Example: `UNIT:ANGL DEG`
sets DEG as a default unit for all commands which determine angle values.

:UNIT:POWer <Power>

Defines the default unit for power parameters. This setting affects the GUI, as well as all remote control commands that determine power values.

Parameters:
<Power> V | DBUV | DBM
*RST: DBM

Example: `UNIT:POW V`
sets V as a default unit for all commands which determine power values.

6.19 Direct Commands for the Stereo/RDS Coder Option R&S SMB-B5

The direct command allow to access all functions of the stereo coder option.

Some of the functions are also available via SCPI commands. In this case, it is recommended to use the SCPI commands in order to keep the settings of the R&S SMB and the stereo coder synchronized. Direct command for which a SCPI command is available are marked with “for documentation reasons only” and the SCPI command is given.

The direct commands are sent to the Stereo/RDS Coder with `[SOURce:]STEReo:DIRect "command string"`.

Information is queried with `STEReo:DIRect? "command string"`.

All parameters are string parameters, this is the reason why all of them have to be sent in qotation marks (" – characters are part of the full direct command !).

Prior to using the stereo coder, the stereo modulation of the R&S SMB has to be switched on with command `SOURce:STEReo:STATe ON`. The SCPI command `SOURce:STEReo:AUDio:FREQuency` sets the LF-Generator frequency and command `SOURce:STEReo:MMF` limits the modulation frequency. These commands have no counterpart in the direct commands.

6.19.1 Remote-Control Commands

STEReo:DIRect "<FFG>=<RetrNumb>,<DataSeq#1>,<DataSeq#2>,..."
STEReo:DIRect? "<FFG>"

Transmits data via free format groups (FFGs). A free format group can be filled with any desired data. (5 bits in block B and 16 bits each in blocks C and D of the group).

Note: The command described here only causes a queue to be filled with data for a specific group. The data will only be sent when the group in question is added to the group sequence with the command "GS", on page 473.

Setting parameters:

<RetrNumb> Number of retransmissions

<DataSeq> Max. 20 different data sequences can be defined.
10 characters must be specified each per <DataSeq>. Leading zeros, if any, must also be specified.
00: erases the data.

Range: 0000000000 to 1FFFFFFFFF (10 ASCII ccoded hexadecimal characters each)

Parameters for setting and query:

<FFG> 1A | 3A | 5A | 6A | 7A | 8A | 9A | 10A | 11A | 12A | 13A

Determines the free format group.
To transmit the FFGs of the B group, the same commands are used, only the A groups are replaced by the B groups in the group sequence. If B groups are transmitted, block C is overwritten with the PI code.

Example: `STEReo:DIRect "1A=01,0123456789,1FFFFFFFFF"`
Fills a queue with the data "0123456789,1FFFFFFFFF". The data is sent in consecutive order in group 1A after group 1A is added to the group sequence (see command "GS", on page 473).

Example: `STEReo:DIRect? "1A"`
Reads the data of group 1A.
Response: `"01,0123456789,1FFFFFFFFF"`

STEReo:DIRect "AF=<A>,<Freq#1>,<Freq#2>,..."
STEReo:DIRect? "AF<z>"

Defines an alternative frequency list.

Note: A maximum of five AF lists with max. 25 frequencies per list can be created.

Parameters:

<Freq> xxx.x

Sets the alternative frequencies as ASCII coded decimal numbers.
If list <z> is not available, the response is ().

Range: 87.6 to 107.9

Setting parameters:

<A> **N**
new AF list

+
AF list to be added

Query parameters:

<z> AF list to be read

Range: 1 to 5

Example: `STEReo:DIRect "AF=N,97.4,98.3"`
Defines an alternative frequency list, the alternative frequencies 97.4 and 98.3 are inserted.

Example: `STEReo:DIRect? "AF1"`
Reads the first alternative frequency list.
Response: `"97.4,98.3"`

Example: `STEReo:DIRect "AF=N"`
Deletes all frequency lists.

STEReo:DIRect "ARI=<State>"
STEReo:DIRect? "ARI"

(for documentation reasons only)

Activates ARI signal transmission.

Use SCPI command `[:SOURce]:STEReo:ARI:STATe` instead.

Setting parameters:

<State> 0 | 1

Example: `STEReo:DIRect "ARI=0"`
Deactivates ARI signal transmission.

Example: `STEReo:DIRect? "ARI"`
Response: `"0"`

STEReo:DIRect "ARI-DEV=<Deviation>"
STEReo:DIRect? "ARI-DEV"

(for documentation reasons only)

Sets the frequency deviation of the ARI signal (max. deviation).

Use SCPI command `[:SOURce]:STEReo:ARI[:DEViation]` instead.

Setting parameters:

<Deviation> Sets the frequency deviation.
Note: A four-digit value must always be set. Leading zeros, if any, must also be specified.

Range: 0000 to 1000 (ASCII coded decimal numbers), corresponding to 0 Hz to 10 kHz

Example: `STEReo:DIRect "ARI-DEV=1000"`
Sets the ARI frequency deviation to 10 kHz.

Example: `STEReo:DIRect? "ARI-DEV`
Response: `"1000"`

STEReo:DIRect "ARI-ID=<Id>"
STEReo:DIRect? "ARI-ID"

(for documentation reasons only)

Selects the ARI identification.

Use SCPI command `[:SOURce]:STEReo:ARI:TYPE` instead.

Parameters:

<Id> 0 | 1 | 2 | 3

0
Off

1
DK (traffic announcement identification)

2
BK (area identification)

3
DK and BK (traffic announcement identification and area identification)

Example: `STEReo:DIRect "ARI-ID=0"`
Deactivates the ARI identification.

Example: `STEReo:DIRect? "ARI-ID"`
Response: `"0"`

STEReo:DIRect "BIN=<x>"

Defines and sends, or queries, binary test patterns.The BIN command causes the Stereo/RDS Coder to send periodic binary bit patterns instead of RDS data.

Parameters:

<x>

0
binary mode OFF

1
00000000...,

2
11111111...,

3
01010101...,

4
11001100...

Example: `STEReo:DIRect "BIN=2"`
The binary test pattern is set to "2" so that only "1s" are transmitted.

STEReo:DIRect "BK=<Code>"
STEReo:DIRect? "BK"

(for documentation reasons only)

Sets the ARI area identification.

Use SCPI command `[:SOURce]:STEReo:ARI:BK[:CODE]` instead.

Parameters:
<Code> A | B | C | D | E | F

Example: `STEReo:DIRect "BK=E"`
The ARI area identification is set to "E".

Example: `STEReo:DIRect? "BK"`
Response: `"E"`

STEReo:DIRect "CT= <Hour>:<Min>:<Sec>,<Day>.<Month>.<Year>"
STEReo:DIRect? "CT"

Sets and activates transmission of the real-time clock.

Note: The CT data is transmitted in group 4A. Setting the real-time clock (CT command) automatically adds group 4A to the group sequence. Group 4A must not be manually added to, or removed from, the group sequence. To remove group 4A from the group sequence, use the command `"CT=off"`.

Setting parameters:
<Hour>:<Min>:<Sec> Range: 00:00:00 to 23:59:59

<Day>.<Month>.<Year> Range: 01.01.00 to 31.12.85

Example: `STEReo:DIRect "CT=20:30:59,01.08.03"`
The real-time clock is set to 20:30:59 and 1 August 2003.

Example: `STEReo:DIRect? "CT"`
Response: `"20:31:06,01.08.03"`

STEReo:DIRect "CT=off"

Deactivates transmission of the real-time clock signal in the RDS signal.

Note: This command is used to remove group 4A from the group sequence. Group 4A must not be manually removed from the group sequence.

Example: `STEReo:DIRect "CT=off"`
The real-time clock signal is no longer transmitted in the RDS signal.

Usage: Setting only

STEReo:DIRect "DI=<x>"
STEReo:DIRect? "DI"

Sets or reads the decoder information (DI).

With this command, the current decoder operating mode (mono, stereo, etc) can be detected and, if necessary, changed.

Parameters:
<x> Range: 0 to F (ASCII coded hexadecimal numbers)

Example: `STEReo:DIRect "DI=4"`
The decoder information is set to "4".

Example: `STEReo:DIRect? "DI"`
Response: `"4"`

STEReo:DIRect "DS=<x>"
STEReo:DIRect? "DS"

(for documentation reasons only)

Selects/activates a storage area in the Stereo/RDS Coder.

Upon activation, the settings stored in the selected area can be loaded.

Use SCPI command `[:SOURce]:STEReo:RDS:DATaset` instead.

Parameters:
<x> Range: 1 to 5

Example: `STEReo:DIRect "DS=2"`
Storage area 2 is activated.

Example: `STEReo:DIRect? "DS"`
Response: `"2"`

STEReo:DIRect "EON-AFA= <PI>,<A>,<Freq#1>,<Freq#2>,..."
STEReo:DIRect? "EON-AFA,<PI>,<z>"

Enhanced Other Networks: defines type A alternative frequencies for the EON with the selected PI.

Parameters:
<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

<Freq> xxx.x

Sets the alternative frequencies as ASCII coded decimal numbers.
If list <z> is not available, the response is ().
Note: For each Enhanced Other Network (EON), a maximum of five type A alternative frequency lists can be created.

Range: 87.6 to 107.9

Setting parameters:

<A> **N**
new AF list

+
AF list to be added

Query parameters:

<z> AF list to be read

Range: 1 to 5

Example: `STEReo:DIRect "EON-AFA=1000,N,97.4,98.3"`
Creates a new type A alternative frequency list for the EON with PI=1000.
The new list contains the alternative frequencies 97.4 MHz and 98.3 MHz.

Example: `STEReo:DIRect? "EON-AFA,1000,1"`
Reads the first type A alternative frequency list of the EON with PI=1000.
Response: `"97.4,98.3"`

STEReo:DIRect "EON-AFB= <PI>,<A>,<Freq#1>,<Freq#2>,..."
STEReo:DIRect? "EON-AFB,<PI>,<z>"

Enhanced Other Networks: defines type B alternative frequencies for the EON with the selected PI.

Parameters:

<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

<Freq> xxx.x

Sets the alternative frequencies as ASCII coded decimal numbers.
If list <z> is not available, the response is ().
Note: For each Enhanced Other Network (EON), a maximum of five type B alternative frequency lists can be created, each list containing max. five frequencies, where <Freq#1> is Tuned Frequency (TF) and <Freq#2..5> are the Mapped Frequencies (MF). A minimum of two frequencies per EON is required.

Range: 87.6 to 107.9

Setting parameters:

<A> **N**
new AF list

+
AF list to be added

Query parameters:

<z> AF list to be read

Range: 1 to 5

Example: `STEReo:DIRect "EON-AFB=1000,N,97.4,98.3"`
Creates a new type B alternative frequency list for the EON with PI=1000.
The list contains the alternative frequencies 97.4 MHz and 98.3 MHz.

Example: `STEReo:DIRect? "EON-AFB,1000,1"`
Reads the first type B alternative frequency list of the EON with PI=1000.
Response: `"97.4,98.3"`

STEReo:DIRect "EON-DEL=<PI>"

Enhanced Other Networks: deletes the complete EON with selected <PI>.

Parameters:

<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Example: `STEReo:DIRect "EON-DEL=1000"`
Deletes the EON with PI=1000.

Usage: Setting only

STEReo:DIRect "EON-PI=<PI>"
STEReo:DIRect? "EON-PI"

Enhanced Other Networks: creates a new EON or reads the list of the program identification (PI) codes of all EONs created so far.

Note: A maximum of eight EONs can be created.

Parameters:

<PI> **Note:** A four-digit value must always be set. Leading zeros, if any, must also be specified.

Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Example: `STEReo:DIRect "EON-PI=1000"`
Creates a new EON with PI=1000.

Example: `STEReo:DIRect? "EON-PI"`
Response: `"1000"`

STEReo:DIRect "EON-PS=<PI>,<PS>"
STEReo:DIRect? "EON-PS,<PI>"

Enhanced Other Networks: sets the program service (PS) name for the EON with the selected <PI>.

Parameters:

<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Setting parameters:

<PS> 8 ASCII characters
Note: An eight-digit value must always be set. Blank spaces, if any, must also be entered, otherwise the value will not be accepted.

Example: `STEReo:DIRect "EON-PS=1000,Test 123"`
Sets the program service name for the EON with PI=1000 to "Test 123".

Example: `STEReo:DIRect? "EON-PS,1000"`
Reads the program service name of the EON with PI=1000.
Response: `"Test 123"`

STEReo:DIRect "EON-PTY=<PI>,<PTY>"
STEReo:DIRect? "EON-PTY,<PI>"

Enhanced Other Networks: sets the program type (PTY) for the EON with the selected <PI>.

Parameters:

<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Setting parameters:

<PTY> Range: 00 to 31 (ASCII coded decimal numbers)

Example: `STEReo:DIRect "EON-PTY=1000,10"`
Sets the program type for the EON with PI=1000 to "10".

Example: `STEReo:DIRect? "EON-PTY,1000"`
Reads the program type of the EON with PI=1000.
Response: `"10"`

STEReo:DIRect "EON-TA=<PI>,<TA>"
STEReo:DIRect? "EON-TA,<PI>"

Enhanced Other Networks: sets the TA flag for the EON with the selected <PI>.

Parameters:
<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Setting parameters:
<TA> 0 | 1

Example: `STEReo:DIRect "EON-TA=1000,1"`
Sets the TA flag for the EON with PI=1000 to "1".

Example: `STEReo:DIRect? "EON-TA,1000"`
Reads the TA flag of the EON with PI=1000.
Response: `"1"`

STEReo:DIRect "EON-TP=<PI>,<TP>"
STEReo:DIRect? "EON-TP,<PI>"

Enhanced Other Networks: sets the TP flag for the EON with the selected <PI>.

Parameters:
<PI> Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Setting parameters:
<TP> 0 | 1

Example: `STEReo:DIRect "EON-TP=1000,1"`
Sets the TP flag for the EON with PI=1000 to "1".

Example: `STEReo:DIRect? "EON-TP,1000"`
Reads the TP flag of the EON with PI=1000.
Response: `"1"`

STEReo:DIRect "GS=<Group#1>,<Group#2>,...<Grpup#36>"
STEReo:DIRect? "GS"

Sets or reads the group sequence.

Note: Only group A or group B data may be sent at a time. Only groups that contain data are transmitted. The groups 4A, 14B and 15B are automatically added to the group sequence and must not be added or removed manually.

Setting parameters:
<Group> 0A,1A,2A, … to 15B

Example: `STEReo:DIRect "GS=0A,1B,10A,15A"`
The groups 0A,1B,10A,15A are transmitted.

Example: `STEReo:DIRect? "GS"`
Response: `"0A,1B,10A,15A"`

STEReo:DIRect "IMP=<x>"
STEReo:DIRect? "IMP"

(for documentation reasons only)

Sets external L, R impedances.

Use the SCPI command `[:SOURce]:STEReo:EXTernal:IMPedance` instead.

Setting parameters:

<x> 1 | 2

1
600 Ohm

2
100 kOhm

Example: `STEReo:DIRect "IMP=1"`
The external impedance is set to 600 Ohm

Example: `STEReo:DIRect? "IMP"`
Response: `"1"`

STEReo:DIRect
"MASK=<NumbGroups>,<ErrFreeGroups>,<BitMaskBlcA>,<BitMaskBlcB>,<BitMaskBlcC>,<BitMaskBlcD>"
STEReo:DIRect? "MASK"

Sets a bit mask to generate defined bit errors in the RDS data stream.

Setting parameters:

<NumbGroups> Number of groups to be masked.
If <NumbGroups> is set to zero, the RDS groups are continuously linked to the error mask.
If <NumbGroups> is set to a value other than zero, this value is decremented after each errored group transmitted. When zero count is reached, no further errored groups are transmitted, and `MASK_STATE` is set to "0".

Range: 00 to FF (hexadecimal values)

<ErrFreeGroups> Number of error-free groups to be inserted after each errored group.

Range: 00 to FF (hexadecimal values)

<BitMaskBlc> <BitMaskBlcA>,<BitMaskBlcB>,<BitMaskBlcC>,<BitMaskBlcD>

Hexadecimal bit mask for blocks A, B, C and D of the RDS groups. For each block, 26 bits (16 data bits and 10 CRC bits) have to be entered in hexadecimal code.

Range: 0000000 to 3FFFFFFF

Example: `STEReo:DIRect "MASK=09,01,0000001,0000000,0000000,0000000"`
In nine RDS groups, the least significant bit of the CRC code of block A is inverted, i.e. an errored bit is sent. After each errored group, one error-free group is inserted. After transmission of the complete sequence, `MASK_STATE` is set to "0".
With the command `MASK_STATE=1`, the above sequence (9 errored groups with one error-free group inserted after each errored group) is retransmitted once.
Then, `MASK_STATE` is again set to "0".

Example: `STEReo:DIRect? "MASK"`
Response: `"09,01,0000001,0000000,0000000,0000000"`

STEReo:DIRect "MASK_STATE=<State>"
STEReo:DIRect? "MASK_STATE"

Switches on or off the transmission of defined bit errors in the RDS data stream.

Setting parameters:
<State> 0 | 1

Example: `STEReo:DIRect "MASK_STATE=1"`
With the command `MASK_STATE=1`, a sequence of errored groups as defined by the MASK command is retransmitted once if the number of groups to be masked is other than zero. Then, `MASK_STATE` is automatically set to "0".
If the number of groups to be masked is equal to zero in the `MASK` command (which means continuous error transmission), the masking function can be switched off with `MASK_STATE=0`.

Example: `STEReo:DIRect? "MASK_STATE"`
Response: `"1"`
The `MASK_STATE` query provides information as to whether the RDS data stream is linked to an error mask.

STEReo:DIRect "MODE=<EMODE>"
STEReo:DIRect? "MODE"

(for documentation reasons only)

Sets one of various transmit modes.

Use the SCPI command `[:SOURce]:STEReo:AUDio:MODE` instead.

Setting parameters:

<EMODE> 1 | 2 | 3 | 4 | 5

1
L: signal in left channel only

2
R: signal in right channel only

3
signal of equal frequency and phase in left and right channel

4
signal of equal frequency and opposite phase in left and right channel

5
different, independent signals in left and right channel
(5 is not possible if the internal LF generator is selected as source (SRC = LFGen))

Example: `STEReo:DIRect "MODE=1"`
Only the signal of the left channel is transmitted.

Example: `STEReo:DIRect? "MODE"`
Response: `"1"`

STEReo:DIRect "MS=<Flag>"
STEReo:DIRect? "MS"

Sets or reads the music/speech flag.

The flag signals whether music or speech is being transmitted.

Setting parameters:

<Flag> M | S

Example: `STEReo:DIRect "MS=M"`
The music/speech flag is set to "M". This signals that music is currently transmitted.

Example: `STEReo:DIRect? "MS"`
Response: `"M"`

STEReo:DIRect "MPX-DEV=<Deviation>"
STEReo:DIRect? "MPX-DEV"

(for documentation reasons only)

Sets the MPX frequency deviation (max. deviation).

Use the SCPI command `[:SOURce]:STEReo[:DEViation]` instead.

Setting parameters:

<Deviation> A five-digit value must always be set. Leading zeros, if any, must also be specified.

Range: 00000 to 10000 (ASCII coded decimal numbers), corresponding to 0 Hz to 100 kHz

Example: `STEReo:DIRect "MPX-DEV=00201"`
Sets the MPX frequency deviation to 2.01 kHz.

Example: `STEReo:DIRect? "MPX-DEV"`
Response: `"00201"`

STEReo:DIRect "PI=<PI>"
STEReo:DIRect? "PI"

Sets or reads the RDS program identification (PI) code.

Setting parameters:

<PI> **Note:** A four-digit value must always be set. Leading zeros, if any, must also be specified, otherwise the value will not be accepted.

Range: 0000 to FFFF (ASCII coded hexadecimal numbers)

Example: `STEReo:DIRect "PI=1234"`
The program identification code to be transmitted is set to "1234".

Example: `STEReo:DIRect? "PI"`
Response: `"1234"`

STEReo:DIRect "PIL=<State>"
STEReo:DIRect? "PIL"

(for documentation reasons only)

Activates/deactivates the pilot tone.

Use the SCPI command `[:SOURce]:STEReo:PILot:STATe` instead.

Setting parameters:

<State> 0 | 1

Example: `STEReo:DIRect "PIL=1"`
The pilot tone is activated.

Example: `STEReo:DIRect? "PIL"`
Response: `"1"`

STEReo:DIRect "PIL-DEV=<Deviation>"
STEReo:DIRect? "PIL-DEV"

(for documentation reasons only)

Sets the pilot tone frequency deviation (max. deviation).

Use the SCPI command `[:SOURce]:STEReo:PILot[:DEViation]` instead.

Setting parameters:

<Deviation> **Note:** A four-digit value must always be set. Leading zeros, if any, must also be specified.

Range: 0000 to 1000 (ASCII coded decimal numbers), corresponding to 0 Hz to 10 kHz

Example: `STEReo:DIRect "PIL-DEV=1000"`
Sets the frequency deviation of the pilot tone to 10 kHz.

Example: `STEReo:DIRect? "PIL-DEV"`
Response: `"1000"`

STEReo:DIRect "PIL-PH=<Phase>"
STEReo:DIRect? "PIL-PH"

(for documentation reasons only)

Sets the pilot tone phase.

Use the SCPI command `[:SOURce]:STEReo:PILot:PHASe` instead.

Setting parameters:

<Phase> **Note:** A two-digit value must always be set with a sign ("+" or "-") in front of it. Leading zeros, if any, must also be specified.

Range: -5.0 to +5.0 (ASCII coded decimal numbers), corresponding to ±5.0

Example: `STEReo:DIRect "PIL-PH=-33"`
The pilot tone phase is set to 3.3

Example: `STEReo:DIRect? "PIL-PH"`
Response: `"-33"`

STEReo:DIRect "PRE=<Preemphasis>"
STEReo:DIRect? "PRE"

(for documentation reasons only)

Sets one of various preemphasis options.

Use the SCPI commands `[:SOURce]:STEReo:AUDio:PREemphasis:STATe` and `[:SOURce]:STEReo:AUDio:PREemphasis` instead.

Setting parameters:

<Preemphasis> 0 | 1 | 2

0
Off

1
50 us

2
75 us

Example: `STEReo:DIRect "PRE=1"`
The preemphasis is set to 50 us.

Example: `STEReo:DIRect? "PRE"`
Response: `"1"`

STEReo:DIRect "PRESET"

Sets the default settings in accordance with specifications.

Example: `STEReo:DIRect "PRESET"`

Usage: Event

STEReo:DIRect "PS=<PS>"
STEReo:DIRect? "PS"

Sets or reads the RDS program service (PS) name.

Setting parameters:
<PS> 8 ASCII characters

Note: An eight-digit value must always be set. Blank spaces, if any, must also be entered, otherwise the value will not be accepted.
Special characters in the program service name are entered with a leading back slash (\) followed by the decimal code of the spezial character according to tabe E1 of CENELEC.
Example: `STER:DIR "RT=02,0,test text with \217"`
217 denotes the German ü.

Example: `STEReo:DIRect "PS=RDS Test"`
Sets the program service name to be transmitted to "RDS Test".

Example: `STEReo:DIRect? "PS"`
Response: `"RDS Test"`

STEReo:DIRect "PS-TABLE=<Table>"
STEReo:DIRect? "PS-TABLE"

Selects the character set table tobe used for the display of the RDS program service (PS) name in the receiver.

The information concerning the character set is transmitted in segment 0 of the PS. Segment 0 is repeatedly transmtted if the value for `PS-TABLE` > 0. For `PS-TABLE`=0 no information concerning the character set is transmitted.

Setting parameters:
<Table> 0 | 1 | 2 | 3

0
no information concerning the character set table in the PS

1
table E.1 is used

2
table E.2 is used

3
table E.3 is used

Example: `STEReo:DIRect "PS-TABLE=2"`
The information concerning the character set is transmitted in segment 0 of the PS in group 0A. To this end, segment 0 is transmitted repeatedly. At the first transmission segment 0 contains the information about the character set, at the second transmission segment 0 contains the first two characters of the PS.

STEReo:DIRect "PTY=<PTY>"
STEReo:DIRect? "PTY"

Sets or reads the program type (PTY).

Setting parameters:

<PTY> **Note:** A two-digit value must always be set. A leading zero, if any, must also be specified.

Range: 00 to 31 (ASCII coded decimal numbers)

Example: `STEReo:DIRect "PTY=08"`
Sets the program type to be transmitted to "08".

Example: `STEReo:DIRect? "PTY"`
Response: `"08"`

STEReo:DIRect "PTYN=<PTYN>"
STEReo:DIRect? "PTYN"

Sets or reads the RDS program type (PTY) name.

Setting parameters:

<PTYN> 8 ASCII characters

Note: An eight-digit value must always be set. Blank spaces, if any, must also be entered, otherwise the value will not be accepted.

Example: `STEReo:DIRect "PTYN=Football"`
Sets the program type name to be transmitted to "Football".
`STEReo:DIRect "GS=0A,10A”`
Group 10A is activated in addition to group 0A. The program type name "Football" is now transmitted.

Example: `STEReo:DIRect? "PTYN"`
Response: `"Football"`

Example: `STEReo:DIRect "PTYN="`
Transmission of PTYN in group 10A is stopped, even if group 10A is contained in the group sequence.

STEReo:DIRect "RDS=<State>"
STEReo:DIRect? "RDS"

(for documentation reasons only)

Switches RDS on or off.

Use the SCPI command `[:SOURce]:STEReo:RDS:STATe` instead.

Setting parameters:
<State> 0 | 1

Example: `STEReo:DIRect "RDS=1"`
RDS is switched on.

Example: `STEReo:DIRect? "RDS"`
Response: `"1"`

STEReo:DIRect "RDS-PH=<Phase>"
STEReo:DIRect? "PDS-PH"

Sets the RDS phase.

Setting parameters:
<Phase> Range: 000 to 359 (ASCII coded decimal numbers)

Example: `STEReo:DIRect "RDS-PH=100"`
The RDS phase is set to 100.

Example: `STEReo:DIRect? "RDS-PH"`
Response: `"100"`

STEReo:DIRect "RDS-DEV=<Deviation>"
STEReo:DIRect? "RDS-DEV"

(for documentation reasons only)

Sets the RDS frequency deviation (max. deviation).

Use the SCPI command `[:SOURce]:STEReo:RDS[:DEViation]` instead.

Setting parameters:
<Deviation> **Note:** A four-digit value must always be set. Leading zeros, if any, must also be specified.
Range: 0000 to 1000 (ASCII coded decimal numbers), corresponding to 0 Hz to 10.00 kHz)

Example: `STEReo:DIRect "RDS-DEV=0201"`
The RDS frequency deviation is set to 2.01 kHz.

Example: `STEReo:DIRect? "RDS-DEV"`
Response: `"0201"`

STEReo:DIRect "RDS-PRESET"

All RDS specific parameters are deleted or set to a default values.

Example: `STEReo:DIRect "RDS-PRESET"`
Sets all RDS parameter to their preset values

Usage: Event

STEReo:DIRect "RT=<RetranNumber>,<A/BFlag>,<RadioTextMsg#1>,<RadioTextMsg#2>"
STEReo:DIRect? "RT"

Radio text

Setting parameters:

<RetranNumber> Range: 00 to 15 (ASCII coded decimal numbers), number of retransmissions of radio text message

<A/BFlag> 0 | 1
If the A/B flag is set, the A/B bit in group 2A is toggled to signal that a new radio text message will be transmitted.)

<RadioTextMsg> max. 64 characters
Two texts of 64 characters each can be transmitted in a radio text message
Note: For group B, the length of a radio text is li ited to 32 characters. Special characters in the radio text are entered with a leading back slash (\) followed by the decimal code of the spezial character according to tabe E1 of CENELEC.
Example: `STER:DIR "RT=02,0,test text with \217"`
217 denotes the German ü.

Example: `STEReo:DIRect "RT=02,1,Test message 123"`
The radio text message "Test message 123" is transmitted.

Example: `STEReo:DIRect? "RT"`
Response: `"02,1,Test message 123"`

STEReo:DIRect "SPS=<Time>,<PSN#1>,<PSN#2>,...<PSN#20>"
STEReo:DIRect? "SPS"

Switching program service names (PSN). The program name automatically changed after the set time interval

Parameters:

<PSN> 8 ASCII characters

Max. 20 program service names of eight characters each can be entered.
Note: The program service names have to be entered as 8-digit texts. Blank spaces, if any, must also be entered, otherwise the value will not be accepted.
`STEReo:DIRect "SPS=0"` stopps the transmission of the scrolling PS beendet and starts the transmission of the standard PS.

Setting parameters:

<Time> Time interval in seconds

Range: 00 to 59 s

Example: `STEReo:DIRect "SPS=05,TEST0123,TEST4567"`
The program service names "TEST0123" and "TEST4567" are alternately transmitted at an interval of 5 seconds.

Example: `STEReo:DIRect? "SPS"`
Queries the program service names
Response: `"05,TEST0123,TEST4567"`

STEReo:DIRect "SRC=<SigSource>"
STEReo:DIRect? "SRC"

(for documentation reasons only)

Selects the signal source.

Use the SCPI command `[:SOURce]:STEReo:SOURce` instead.

Setting parameters:

<SigSource> 0 | 1 | 2 | 3

0
Off

1
external analog (via L and R inputs)

2
external digital

3
internal with LF generator

Example: `STEReo:DIRect "SRC=1"`
The external analog L and R inputs are selected as source.

Example: `STEReo:DIRect? "SRC"`
Response: `"1"`

STEReo:DIRect? "STATUS"

Status request as to whether the encoder or the update loader program is being executed.

Return values:

<Status> **ENC**
encoder program is running
UPL
update loader program is running

Example: `STEReo:DIRect? "STATUS"`
Response: `"ENC"`

Usage: Query only

STEReo:DIRect "STORE=<DataSet#>"

Stores data in the flash memory. All RDS-specific settings are stored in data set <DataSet#> of the flash memory.

Setting parameters:

<DataSet#> Range: 1 to 5

Example: `STEReo:DIRect "STORE=1"`
The current settings are stored in data set "1"

Usage: Setting only

STEReo:DIRect "TA=<State>"
STEReo:DIRect? "TA"

(for documentation reasons only)

Sets or reads the traffic announcement flag.

This flag signals whether traffic information is currently being broadcast.

Use the SCPI command `[:SOURce]:STEReo:RDS:TRAFfic:ANNouncement[:STATe]` instead.

Setting parameters:

<State> 0 | 1

Example: `STEReo:DIRect "TA=1"`
The traffic announcement flag is set to "1".

Example: `STEReo:DIRect? "TA"`
Response: `"1"`

STEReo:DIRect "TP=<State>"
STEReo:DIRect? "TP"

(for documentation reasons only)