

ABOUT MML-LANGUAGE IN DX-210

GENERAL

DX-210 is operated through Operation and Maintenance Unit (OMU) using MML language (Man Machine Language). The MML menu is hierarchical consisting of three levels. Sessions start by giving USERNAME and PASSWORD. This leads to the main level menu. USE CAPITAL LETTERS ONLY.

COMMAND SELECTION

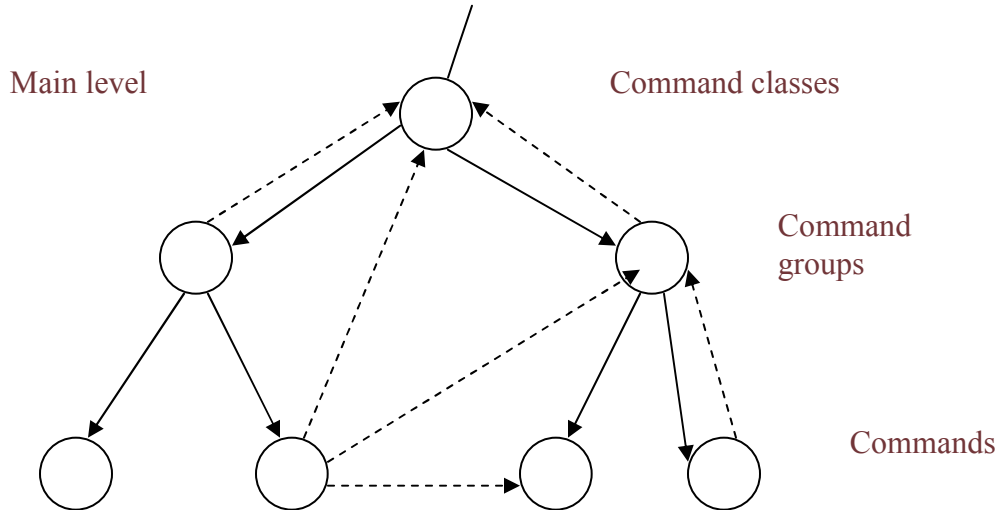


Figure 1. MML command hierarchy

Command classes	At the main level type “?<Return>” and you will get the list of all command classes.
Command groups	Select a letter of one command class followed by “?<Return>” to get the list of the command groups.
Commands	Select a letter of one command group followed by “?<Return>” to get the list of the commands. You can select the desired command by writing the concerning letter and typing <Return>. Type <Return> again and you will get list of parameters.

You can jump to the main level by typing “Z;” and <Return>. If you are on the main menu and you type Z; you will be logged out of the session. You may jump from one command group to another just by typing “Z” followed by the wanted command.

Example 1.

You want to type the command that lists all the working stages of the units: USI:ALL;
At the main level type “?<Return>”.

```
U? <Return>
S?<Return>
I<Return>
<Return>
ALL <Return>
; <Return>”
```

COMMAND STRUCTURE

A command consists of command letters and parameters. Parameters can be grouped into parameter blocks. Parameter blocks are separated with colons, and parameters belonging to the same parameter block are separated with commas. A command is terminated with semi-colon. A return after a semi-colon causes command execution.

Example 2. Position defined parameters

```
ZRCI:P1,P2,P3,P4:PI,P2,P3;
```

R = Command Class

RC = Command Group

RCI = Command

: and , = Separators

P1,P2,P3,P4 = Parameter Block

; = Terminator

Example 3. Name defined parameters

```
ZRCI:SWI:NCGR=OUTGRP;
```

ZRCI = Command

SWI = Parameter block 1

NCGR=OUTGRP = Parameter block 2

SWI: NCGR=OUTGRP = Parameters

The MML program of the command will give instructions to make it easier for the user to execute the command. By typing a <Return> after a parameter, the MML-system will add the next parameter separator automatically and give instructions of the next parameter.

A <Return> typed after giving the command will prompt the system into displaying what kinds of parameters are required with the command. At this stage another <Return> will display the first parameter more detailed.

To find out if the command has some more compulsory parameters type “:” until you get the following option:

```
“EXECUTION TERMINATION:  
; .. COMMAND EXECUTION  
N .. NO EXECUTION”
```

PARAMETER RANGING

Parameter values of the same type can be entered individually (i.e. separate commands) or combined in one command.

e.g. $\left. \begin{array}{l} \text{ZRCI:SWI:CGR=143;} \\ \text{ZRCI:SWI:CGR=148;} \end{array} \right\} = \text{ZRCI:SWI:CGR=143\&148;}$

This command will interrogate circuit groups 143 and 148 only.

e.g. ZRCI:SWI:CGR=143&&148;

This combined command will interrogate circuit groups 143, 144,145,146,147 and 148.

Parameter values that have two elements e.g. PCM No. – timeslot, can be combined in the following manner.

e.g. ZRCI:SWI:CRCT=29-2;
ZRCI:SWI:CRCT=29-19; } = ZRCI:SWI:CRCT=29-2&-19;

As before, this command will only interrogate circuits 2 and 19 in PCM system 29.

e.g. ZRCI:SWI:CRCT=29-2&&-19;

This command will interrogate all circuits between 2 and 19.

LINE EDITOR FUNCTIONS

Line editor commands are used for reading characters and editing a character line. The system stores the character in a line buffer where they can be edited using special characters. Command characters are CONTROL-Y and CONTROL-B, for example.

You can have the command characters of the line editor displayed on the screen by typing CONTROL-W at any time during an MML session.

The line editor allows re-editing of previously executed MML commands.

Example:

Type in the command USI:ALL;

Next you would like to print out, say, the operating stages of CMs. Using line editor, you could do it as follows:

Enter:	CTRL B	(to get the command back)
Displayed:	USI:ALL;_	
Enter:	CTRL D	(four times to move the cursor left to the letter A)
Displayed:	USI: <u>A</u> LL;	
Enter:	ET	(type ET, which replaces AL)
Displayed:	USI:ET <u>L</u> ;	
Enter:	CTRL L	(deletes L)
Enter:	Return	(executes)

Working states of the ETs are printed out on the screen.

LINE EDITOR COMMANDS:

CTRL A	=>	Interrupt/Replace
CTRL B	=>	Edit previous command
CTRL D	=>	Cursor left
CTRL E	=>	Cursor end of line
CTRL F	=>	Cursor right
CTRL G	=>	Cursor down
CTRL H	=>	Cursor home
CTRL I	=>	Cursor up
CTRL L	=>	Delete character
CTRL N	=>	Cursor beginning of parameter block
CTRL P	=>	Page mode on/off
CTRL Q	=>	Continue outputting
CTRL S	=>	Pause outputting
CTRL U	=>	Empty edit buffer
CTRL V	=>	Delete left character
CTRL W	=>	Display line editor commands
CTRL X	=>	Jump to command group level
CTRL Y	=>	Interrupt
CTRL Z	=>	Delete characters in edit buffer
? ↑	=>	Lists all the previous commands

You may scroll the command history buffer also with up and down arrows.

The command history is deleted when you log out.