AOR™

The New Concept

CU8232

Remote Control Interface

Supplement for the AR2700

Hand Portable Radio Receiver

Thank you for purchasing the CU8232 computer control interface for operation with the AR2700 receiver.

Every effort has been made to make this supplement correct and up to date. Due to continuous development of the product and by error or omission anomalies may be found and these are acknowledged.

Most apparent faults are usually due to accidental misoperation of the product, carefully read all of the manual and relevant sections in the AR2700 operating manual before deciding to return the interface for repair.

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Index

(1) General

The CU8232 interface allows computer control via the RS232 serial port of a computer. An additional piece of software will usually be required in order to address the computer's serial port with the correct set of parameters. If using an IBM-PC or clone (with 80386 processor or higher) Microsoft WINDOWS "TERMINAL" may be used to address the computer's serial port, configuration of "TERMINAL" is covered later in this manual.

In order to gain the greatest flexibility, a specialist software package is desirable. It is planned to later introduce IBM compatible DOS and Microsoft WINDOWS packages to support the AR2700 receiver.

The CU8232 interface also enables data to be copied between two AR2700 receivers when simultaneously connected to the CU8232. All operating, memory and search bank data may be transferred and is accomplished without the use of a host computer and the interface is powered from the AR2700 receiver.

(2) Supplied Accessories

Please check that the following items are included in the package:

Description	Quantity
CU8232 remote control interface box	One
Flat cable	Two
RS232C 9-pin to 25-pin adaptor	One
RS232C 9-pin male-Female adaptor	One
English language operating manual (CU8232 & AR8000)	One
Optional - AR2700 supplement (this booklet)	*One*

(3) AR2700/CU8232 connection & clone

1.   A ribbon cable is used to connect the AR2700 to the CU8232. One end of the ribbon cable has a reinforced plate, this is used at the AR2700 end of the connection. Insert one flat cable (they are both identical) into the CU8232 [PROGRAM] socket contact (metal) side downward.
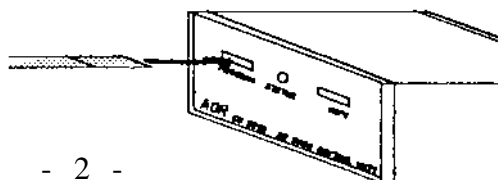
The [PROGRAM] socket is the primary receiver connection used for computer control. This port also takes power from the receiver (when the AR2700 is switched On).

Should you wish to CLONE data between two AR2700 receivers, connect the second ribbon cable to the socket labelled [COPY].

2.   Remove the battery compartment lid of the AR2700 using a downward sliding motion.

    Locate the remote control socket which is located at the bottom edge of the battery compartment. Insert the ribbon cable (with the reinforced plate) contact (metal) side facing toward the front of the receiver and the blue tab facing you (so that the cable is not twisted)

IMPORTANT
If the receiver has a four pin remote socket the optional IF-ADP cable will be required... in which case please contact your dealer.

It may be difficult to insert the flat cable into the CU8232 or AR2700 socket for the first time as they are necessarily quite tight. If this is the case, try inserting with a little upward pressure, it should become easier the next time.

DO NOT APPLY EXCESSIVE STRESS TO THE FLAT CABLE UNDER ANY CIRCUMSTANCES.

A DC voltage is fed to the CU8232 by the AR2700 connected to the [PROGRAM] socket. When the receiver is switched On, the AR2700 DATA is routed to the RS232 connector.

If a second receiver is connected to the [COPY] socket and switched On, the CU8232 recognises it's presence and routes data between receivers and not to the RS232 socket.

3.   To CLONE data between two AR2700 receivers, connect each receiver to the CU8232 using a ribbon cable as outlined above. Data may be transferred in BOTH direction between the [PROGRAM] and [COPY] sockets.

4.   Switch both receivers On and run the CLONE functions as detailed on page 57 section 15 of the AR2700 English language operating manual.

Caution!
Make sure that no low / flat batteries occur while the data clone is in progress. Although no significant extra current is required for clone operations, flat batteries may cause corrupted data transfer. It is advisable that the receivers are both powered from their chargers (which were supplied with the receivers) during clone operation.

5.   If a data clone fails retry the procedures of clone operation after checking the following:

    ☆ Make sure that all connections are correct and there is no loose contact.

    ☆ Ensure that one receiver is in TRANSMIT mode and the other is in RECEIVE mode.

    ☆ Always press the [ENT] key of the AR2700 in RECEIVE mode first so that it is ready to accept data.

    ☆   Press the [CLEAR] key of the receiver prior to the retry if the failure is due to incorrect connections or an error in key sequence.

6.   An alternative method may be used to connect two AR8000 receivers for data CLONE. Two CU8232 interfaces may be employed with each AR2700 connected to the [PROGRAM] socket. The RS232 9-pin connectors are linked using a three wire crossed cable:

CU8232	CU8232
Pin 2	**Pin 3**
Pin 3	**Pin 2**
Pin 5	**Pin 5**

    No other pins are used.

(4) Connection for RS232 operation

The connection and setup parameters are identical to those for the AR8000 receiver... for this reason please refer to page 6 section 4 of the main CU8232 operating manual.

Sections 5, 6 & 7 refer to the main CU8232 manual

(8) Revised list of commands (AR2700)

Application	Command
VFO Freq Input	RF
Receiver Function	AT AU MC MD RX ST
SQ, S-Meter	LC LM MG SG
Receive Mode	MR MG MS SG SS VF
Search	BN BQ BS SE SG SR SS TP
Search Data Write	AT AU MD SE SL SU ST
Pass Freq	PD PR PS PW
Memo CH, Scan	BM BN MA MG ML MP MQ MR MS
Memo CH Data Write	AT AU MD MX RF ST
Others	EX SC SI TI QP RR

↑[UP] (1E)   ↓[DOWN] (1F)   ( )= Hex Decimal
Arrow is a control code of ASCII.
No delimiter is required when sending Arrow.
Commands which have dual roles are duplicated in this list.

(9) Command index (AR2700)

AT	Register the attenuator position ON/OFF.
AU	Register the auto mode ON/OFF.
BM	Register the scan bank link ON/OFF.
BN	Change the search/scan bank.
BQ	Register the search bank link function ON/OFF.
BS	Register the search bank link ON/OFF.
EX	End the Remote mode (RS232C).
LC	Respond with the received freq and S-level when SQ opens.
LM	Respond with the S-level reading and SQ open/close.
MA	Respond with the contents of the present bank or specified bank.
MC	Select the monitor switch position.
MD	Select the receive mode.
MG	Start the scan mode. Respond with receive freq and S-level reading when SQ is open (as LC).
ML	Register the scan bank link function ON/OFF.
MP	Register the present memory channel as Pass channel.
MQ	Delete the present bank or memory channel.
MR	Switch to the memory read (M.RE) mode.
MS	Switch to the scan (SCAN) mode.
MX	Write data into memory channel.
PD	Delete the Search Pass Freq
PR	Recall the Search Pass Freq
PS	Register the Search Pass Freq
PU	Register the pause (free search / scan) On / Off
PW	Register the presently receiving freq as Pass Freq
QP	Turn the power switch Off
RF	Key in the Freq in VFO
RR	Control the AR2700 record / play back
RX	Respond with the presently receiving data
SC	Change the operating code of the option unit (when fitted - not available in the UK).
SE	Register the Search data.
SG	Start the Search mode. Respond with freq and S-level reading when SQ is open.
SI	Switch the option unit ON/OFF (when fitted - not available in the UK).
SL	Write the start freq of Search.
SR	Recall the Search data.
SS	Start the Search.
ST	Register the step size in search mode.

SU   Register the end freq of search mode.
TI   Register the interval time of Priority channel.
TD   Register the delay time
TP   Register the pause time

Arrow Mark
↑[UP] ↓[DOWN]   similar to the receiver's keyboard.

(10) Explanation of commands (AR2700)

AT

ATTENUATOR ON/OFF.

ATn[⇦]   n = 0 ATT OFF
                      n = 1 ATT ON

Multiple commands in conjunction with other commands are possible with a space in between:
AT, AU, MD, RF, ST

Example: AU0_MD3_RF145.2_AT1[⇦]

AT[⇦] checks the current attenuator setting, the response being:

AT0 = ATT OFF
AT1 = ATT ON

Related commands MD MX RF SE

AU

AUTO MODE (and step) ON/OFF.

AUn[⇦]   n = 0 AUTO MODE OFF
                      n = 1 AUTO MODE ON

Multiple commands in conjunction with other commands are possible with a space in between:
AT, AU, MD, RF, ST

Example: AU0_MD3_RF145.2[⇦]

AU[⇦] checks the current auto mode setting, this is not valid when "M.RE" or "SCAN" is in use. The usual response to the AU request being:

AU0 = AUTO MODE OFF
AU1 = AUTO MODE ON - step size and receive mode set automatically.

Related commands MD MX RF SE ST

BM

SCAN BANK LINK ON/OFF (specifically).

BM[⇦] checks the current status of linked scan banks.

If bank letters are specified then scan bank link is On (the specified banks will be scanned as a group), if no letters are specified then the facility is Off.

First check the current status by typing BM[⇦]

A typical response may be: BM 1 2 - - 5 - - - 9 -

To switch bank link Off type in the reported scan bank letters:

    BM 1259

To activate a new scan bank link type in the required list of scan bank letters.
For example to link a few specified scan banks and turn the facility On:

Type BM followed by the bank letters and terminated with [⇦]

> BM 1348 [⇦]

The BM command may be used to switch some banks On and others Off at the same time. To make things easier a "-" character **reverses** the current status of the specified bank, of course this may also be used to switch scan bank link Off.

Note: The SCAN BANK LINK facility can also be simply switched On/Off using the ML command.

BS is the equivalent command for SEARCH bank link.

Related commands ML BN SG SS

BN

The BN command is used to change the starting point for SCAN and SEARCH banks. In VFO mode, BN specifies the bank to use when SCAN or SEARCH mode is entered (rather than the last used bank location).

In scan or search mode for format is BNx[⇦] where x is a bank location 0 - 9.
To review the current status of BN simply type BN[⇦]

Related commands BM BQ BS ML MQ SG SS

BQ

Switch search bank link On/Off (globally).

The BQ command provides a simple method of switching search bank link On/Off.

Type BQn[⇦] to toggle the status   n = 0 search bank link OFF
                                                    n = 1 search bank link ON

Related commands BN BS SA SG SS
ML is the equivalent command for SCAN.

BS

SEARCH BANK LINK ON/OFF (specifically).

BS[⇦] checks the current status of linked search banks.

If bank letters are specified then search bank link is On (the specified banks will be searched as a group), if no letters are specified then the facility is Off.

First check the current status by typing BS[⇦]

A typical response may be: BS - 2 3 4 - - 7 8 - -

To switch bank link Off type in the reported scan bank letters

BS 2 3 4 7 8

To activate a new search bank link type in the required list of search bank letters. For example to link a few specified search banks and turn the facility On:

Type BS followed by the bank letters and terminated with [⇦]

> BS 1 2 3 [⇦]

The BS command may be used to switch some banks On and others Off at the same time. To make things easier a "-" character **reverses** the current status of the specified bank, of course this may also be used to switch search bank link Off.

Note: The SEARCH BANK LINK facility can also be simply switched On/Off using the BQ command.

BM is the equivalent command for SCAN bank link.

Related commands BQ SS

EX

End remote operation and restore keypad operation to AR2700.

To end RS232 remote operation type EX[⇦]

This has the same effect as pressing the [CLR] key on the AR2700 receiver.

LC

The LC command caused the receiver to supply FREQUENCY and S-METER level only when the squelch is opened. A new response will be repeated automatically when the squelch is closed and opened again.

To terminate the facility send another command.

LC[⇦] will report the present receive frequency and S-meter. The S-meter report is in 64 steps from hex decimal 00 to 3F.

A typical response may be: LC1B_RF0145300000

                                            S-meter h1B Receive frequency 145.30 MHz

Notes: S-meter reading and frequency are separated with a space. The S-meter output is in 64 steps (hex decimal) 00 to 3F. "3F" may not be available on some sets as the CPU processes the data and the MAXIMUM level may vary slightly between sets.

Approximate relation of S-meter and LC report:

S-meter   0   1   2   3   4   5   6   7   8   9
"LC"   0 ~ 15 ~ 19 ~ 1D ~ 21 ~ 23 ~ 26 ~ 28 ~ 2E ~ 3F (16 hex)

Related commands LM MG SG

LM

S-meter reading and squelch status.

The LM command is used to report the S-meter level and squelch open / closed status.

The S-meter reading is reported in 64 steps (hex) 00 ~ 3F. The squelch is CLOSED when the response is 80 and above.

A typical response to the LM[⇦] command is: LM1D

    00 ~ 3F   Squelch is open   (MSB = 0)
    80 ~ BF   Squelch is closed (MSB = 1)

Related commands LC MG SG [UP] [DOWN]

MA

Recall data from the current or specified memory bank.

The MR command recalls data from the current or specified memory bank.

MR[⇦] recalls data from the current memory bank.

MRx[⇦] recalls data from the specified memory bank where
                                            x = 0 ~ 9
A typical response being:

MX100_MP0_RF0000594000_AU1_MD2_ST009000_AT0
MX101_MP0_RF0000693000_AU1_MD1_ST009000_AT0

SIMILAR FORMAT FOR ALL CHANNELS...

MX149_MP0_RF0082520000_AU1_MD1_ST100000_AT0

The first memory channel data being:

Memory location:	100
Memory pass:	OFF
Receive frequency:	594 kHz (0.594 MHz)
Step increment:	9 kHz
Auto mode:	ON
Receive mode:	AM
Attenuator:	OFF

If no data is available in the selected or current memory bank the response may look like this:

MA3_—   No memory data in this channel of bank "3".

Related command MX

MC

Select monitor switch position.

The monitor switch may be selected irrespective of squelch setting by use of the MC command. This is particularly useful for monitoring weak or fluttery signals. The MC command may also be used to mute the audio completely.

MCn[⇦] where   n = 0 MUTE OFF (emit audio)
                     n = 1 MUTE ON   (mute audio)
                     n = 2 MUTE AUTO (restore normal SQ operation)

MD

The MD command provides a quick method to report and change the current receive mode without affecting other settings.

To report the current mode type:

MD[⇦] where   0 = WFM
                    1 = NFM
                    2 = A M

To change the current mode:

MDn[⇦] where n equals 0 ~ 2   MD0[⇦] WFM
                                     MD1[⇦] NFM
                                     MD2[⇦] A M

Multiple command entry is of course possible: AT0_MD_RF145.2[⇦]

Related commands AU MX RF SE

MG

Scan with frequency and S-meter then resume.

The MG commands causes an automatic response of receive frequency and S-meter level (similar to LC command) AND places the receiver into memory scan mode again.

MG[⇦] will report the present receive frequency in Hz and S-meter. The S-meter report is in 64 steps from hex decimal 00 to 3F.

A typical response may be: LC2B_RF0145300000

S-meter h2B Receive frequency 145.30 MHz

Related commands BM BN ML MP MQ MR MS MX ⬆ ⬇
SG is the equivalent command for SEARCH.

ML

Scan bank link On/Off.

The ML command is used to switch the memory scan bank link facility ON / Off.

The command ML[⇦] may be used to check the current status of scan bank link.

To change the status of scan bank link, the MLn[⇦] command is used

<div style="text-align: center">

where   n = 0 Bank link OFF
n = 1 Bank link ON
</div>

Related commands MG MS
BQ is the equivalent command for SEARCH.

MP

Register the present channel as PASS.

The MP command is used to register the current memory channel as PASS
(so that it will be skipped during scan). The command is generally used in
conjunction with the "MR" command.

To check the current status of PASS use the command MP[⇦]

The response will be   MP0   Memory PASS OFF
                   MP1   Memory PASS ON

It is possible to change the status of memory channel PASS using the command:

MPn[⇦] where   n = 0 Channel PASS OFF
                     n = 1 Channel PASS ON

Related commands BN MQ MR MG MS

MQ

Delete the current memory channel OR bank.

The MQ command **can only be used in M.RE (memory read) mode.** It is used to delete memory channels
or a whole memory bank in one go. The memory bank must first be recalled as the active bank.

Note: Once memory channels have been deleted the data is lost. They can not be reinstated but new data
has to be written to the channel if required.

The command MQ[⇦] deleted the current memory channel.

The command MQnn[⇦] deletes the specified memory channel from the current bank were

<div style="text-align: center">

nn = 00 ~ 49
</div>

The command MQ%%[⇦] deletes ALL memory channels from the current memory bank.

Related commands BN MP MR MG MS

MR

Place the receiver in M.RE - memory read mode.

The MR command is used to place the receiver into memory read mode. The MR command is also required
before channels may be deleted using the MQ command.

The MR[⇦] command places the receiver in memory recall mode and the last used channel data is reported.

It is possible to specify both the memory bank and channel number for recall:

MRxnn[⇦] where   x = memory bank 0 ~ 9
                 nn = channel number 00 ~ 49

A typical response to the MR command may be:

MX043_MP0_RF0435120000_AU1_MD1_ST020000_AT0

Memory location:	043
Receive frequency:	435.12 MHz
Step size:	20 kHz
Receive mode:	NFM
Attenuator:	OFF

A response of: MX700_— indicates that memory 7 bank has no data programmed or it has has been deleted.

Related command BN MA MP MQ ⬆ ⬇

MS

Start memory scan.

The MS command places the receiver into memory scan mode.

    MS[⇐]

Commences memory scan from the current memory bank (or last one used if in another operating mode).

    MSx[⇐]

Commences memory scan from a specified memory bank number

where x = 0 ~ 9 memory bank number

If the specified memory bank number has no memory contents an error beep will sound.

Related commands BM BN MG ML MP MQ MR MX SG ⬆ ⬇

SS is the equivalent command for SEARCH.

MX

Write data into a memory channel.

The MX command is used to write a comprehensive set of data to a specified memory bank / channel.

The format of the command is:

MXxnn_RF(freq)_AU(auto mode)_MD(mode)_ST(step size)_AT(att) [⇐]

For example: MX114_RF124.8_AU1_AT0 [⇐]

This will set memory channel "114" with a frequency of 124.8 MHz, Auto mode ON and Attenuator OFF.

MXxnn Memory location where	x = 0 ~ 9 memory bank nn = 00 ~ 49 memory channel
RFnnnnnnnnm0 (Hz)	Frequency input in MHz. The last but one digit (tens of Hz) MUST be either "5" (for 6.25 kHz channel steps) or "0" for other step sizes.
RFnnnn.nnnnm0 (MHz)	Refer to the command "RF".
AUn AUTO MODE where	n = 0 OFF n = 1 ON

* When AUTO MODE is ON, step size and mode is invalid.

STnnnnm0 (Hz)	Step size input in MHz. The last but one digit (tens of Hz) MUST be either "5" (for 6.25 kHz channel steps) or "0" for other step sizes.
STnnn.nm0 (kHz)	Refer to the command "ST".
MDn Receive mode where	n = 0 WFM n = 1 NFM n = 2 A M
ATn Attenuator where	n = 0 Attenuator OFF n = 1 Attenuator ON

Absence of a command will cause the present or previous value to be automatically entered.

Related commands MP MQ MR

PD

Delete PASS frequencies in search mode.

There are a total of 50 PASS frequencies, they may be deleted on an individual basis or the whole bank may be deleted in one go.

PDnn[⇦] deletes a specific PASS frequency where nn is the PASS channel number 00 ~ 49.

When a PASS channel is deleted, the PASS frequency number will be incremented upward.

PD%%[⇦] deletes ALL PASS channels in one go.

Related commands PR PS PW SG SR SS

PR

There are 50 PASS frequencies allocated per search bank, they may be recalled on an individual basis for review using the PR command before being deleted using the PD command.

PR[⇦] recalls ALL PASS frequencies.

PRnn[⇦] recalls a specific PASS frequency from the chosen search bank where nn is the PASS channel number 00 ~ 49.

When a PASS channel is deleted using the PD command, the PASS frequency number will be incremented upward.

Related commands PD PS PW SG SS

PS

Write search PASS frequency.

There are a total of 50 PASS frequencies, they may be entered using the PS command.

PSnnnnnnnn00[⇦] (Hz)   enter PASS frequency in Hz

PSnnnn.nnn[⇦]   (MHz)   enter PASS frequency in MHz. If MHz entry is
                                        used there is no need to enter the trailing digits
                                        after the decimal point, they will be treated as "0".

Examples of PASS frequency input:

150.2 MHz	PS150.2[⇦] or PS150200000[⇦]
1134 kHz	PS1.134[⇦] or PS1134000[⇦]
1691.0 MHz	PS1691.[⇦] or PS1691000000[⇦]

Related commands PD PR PW SG SS

PU

Register the pause On/Off (pause time can be specified using TP). To register the pause, the command PU[⇦] is used.

The format is: PUn[⇦] where   n = 0 Pause Off
                                       n = 1 Pause On

The command PU[⇦] is used to review the current setting of pause where the response will be:
                                       PU0 = Pause Off
                                       PU1 = Pause On

Related commands MG MS SG SS TP

PW

Register current frequency as PASS.

The PW command is used to register the current receive frequency in the search pass list.

The command PW[⇦] being used.

Related commands PD PR PS SG SS

QP

Used to turn the receiver power switch Off (cannot be used to switch the receiver On!). Register current frequency as PASS.

The format of the command is QP[⇦]

RF

Write and recall receive frequency to / from VFO.

The RF command is used to write a frequency to VFO. The input may be specified in Hz or in MHz if the decimal point is used.

The format of the RF command being:

    RFnnnnnnnnm0[⇦]   (Hz)
    or
    RFnnnn.nnnnm[⇦]   (MHz)

The last but one digit (tens of Hz) MUST be either "5" (for 6.25 kHz channel steps) or "0" for other step sizes, any other number will be ignored.

For example:

    150.3 MHz   input   RF150.2[⇦] or RF150200000[⇦]
    1134 kHz   input   RF1.134[⇦] or RF1134000[⇦]
    1691.0 MHz   input   RF1691.[⇦] or RF1691000000[⇦]

To recall the receive frequency, the RF[⇦] command is used. The response may look like

                RF000134_AU1_MD2_ST009000_AT0

This means a receive frequency of 134.0MHz, Automode On, AM mode, 9kHz steps, attenuator Off.

Related commands RX ↑↓

RR

Control of the optional voice record facilities.

The RR command is used to control the voice recording facilities On & Off.

The format of the command being: RRn[⇦] where
                                                n = 0 Stop recording or playback
                                                n = 1 Start recording
                                                n = 2 Start playback

It is NOT possible to change "directly" from the recording position to playback... instead the sequence must always pass through the stop position.

RX

Recall present operating condition and data.

The RX command is used to recall (generate a report) the current operating condition of the receiver including VFO, SCAN, SEARCH along with receive mode, frequency etc.

The format of the RX command is: RX[⇦]

Response examples are as follows:

VFO MODE   RF0126000000_AU1_MD2_ST05000_AT0
M.RE   MZ107_MP0_RF0126000000_AU1_MD2_ST050000_AT0
SCAN MODE   MA101_MP0_RF0156000000_AU1_MD1_ST025000_AT0
SEARCH MODE   SS_RF0145100000_AU1_MD1_ST025000_AT0

Related command BN

SC

Set operating code for option (not available in the UK).

The SC command is used to review and select the operating code if the option is fitted to the AR2700.

To review the current selection of code use the command SC[⇦]

The response will be in the format SCnn where nn = 26 ~ 50 (HEX DECIMAL h26 ~ h50 = 42 steps).

To change the current code use the format SCnn[⇦] where nn is the desired operating code.

Related command SI

SE

The SE command is used to input data for search bands.

To write search data into the currently selected search bank, the format of the SE command is:

> **SE_SL**[LOWER FREQUENCY]_**SU**[HIGHER FREQUENCY]_AU**[AUTOMODE]**_
> **ST**[STEP SIZE]_**MD**[MODE]_**AT**[ATTENUATOR] [⇦]

To write search date to a specific search bank, the following format is used:

> **SEx_SL**[LOWER FREQUENCY]_**SU**[HIGHER FREQUENCY]_AU**[AUTOMODE]**_
> **ST**[STEP SIZE]_**MD**[MODE]_**AT**[ATTENUATOR] [⇦]
>
> Where:

SEx	x = Search bank number 0 ~ 9	
SL	Lower frequency limit nnnnnnnnm0 (Hz)	
	or nnnn.nnnnm (MHz)	
	m = "0" (tens of Hz position) "5"	
	is only used when the step size of	
	6.25 kHz has been selected.	
SU	Upper frequency limit nnnnnnnnm0 (Hz)	
	or nnnn.nnnnm (MHz)	
	m = "0" (tens of Hz position)	
AU	Automode n = 0 Automode OFF	
	n = 1 Automode ON	
	When automode is ON, the receive mode and step	
	size is automatically set and any alternative input	
	of SE will be ignored. Refer to AU command.	
ST	Step size nnnnm0 (Hz)	
	or nnn.nm (kHz)	
	m = "0" or "5" (tens of Hz position)	
MD	Receive mode WFM 0	
	NFM 1	
	AM 2	
AT	Attenuator n = 0 Attenuator OFF	
	n = 1 Attenuator ON	

A typical input may look like:

SEC_SL0118500000_SU0135900000_AU1_(ST025000_MD2_)AT0 [⇦]

The input in brackets ( ) is ignored when automode is selected ON.

Related commands SR SG SS

SG

Search with frequency and S-meter then resume.

The SG commands causes an automatic response of receive frequency and S-meter level (similar to MG / LC command) AND places the receiver into search mode again.

SG[⇦] will report the present receive frequency in Hz and S-meter. The S-meter report is in 64 steps from hex decimal 00 to 3F starting from the currently selected search bank.

A typical response may be: LC2B_RF0145300000

S-meter h2B Receive frequency 145.30 MHz

The command SGx[⇦] causes an automatic response and searching from the specified bank

> where   x = 0 ~ 9.

Related commands LC MG SS ⬆ ⬇

SI

Set code for option ON / OFF (not available in the UK).

The SI command is used to review and select the optional code unit On / Off if the option is fitted to the AR2700.

To review the current status use the command SI[⇦]

The response will be in the format SIn

> where
> n = 0 Optional code unit OFF
> n = 1 Optional code unit ON

To switch the code option ON / OFF use the format SIn[⇦]

> where
> SI0[⇦] = Optional code unit OFF
> SI1[⇦] = Optional code unit ON

Related command SC

SL

Set the lower frequency of a search bank.

This command cannot be used on its' own but must be used in conjunction with the **SE** command, please refer to the section on **SE**.

SL   Lower frequency limit   nnnnnnnnm0 (Hz)
                                            or
                                            nnnn.nnnnm (MHz)

m = "0" or "5" (tens of Hz position), "5" is only used when the step size is 6.25 kHz. Any entry other than "0" or "5" will be ignored.

Related commands SE SL SU TT

SR

Recall search data.

The SR command is used to recall search data for a chosen bank.

To recall the search data from the currently selected search bank use the format
SR[⇦]

To recall the search data from a specific bank use the format SRx[⇦]

> where   x = search bank 0 ~ 9.

A typical response may be: SRC_SL0118500000_SU0135900000_ST025000_AU1_MD2_AT0

This is a data breakdown of:

Search bank	C
Lower (start) frequency	118.50 MHz
Upper (end) frequency	135.90 MHz
Automode	ON (this means that mode & step are ignored so do not have to be specified as will be taken from the receivers preprogrammed data)
Attenuator	OFF

Related command SE

SS

Engage search mode - start search.

The SS command is used to start the search process from either the current or specified search bank.

To start searching from the current search bank use the format SS[⇦]

To start searching from a specified search bank use the format SSx[⇦]

> where
> x = search bank 0 ~ 9.

Related commands MR MS RX SG ↑ ↓

ST

Tuning step size.

The ST command is used in conjunction with several other commands to set the tuning or search increment. Multiple command entry is possible with AT, AU, MD, RF, ST (with a space separating each command).

The format of the command is   ST nnnnm0[⇦] (Hz)
                                     or
                                     ST nnn.nm[⇦] (kHz)

m = "0" or "5" (tens of Hz position), "0" must always be zero - any other entry will be ignored. "5" is only used when a channel step of 6.25 kHz has been selected.

The following entries are treated in the same manner and are valid: 20. 20.00 0.20. 020.0 020000 20000

The following official step sizes are available: 5, 6.25, 9, 10, 12.5, 20, 25, 30, 50 & 100 kHz.

It is possible to enter any step size between 1.01 kHz and 100 kHz using the ST command but the secure performance cannot be guaranteed. The receive frequency may be automatically adjusted to a point where the PLL is able to operate.

Note: When step size is entered AUTOMODE is automatically switched OFF.

To view the current setting of step size use the command ST[⇦]

A typical response may be   ST020000 which would be 20 kHz.

A typical multiple command may be AU0_MD3_RF145.2_ST010.[⇦]

Related commands AU MD MX RF SE

SU

Set the upper frequency of a search bank.

This command cannot be used on its' own but must be used in conjunction with the **SE** command, please refer to the section on **SE**.

SU   Upper frequency limit   nnnnnnnnm0 (Hz)
                                      or
                                      nnnn.nnnnm (MHz)

m = "0" or "5" (tens of Hz position), "0" must always be "0" any other entry will be ignored. "5" is only used when a step size of 6.25 kHz has been selected.

Related commands AT AU MD SE SL

TD

This command is used to register the delay time.

The format is: TDnn[⇦] where nn = 01 ~ 99 in 0.1 second intervals (for example, 30 = 3.0 seconds).

To review the current setting for delay time, the command TD[⇦] is used.
A typical response may be: TD2.1 (2.1 seconds).

Note: Entry and response are in different formats, the entry does not use the decimal point.

Related commands MG MS SG SS

TI

Priority interval time.

The TI command is used to set the priority interval time (how long to wait between checking the priority channel for activity).

To check the current setting use the format TI[⇦]

The response will be TInn where nn = 01 ~ 19 seconds.

A typical response may look like TI13

To change the timing use the format TInn[⇦] where nn = 01 ~ 19 seconds.

TP

Register the pause time.

This command is used to register the pause time in 1 second intervals between the range of 1 to 99 seconds..

To check the current setting use the format TP[⇦]

The response will be TPnn where nn = 01 ~ 99 seconds.

A typical response may look like TP13 (13 = 13 seconds).

To change the timing use the format TInn[⇦] where nn = 01 ~ 99 seconds.

Related commands MG MS PU SG SS

⬆ ⬇

UP / DOWN arrows.

The   ⬆ ⬇   arrow commands have largely the same effect as the arrow keys on the front panel of the AR8000 receiver. In VFO mode the frequency is incremented upward or downward, in memory recall mode the next channel is selected and in search/scan modes the direction of search/scan may be reversed.

The value for   ⬆   is "h1E" (HEX DECIMAL) and the command may be sent using the format   ⬆[⇦]

The value for   ⬇   is "h1F" (HEX DECIMAL) and the command may be sent using the format   ⬇[⇦]

Related commands MG MS SG SS

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