

VI.3.3B-SYSTEM-DEBUG PROGRAM PPINIT COMMAND DEBUG

Purpose

Command DEBUG prints information used for program debugging. 1/ 2/

Format 3/

@DEBUG

$\left[\begin{matrix} \text{ON}^\circ \\ \text{OFF} \end{matrix} \right] \quad \left[\text{TRACELVL} \left(\begin{matrix} 1^\circ \\ \text{tracelvl} \end{matrix} \right) \right] \quad \left[\text{DEBUGLVL} \left(\begin{matrix} 1^\circ \\ \text{debuglvl} \end{matrix} \right) \right]$

$[\text{UNIT}(\text{unit})] \quad \left[\text{PRINT} \left(\begin{matrix} \text{YES}^\circ \\ \text{NO} \end{matrix} \right) \right] \quad \left[\text{LISTCODE} \left(\begin{matrix} \text{YES}^\circ \\ \text{NO} \end{matrix} \right) \right]$

$[\text{ROUTINE}(\text{routine})] \quad [\text{CODE}(\{\text{code}\})]$

Parameter Description

<u>Parameter</u>	<u>Required/ Optional</u>	<u>Maximum Characters</u>	<u>Description</u>
OFF	0		Turn off all debug options
tracelvl	0	1	Trace level: 0 = do not print trace messages >0 = print trace messages if greater than or equal to trace level for routine <u>5/</u>
debuglvl	0	1	Debug level: <u>6/</u> 1 = default
routine	0	8	Name of routine at which debug is to be turned on
code	0	8	Debug code <u>4/</u>
unit	0	2	Unit on which debug output is to be printed
PRINT	0	3	Print debug options in effect
LISTCODE	0		List currently available debug codes

Notes:

- 1/ Options specified on the DEBUG command do not become effective until the command has been run.
- 2/ Extended debug is available in certain cases. This allows debug options to be specified when not at the command level. The advantage to this is that debug can be turned on at the point where it is needed and eliminate debug output that is not needed.

Extended debug is specified by entering:

```
@DEBUG {options} @RUN
```

where {options} is any valid debug options

For example:

```
@DEFINE STATION
STAN TESTID @DEBUG TRACE(1) @RUN TESTDESC
```

would set the TRACE to one after the station identifier has been processed by the DEFINE STATION Command.

Extended debug is available after the following input:

```
@DEFINE AREA FMAP
@DEFINE AREA MAP
@DEFINE AREA MAPE
@DEFINE AREA MAT
@DEFINE BASIN BASN
@DEFINE STATION STAN
@DEFINE STATION TEMP
@DUMP STATION
```

- 3/ The following rules apply to the order of the ON/OFF, TRACELVL, DEBUGLVL, ROUTINE and CODE debug parameters:
 - o the ON/OFF parameter must be first
 - o the TRACELVL and DEBUGLVL parameters must be second and can be in any order
 - o the ROUTINE parameter must be third
 - o the CODE parameter must be last
- 4/ The following is a list of valid debug codes and their purpose.

<u>Code</u>	<u>Purpose</u>
NONE	Turns off all debug codes
ALL	All debug
COMNSRCE	Common Source Utility routines
SYS	High level system routines
UTIL	Utility routines
DERW	Data Entry Data Base read/write routines
HCLRW	Hydrologic Command Language read/write routines
PPDRW	Preprocessor Data Base read/write routines

<u>Code</u>	<u>Purpose</u>
PPPRW	Preprocessor Parametric Data Base read/write routines
PRDRW	Processed Data Base read/write routines
FCRW	Forecast Parametric Data Base read/write routines
PDMP	Dump contents of parameter arrays
PNCH	Card punch routines
TIMR	Print CPU time used
CHNG	CHANGE command
DEBG	DEBUG command
DEFN	DEFINE command
DELT	DELETE command
DUMP	DUMP command
NTWK	NETWORK command
ORD1	ORDER command - level 1
ORD2	ORDER command - level 2
SOPT	SETUPT command
STAT	STATUS command
UGNL	USER parameter type
URRS	URRS parameter type
STBN	STBN parameter type
STA	Main routine for STAN processing
STAN	GENL parameter type
PCPN	PCPN parameter type
TEMP	TEMP parameter type
PE	PE parameter type
RRS	RRS parameter type
BASN	BASN parameter type
MAP	MAP parameter type
MAPS	MAPS parameter type
FMAP	FMAP parameter type
MAT	MAT parameter type
MAPE	MAPE parameter type
NTWK	NTWK parameter type
NTWKMAIN	Main routine for NTWK processing
NTWKDLY	Routine for DLY NTWK processing
NTWKPCPN	Routine for PCPN NTWK processing
NTWKTEMP	Routine for TEMP NTWK processing
ORDR	ORDR parameter type
MPCO	MPCO parameter type
MPFO	MPFO parameter type
FMPO	FMPO parameter type
GRID	Grid coordinate routines
MDR	MDR routines
WGHT	Station weighting routines

5/ Two trace messages are printed by each routine. 'ENTER routine' is printed when the routine is first entered. 'EXIT routine' is

printed just before exiting from the routine. Higher level routines have lower trace levels.

6/ The level option is used to set the debug level for the following debug codes: ALL, UTIL, DERW, PPDRW, PPPRW, PRDRW and FCRW

Sample Input

```
@DEBUG CODE(DEF DUMP) TRACE(2)
```

```
@DEBUG OFF CODE(DEF)
```

```
@DEBUG LISTCODE
```

```
@DEBUG OFF
```