



IBM 3814 Operator's Reference Summary

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This publication applies to the operator (authority level 1) of the IBM 3814 Switching Management System. This reference summary contains basic information from the *IBM 3814 Switching Management System Operator's Guide*, GA22-7078.

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3814 Introduction

The 3814 is a microprocessor-driven switching management system. A single series of commands can change a predetermined configuration very quickly.

The mask is used to prohibit certain cross-point connections. It is equivalent to the pins behind the flip-down panel on the 2914. It only needs to be changed when machines are added, removed, or rearranged.

The ChIS (channel interface switches) act as bypass switches that in effect remove a level (a group of four control unit switches) from a channel. They are equivalent to the switches behind the flip-down panel on a 2914. These are only changed for problem isolation or the addition or removal of channel cables in the 3814.

The XPT (crosspoint) switches connect a channel port to a control unit port under control of the mask. They are equivalent to the dials on the front panel of a 2914. These are changed anytime a configuration is changed.

The 3814 can store XPT switch settings for all of the normal configurations that are commonly used.

User ID 1 Keys

Command and Subcommand Keys

Log	AUTH	View User
WTNU TY	DIAG	VIEW MASK
Exec	Locate	View ChIS
CHMS	SAME	View TCS
Enable	Disable	View XPT

- Log Request for a logon or logoff.
- View User Valid only if the alternate controller attachment feature is installed. Request that the controller switching panel be displayed.
- Exec Request that the display as presented be executed.
- Locate Request that the display be started at the position specified.
- View ChIS Request that the channel interface switches be displayed.
- View TCS Request that the two-channel switches be displayed.
- Enable Request that a XPT, TCS, or ChIS port be enabled. Also used to assign the active controller if the alternate controller attachment feature is installed.
- Disable Request that a XPT, TCS, or ChIS port be disabled.
- View XPT Request that the crosspoint switches be displayed.

Operand Keys

Immed	Sync	HEX
ID	PSWD	Config
TCS Switch	TCS Intf	ChIS Level
XPT Matrix	CU	Ch

Numeric and Other Keys

SPACE	CLR Cmd /Reset	Clear Display
1 A	2 B	3 C
4 D	5 E	6 F
7	8	9
SHIFT	0	Enter

Immed	Request that the Exec command be processed immediately without regard to the state of the I/O interface.
Sync	Request that the Exec command be processed only when a null condition occurs on the affected interface.
ID	Specifies that the next digit(s) keyed will be the user authority level.
PSWD	Specifies that the next digit(s) keyed will be the user password.
Config	Specifies that the next digit(s) keyed will be the configuration number.
TCS Switch	Specifies that the next digit(s) keyed will be the number of the control-unit multiple-channel switch.
TCS Intf	Specifies that the next digit(s) keyed will be the interface number of the control-unit multiple-channel switch.
ChIS Level	Specifies that the next digit(s) keyed will be the level number of the channel interface switch.
XPT Matrix	Specifies that the next digit(s) keyed will be the crosspoint switch matrix number.
CU	Specifies that the next digit(s) keyed will be the control unit port number.
Ch	Specifies that the next digit(s) keyed will be the channel port number.

CLR Cmd/Reset	If pressed once, request that the command area be cleared. If pressed twice consecutively, ends any current command execution.
Clear Display	Request to clear the display area and to cancel the active function.
0-9	The numeric keys are self-explanatory.
Enter	Request that the current command be operated on.

Console Indicators

Ready	Lighted when the console is operational.
MSG Logged	Lighted each time a message that requires immediate attention is logged in the log file. It can be turned off by pressing the CLR Cmd/Reset key or by entering any command key. If the alarm feature is installed on the 3604 operator console, the alarm sounds when this indicator is lighted.
Running	Lighted when an I/O operation is in process.
Alt Term Req	Lighted on the active console when a user tries to use a second console.

LVL 2 ONLY

VIEW MASK	XPT MATRIX	1	CH	3	ENTER	} LVL OF 2
LOCATE	CHNL	3	CU	2	ENTER	
CHANGE	C.U.	4	CH	3	ENTER	} LVL 2 ONLY

VIEUW USER					ENTER
CHANGE	ID	1	PSWD	000000	ENTER
CHANGE	ID	1	PSWD	0	ENTER

Command Set

The command set of the 3814 is entered from the 3604 Model 6 operator console.

Command	Subcmd	Definition
View User	Enable	Switch alternate controllers. Request controller switching. (Valid only when the alternate controller feature is installed.)
	Execute	Execute the Enable request. (Valid only when the alternate controller feature is installed.)
	Clear	Terminate View User and clear the screen.
Log		Log on or off.
View XPT	Enable	Display status of crosspoint switch.
	Disable	Enable a control-unit-to-channel switch.
	Config	Disable a control-unit-to-channel switch.
	Execute	Compare configuration function.
	Clear	Change the switch settings.
View TCS	Locate	Display status of two-channel switches.
	Enable	Scan two-channel switch display.
	Disable	Enable a two-channel switch.
	Execute	Disable a two-channel switch.
	Clear	Change the switch settings.
View ChIS	Locate	Display status of channel interface switches.
	Enable	Scan the interface display.
	Disable	Enable the channel interface switch.
	Execute	Disable the channel interface switch.
	Clear	Change the switch settings.

Symbol Definition

The following special characters are used on most operator panels:

Character	Meaning
*	The preceding data has been modified since this layout was first called.
+	The switch is enabled.
-	The switch is disabled.
X	The connection is prohibited.
*	The connection is allowed.
\$	The position is available.
=	The position is already used.
S	A conflict exists.
E	The node has been enabled without request (spurious connection).
D	The node has been disabled without request (spurious disconnection).

View User

The View User command can be used to switch alternate controllers if the alternate controller attachment feature is installed.

Format

Operands None

Messages Normal message:

- ENTER USER SBCMD

Enable

Purpose Enable is a subcommand of View User. The enable subcommand enables a request for a controller switching operation. This subcommand is available only when the alternate controller attachment feature is installed.

Format

Operands n = 1 if the current active controller is 2
n = 2 if the current active controller is 1

Messages Normal message:

- ALLOWED
- ALREADY ENABLED

Exec

Purpose The Exec key must be pressed to initiate controller switching after the Enable subcommand has been completed.

Format

Switching Alternate Controllers

When the alternate controller feature is installed, the controllers can be switched by either of two procedures:

- Switching from the operator control panel.
 - This method does not require that an operator console be attached. However, the operator must be aware that there is no indication of which controller is the active controller without a console.
- Note: If an operator console is attached to the standby controller and is logged on, the console must be logged off and a minimum of 1 minute must be waited before performing this procedure.
- Switching from an operator console.
 - This method requires that an operator console be attached to the active controller.

Note: If an operator console is attached to the standby controller and the console is logged on, the console must be logged off and a minimum of 1 minute waited before performing this procedure.

Switching From the Operator Control Panel

The following procedure can be initiated from the control panel of either controller.

Perform the following sequence:

1. If the Local/Remote switch is in the Remote position, set it to the Local position.
2. Press the Power On and Reset pushbuttons at the same time while watching the Power On indicator. The Power On indicator should flash for approximately 2 seconds if the switching request is accepted.
3. After the switching request has been accepted, switch the Local/Remote switch back to Remote if it was in that position before doing item 1.

Switching From the Operator Console

This procedure may be invoked from a 3604 or a 3278 in 3604 emulation mode. The 3278 must be attached to the active controller. When switching occurs, the 3278s and 3287s will not be switched.

To enter emulation mode, do the following:

1. Initialize the 3278 to the 3814 IDLE frame.
2. Key 'CE 3604' and press the ENTER key.

The 3604 panel should display:

/	/	/
mm/dd/yy	hh:mm	n
3814 AVAILABLE		

Where:

mm/dd/yy = month/day/year

hh:mm = hour:minute

n = number of the controller that is currently active

Notes:

1. The date, time, and controller number will not be displayed on the 3604 EMULATION MODE panel.
2. The date and time will be displayed as 0's if the display/printer attachment feature is not installed.

3. Perform a log on.

Controller Switching Example

Key

View User	Enter
-----------	-------

Display

USER	/
CONTROLLER ACTIVE: n, SELECTED:	/
ENTER USER SBCMD	

Key

Enable n	Enter
----------	-------

Display

USER	/
CONTROLLER ACTIVE: n, SELECTED =	/
ENABLE n	ALLOWED

Key

Exec	Enter
------	-------

Display

USER	/
CONTROLLER ACTIVE: n SELECTED n	/
EXECUTE	

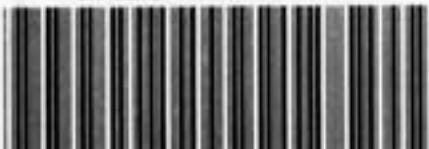
The CTR SW IN PROC message is displayed, the 3604 screen is cleared, and within 4 minutes should display:

/	/	
mm/dd/yy	hh:mm	n
3814 AVAILABLE		

Note: When controllers are switched from a 3278, the screen of the switching 3278 is cleared, and the 3278 attached to the other controller displays the 3604 emulation panel followed 10 seconds later by the 3814 IDLE panel.



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UTILITY	ENTER
INITIAL.	1
DISPLAY	2
COPY	3

Logon and Logoff

Purpose The Log command is keyed to log on or log off a 3814 user.

Format

Log ID q

Operands

- q = The ID authority level number.
- q of 0 = User who can run diagnostic tests, and Utility, View CHIS, View XPT, View TCS, View Mask, and Auth functions.
- q of 1 = User who can invoke all 3814 commands except Save, View User, View Mask, Auth, Utility, and Diag.
- q of 2 = User who can invoke all commands except Utility and Diag.

Messages

Normal message:

- 3814 AVAILABLE
- ENTER YOUR PSWD
- LOGGED ON ID 0
- LOGGED ON ID 1
- LOGGED ON ID 2
- CONFIRM LOG OFF

Logon Example

Display

```
/ _____
| | |
| 3814 AVAILABLE |
```

Key

Log ID 1 Enter

Display

```
/ _____
| | |
| LOG ID 1 | ENTER YOUR PSWD |
```

Key

1 2 3 4 5 6 Enter

Display

```
/ _____
| | |
| | LOGGED ON ID 1 |
```

Clear Display

Purpose The Clear subcommand terminates the preceding function and blanks the screen. The operator is prompted to key a command or subcommand.

Format

Clear

Operands

None

Messages

Normal message:

- ENTER A COMMAND

Exec

Purpose Exec is a subcommand of View XPT, View TCS, and View CHIS. The Exec command causes the switches to be altered according to the configuration on the display.

Note: If the alternate controller attachment feature is installed, Exec is also a subcommand of View User. The Exec subcommand causes the controllers to be switched if the View User Enable subcommand has been allowed.

Format

Execute
Execute Sync
Execute Immed

Operands

Sync (default value)
Immed

Logoff Example

Key

Clear Display Enter

Display

```
/ _____
| | |
| | ENTER A COMMAND |
```

Key

Log Enter

Display

```
/ _____
| | |
| LOG | CONFIRM LOG OFF |
```

Key

Log Enter

Display

```
/ _____
| | |
| | 3814 AVAILABLE |
```

View XPT

Purpose The View XPT command causes the crosspoint switch matrix number m in configuration x to be displayed.

Format

XPT MTX m Config xx **ENTER**

Operands
 XPT MTX m = Switch matrix number (1 to 8)
 Config xx = Configuration number (0 to 79)
 xx = 0 means previous configuration
 xx = 1 means current configuration
 xx > 1 means one of the saved configurations

Messages Normal message:

- ENTER XPT SUBCMD

Enable

Purpose Enable is a subcommand of View XPT. The Enable key is used to signal that a switch should be enabled.

Format

Enable CU nn Ch nn

Operands CU nn = Control unit number (1 to 16)
 Ch nn = Channel number (1 to 16)

Messages Normal message:

- ALLOWED

Disable

Purpose Disable is a subcommand of View XPT. The Disable key is used to signal that a switch should be disabled.

Format

Disable CU nn Ch nn

Operands CU nn = Control unit number (1 to 16)
 Ch nn = Channel number (1 to 16)

Messages Normal message:

- ALLOWED

Config

Purpose Config is a subcommand of View XPT. The Config key is used to request a comparison between the XPT data on the display and any configuration stored on the diskette for the same matrix.

Format

Config xx

Operands Config xx = Configuration number (0 to 79);
 xx represents the name of the configuration to which the current display is to be compared.

Messages Normal messages:

- IDENTICAL CONF
- CONF MISMATCH

View XPT Example

Key

View XPT	MTX	2	Config	1	Enter
----------	-----	---	--------	---	-------

Display

XPT	CU 01	02	03	04	05	06	07	08
MTX	CH 07	02	03	01	03	04		
2								
CONF	CU 09	10	11	12				
01	CH 05	07	04					
XPT MTX 2 CONF 1								ENTER XPT SUBCMD

Enable

Key

Enable	CU	2	Ch	4	Enter
--------	----	---	----	---	-------

Display

XPT*	CU 01	02	03	04	05	06	07	08
MTX	CH 07	04	02	01	03	04		
2								
CONF	CU 09	10	11	12				
01	CH 05	07	04					
ENABLE CU 2 CH 4								ALLOWED

Disable

Key

Disable	CU	6	Ch	3	Enter
---------	----	---	----	---	-------

Display

XPT*	CU 01	02	03	04	05	06	07	08
MTX	CH 07	04	02	01	03	04		
2								
CONF	CU 09	10	11	12				
01	CH 05	07	04					
DISABLE CU 6 CH 3								ALLOWED

Exec

Key

Exec	Enter
------	-------

Display

XPT	CU 01	02	03	04	05	06	07	08
MTX	CH 07	04	02	01	03	04		
2								
CONF	CU 09	10	11	12				
01	CH 05	07	04					
EXECUTE								EXECUTION ENDED

View TCS

Purpose View TCS causes the two-channel switches, starting with switch number mmm in configuration x, to be displayed.

Format **TCS Sw mmm Config x**

Operands
 TCS Sw mmm = TCS number (1 to 128)
 Config x = Configuration number (0 to 6)
 x = 0 means previous configuration
 x = 1 means current configuration
 x = 2 to 6 means one of the saved configurations

Messages Normal message:

- ENTER TCS SUBCMD

Locate

Purpose Locate is a subcommand of View TCS. The TCS number mmm designates the starting position of the display.

Format **Locate Sw mmm**

Operands Sw mmm = TCS number (1 to 128)

Messages Normal message:

- ENTER TCS SUBCMD

Enable

Purpose Enable is a subcommand of View TCS. The Enable key is used to signal that the switch should be enabled.

Format **Enable Sw mmm Intf nn**

Operands Sw mmm = TCS number (1 to 128)
 Intf nn = Interface number in one TCS switch
 mm; it must be a number between 1 and 16.

Messages Normal message:

- ALLOWED

Disable

Purpose Disable is a subcommand of View TCS. The Disable key is used to signal that the switch should be disabled.

Format **Disable Sw mmm Intf nn**

Operands Sw mmm = TCS number (1 to 128).
 Intf nn = Interface number in one TCS switch
 mm; it must be a number between 1 and 16.

Messages Normal message:

- ALLOWED

View TCS Example

Key

View	TCS	*	Enter
TCS	Switch		

Display

TCS SW--004 005 006 007 008 009
CONF +--- +--- +--- +--- +--- +---
01 +*** -++ **** +--- +---
----- +--- +---
----- +---
----- +---

TCS SW 4

ENTER TCS SUBCMD

Enable

Key

Enable	TCS	*	TCS	Intf	I4	Enter
Switch			Intf			

Display

TCS* SW--004 005 006 007 008 009
CONF +--- +--- +--- +--- +--- +---
01 +*** -++ **** +--- +---
-++- +---
-++- +---
-++- +---

ENABLE SW 4 INTF I4

ALLOWED

Disable

Key

Disable	TCS	*	TCS	Intf	I0	Enter
Switch			Intf			

Display

TCS* SW--004 005 006 007 008 009
CONF +--- +--- +--- +--- +--- +---
01 +*** -++ **** +--- +---
-+-- +---
-+-- +---
-+-- +---

DISABLE SW 4 INTF I0

ALLOWED

Exec

Key

Exec	Enter
------	-------

Display

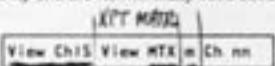
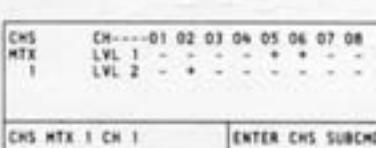
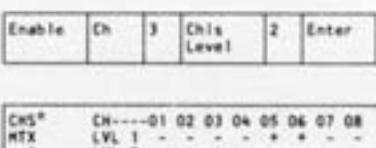
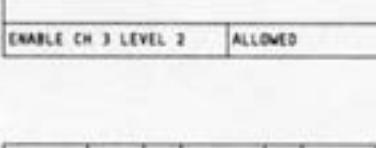
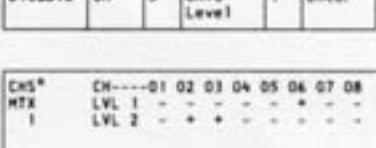
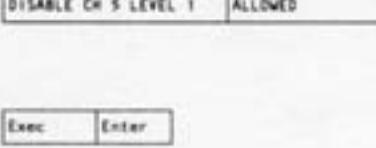
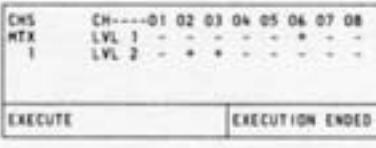
TCS SW--004 005 006 007 008 009
CONF +--- +--- +--- +--- +--- +---
01 +*** -++ **** +--- +---
-+-- +---
-+-- +---
-+-- +---

EXECUTE

EXECUTION ENDED

View CHIS

View CHIS Example

Purpose	The View CHIS command causes the settings of channel interface switch matrix number m, starting with channel port number nn, to be displayed. The CHISs are for error isolation only and are not normally controlled by the operator.	Key		View CHIS	View Matrix	1	Ch	1	Enter
Format		Display		CHS	CH----01 02 03 04 05 06 07 08 MTX LVL 1 - - - * * - - 1 LVL 2 - + - - - - - -	CHS MTX 1 CH 1	ENTER CHS SUBCMD		
Operands	View MTX m = Switch matrix number (1 to 8) Ch nn = Channel number (1 to 16)								
Messages	Normal message:	Enable		Enable	Ch	3	Chis Level	2	Enter
Locate		Key		CHS*	CH----01 02 03 04 05 06 07 08 MTX LVL 1 - - - * * - - 1 LVL 2 - + - - - - - -	ENABLE CH 3 LEVEL 2	ALLOWED		
Purpose	Locate is a subcommand of View CHIS. The Locate command is keyed to specify that channel interface switch number mm is to be the starting position of the display.	Display							
Format									
Operands	Ch nn = Channel number (1 to 16)								
Messages	Normal message:	Disable		Disable	Ch	5	Chis Level	1	Enter
Enable		Key		CHS*	CH----01 02 03 04 05 06 07 08 MTX LVL 1 - - - * * - - 1 LVL 2 - + - - - - - -	DISABLE CH 5 LEVEL 1	ALLOWED		
Purpose	Enable is a subcommand of View CHIS. The Enable key is used to signal that the switch should be enabled.	Display							
Format									
Operands	Ch nn = Channel number (1 to 16) Level n = Level number (1 to 4)								
Messages	Normal message:	Exec		Exec	Enter				
Disable		Key		CHS	CH----01 02 03 04 05 06 07 08 MTX LVL 1 - - - * * - - 1 LVL 2 - + - - - - - -	EXECUTE	EXECUTION ENDED		
Purpose	Disable is a subcommand of View CHIS. The Disable key is used to signal that the switch should be turned off.	Display							
Format									
Operands	Ch nn = Channel number (1 to 16) Level n = Level number (1 to 4)								
Messages	Normal message:								
	• ALLOWED								