Information form correspond to Value keys (V-1, V-2, V-3, etc.) on the configuration form. Select the proper line for the Value you are defining.

4.2.2 Expression

Specify the variable that supplies the Value or Collector information.

For example, in Figure 4-4, keys V-1 and V-2 call for the System date and time collector: SYS TIME. Because they are formatted differently, one returns date information and the other returns the time.

Key V-3, specifies the Value for point A100.PV; Key V-4, specifies the Value for point B200.PV, etc. The expression can be a simple entity such as a point reference or a combination of entities and literal Values, for example A100.PV+2.0. Of course, data points that you refer to must exist in the system database.

The complete syntax for expressions is presented in the *Picture Editor Reference Manual*. Standard expressions are described in Appendix C and the Collectors are described in Appendix H of that manual.

4.2.3 Variable Types

If a variable has not been defined before you enter Free Format Log data into the Universal Station, the Picture Editor function requests the variable type and format; therefore, this information should be available on the form in case it is needed by the data-entry person. Legitimate variable types are—

REAL	INTEGER	STRING	DATE_TIME	TEXT
ENUMERATION	UNKNOWN	BOOLEAN	DURATION	

Appendix A in the *Picture Editor Reference Manual* provides more information on variable types.

Collector Types are known to the system and you can accept the default.

FORM HM88-562 Honeywell TDC 3000X

Value Information For Free Format Log _____

Key (V-)	Expression	Variable Type*	Format*
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			

Refer to FFL Forms Instructions Manual HM12-560 and FFL Data Entry Manual HM11-560

*** If unknown to the system.**

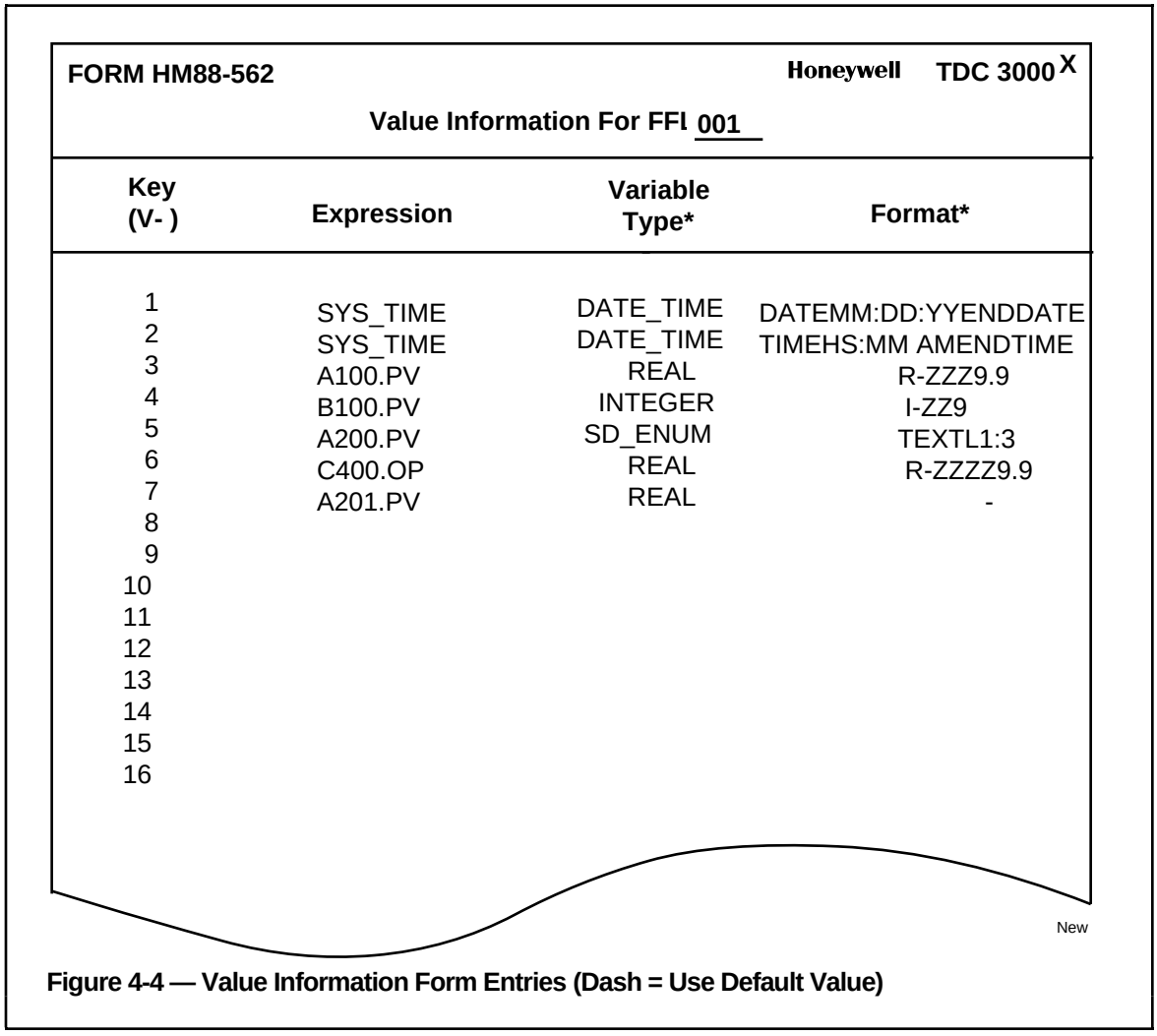
New

Figure 4-3 — Value Information Form

4.2.4 Formats

Formats and default formats for the different variable types are defined in Appendix A of the *Picture Editor Reference Manual*. If you wish to specify a different format, enter it here. For example, if you wish to limit the INTEGER format to four digits, enter I-ZZ9 instead of accepting the default format which, is I-ZZZZZ9. If the default format is acceptable, enter a dash (-) so that the data-entry person will know that you didn't overlook this entry.

Collector formats are known to the system, and unless you want to make a change, accept the default. Refer to Appendix H of the *Picture Editor Reference Manual*, if you wish to specify a different format.



FORM HM88-562 Honeywell TDC 3000X

Value Information For FFl 001

Key (V-)	Expression	Variable Type*	Format*
1	SYS_TIME	DATE_TIME	DATEMM:DD:YYENDDATE
2	SYS_TIME	DATE_TIME	TIMEHS:MM AMENDTIME
3	A100.PV	REAL	R-ZZZ9.9
4	B100.PV	INTEGER	I-ZZ9
5	A200.PV	SD_ENUM	TEXTL1:3
6	C400.OP	REAL	R-ZZZ9.9
7	A201.PV	REAL	-
8			
9			
10			
11			
12			
13			
14			
15			
16			

New

Figure 4-4 — Value Information Form Entries (Dash = Use Default Value)

VARIANTS
Section 5

This section describes Variant entries for a Free Format Log Configuration form.

5.1 VARIANT ENTRIES

Variants are used to choose one of several items for presentation on the screen. The choices are

- One of n Subpictures
- One of n text strings
- One of n Subpictures or one of n text strings, or blank screen

The decision is based on evaluating one or more Boolean expressions and n is the number of alternatives stated in the Variant body. For example

```
IF A100.PV > 400 "OVERTEMP"
ELSE "NORMAL"
```

or

```
IF A100.PV > 10 THEN SUB PRSR01
ELSE IF B100.OP < 30
THEN "UNDERLIMIT"
```

In the first case, if A100.PV is greater than 400, the word OVERTEMP is displayed, and if not the word NORMAL is displayed.

In the second case, if the first expression is true, Subpicture PRSR01 is called into the display. If the second expression is true, the word UNDERLIMIT is presented in the display.

5.2 VARIANT SUPPORT FORM

If you want to use Variants on the *HM88-561,* Configuration form, indicate the locations with VR- keys. Fill in a section of form *SW88-556* for each Variant on the display form as explained below. Note that text strings must be enclosed in quote marks and Subpicture names must be preceded by the word Subpicture (or one of its abbreviations). Figure 5-1 shows an example. Entries on the Variant support form are

Dwg._____ Key _____

Indicate the drawing number where the Variant is used and the Key (e.g., VR-1) that appears on the drawing.

At ___, ___ is the optional X,Y coordinate location (in pixels) for the Variant. For text strings, the lower left corner of the left-most digit corresponds to the specified coordinate. For Subpictures, the origin of the Subpicture corresponds to the Variant coordinate.

NOTE

In practice, it is probably easier for the data-entry person to place the Variant into the picture, using the FFL Configuration Form drawing as a guide, than for the designer to specify coordinates.

Subpicture Or Text For Bad Value _____

Enter the Subpicture name or text string to be displayed in case evaluation of the expression gives an unreasonable result, or if the Value of any variable in the expression cannot be obtained. The default word string is "BAD Value".

Variant Body _____

Write a statement or series of statements for the Variant body. The language is described in the *Picture Editor Reference Manual* (see References).

Variable Type _____

If any variable name is unknown to the system, the type will have to be specified. Refer to Appendix A in the *Picture Editor Reference Manual* for a list of variable types.

NOTE

The Log Builder reserves an area of the display for the Variant subpictures and/or text string(s). This area is sufficient to hold the longest and highest object(s). Be careful not to put other objects into the same area. Don't forget that the Bad Value text string or Subpicture (if any) must also fit into the same area.

FORM SW88-556 VARIANTS Honeywell TDC 3000 X

Dwg. 1 , Key VR-1
Variant At ____ ____
Subpicture Or Text For
Bad Value "Bad Value"
Variant Body:
IF A100.PV >400 "OVERTEMP"
ELSE "NORMAL"

Variable Type* REAL

Dwg. ____ , Key ____
Variant At ____ ____
Subpicture Or Text For
Bad Value ____
Variant Body:

Variable Type* ____

Dwg. ____ , Key ____
Variant At ____ ____
Subpicture Or Text For
Bad Value ____
Variant Body:

Variable Type* ____

Dwg. ____ , Key ____
Variant At ____ ____
Subpicture Or Text For
Bad Value ____
Variant Body:

Variable Type* ____

Dwg. ____ , Key ____
Variant At ____ ____
Subpicture Or Text For
Bad Value ____
Variant Body:

Variable Type* ____

* If unknown to the system

New

Figure 5-1 — Variant Support Form

SUBPICTURES
Section 6

This section describes Subpicture entries for a Free Format Log Configuration form.

6.1 SUBPICTURE ENTRIES

Subpictures are useful when the same or similar information can be used repeatedly in one or more Free Format Logs. When used in Free Format Logs, Subpictures can contain only text, Values, Variants, or other Subpictures that contain those items. Be sure to study the Subpicture discussion in the *Picture Editor Reference Manual* before attempting to add Values or parameters to Subpictures.

6.2 SUBPICTURE SUPPORT FORM

If you want to use Subpictures, indicate the location(s), with S- keys on the *HM88-561,* Configuration form. Sometimes, as explained later, SD- keys are also used. Enter the information on a *SW88-557,* Subpicture form. Grid lines on this form have the same spacing as the main log configuration form.

Subpicture Pathname _____

Choose a pathname for the Subpicture. Refer to the Set Pathname command in the *Picture Editor Reference Manual* for allowable Subpicture pathname syntax.

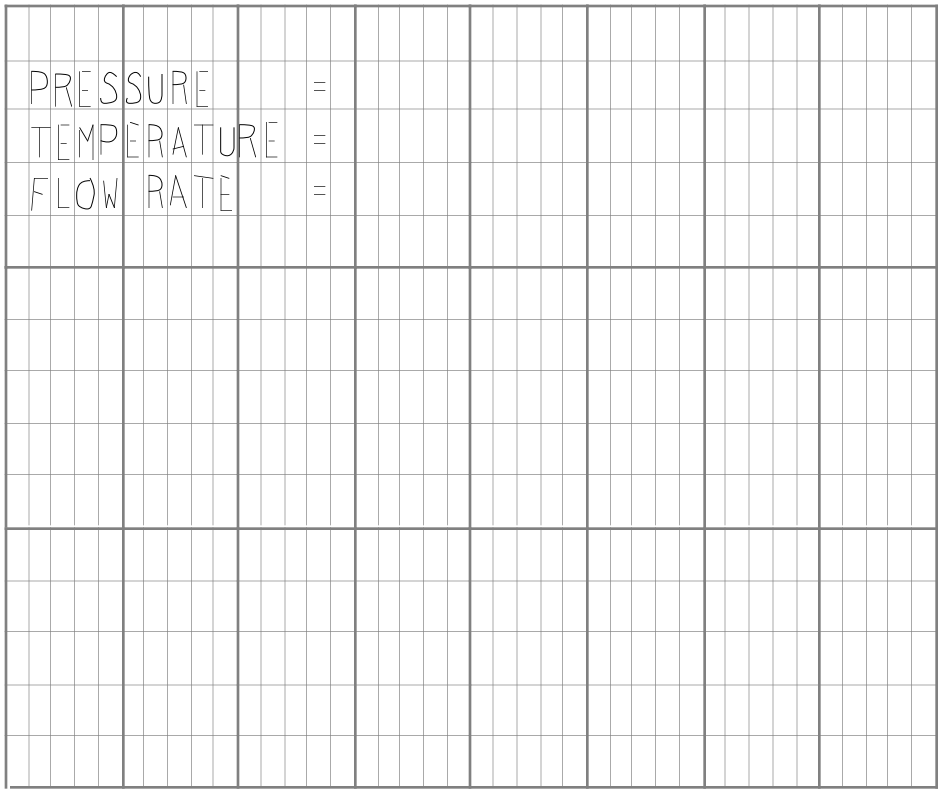
Figure 6-1 shows Subpicture 1 (S-1), the first of two examples. This is a simple case where the same text can be used repeatedly in a log. Because this was the next drawing designed after the main Log Configuration form, it is identified as Drawing 2. In the main log drawing you would probably want to place Value objects after each equals sign (=).

6.2.1 Subpictures with Parameters

Figure 6-2 shows another way to build a similar Subpicture (S-2) except that this time, Values were added to the Subpicture. Instead of directly identifying the expression for each Value, parameters (&A, &B, and &C) were used. Using this method, a different expression can be substituted for each parameter when the Subpicture is added to the main log drawing. Support forms needed for this subpicture drawing refer to drawing 3 because it was the third drawing created for this example. A Value support form (*SW88-553*) was used to explain the S form because this Value information is entered when the Subpicture is built. In this case a Subpicture Detail form, *SW88-558* is also needed to provide

FORM SW88-557 **-S- SUBPICTURES** **Honeywell** **TDC 3000 X**

Drawing No. 2 Date _____ Rev. _____



SUBPICTURE

Dwg. 1, Key S-1

Subpicture Pathname PRSRØ1

Inherited Behavior? N/A

Item	Parameter	Prompt

New

Figure 6-1 — Subpicture Form

additional information. Data on the SD form is entered after the Subpicture is added to the main log drawing and supports that drawing; therefore, an SD- key must be added to the main Log Configuration drawing. The general procedure is explained below.

When a Subpicture with parameters is stored, the Log Builder requests a prompt for each different parameter. You can choose the words. The example prompts are shown at the bottom of the S form. When this subpicture is added to the main Log Configuration display, the Log Builder presents the prompt and waits for an expression to be entered. The expression is then substituted for the parameter. In this way, most of the work is done when the Subpicture is built but different expressions can be entered as the Subpicture is used.

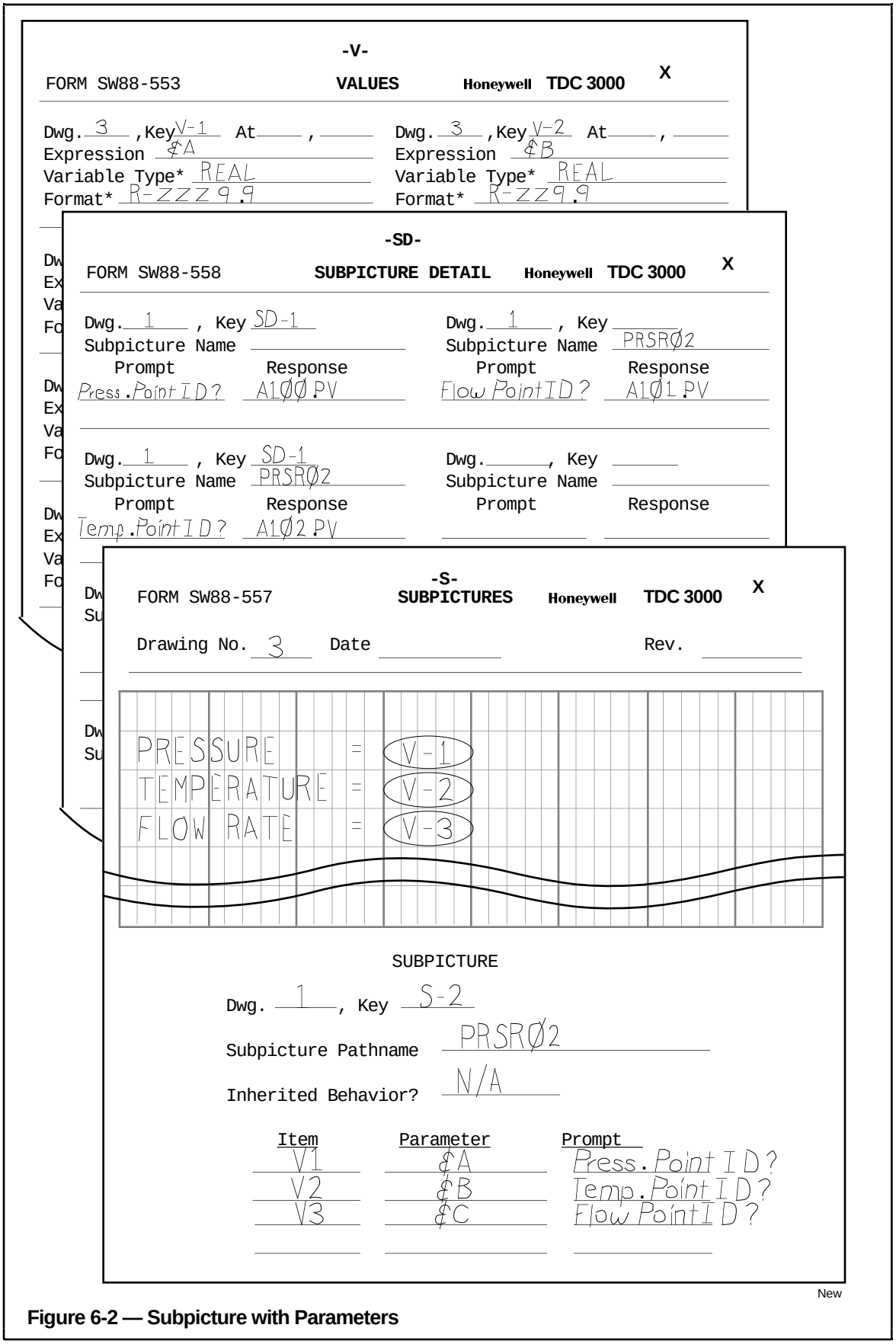


Figure 6-2 — Subpicture with Parameters

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