KENWOOD

# TS-590S
# TS-590SG

## PC CONTROL COMMAND
## Reference Guide

JVCKENWOOD Corporation

# PC CONTROL COMMAND REFERENCE GUIDE

## ABOUT THIS REFERENCE GUIDE

All descriptions in this reference guide are for the user's convenience. **KENWOOD** does not support or warrantee this documentation in any way.

### CONNECTING TO A PC

You can connect the TS-590S/ TS-590SG transceiver to a PC COM port using a traditional RS-232C connector, or to a USB port using a USB 2.0 (AB type) cable.

Through the transceiver menu, select a baud rate for communications between the PC and the transceiver.

#### ■ Using a RS-232C Straight Cable

Directly connect the RS-232C straight cable between the COM port of the PC and the COM terminal of the transceiver.

#### ■ Using a USB Cable

When using a USB cable, you must first pre-install a virtual COM port driver on the PC. Then, connect the USB cable A-connector to the USB port of the PC and the B-connector the USB terminal of the transceiver.

**Note:** Operation is not guaranteed when connecting through a USB hub.

### CONTROL OPERATION

Most computers handle data in the form of "bits" and "bytes". A bit is the smallest piece of information a computer can handle. A byte is composed of eight bits. This is the most convenient form for most computer data. This data may be sent in the form of either serial or parallel data strings. The parallel method is faster but more complicated, while the serial method is slower and requires less complicated equipment. The serial form is, therefore, a less expensive alternative.

Serial data transmission uses time-division methods over a single line. Using a single line also offers the advantage of reducing the number of errors due to line noise.

Theoretically, only three lines are required to control the transceiver via the computer:

- Transmit data
- Receive data
- Ground

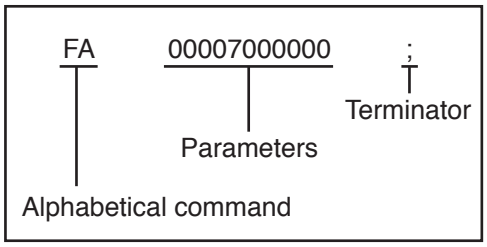
From a practical standpoint however, it is also necessary to incorporate some means of controlling when this data transfer will occur. The computer and transceiver cannot be allowed to send data at the same time! The required control is achieved by using the RTS and CTS lines.

For example, the transceiver is placed into the transmit mode whenever the character string "TX;" is sent from the computer. The character string "TX;" is called a computer control command; it tells the transceiver what to do. There are numerous commands available for control of the transceiver. These commands may be incorporated into a computer program written in any high level language. Programming methods vary from computer to computer; refer to the instruction manuals provided with the terminal program and computer.

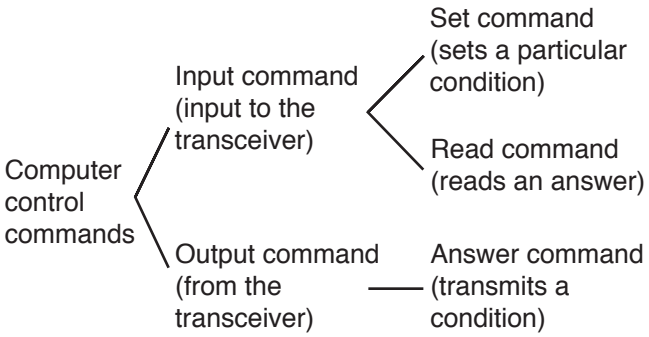
## COMPUTER CONTROL COMMANDS

A computer control command is composed of a 2 letter alphabetical command name, a set of parameters, and the terminator that signals the end of the command.

Example: Command to set VFO A to 7 MHz




Commands can be classified as shown below:




For example, note the following in the case of the above FA command (Frequency of VFO A):

- To set the frequency to 7 MHz, the following command is sent from the computer to the transceiver:

  "FA00007000000;" (Set command)

- To read the frequency of VFO A, the following command is sent from the computer to the transceiver:

  "FA;" (Read command)

- When the Read command above has been sent, the following command is returned to the computer:

  "FA00007000000;" (Answer command)

**Note:**

- Do not use the control characters 00 to 1Fh since they are either ignored or cause a "?" answer.
- Program execution may be delayed while turning the **Tuning** control rapidly.
- Receive data is not processed if the frequency is entered from the keypad.

### ■ Command

A command consists of 2 or 3 characters. You may use either lower or upper case characters. The commands available for this transceiver are listed in the PC Control Command Tables, beginning on page 3.

### ■ Parameters

Parameters are used to specify information necessary to implement the desired command. The parameters to be used for each command are predetermined. The number of digits assigned to each parameter is also predetermined. Refer to the PC Control Command Tables {page 3} to configure the appropriate parameters.

When configuring parameters, be careful not to make the following mistakes.

Correct parameter example: "IS+1000;"

| | |
|---|---|
| IS1000; | Not enough parameters specified (No direction given for the IF shift) |
| IS+100; | Not enough digits (Only three frequency digits given) |
| IS_+_1000; | Unnecessary characters (spaces) between parameters |
| IS+10000; | Too many digits (Five frequency digits given) |

**Note:** If a particular parameter is not applicable to this transceiver, the parameter digits should be filled using any character except the ASCII control codes (00 to 1Fh) and the terminator (;).

### ■ Terminator

To signal the end of a command, it is necessary to use a semicolon (;). The digit where this special character must appear differs depending on the command used.

### ■ Error Messages

In addition to the Answer command, the transceiver can send the error messages listed below.

| Error Message | Reason for Error |
|---|---|
| ?; | • Command syntax was incorrect.<br>• Command was not executed due to the current status of the transceiver (even though the command syntax was correct).<br>**Note:** Occasionally, this message may not appear due to microprocessor transients in the transceiver. |
| E; | A communication error occurred, such as an overrun or framing error during a serial data transmission. |
| O; | Receive data was sent but processing was not completed. |

# PC CONTROL COMMAND TABLES

## AC

Sets or reads the internal antenna tuner status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | A | C | P1 | P2 | P3 | ; | | | | |
| Read | A | C | ; | | | | | | | |
| Answer | A | C | P1 | P2 | P3 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: RX-AT THRU
- 1: RX-AT IN

P2
- 0: TX-AT THRU
- 1: TX-AT IN

P3
- 0: Stop Tuning (Set)/ Tuning is stopped (Answer)
- 1: Start Tuning (Set)/ Tuning is active (Answer)

- The setting cannot be performed for RX IN/THRU
- AT Tuning will not begin when using the TX THRU status.
- To begin tuning, you must use command “AC111”.

## AG

Sets or reads the AF gain.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | A | G | P1 | P2 | P2 | P2 | ; | | | |
| Read | A | G | P1 | ; | | | | | | |
| Answer | A | G | P1 | P2 | P2 | P2 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Always 0

P2
- 000 (minimum) ~ 255 (maximum)

## AI

Sets or reads the Auto Information (AI) function ON/ OFF.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | A | I | P1 | ; | | | | | | |
| Read | A | I | ; | | | | | | | |
| Answer | A | I | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: AI OFF
- 2: AI ON (without backup)
- 4: AI ON (with backup)

- When AI is ON, the respective response command is output when the parameter is changed by the command with the response command.
- When AI is ON by setting P1 parameter to 2 and the power is turned to OFF, AI is also turned to OFF.
- P1 parameter 4 (with backup) is supported from the firmware version 2.00 in TS-590S

## AN

Selects the antenna connector ANT1/ ANT2.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | A | N | P1 | P2 | P3 | ; | | | | |
| Read | A | N | ; | | | | | | | |
| Answer | A | N | P1 | P2 | P3 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: ANT1
- 1: ANT2
- 9: No change

P2
- 0: RX ANT is not used
- 1: RX ANT is used
- 9: No change

P3
- 0: Drive Out OFF
- 1: Drive Out ON
- 9: No change

In TS-590SG, when the drive output (DRV) terminal is used as the antenna output terminal (by menu setting), P3 parameter shows the ON/OFF selected status of the antenna output.
- 0: Antenna Out OFF
- 1: Antenna Out ON
- 9: No change

- When setting the command, enter only the parameters you are changing. For parameters you are not changing, enter “9”.
- For a response command, parameter P1, P2, and P3 cannot be “9”.

## AS

Sets or reads the Auto Mode function parameters.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | A | S | P1 | P2 | P2 | P3 | P3 | P3 | P3 | P3 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P3 | P3 | P3 | P3 | P3 | P3 | P4 | P5 | ; | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | A | S | P1 | P2 | P2 | ; | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | A | S | P1 | P2 | P2 | P3 | P3 | P3 | P3 | P3 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P3 | P3 | P3 | P3 | P3 | P3 | P4 | P5 | ; | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Always 0

P2
- 00 ~ 31: Channel number

P3
- 11-digit Frequency in Hz (unused digits must be 0)

P4 (Mode (refer to the MD command)
- 1: LSB
- 2: USB
- 3: CW
- 4: FM
- 5: AM
- 6: FSK
- 7: CWR (CW Reverse)
- 9: FSKR (FSK Reverse)

P5 (Data mode (refer to the DA command))
- 0: No Data mode
- 1: Data mode

(example: USB-DATA: P4=2 / P5=1)

Conditions when configuring:
- You cannot set the channel to a frequency lower than the frequency of the previous channel.
- When the channel is set to a frequency higher than the next channel, all subsequent channel frequencies that are lower than the set frequency are changed to the frequency you just set.
- To reset all channels to their initial conditions, set them to to 9.5 MHz, LSB mode (DATA-OFF).

## BC

Sets or reads the Beat Cancel function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | B | C | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | B | C | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | B | C | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Beat Cancel OFF
- 1: Beat Cancel 1 ON
- 2: Beat Cancel 2 ON

## BD / BU

Sets a frequency band.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | B | D / U | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1 (Band number)
- 00: 1.8 MHz band
- 01: 3.5 MHz band
- 02: 7 MHz band
- 03: 10 MHz band
- 04: 14 MHz band
- 05: 18 MHz band
- 06: 21 MHz band
- 07: 24 MHz band
- 08: 28 MHz band
- 09: 50 MHz band
- 10: GENE

- Unlike previous models, this command no longer functions as a conventional Band Down/ Band Up.
- While the section setting Memory Channel is displayed, you can use BD; to send the start frequency and BU; to send the end frequency.

## BP

Adjusts the Notch Frequency of the Manual Notch Filter.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | B | P | P1 | P1 | P1 | ; | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | B | P | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | B | P | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 000 (minimum) ~ 127 (maximum)

## BY

Reads the busy signal status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | B | Y | ; | | | | | | | |
| Answer | B | Y | P1 | P2 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Not busy
- 1: Busy

P2
- 0: Always 0

• This command is used with Sky Command.

## CA

Sets and reads the CW TUNE function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | A | P1 | ; | | | | | | |
| Read | C | A | ; | | | | | | | |
| Answer | C | A | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Cancels CW TUNE/ Inactive
- 1: Starts CW TUNE/ Active

## CD0

Sets and reads the Morse code decoder function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | D | 0 | P1 | ; | | | | | |
| Read | C | D | 0 | | | | | | | |
| Answer | C | G | 0 | P1 | ; | | | | | |

**[TS-590SG only]**

Parameters:

P1
- 0: Morse code decoder OFF
- 1: Morse code decoder ON

## CD1

Sets and reads the Morse code decoder threshold level.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | D | 1 | P1 | P1 | P1 | ; | | | |
| Read | C | D | 1 | | | | | | | |
| Answer | C | D | 1 | P1 | P1 | P1 | ; | | | |

**[TS-590SG only]**

Parameters:

P1 (threshold level)
- 001 ~ 030

• 001 or less value of P1 parameter is rectified by 001, and 030 or more value is rectified by 030.

## CD2

Outputs the Morse code decoder character.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Answer | C | D | 2 | P1 | P1 | ; | | | | |

**[TS-590SG only]**

Parameters:

P1
- Decoded character (usually 1 digit, Abbreviation is 2 digits)

• When AI is ON, the character decoded by the Morse code decoder is output as ASCII code.

## CG

Sets and reads the Carrier Level.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | G | P1 | P1 | P1 | ; | | | | |
| Read | C | G | ; | | | | | | | |
| Answer | C | G | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 000 (minimum) ~ 100 (maximum)

## CH

Operate the MULTI/CH encoder.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | H | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Move the MULTI/CH encoder 1 step up
- 1: Move the MULTI/CH encoder 1 step down

## CN

Sets and reads the CTCSS frequency.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | N | P1 | P1 | ; | | | | | |
| Read | C | N | ; | | | | | | | |
| Answer | C | N | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

00 ~ 41

| No. | Freq. (Hz) | No. | Freq. (Hz) | No. | Freq. (Hz) | No. | Freq. (Hz) |
|---|---|---|---|---|---|---|---|
| 00 | 67.0 | 11 | 97.4 | 22 | 141.3 | 33 | 206.5 |
| 01 | 69.3 | 12 | 100.0 | 23 | 146.2 | 34 | 210.7 |
| 02 | 71.9 | 13 | 103.5 | 24 | 151.4 | 35 | 218.1 |
| 03 | 74.4 | 14 | 107.2 | 25 | 156.7 | 36 | 225.7 |
| 04 | 77.0 | 15 | 110.9 | 26 | 162.2 | 37 | 229.1 |
| 05 | 79.7 | 16 | 114.8 | 27 | 167.9 | 38 | 233.6 |
| 06 | 82.5 | 17 | 118.8 | 28 | 173.8 | 39 | 241.8 |
| 07 | 85.4 | 18 | 123.0 | 29 | 179.9 | 40 | 250.3 |
| 08 | 88.5 | 19 | 127.3 | 30 | 186.2 | 41 | 254.1 |
| 09 | 91.5 | 20 | 131.8 | 31 | 192.8 | — | — |
| 10 | 94.8 | 21 | 136.5 | 32 | 203.5 | — | — |

## CT

Sets and reads the CTCSS function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | C | T | P1 | ; | | | | | | |
| Read | C | T | ; | | | | | | | |
| Answer | C | T | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: CTCSS OFF
1: CTCSS ON
2: Cross Tone ON

- If Tone or CTCSS is ON when Cross Tone is turned ON, they will automatically turn OFF.

## DA

Sets and reads the DATA mode.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | D | A | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | D | A | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | D | A | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: DATA mode OFF
1: DATA mode ON

- You can use this command in LSB, USB, FM, and AM mode. When used in CW, FSK, an error occurs. (AM-DATA mode of TS-590S is supported from the firmware version 2.00.)
- When used in any mode other than DATA mode, the P1 parameter response is always 0.

## DN / UP

Emulates the microphone DWN and UP keys.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | D / U | N / P | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

00 ~ 99

- If no P1 parameter is specified, the command is interpreted as 1 step down (DN;) or 1 step up (UP;).
- When setting the parameter from 01 to 99, the frequency is adjusted by the specified step size.
- In Memory mode and Quick Memory mode, the command with no P1 parameter specified is treated as a Memory channel down (DN;) or up (UP;) command. With parameters, it is treated as the frequency down or up command.
- When setting the parameter to 00, the command is accepted, but no changes occur.

## EM

Sets the Emergency communication frequency mode.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | E | M | ; | | | | | | | |

**[TS-590S / TS-590SG common]**

- There are no parameters for this command.
- The transceiver switches to the Emergency frequency after sending this command.
- This command is not available for E market versions (an error occurs).

## EQ

Sets or reads the Equalizer.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | Q | P1 | P2 | P3 | ; | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | Q | P1 | P2 | ; | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | Q | P1 | P2 | P3 | ; | | | | |

**[TS-590S / TS-590SG common] (TS-590S supports from the firmware version 2.00.)**

Parameters:

P1 (Equalizer type)
- 0: TX EQ
- 1: RX EQ

P2 (Mode)
- 0: SSB
- 1: SSB-DATA
- 2: CW/CW-R
- 3: FM
- 4: FM-DATA
- 5: AM
- 6: AM-DATA
- 7: FSK/FSK-R

P3 (Equalizer curve)
- 0: OFF
- 1: HB1
- 2: HB2
- 3: FP
- 4: BB1
- 5: BB2
- 6: C TX EQ /FLAT RX EQ
- 7: U

- TX EQ setting in CW/CW-R mode and FSK/FSK-R mode can not be changed from OFF. (An error occurs if the setting command is sent.)

## ES

Sets or reads the Advanced startup option.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | S | P1 | P2 | ; | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | S | P1 | ; | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | S | P1 | P2 | ; | | | | | |

**[TS-590S only] (supported from the firmware version 1.08)**

Parameters:

P1 (Select the targeted function for Set and Read)
- 0: Shiftable RX Frequency during Split Transmission

P2
- 0: Function OFF
- 1: Function ON

## EX

Sets or reads the Menu.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | X | P1 | P1 | P1 | P2 | P2 | P3 | P4 | P5 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P5 | P5 | P5 | P5 | P5 | P5 | P5 | ; | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | X | P1 | P1 | P1 | P2 | P2 | P3 | P4 | ; |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | E | X | P1 | P1 | P1 | P2 | P2 | P3 | P4 | P5 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P5 | P5 | P5 | P5 | P5 | P5 | P5 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 000 ~ 087: Menu number (TS-590S)
- 000 ~ 099: Menu number (TS-590SG)

P2
- 00: Always 00

P3
- 0: Always 0

P4
- 0: Always 0

P5
- String of alphanumeric characters for the Menu setting (variable length)

- Refer to the following table for the menus corresponding to parameter P1, and the available settings corresponding to parameter P5.

### EX Command Parameter List (for TS-590S)

| Menu (P1) | Function | Command Parameter (P5) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 ~ |
| 000 | Display brightness | OFF | 1 | 2 | 3 | 4 | 5 | 6 | | | | |
| 001 | Back light color | 1 | 2 | | | | | | | | | |
| 002 | Panel key response for double function | 1 | 2 | 3 | | | | | | | | |
| 003 | Beep volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 004 | Sidetone volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 005 | Message playback volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 006 | Voice guide volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |
| 007 | Voice guide speed | 0 | 1 | 2 | 3 | 4 | | | | | | |
| 008 | Voice guide language | EN | JP | | | | | | | | | |
| 009 | Auto announcement | OFF | ON | | | | | | | | | |
| 010 | MHz step (MHz) | 0.1 | 0.5 | 1 | | | | | | | | |
| 011 | Tuning control adjustment rate (Hz) | 250 | 500 | 1000 | | | | | | | | |

| Menu (P1) | Function | Command Parameter (P5) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 ~ |
| 012 | MULTI/CH control rounding off process | OFF | ON | | | | | | | | | |
| 013 | Dedicated step change inside the BC band (AM) | OFF | ON | | | | | | | | | |
| 014 | MULTI/CH control step change for SSB/CW/FSK (kHz) | 0.5 | 1 | 2.5 | 5 | 10 | | | | | | |
| 015 | MULTI/CH control step change for AM (kHz) | 5 | 6.25 | 10 | 12.5 | 15 | 20 | 25 | 30 | 50 | 100 | |
| 016 | MULTI/CH control step change for FM (kHz) | 5 | 6.25 | 10 | 12.5 | 15 | 20 | 25 | 30 | 50 | 100 | |
| 017 | Maximum number of Quick Memory channels | 3 | 5 | 10 | | | | | | | | |
| 018 | Temporary variable of the standard memory frequency | OFF | ON | | | | | | | | | |
| 019 | Program Scan slow down function | OFF | ON | | | | | | | | | |
| 020 | Program Scan slow down frequency range (Hz) | 100 | 200 | 300 | 400 | 500 | | | | | | |
| 021 | Program Scan hold | OFF | ON | | | | | | | | | |
| 022 | Scan Resume method | TO | CO | | | | | | | | | |
| 023 | Auto mode change | OFF | ON | | | | | | | | | |
| 024 | Following speed setting of AUTO NOTCH | 0 | 1 | 2 | 3 | 4 | | | | | | |
| 025 | SSB/AM Low Cut transmit filter (Hz) | 10 | 100 | 200 | 300 | 400 | 500 | | | | | |
| 026 | SSB/AM High Cut transmit filter (Hz) | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | | | | | |
| 027 | SSB-DATA Low Cut transmit filter (Hz) | 10 | 100 | 200 | 300 | 400 | 500 | | | | | |
| 028 | SSB-DATA High Cut transmit filter (Hz) | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | | | | | |
| 029 | Effective change of Speech Processor | SOFT | HARD | | | | | | | | | |
| 030 | Transmit equalizer | OFF | HB1 | HB2 | FP | BB1 | BB2 | C | U | | | |
| 031 | Receive equalizer | OFF | HB1 | HB2 | FP | BB1 | BB2 | FLAT | U | | | |
| 032 | Electronic keyer operation mode | A | B | | | | | | | | | |
| 033 | Insert keying ON/OFF | OFF | ON | | | | | | | | | |
| 034 | Side tone/ pitch frequency setting (Hz) | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | up to 1000 (steps of 50) |
| 035 | CW clipping (ms) | 1 | 2 | 4 | 6 | | | | | | | |
| 036 | Keying weight ratio | AUTO | 2.5 | 2.6 | 2.7 | 2.8 | 2.9 | 3.0 | 3.1 | 3.2 | 3.3 | up to 4.0 (steps of 0.1) |
| 037 | Reverse keying auto weight ratio | OFF | ON | | | | | | | | | |
| 038 | Bug key function | OFF | ON | | | | | | | | | |
| 039 | Paddle dot/dash replacement setting | OFF | ON | | | | | | | | | |
| 040 | Mic paddle function | PF | PA | | | | | | | | | |
| 041 | Auto CW TX in SSB mode | OFF | ON | | | | | | | | | |
| 042 | Frequency correction for changing SSB to CW mode | OFF | ON | | | | | | | | | |
| 043 | Break-in null configuration at time of keying speed configuration | OFF | ON | | | | | | | | | |
| 044 | FSK shift | 170 | 200 | 425 | 850 | | | | | | | |
| 045 | FSK keying polarity | OFF | ON | | | | | | | | | |
| 046 | FSK tone frequency (Hz) | 1275 | 2125 | | | | | | | | | |
| 047 | Mic gain for FM | 1 | 2 | 3 | | | | | | | | |
| 048 | Power fine | OFF | ON | | | | | | | | | |
| 049 | Time-out Timer | OFF | 3 | 5 | 10 | 20 | 30 | | | | | |
| 050 | Configuring the Transverter function and power down | OFF | 1 | 2 | | | | | | | | |
| 051 | TX hold when AT completes the tuning | OFF | ON | | | | | | | | | |
| 052 | AT operation when receiving | OFF | ON | | | | | | | | | |
| 053 | HF linear amplifier control | OFF | 1 | 2 | 3 | | | | | | | |
| 054 | 50 MHz linear amplifier control | OFF | 1 | 2 | 3 | | | | | | | |
| 055 | Constant recording | OFF | ON | | | | | | | | | |
| 056 | Voice/ message playback repeat | OFF | ON | | | | | | | | | |
| 057 | Voice/ message playback repeat duratin (seconds) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | up to 60 (steps of 1) |
| 058 | Split transfer function | OFF | ON | | | | | | | | | |
| 059 | Write split transfer data to the VFO | OFF | ON | | | | | | | | | |
| 060 | Transmit inhibit | OFF | ON | | | | | | | | | |

| Menu (P1) | Function | Command Parameter (P5) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 ~ |
| 061 | COM port communication speed | 4800 | 9600 | 19200 | 38400 | 57600 | 115200 | | | | | |
| 062 | USB port communication speed | 4800 | 9600 | 19200 | 38400 | 57600 | 115200 | | | | | |
| 063 | DATA modulation line | ACC2 | USB | | | | | | | | | |
| 064 | USB audio input level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 065 | USB audio output level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 066 | ACC2 terminal AF input level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 067 | ACC2 terminal AF output level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 068 | External AF output beep mix | OFF | ON | | | | | | | | | |
| 069 | DATA VOX | OFF | ON | | | | | | | | | |
| 070 | DATA VOX delay | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | up to 100 (steps of 5) |
| 071 | DATA VOX gain for USB audio input | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 072 | DATA VOX gain for ACC2 terminal input | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 073 | PKS polarity change | OFF | ON | | | | | | | | | |
| 074 | Busy transmit inhibit | OFF | ON | | | | | | | | | |
| 075 | CTCSS mute operation change | 1 | 2 | | | | | | | | | |
| 076 | PSQ control signal logic selection | LO | OPEN | | | | | | | | | |
| 077 | PSQ control signal output condition | OFF | BSY | SQL | SND | BSY-SND | SQL-SND | | | | | |
| 078 | APO function (minutes) | OFF | 60 | 120 | 180 | | | | | | | |
| 079 | Panel PF A function | 000 ~ 255 (3-digit)<br>Refer to the TS-590S instruction manual for the numbers and functions. (When the function is turned OFF, 255 is used.) | | | | | | | | | | |
| 080 | Panel PF B function | | | | | | | | | | | |
| 081 | Mic PF 1 function | | | | | | | | | | | |
| 082 | Mic PF 2 function | | | | | | | | | | | |
| 083 | Mic PF 3 function | | | | | | | | | | | |
| 084 | Mic PF 4 function | | | | | | | | | | | |
| 085 | Mic PF (DWN) function | | | | | | | | | | | |
| 086 | Mic PF (UP) function | | | | | | | | | | | |
| 087 | Power on message | Power on Message (up to 8 ASCII characters) | | | | | | | | | | |

## EX Command Parameter List (for TS-590SG)

| Menu (P1) | Function | Command Parameter (P5) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 ~ |
| 000 | Display brightness | Version information (4 ASCII characters) read only | | | | | | | | | | |
| 001 | Power on message | Power on Message (up to 8 ASCII characters) | | | | | | | | | | |
| 002 | Display brightness | OFF | 1 | 2 | 3 | 4 | 5 | 6 | | | | |
| 003 | Back light color | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 004 | Panel key response for double function | 1 | 2 | 3 | | | | | | | | |
| 005 | Beep volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ~ 20 (steps of 1) |
| 006 | Sidetone volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ~ 20 (steps of 1) |
| 007 | Message playback volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ~ 20 (steps of 1) |
| 008 | Voice guide volume | OFF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ~ 20 (steps of 1) |
| 009 | Voice guide speed | 0 | 1 | 2 | 3 | 4 | | | | | | |
| 010 | Voice guide language | EN | JP | | | | | | | | | |
| 011 | Auto announcement | OFF | 1 | 2 | | | | | | | | |
| 012 | MHz step (MHz) | 0.1 | 0.5 | 1 | | | | | | | | |
| 013 | Tuning control adjustment rate (Hz) | 250 | 500 | 1000 | | | | | | | | |
| 014 | MULTI/CH control rounding off process | OFF | ON | | | | | | | | | |
| 015 | Dedicated step change inside the BC band (AM) | OFF | ON | | | | | | | | | |
| 016 | MULTI/CH control step change for SSB (kHz) | OFF | 0.5 | 0.5 | 1 | 2.5 | 5 | 10 | | | | |
| 017 | MULTI/CH control step change for CW/ FSK (kHz) | OFF | 0.5 | 0.5 | 1 | 2.5 | 5 | 10 | | | | |
| 018 | MULTI/CH control step change for AM (kHz) | OFF | 5 | 6.25 | 10 | 12.5 | 15 | 20 | 25 | 30 | 50 | P5=10: 100 |
| 019 | MULTI/CH control step change for FM (kHz) | OFF | 5 | 6.25 | 10 | 12.5 | 15 | 20 | 25 | 30 | 50 | P5=10: 100 |
| 020 | Shiftable RX frequency during split transmission | OFF | ON | | | | | | | | | |
| 021 | Maximum number of Quick Memory channels | 3 | 5 | 10 | | | | | | | | |
| 022 | Temporary variable of the standard/ Extention memory frequency | OFF | ON | | | | | | | | | |

| Menu (P1) | Function | Command Parameter (P5) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 ~ |
| 023 | Program Scan slow down function | OFF | ON | | | | | | | | | |
| 024 | Program Scan slow down frequency range (Hz) | 100 | 200 | 300 | 400 | 500 | | | | | | |
| 025 | Program Scan hold | OFF | ON | | | | | | | | | |
| 026 | Scan Resume method | TO | CO | | | | | | | | | |
| 027 | Auto mode change | OFF | ON | | | | | | | | | |
| 028 | Low Cut/ Low Cut and Width/ Shift change (SSB) | 1 (HI/LO) | 2 (WIDTH/ SHIFT) | | | | | | | | | |
| 029 | Low Cut/ Low Cut and Width/ Shift change (SSB-DATA) | 1 (HI/LO) | 2 (WIDTH/ SHIFT) | | | | | | | | | |
| 030 | Following speed setting of AUTO NOTCH | 0 | 1 | 2 | 3 | 4 | | | | | | |
| 031 | SSB/AM Low Cut transmit filter (Hz) | 10 | 100 | 200 | 300 | 400 | 500 | | | | | |
| 032 | SSB/AM High Cut transmit filter (Hz) | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | | | | | |
| 033 | SSB-DATA Low Cut transmit filter (Hz) | 10 | 100 | 200 | 300 | 400 | 500 | | | | | |
| 034 | SSB-DATA High Cut transmit filter (Hz) | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | | | | | |
| 035 | Effective change of Speech Processor | SOFT | HARD | | | | | | | | | |
| 036 | Transmit equalizer | OFF | HB1 | HB2 | FP | BB1 | BB2 | C | U | | | |
| 037 | Receive equalizer | OFF | HB1 | HB2 | FP | BB1 | BB2 | FLAT | U | | | |
| 038 | Electronic keyer operation mode | A | B | | | | | | | | | |
| 039 | Insert keying ON/OFF | OFF | ON | | | | | | | | | |
| 040 | Side tone/ pitch frequency setting (Hz) | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | up to 1000 (steps of 50) |
| 041 | CW clipping (ms) | 1 | 2 | 4 | 6 | | | | | | | |
| 042 | Keying weight ratio | AUTO | 2.5 | 2.6 | 2.7 | 2.8 | 2.9 | 3.0 | 3.1 | 3.2 | 3.3 | up to 4.0 (steps of 0.1) |
| 043 | Reverse keying auto weight ratio | OFF | ON | | | | | | | | | |
| 044 | Bug key function | OFF | ON | | | | | | | | | |
| 045 | Paddle dot/dash replacement setting | OFF | ON | | | | | | | | | |
| 046 | Mic paddle function | PF | PA | | | | | | | | | |
| 047 | Auto CW TX in SSB mode | OFF | ON | | | | | | | | | |
| 048 | Frequency correction for changing SSB to CW mode | OFF | ON | | | | | | | | | |
| 049 | Break-in null configuration at time of keying speed configuration | OFF | ON | | | | | | | | | |
| 050 | FSK shift | 170 | 200 | 425 | 850 | | | | | | | |
| 051 | FSK keying polarity | OFF | ON | | | | | | | | | |
| 052 | FSK tone frequency (Hz) | 1275 | 2125 | | | | | | | | | |
| 053 | Mic gain for FM | 1 | 2 | 3 | | | | | | | | |
| 054 | Power fine | OFF | ON | | | | | | | | | |
| 055 | Time-out Timer | OFF | 3 | 5 | 10 | 20 | 30 | | | | | |
| 056 | Configuring the Transverter function and power down | OFF | 1 | 2 | | | | | | | | |
| 057 | TX hold when AT completes the tuning | OFF | ON | | | | | | | | | |
| 058 | AT operation when receiving | OFF | ON | | | | | | | | | |
| 059 | HF linear amplifier control | OFF | 1 | 2 | 3 | 4 | 5 | | | | | |
| 060 | 50 MHz linear amplifier control | OFF | 1 | 2 | 3 | 4 | 5 | | | | | |
| 061 | Constant recording | OFF | ON | | | | | | | | | |
| 062 | Voice/ message playback repeat | OFF | ON | | | | | | | | | |
| 063 | Voice/ message playback repeat duratin (seconds) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | up to 60 (steps of 1) |
| 064 | Split transfer function | OFF | ON | | | | | | | | | |
| 065 | Write split transfer data to the VFO | OFF | ON | | | | | | | | | |
| 066 | Transmit inhibit | OFF | ON | | | | | | | | | |
| 067 | COM port communication speed | 4800 | 9600 | 19200 | 38400 | 57600 | 115200 | | | | | |
| 068 | USB port communication speed | 4800 | 9600 | 19200 | 38400 | 57600 | 115200 | | | | | |
| 069 | DATA modulation line | ACC2 | USB | | | | | | | | | |
| 070 | Audio source of SEND/PTT transmission for data mode | FRONT | REAR | | | | | | | | | |
| 071 | USB audio input level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

| Menu (P1) | Function | Command Parameter (P5) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 ~ |
| 072 | USB audio output level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 073 | ACC2 terminal AF input level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 074 | ACC2 terminal AF output level | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 075 | External AF output beep mix | OFF | ON | | | | | | | | | |
| 076 | DATA VOX | OFF | ON | | | | | | | | | |
| 077 | DATA VOX delay | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | up to 100 (steps of 5) |
| 078 | DATA VOX gain for USB audio input | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 079 | DATA VOX gain for ACC2 terminal input | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 080 | PKS polarity change | OFF | ON | | | | | | | | | |
| 081 | Busy transmit inhibit | OFF | ON | | | | | | | | | |
| 082 | CTCSS mute operation change | 1 | 2 | | | | | | | | | |
| 083 | PSQ control signal logic selection | LO | OPEN | | | | | | | | | |
| 084 | PSQ control signal output condition | OFF | BSY | SQL | SND | BSY-SND | SQL-SND | | | | | |
| 085 | DRV connector output function | DRO | ANT | | | | | | | | | |
| 086 | APO function (minutes) | OFF | 60 | 120 | 180 | | | | | | | |
| 087 | Panel PF A function | 000 ~ 255 (3-digit)<br>Refer to the TS-590SG instruction manual for the numbers and functions. (When the function is turned OFF, 255 is used.) | | | | | | | | | | |
| 088 | Panel PF B function | | | | | | | | | | | |
| 089 | RIT Key function | | | | | | | | | | | |
| 090 | XIT Key function | | | | | | | | | | | |
| 091 | CL Key function | | | | | | | | | | | |
| 092 | Front panel MULTI/CH key assignment (exclude CW mode) | | | | | | | | | | | |
| 093 | Front panel MULTI/CH key assignment (CW mode) | | | | | | | | | | | |
| 094 | Mic PF 1 function | | | | | | | | | | | |
| 095 | Mic PF 2 function | | | | | | | | | | | |
| 096 | Mic PF 3 function | | | | | | | | | | | |
| 097 | Mic PF 4 function | | | | | | | | | | | |
| 098 | Mic PF (DWN) function | | | | | | | | | | | |
| 099 | Mic PF (UP) function | | | | | | | | | | | |

## FA / FB

Sets or reads the VFO A/ VFO B frequency.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | F | A / B | P1 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | F | A / B | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | F | A / B | P1 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

Frequency (11 digits in Hz)

- For example, enter 00014195000 for 14.195 MHz. Blank digits must be entered as 0.

## FL

Sets and reads the IF filter.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | F | L | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | F | L | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | F | L | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

1: IF Filter A

2: IF Filter B

## FR / FT

Selects or reads the VFO or Memory channel.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | F | R / T | P1 | ; | | | | | | |
| Read | F | R / T | ; | | | | | | | |
| Answer | F | R / T | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: VFO A
1: VFO B
2: Memory Channel

- When using the FR command to select VFO A or VFO B, the selected VFO changes to the simplex state. When using the FT command, the selected VFO changes to the split state.
- You cannot use the FT command to select Memory Channel mode. Use only the FR command.

## FS

Sets and reads the Fine Tuning function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | F | S | P1 | ; | | | | | | |
| Read | F | S | ; | | | | | | | |
| Answer | F | S | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Fine Tuning function OFF
1: Fine Tuning function ON

## FV

Verifies the Firmware version.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | F | V | ; | | | | | | | |
| Answer | F | V | P1 | P1 | P1 | P1 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

Reads out the character string of the firmware version.

- For example, for firmware version 1.00, it reads “FV1.00;”.

## FW

Sets or reads the DSP filtering bandwidth.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | F | W | P1 | P1 | P1 | P1 | ; | | | |
| Read | F | W | ; | | | | | | | |
| Answer | F | W | P1 | P1 | P1 | P1 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0000 ~ 9999 (in Hz)

CW:

- 0050, 0080, 0100, 0150, 0200, 0250, 0300, 0400, 0500, 0600, 1000, 1500, 2000, 2500
- An entered value of 0049 or lower results in 0050 being entered. An entered value of any other number not listed will result in the closest lower value being entered (for example, 1400 will revert to 1000). A value of 2501 or higher results in 2500 being entered.

FSK:

- 0250, 0500, 1000, 1500
- An entered value of 0249 or lower results in 0250 being entered. An entered value of any other number not listed will result in the closest lower value being entered (for example, 1400 will revert to 1000). A value of 1501 or higher results in 1500 being entered.

FM: (Modulation degree setting)

- 0000 (Normal), 0001 (Narrow)

- Use the SH and SL commands to change the HIGH cut/LOW cut for SSB/AM/FM.
- The FW command cannot be used in SSB or AM mode.
- When entering an unused number, the closest lower value will be automatically entered.

## GC

Sets or reads the AGC.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | G | C | P1 | ; | | | | | | |
| Read | G | C | ; | | | | | | | |
| Answer | G | C | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: AGC Off
1: AGC Slow
2: AGC Fast
3: AGC Off → On (AGC returns to its Slow/Fast status before turning Off.)

- This command cannot be performed in FM mode (an error sounds).
- Entering a P1 parameter value of 4 or higher causes an error tone to sound.
- A P1 parameter value of 3 is used only for turning AGC On.
- While AGC is On, entering a P1 parameter value of 3 will not change the AGC status.

## GT

Sets or reads the AGC time constant.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | G | T | P1 | P1 | ; | | | | | |
| Read | G | T | ; | | | | | | | |
| Answer | G | T | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

01 ~ 20 (in steps of 1)

- Entering a P1 parameter value of 00 results in 01 being entered and entering a P1 parameter value higher than 20 results in 20 being entered.
- If AGC is OFF or while in FM mode, the GT command cannot be read (an error tone sounds).

## ID

Reads the transceiver ID number.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | I | D | ; | | | | | | | |
| Answer | I | D | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

021: TS-590S
023: TS-590SG

## IF

Reads the transceiver status.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | I | F | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | I | F | P1 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | P2 | P2 | P2 | P2 | P2 | P3 | P3 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P3 | P3 | P3 | P4 | P5 | P6 | P7 | P7 | P8 | P9 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | P10 | P11 | P12 | P13 | P14 | P14 | P15 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
11 digit displayed frequency (for example, 00014175000 is 14.175 MHz)

P2
Spaces (5)

P3
RIT/XIT frequency ±9990 Hz

P4
0: RIT OFF
1: RIT ON

P5
0: XIT OFF
1: XIT ON

P6, P7
Memory channel number (refer to the MC command)

P8
0: RX
1: TX

P9
Operating mode (refer to the MD command)

P10
Function (refer to the FR/FT commands)

P11
Scan status (refer to the SC command)

P12
0: Simplex operation
1: Split operation

P13
0: OFF
1: Tone ON
2: CTCSS ON
3: Cross Tone ON

P14
00 ~ 42: Tone/ CTCSS frequency (refer to the TN/CN commands)
When Tone is ON, this number is the Tone frequency. When CTCSS is ON, this number is the CTCSS frequency. When Cross Tone is ON, the transceiver transmits on the Tone frequency and receives on the CTCSS frequency. When OFF, it shows the Tone frequency.

P15
0: Always 0

- While the Auto Information (AI) function is ON, a response is automatically sent when the RIT/XIT frequency is changed or the Memory channel frequency is changed.
- The IF command cannot read the transceiver status while it is in Data mode.

## IS

Sets and reads the DSP Filter Shift.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | I | S | P1 | P2 | P2 | P2 | P2 | ; | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | I | S | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | I | S | P1 | P2 | P2 | P2 | P2 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
Always a space

P2
0000 ~ 9999 (in Hz)

CW:

- 0300, 0350, 0400, 0450, 0500, 0550, 0600, 0650, 0700, 0750, 0800, 0850, 0900, 0950, 1000
- An entered value of 0299 or lower results in 0300 being entered. An entered value of any other number not listed will result in the closest lower value being entered (for example, 0633 will revert to 0600). A value of 1001 or higher results in 1000 being entered.

- Use the SH and SL commands to change the slope tune for SSB/AM/FM/SSB DATA/FM DATA mode.
- The IS command cannot be used in any mode other than CW/ CW-R.

## KS

Sets and reads the Keying speed.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | K | S | P1 | P1 | P1 | ; | | | | |
| Read | K | S | ; | | | | | | | |
| Answer | K | S | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

004 ~ 060 (in steps of 1)

- An entered value of 003 or lower results in 004 being entered. A value of 061 or higher results in 060 being entered.

## KY

Converts the entered characters into morse code while keying.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set 1 | K | Y | P1 | P2 | P2 | P2 | P2 | P2 | P2 | P2 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P2 | P2 | P2 | P2 | P2 | P2 | P2 | P2 | P2 | P2 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P2 | P2 | P2 | P2 | P2 | P2 | P2 | ; | | |
| Set 2 | K | Y | P1 | ; | | | | | | |
| Read | K | Y | ; | | | | | | | |
| Answer | K | Y | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

For Setting 1, always enter a space.

For Setting 2, entering 0 will cause Setting 1 to stop. An error will occur if any value other than 0 is entered.

0: Character buffer space

1: No character buffer space

P2

Enter a character string for keying.

The characters listed in the following table can be entered.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| K | L | M | N | O | P | Q | R | S | T |
| U | V | W | X | Y | Z | | | | |
| a | b | c | d | e | f | g | h | i | j |
| k | l | m | n | o | p | q | r | s | t |
| u | v | w | x | y | z | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| (space) | | ' | " | ( | ) | * | + | , | − |
| . | / | : | = | ? | @ | | | | |

Using abbreviations, you can enter the symbols listed in the following table.

| Abbreviation | Symbol | Abbreviation | Symbol |
|---|---|---|---|
| $\overline{BT}$ | [ | $\overline{SK}$ | > |
| $\overline{AR}$ | _ | $\overline{KN}$ | ] |
| $\overline{AS}$ | < | $\overline{BK}$ | \ |
| $\overline{HH}$ | # | $\overline{SN}$ | % |

- Parameter P2 has a fixed length of 24 bits. Characters that are left blank will be filled with spaces, but these spaces will not be converted to morse code.
- When sending a string of 25 characters or more, they are sent in split. (If there is no space in the buffer of the transceiver, the result is an error.)
- Although you can use lower-case letters as well as upper-case letters for the P2 parameter, there is no distinction made between them when sending the morse code.
- ";" (semicolon) can not be used for the parameter P2.

## LK

Sets and reads the Lock status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | L | K | P1 | P2 | ; | | | | | |
| Read | L | K | ; | | | | | | | |
| Answer | L | K | P1 | P2 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Lock OFF

1: Lock ON

P2

0: Always 0

## LM

Sets and reads the VGS-1 electric keyer recording status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | L | M | P1 | P2 | ; | | | | | |
| Read | L | M | ; | | | | | | | |
| Answer | L | M | P1 | P2 | P3 | P3 | P3 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Not recording (used only as response)
- 1: Channel 1
- 2: Channel 2
- 3: Channel 3
- 4: Channel 4
- 5: RX (constant recording)

P2
- 0: Recording is inactive (recording stops by the setting command)
- 1: Recording is ready
- 2: Start recording (displays while recording by the response command)
- 3: Recording is ready*
- 4: Start recording* (displays while recording by the response
- 5: Erase (Set commnd only)

* This parameter is used in recording the input voice from the rear terminal (USB audio or ANI terminal of ACC2 connector). (Voice message recording only)

P3

000 ~ 100

When a recording is saved to Channels 1 and 2:
- Shows the remaining recording time as 000 ~ 030 (seconds).

When a recording is saved to Channels 3 and 4:
- Shows the remaining recording time as 000 ~ 015 (seconds).

CW message:
- Shows the recording progress as 000 ~ 100 (%).

- Entering a P1 parameter value other than those listed causes an error.
- When parameter P1 is set to 5, parameter P2 must be set to 2.
- 3, 4, and 9 of parameter P2 are supported from the firmware version 2.00 in TS-590S.
- The recording starts after the recording standby status is set.
- Voice message is erased after the recording start direction is set.
- CW message is erased after the recording standby status is set.

## MC

Sets and reads the Memory Channel number.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | C | P1 | P2 | P2 | ; | | | | |
| Read | M | C | ; | | | | | | | |
| Answer | M | C | P1 | P2 | P2 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

Sets the 100's digit for the channel number
When entering a setting command, enter 0 or a space for a channel number less than 100.
For a response command, a space is entered for a channel number less than 100.

P2

00 ~ 99: Two digit channel number
When the channel number is less than 10, both for setting and response commands, the first digit is "0".

- Channel numbers P00 ~ P09 are represented by 100 ~ 109.
- TS-590SG extention channel numbers E00 ~ P09 are represented by 110 ~ 119.

## MD

Sets and reads the operating mode status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | D | P1 | ; | | | | | | |
| Read | M | D | ; | | | | | | | |
| Answer | M | D | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: None (setting failure)
- 1: LSB
- 2: USB
- 3: CW
- 4: FM
- 5: AM
- 6: FSK
- 7: CW-R
- 8: None (setting failure)
- 9: FSK-R

## MF

Sets and reads Menu A or B.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | F | P1 | ; | | | | | | |
| Read | M | F | ; | | | | | | | |
| Answer | M | F | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Menu A
1: Menu B

## MG

Sets and reads the microphone gain.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | G | P1 | P1 | P1 | ; | | | | |
| Read | M | G | ; | | | | | | | |
| Answer | M | G | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

000 ~ 100 (in steps of 1)

- An entered value of 101 or higher results in 100 being entered.

## MK

Mode key operation.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | K | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: LSB/USB key
1: CW/FSK key
2: FM/AM key
3: CW/-R key *
4: FSK/-R key *

* These keys do not exist on the operation panel of the transceiver. These keys are virtual keys for the PC command control.

- This is the command for the operation by the transceiver when each mode key is pressed.
- When reading the current mode, MD command is used.

## ML

Sets and reads the TX Monitor function output level.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | L | P1 | P1 | P1 | ; | | | | |
| Read | M | L | ; | | | | | | | |
| Answer | M | L | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

000: TX Monitor is OFF
001 ~ 009 (TS-590S)
001 ~ 020 (TS-590SG)

- An entered maximum value or higher results in maximum value entered.

**MR** Reads the Memory channel data.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | M | R | P1 | P2 | P3 | P3 | : | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | M | R | P1 | P2 | P3 | P3 | P4 | P4 | P4 | P4 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P4 | P4 | P4 | P4 | P4 | P4 | P4 | P5 | P6 | P7 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P8 | P8 | P9 | P9 | P10 | P10 | P10 | P11 | P12 | P13 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | P13 | P13 | P13 | P13 | P13 | P13 | P13 | P13 | P14 | P14 |
| | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| | P15 | P16 | P16 | P16 | P16 | P16 | P16 | P16 | P16 | ; |

**[TS-590S / TS-590SG common]**

Parameters:

P1
0: Simplex
1: Split

P2, P3
Channel number (refer to the MC command)

P4
Frequency (depending on the P1 setting, unused high-end digits will become 0)

P5
Mode (depending on the P1 setting, refer to the MD command)

P6
Data mode (depending on the P1 setting, refer to the DA command)

P7
0: TONE/CTCSS OFF
1: TONE ON
2: CTCSS ON
3: Cross Tone ON

P8
Tone frequency (refer to the TN command)

P9
CTCSS frequency (refer to the CN command)

P10
000: Always 000

P11 (Selected status of FILTER A/B (Status of FILTER A/B in the mode indicated by P5 and P6 parameters))
0: FILTER A
1: FILTER B
* In firmware version 1.xx of TS-590S, always "0".

P12
0: Always 0

P13
000000000: Always 000000000

P14
00: FM Normal
01: FM Narrow

P15
0: Channel Lockout OFF
1: Channel Lockout ON

P16
Memory name (up to 8 digits)

- When reading the simplex channel data or the receive frequency of the split channel in receive mode, enter 0 for parameter P1. When reading the transmit frequency of the split channel in transmit mode, enter 1.
- When reading the start frequency of a section defined channel, enter 0 for parameter P1. When reading the end frequency, enter 1.
- If the selected channel is empty, P4 ~ P15 will be 0 and P16 will be blank.

## MW

Sets the Memory channel data.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | M | W | P1 | P2 | P3 | P3 | P4 | P4 | P4 | P4 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P4 | P4 | P4 | P4 | P4 | P4 | P4 | P5 | P6 | P7 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P8 | P8 | P9 | P9 | P10 | P10 | P10 | P11 | P12 | P13 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | P13 | P13 | P13 | P13 | P13 | P13 | P13 | P13 | P14 | P14 |
| | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| | P15 | P16 | P16 | P16 | P16 | P16 | P16 | P16 | P16 | ; |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Simplex
- 1: Split

P2, P3
- Channel number (refer to the MC command)

P4
- Frequency (depending on the P1 setting, unused high-end digits will become 0)

P5
- Mode (depending on the P1 setting, refer to the MD command)

P6
- Data mode (depending on the P1 setting, refer to the DA command)

P7
- 0: TONE/CTCSS OFF
- 1: TONE ON
- 2: CTCSS ON
- 3: Cross Tone ON

P8
- Tone frequency (refer to the TN command)

P9
- CTCSS frequency (refer to the CN command)

P10
- 000: Always 000

P11 (Selected status of FILTER A/B (Status of FILTER A/B in the mode indicated by P5 and P6 parameters))
- 0: FILTER A
- 1: FILTER B
- This is always set to “0" in the firmware version 1.xx of TS-590S.

P12
- 0: Always 0

P13
- 000000000: Always 000000000

P14
- 00: FM Normal
- 01: FM Narrow

P15
- 0: Channel Lockout OFF
- 1: Channel Lockout ON

P16
- Memory name (up to 8 digits)

- When registering a simplex channel, set parameter P1 to 0. After setting P1 to 0, the channel becomes a simplex channel, even if it was already a split channel.
- When registering a split channel, set parameter P1 to 1 (set the transmission frequency and mode). The reception frequency and mode are not updated at this time.
- When registering a section defined channel,set parameter P1 to 0 to enter the Start frequency, then set P1 to 1 to set the End frequency.
- When you have a blank channel selected, and set parameter P1 to 1, the channel becomes a split channel. However, the transmit and receive frequencies are the same, and the transmit and receive modes are the same.
- When registering a section defined channel and parameter P1 is set to 1, the Start and End frequencies are the same.

## NB

Sets and reads the Noise Blanker function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | N | B | P1 | ; | | | | | | |
| Read | N | B | ; | | | | | | | |
| Answer | N | B | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: NB OFF
- 1: NB1 ON
- 2: NB2 ON

## NL

Sets and reads the Noise Blanker level.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | N | L | P1 | P1 | P1 | ; | | | | |
| Read | N | L | ; | | | | | | | |
| Answer | N | L | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

001 ~ 010 (in steps of 1)

- When NB1 is ON, it sets and reads the NB1 level.
- When NB2 is ON, it sets and reads the NB2 level.
- Entering a P1 parameter value of 000 results in 001 being entered and entering a P1 parameter value higher than 010 results in 010 being entered.
- When NB is set to OFF, an error occurs.

## NR

Sets and reads the Noise Reduction function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | N | R | P1 | ; | | | | | | |
| Read | N | R | ; | | | | | | | |
| Answer | N | R | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: NR OFF
1: NR1 ON
2: NR2 ON

## NT

Sets and reads the Notch Filter status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | N | T | P1 | P2 | ; | | | | | |
| Read | N | T | ; | | | | | | | |
| Answer | N | T | P1 | P2 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Notch OFF
1: Auto Notch
2: Manual Notch

P2 (bandwidth of Manual Notch)

0: Normal
1: Wide

- When setting the command, parameter P2 is ignored unless parameter P1 is set to 2.
- When receiving a response, parameter P2 will always be 0 unless parameter P1 is 2.

## PA

Sets and reads the Pre-amplifier function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | P | A | P1 | ; | | | | | | |
| Read | P | A | ; | | | | | | | |
| Answer | P | A | P1 | P2 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Pre-amp OFF
1: Pre-amp ON

P2

0: Always 0

## PB

Sets and reads the voice and CW message playback status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | P | B | P1 | ; | | | | | | |
| Read | P | B | ; | | | | | | | |
| Answer | P | B | P2 | P3 | P4 | P5 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Stops playback
1: Playback Channel 1
2: Playback Channel 2
3: Playback Channel 3
4: Playback Channel 4
5: Playback constant recorded sound

P2

Playback Channel

P3 ~ P5 (Playback queueing buffer status)

0: None
1: Channel 1
2: Channel 2
3: Channel 3
4: Channel 4
5: Constant recorded sound

## PC

Sets and reads the output power.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | P | C | P1 | P1 | P1 | ; | | | | |
| Read | P | C | ; | | | | | | | |
| Answer | P | C | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

005 ~ 100: SSB/ CW/ FM/ FSK

005 ~ 025: AM

- When the Power Fine function is On, the step size is 1 W.
- When the Power Fine function is Off, the step size is 5 W. In this case, if an inappropriate value is entered, the value is rounded down to the nearest 5's value. For example, when you enter a value of 093, it is rounded down to 090.
- Entering a value lower than the minimum value results in the minimum value being entered and entering a value higher than maximum value results in the maximum value being entered.

## PL

Sets and reads the Speech Processor input/output level.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | P | L | P1 | P1 | P1 | P2 | P2 | P2 | ; | |
| Read | P | L | ; | | | | | | | |
| Answer | P | L | P1 | P1 | P1 | P2 | P2 | P2 | ; | |

**[TS-590S / TS-590SG common]**

Parameters:

P1 (Input level)

000 (minimum) ~ 100 (maximum)

P2 (Output level)

000 (minimum) ~ 100 (maximum)

- Entering a value of 101 or higher results in 100 being entered.

## PR

Sets and reads the Speech Processor function ON/ OFF.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | P | R | P1 | ; | | | | | | |
| Read | P | R | ; | | | | | | | |
| Answer | P | R | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Speech Processor OFF

1: Speech Processor ON

## PS

Sets and reads the Power ON/ OFF status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | P | S | P1 | ; | | | | | | |
| Read | P | S | ; | | | | | | | |
| Answer | P | S | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Power OFF

1: Power ON

9: Power OFF (low current mode)

- When turning the power Off by setting the P1 parameter to 0, more current is consumed than if you turn the power Off by operating the transceiver panel power switch. However, you can switch the power back On without any special procedures, using the PS command.
- When turning the power Off by setting the P1 parameter to 9, the same amount of standby current is consumed as if you turned the power Off by operating the transceiver panel power switch. In this case, to turn the power back On using the PS command, you must perform the following procedure:
  1) When using hardware flow control, turn the flow control Off.
  2) Send dummy data (;).
  3) Wait for more than 200 ms.
  4) Send "PS1;" within 2 seconds of sending the dummy data.

## QD

Deletes the Quick Memory.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | Q | D | ; | | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

No parameters are used with this command.

- You cannot perform this command when Quick Memory mode is OFF (an error occurs).

## QI

Stores the settings in the Quick Memory.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | Q | I | ; | | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

No parameters are used with this command.

## QR

Sets and reads the Quick Memory channel data.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | Q | R | P1 | P2 | ; | | | | | |
| Read | Q | R | ; | | | | | | | |
| Answer | Q | R | P1 | P2 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Quick Memory OFF
- 1: Quick Memory ON

P2
- 0 ~ 9: Quick Memory channel number

- If parameter P1=0, set parameter P2 to 0.
- When configuring a value above the number of Quick Memory channels set by the menu, an error occurs.
- When specifying a blank channel, an error occurs.

## RA

Sets and reads the RF Attenuator status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | R | A | P1 | P1 | ; | | | | | |
| Read | R | A | ; | | | | | | | |
| Answer | R | A | P1 | P1 | P2 | P2 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 00: ATT OFF
- 01: ATT ON

P2
- 00: Always 00

## RC

Clears the RIT/XIT frequency.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | R | C | ; | | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

No parameters are used with this command.

- When the RIT/XIT function is ON, this command will clear the RIT/XIT frequency.
- When the RIT/XIT funtion is OFF, an error occurs.

## RD / RU

Sets and reads the RIT/XIT frequency Up/ Down. Also sets and reads the scan speed in Scan mode.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | R | D / U | P1 | P1 | P1 | P1 | P1 | ; | | |
| Read | R | D / U | ; | | | | | | | |
| Answer | R | D / U | P2 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 00000 ~ 99999: Frequency (in Hz)

P2
- 1 ~ 9: Scan speed

When Scan is OFF:
- This command is only used for the RIT/XIT frequency.
- The RU command is used to increase the frequency and the RD command is used to decrease the frequency.
- When no value for parameter P1 is entered, the frequency is adjusted by 1 step.
- The RIT/XIT setting has a frequency range of +9.999 kHz ~ -9.999 kHz

When Scan is ON:
- This command is used to set or read the scan speed. When the scan speed changes, a response is returned.
- When no value for parameter P1 is entered, the current scan speed is retrieved.
- Enter “RDxxxxx;” to increase the scan speed (where “x” can be any character).
- Enter “RUxxxxx;” to increase the scan speed (where “x” can be any character).

## RG

Sets and reads the RF Gain status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | R | G | P1 | P1 | P1 | ; | | | | |
| Read | R | G | ; | | | | | | | |
| Answer | R | G | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 000 ~ 255 (in steps of 1)

- Entering a value of 256 or higher results in 255 being entered.

## RI

Reads the RX frequency and Mode

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | I | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | I | P1 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | P2 | P3 | P4 | P4 | ; | | |

**[TS-590S / TS-590SG common] (TS-590S supported from the firmware version 1.08)**

Parameters:

P1
RX frequency

P2
RX Mode (refer to the MD command)

P3
ON/OFF status for DATA mode
00: DATA mode OFF
01: DATA mode ON

P4
Always "00"

- The AI function automatically send a response only when the receiving frequency changes during transmission by the split memory channel.

## RL

Sets and reads the Noise Reduction Level.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | L | P1 | P1 | ; | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | L | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | L | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1 (When NR1 is ON: reads the setting of the NR1 effective level)
01 ~ 10

- Entering a value of 00 results in 01 being entered. Entering a value of 11 or higher results in 10 being entered.

P1 (When NR2 is ON: reads the setting of the SPAC following speed)
00 ~ 09 (2 ms ~ 20 ms, in steps of 2 ms)

- When the Noise Reduction setting is OFF, an error occurs.

## RM

Sets and reads the Meter function.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | M | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | M | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | M | P1 | P2 | P2 | P2 | P2 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
0: No selection (selection cannot be made)
1: SWR
2: COMP
3: ALC

P2
0000 ~ 0030: Meter value in dots

- There are always three types of responses: SWR, COMP, and ALC.
- The ALC meter value is output during VGS recording and standby.

## RT

Sets and reads the RIT function status.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | T | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | T | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | T | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
0: RIT OFF
1: RIT ON

## RX

Sets the receiver function status.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | X | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | R | X | ; | | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

No parameters are used with this command.

- A response is output only when the AI function is working.

## SC

Sets and reads the Scan function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | C | P1 | ; | | | | | | |
| Read | S | C | ; | | | | | | | |
| Answer | S | C | P2 | P3 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Scan OFF
- 1: Scan ON (VFO Scan, Memory Scan, Quick Memory Scan)
- 4: Tone Scan ON
- 5: CTCSS Scan ON

P2
- 0: Scan OFF
- 1: Scan ON (VFO Scan, Memory Scan, Quick Memory Scan)
- 4: Tone Scan ON
- 5: CTCSS Scan ON
- 7: Program Scan ON

P3
- 0: Cancel the Slow Scan frequency point and outside the Slow Scan frequency range.
- 1: Set the Slow Scan frequency point and inside the Slow Scan frequency range.

- When parameter P1=1 is sent, the transceiver performs either Program Scan or VFO Scan depending on the VFO mode. In Quick Memory mode, it performs Quick Memory scan.

## SD

Sets and reads the CW break-in time delay.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | D | P1 | P1 | P1 | P1 | ; | | | |
| Read | S | D | ; | | | | | | | |
| Answer | S | D | P1 | P1 | P1 | P1 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0000 (ms): Full break-in
0050 ~ 1000 (ms) (in steps of 50)

- An entered value of 1001 or higher results in 1000 being entered.
- An entered value that does not match the 50 ms step value will be rounded down to the nearest 50 ms step.

## SH / SL

Sets and reads the receive tune bandwidth settings.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | H / L | P1 | P1 | ; | | | | | |
| Read | S | H / L | ; | | | | | | | |
| Answer | S | H / L | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

00 ~ 99

- The SH command is for the high-cut frequency and the SL command is for the low-cut frequency.
- In SSB Data mode, the SH command is used for Shift and the SL command is used for Width.
- An entered value higher than the maximum value for each entry type results in the maximum value being entered.

SSB/SSB-DATA/FM/FM-DATA mode High-cut frequency (Hz)
00: 1000, 01: 1200, 02: 1400, 03: 1600, 04: 1800, 05: 2000, 06: 2200, 07: 2400, 08: 2600, 09: 2800, 10: 3000, 11: 3400, 12: 4000, 13: 5000

SSB/SSB-DATA/FM/FM mode Low-cut frequency (Hz)
00: 0, 01: 50, 02: 100, 03: 200, 04: 300, 05: 400, 06: 500, 07: 600, 08: 700, 09: 800, 10: 900, 11: 1000

AM/AM-DATA mode High-cut frequency (Hz)
00: 2500, 01: 3000, 02: 4000, 03: 5000

AM/AM-DATA mode Low-cut frequency (Hz)
00: 0, 01: 100, 02: 200, 03: 300

SSB/SSB-DATA mode band width (Hz)
00: 50, 01: 80, 02: 100, 03: 150, 04: 200, 05: 250, 06: 300, 07: 400, 08: 500, 09: 600, 10: 1000, 11: 1500, 12: 2000, 13: 2500

TS-590S
SSB/SSB-DATA mode Shift frequency (Hz)
00: 1000, 01: 1100, 02: 1200, 03: 1300, 04: 1400, 05: 1500, 06: 1600, 07: 1700, 08: 1800, 09: 1900, 10: 2000, 11: 2100, 12: 2210

TS-590SG
SSB/SSB-DATA mode Shift frequency (Hz)
00: 1000, 01: 1100, 02: 1200, 03: 1300, 04: 1400, 05: 1500, 06: 1600, 07: 1700, 08: 1750 09: 1800, 10: 1900, 11: 2000, 12: 2100, 13: 2210

## SM

Reads the S-meter value.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | S | M | P1 | ; | | | | | | |
| Answer | S | M | P1 | P2 | P2 | P2 | P2 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Always 0

P2
- 0000 ~ 0030: S-meter value

- The P2 parameter value is the number of dots displayed on the meter.
- The SM command reads the S-meter during reception and the RF (power) meter during transmission.

## SP

Sets and reads the split operation frequency

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set 1 | S | P | P1 | ; | | | | | | |
| Set 2 | S | P | P1 | P2 | P3 | ; | | | | |
| Read | S | P | ; | | | | | | | |
| Answer | S | P | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common] (TS-590S supports from the firmware version 2.00.)**

Parameters:

P1 (Sets the split operation frequency)
- 0: No operation Setting complete
- 1: During the setting operation Setting start
- 2: Cancel (Setting command only)
  - * In Set 2, enter “0”.
  - * SPLIT LED of the transceiver flashes during setting.

P2 (Shift direction of the split operation frequency (1 digit)
- 0: Plus direction
- 1: Minus direction

P3 (Shift value of split operation frequency)
- 1 ~ 9 (Unit: kHz)

- When Set 2 is executed, split operation frequency setting is automatically confirmed.

## SQ

Sets and reads the squelch value.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | Q | P1 | P2 | P2 | P2 | ; | | | |
| Read | S | Q | P1 | ; | | | | | | |
| Answer | S | Q | P1 | P2 | P2 | P2 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 0: Always 0

P2
- 000 ~ 255 (in steps of 1): Squelch level

- An entered value of 256 or higher results in 255 being entered.

## SR

Resets the transceiver.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | R | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
- 1: VFO reset
- 2: Full reset

- An entered value other than those listed results in an error.

## SS

Sets and reads the Program Slow Scan frequency.

**Set**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| S | S | P1 | P2 | P3 | P3 | P3 | P3 | P3 | P3 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| P3 | P3 | P3 | P3 | P3 | ; | | | | |

**Read**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| S | S | P1 | P2 | ; | | | | | |

**Answer**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| S | S | P1 | P2 | P3 | P3 | P3 | P3 | P3 | P3 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| P3 | P3 | P3 | P3 | P3 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1
0 ~ 9: Memory channel number for Program Slow Scan

P2
0 ~ 4: Slow down frequency spot

P3
Slow down frequency (11 digits in Hz)

- If no point frequency has been set, parameter P3 is all 0's.
- If parameter P3 is set to all 0's, the point frequency set for parameter P2 is deleted.
- Other than when deleting parameter P3, you cannot set a frequency exceeding the section selected channel lower/upper frequency limits.
- If a P2 parameter is skipped (not entered sequentially from 0 to 4), the parameter will not be accepted.
- If the specified P1 parameter is an empty Memory channel, the SS command becomes invalid.
- When the AI function is ON, all slow scan points of the current Memory channel are output.
- When the AI function is ON and the status of the slow scan points changes (newly registered or deleted points), all slow scan points are output.
- In each section selected channel, when multiple slow scan point frequencies are set up, if you delete a frequency from one of the slow scan point numbers, the remaining point frequencies are renumbered with slow scan point numbers, starting from 0.

Example:

The following table lists point numbers and their respective frequency settings, before deleting any frequencies.

| Slow Scan Point Number (P2) | Slow Scan Point Frequency (before deletion) |
|---|---|
| 0 | 14.0 (MHz) |
| 1 | 14.1 (MHz) |
| 2 | 14.2 (MHz) |
| 3 | 14.3 (MHz) |
| 4 | 14.35 (MHz) |

If Slow Scan Point number 1 is deleted, numbers 2 ~ 4 step up one spot to fill in spots 1 ~ 3, leaving spot 4 empty.

| Slow Scan Point Number (P2) | Slow Scan Point Frequency (after deletion) |
|---|---|
| 0 | 14.0 (MHz) |
| 1 | 14.2 (MHz) |
| 2 | 14.3 (MHz) |
| 3 | 14.35 (MHz) |
| 4 | Empty |

The Slow Scan Point frequencies following the deleted point are read, and the empty point is written as a space (the frequency is not set).

## SU

Sets and reads the Scan group.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | U | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P9 | P10 | P11 | P12 | P13 | ; | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | S | U | P1 | ; | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | S | U | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P9 | P10 | P11 | P12 | P13 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Program Scan section defined memory setting
1: Memory Scan group setting

P2 ~ P13 (P13: TS-590SG only)

| Parameter | When Selecting the Program Scan Section | When Setting the Memory Scan Group |
|---|---|---|
| P2 | The section set in Channel P0 | Group 0 |
| P3 | The section set in Channel P1 | Group 1 |
| P4 | The section set in Channel P2 | Group 2 |
| P5 | The section set in Channel P3 | Group 3 |
| P6 | The section set in Channel P4 | Group 4 |
| P7 | The section set in Channel P5 | Group 5 |
| P8 | The section set in Channel P6 | Group 6 |
| P9 | The section set in Channel P7 | Group 7 |
| P10 | The section set in Channel P8 | Group 8 |
| P11 | The section set in Channel P9 | Group 9 |
| P12 | Always 0 | Group P |
| P13 | Always 0 | Group E |

0: Unselected
1: Selected

- P13 is only required for TS-590SG. P13 does not exist in TS-590S, and the next parameter of P12 is the terminator.
- When parameters P2 ~ P12 are selected in the Memory Scan group, unselecting them will configure All Channel Scan.

## SV

Performs the Memory Transfer function.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | S | V | ; | | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

No parameters are used with this command.

## TN

Sets and reads the Tone frequency.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | T | N | P1 | P1 | ; | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | T | N | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | T | N | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

00 ~ 42 (refer to the table below)

| No. | Freq. (Hz) | No. | Freq. (Hz) | No. | Freq. (Hz) | No. | Freq. (Hz) |
|---|---|---|---|---|---|---|---|
| 00 | 67.0 | 11 | 97.4 | 22 | 141.3 | 33 | 206.5 |
| 01 | 69.3 | 12 | 100.0 | 23 | 146.2 | 34 | 210.7 |
| 02 | 71.9 | 13 | 103.5 | 24 | 151.4 | 35 | 218.1 |
| 03 | 74.4 | 14 | 107.2 | 25 | 156.7 | 36 | 225.7 |
| 04 | 77.0 | 15 | 110.9 | 26 | 162.2 | 37 | 229.1 |
| 05 | 79.7 | 16 | 114.8 | 27 | 167.9 | 38 | 233.6 |
| 06 | 82.5 | 17 | 118.8 | 28 | 173.8 | 39 | 241.8 |
| 07 | 85.4 | 18 | 123.0 | 29 | 179.9 | 40 | 250.3 |
| 08 | 88.5 | 19 | 127.3 | 30 | 186.2 | 41 | 254.1 |
| 09 | 91.5 | 20 | 131.8 | 31 | 192.8 | 42 | 1750 |
| 10 | 94.8 | 21 | 136.5 | 32 | 203.5 | — | — |

- An entered value of 43 or higher results in an error.

## TO

Sets and reads the Tone status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | T | O | P1 | ; | | | | | | |
| Read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | T | O | ; | | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | T | O | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Tone OFF
1: Tone ON

## TP

Sets and reads the output power for TX Tune.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | T | P | P1 | P1 | P1 | ; | | | | |
| Read | T | P | ; | | | | | | | |
| Answer | T | P | P1 | P1 | P1 | ; | | | | |

**[TS-590SG only]**

Parameters:

P1

005 ~ 100

- When the Power Fine function is On, the step size is 1 W.
- When the Power Fine function is Off, the step size is 5 W. In this case, if an inappropriate value is entered, the value is rounded down to the nearest 5's value. For example, when you enter a value of 093, it is rounded down to 090.
- Entering a value lower than the minimum value results in the minimum value being entered and entering a value higher than maximum value results in the maximum value being entered.

## TS

Sets and reads the TF-Set status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | T | S | P1 | ; | | | | | | |
| Read | T | S | ; | | | | | | | |
| Answer | T | S | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: TF-Set OFF

1: TF-Set ON

## TX

Sets the transmission mode.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | T | X | P1 | ; | | | | | | |
| Answer | T | X | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: SEND (normal transmission using the MIC input)

1: DATA SEND (ACC2/ USB input)

2: TX Tune

- If no P1 parameter is specified, it is set to 0 (SEND).
- A response is output only when using the AI function.

## UR / UT

Sets and reads the RX / TX equalizer.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | U | R / T | P1 | P1 | P2 | P2 | P3 | P3 | P4 | P4 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P5 | P5 | P6 | P6 | P7 | P7 | P8 | P8 | P9 | P9 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P10 | P10 | P11 | P11 | P12 | P12 | P13 | P13 | P14 | P14 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | P15 | P15 | P16 | P16 | P17 | P17 | P18 | P18 | ; | |
| Read | U | R / T | ; | | | | | | | |
| Answer | U | R / T | P1 | P1 | P2 | P2 | P3 | P3 | P4 | P4 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P5 | P5 | P6 | P6 | P7 | P7 | P8 | P8 | P9 | P9 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P10 | P10 | P11 | P11 | P12 | P12 | P13 | P13 | P14 | P14 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | P15 | P15 | P16 | P16 | P17 | P17 | P18 | P18 | ; | |

**[TS-590S / TS-590SG common]**

Parameters:

P1: 0 Hz level
P2: 300 Hz level
P3: 600 Hz level
P4: 900 Hz level
P5: 1200 Hz level
P6: 1500 Hz level
P7: 1800 Hz level
P8: 2100 Hz level
P9: 2400 Hz level
P10: 2700 Hz level
P11: 3000 Hz level
P12: 3300 Hz level
P13: 3600 Hz level
P14: 3900 Hz level
P15: 4200 Hz level
P16: 4500 Hz level
P17: 4800 Hz level
P18: 5100 Hz level

- Each parameter has a range from 00 ~ 30 (where 00 is -24 dB, 06 is 0 dB, and 30 is +6 dB; each value decreases the step by 1 dB). An entered value of 31 or higher results in an error.
- When the equalizer is set to OFF through the Menu, you cannot adjust the level using this command (an error occurs).
- When the equalizer is set to anything other than OFF, through the Menu, you can use this command to adjust the level.
- When the equalizer is set to "USER" through the Menu, the level you select will be stored in the transceiver memory.
- When the AI function is ON, if any changes are made to the equalizer settings, a response command is output.

## VD

Sets and reads the VOX Delay time.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | D | P1 | P1 | P1 | P1 | ; | | | |
| Read | V | D | ; | | | | | | | |
| Answer | V | D | P1 | P1 | P1 | P1 | ; | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0000 ~ 3000 ms (in steps of 150)

- An entered value of 3001 or higher results in 3000 being entered.
- An entered value that does not match the 150 ms step value will be rounded down to the nearest 150 ms step.

## VG

Sets and reads the VOX Gain.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | G | P1 | P1 | P1 | ; | | | | |
| Read | V | G | ; | | | | | | | |
| Answer | V | G | P1 | P1 | P1 | ; | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

000 ~ 009 (in steps of 1)

- An entered value of 010 or higher results in 09 being entered.

## VR

Sets and reads the VOX Gain.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | R | P1 | ; | | | | | | |
| Read | V | R | ; | | | | | | | |
| Answer | V | R | P2 | ; | | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Auto (set P1 to 4 to cancel)
1: VOICE 1
2: VOICE 2
3: VOICE 3
4: Cancel

P2

0: VGS-1 is not installed
1: VGS-1 is installed

- The cancel status is not retained when the transceiver power is turned OFF.
- In TS-590S, Read and Answer are supported from the firmware version 2.00.

## VS0

Sets and reads the Visual Scan start/ stop/ pause status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | S | 0 | P1 | ; | | | | | |
| Read | V | S | 0 | ; | | | | | | |
| Answer | V | S | 0 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: Visual Scan OFF
1: Visual Scan ON (while scanning)
2: Visual Scan pause
3: Visual Scan restart (when paused) (set command only)

- Visual Scan will not start when the AI function is OFF.
- Visual Scan can only be used in VFO mode.
- You cannot start Visual Scan while transmitting.
- During Visual Scan, reception is muted and the S meter will not display signal strength. (While paused, reception and the S meter function normally.)
- During Visual Scan, you cannot change the band, the VFO A/B, the Memory Channel mode, or the Quick Memory Channel mode. Additionally, you cannot transmit.
- When the transceiver power is turned OFF, Visual Scan will also turn OFF.

## VS1

Sets the Visual Scan center frequency.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | S | 1 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

Center frequency (11 digits in Hz, unused high level digits are set to 0)

- To read the center frequency, use the "VS3;" command.
- The center frequency is stored in each band, and can be changed using the Band Direct key.

| Band Direct Key | Default Value |
|---|---|
| [1.8] | 1.85 MHz |
| [3.5] | 3.55 MHz |
| [7] | 7.05 MHz |
| [10] | 10.15 MHz |
| [14] | 14.05 MHz |
| [18] | 18.118 MHz |
| [21] | 21.05 MHz |
| [24] | 24.94 MHz |
| [28] | 28.05 MHz |
| [50] | 50.05 MHz |
| [GENE] | 5.05 MHz |

- Do not enter a frequency outside the reception frequency range. An error will occur.

## VS2

Sets the Visual Scan span.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | S | 2 | P1 | ; | | | | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

0: 20 kHz (in steps of 100 Hz)
1: 50 kHz (in steps of 250 Hz)
2: 100 kHz (in steps of 500 Hz)
3: 200 kHz (in steps of 1 kHz)
4: 500 kHz (in steps of 2.5 kHz)
5: 1 MHz (in steps of 5 kHz)
6: 2 MHz (in steps of 10 kHz)

- To read the span, use the "VS3;" command.
- The span is stored in each band, and can be changed using the Band Direct key.

| Band Direct Key | Default Value |
|---|---|
| [1.8] | 100 Hz |
| [3.5] | 100 Hz |
| [7] | 100 Hz |
| [10] | 100 Hz |
| [14] | 100 Hz |
| [18] | 100 Hz |
| [21] | 100 Hz |
| [24] | 100 Hz |
| [28] | 100 Hz |
| [50] | 5100 Hz |
| [GENE] | 100 Hz |

## VS3

Reads the Visual Scan upper/ lower/ center frequency, and span.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | V | S | 3 | ; | | | | | | |
| Answer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | V | S | 3 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | P1 | P2 | P2 | P2 | P2 | P2 | P2 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | P2 | P2 | P2 | P2 | P2 | P3 | P3 | P3 | P3 | P3 |
| | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | P3 | P3 | P3 | P3 | P3 | P3 | P4 | ; | | |

**[TS-590S / TS-590SG common]**

Parameters:

P1

Lower frequency (11 digits in Hz)

P2

Center frequency (11 digits in Hz)

P3

Upper frequency (11 digits in Hz)

P4 (span)

0: 20 kHz ±10 kHz (in steps of 100 Hz)
1: 50 kHz ±25 kHz (in steps of 250 Hz)
2: 100 kHz ±50 kHz (in steps of 500 Hz)
3: 200 kHz ±100 kHz (in steps of 1 kHz)
4: 500 kHz ±250 kHz (in steps of 2.5 kHz)
5: 1 MHz ±500 kHz (in steps of 5 kHz)
6: 2 MHz ±1 MHz (in steps of 10 kHz)

## VS4

Reads the Visual Scan sweep frequency and signal level.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | V | S | 4 | ; | | | | | | |
| Answer | V | S | 4 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P1 | P1 | P1 | P1 | P2 | P2 | P2 | P2 | ; | |

**[TS-590S / TS-590SG common]**
Parameters:
P1
Sweep frequency (11 digits in Hz)
P2 (signal level)
0000 ~ 0060

## VV

Performs the VFO copy (A=B) function.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | V | ; | | | | | | | |

**[TS-590S / TS-590SG common]**
Parameters:
No parameters are used with this command.

## VX

Sets and reads the VOX and Break-in function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | V | X | P1 | ; | | | | | | |
| Read | V | X | ; | | | | | | | |
| Answer | V | X | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**
Parameters:
P1
0: VOX OFF
1: VOX ON

- When transmitting the VX command in CW mode, the Break-in function is set and read, rather than the VOX function.

## XI

Reads the transmit frequency and mode.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Read | X | I | ; | | | | | | | |
| Answer | X | I | P1 | P1 | P1 | P1 | P1 | P1 | P1 | P1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | P1 | P1 | P1 | P2 | P3 | P4 | P4 | ; | | |

**[TS-590S / TS-590SG common]**
Parameters:
P1
Frequency (11 digits in Hz)
P2
Transmission mode (refer to the MD command)
P3
0: Data mode OFF
1: Data mode ON
P4
00: Always 00

- When the transmit frequency changes across the HF band and the 50 MHz range, the AI function automatically sends a response when the transmission mode changes.

## XO

Sets and reads the offset direction and frequency for the transverter mode.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | X | O | P1 | P2 | P2 | P2 | P2 | P2 | P2 | P2 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P2 | P2 | P2 | P2 | ; | | | | | |
| Read | X | O | ; | | | | | | | |
| Answer | X | O | P1 | P2 | P2 | P2 | P2 | P2 | P2 | P2 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | P2 | P2 | P2 | P2 | ; | | | | | |

**[TS-590S / TS-590SG common]**
Parameters:
P1 (For the transceiver frequency, the transverter frequency can be set in either direction)
0: Plus direction
1: Minus direction
P2
Offset frequency in Hz (11 digits in Hz)

- When setting the offset frequency, the 1 Hz digit is set to 0.

## XT

Sets and reads the XIT function status.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Set | X | T | P1 | ; | | | | | | |
| Read | X | T | ; | | | | | | | |
| Answer | X | T | P1 | ; | | | | | | |

**[TS-590S / TS-590SG common]**
Parameters:
P1
0: XIT OFF
1: XIT ON