

COMPUTER INTERFACE COMMAND SET SPECIFICATION
VERSION 3
FOR
CODAN TRANSCEIVER SYSTEMS




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1. Revision History

Version	Changes By	Comments
AA	MH	First version in separate specification document.
AK	MH	Updated after thorough review by Brenton H.
AM	MH	Changed the command editing facilities to match the what the engineering terminal interface provides.
AN	MH	Removed the CW command.
AP	MH	Updated for compatibility issues with CICS 2.
AQ	MRU	Updated GPS request responses. Section 5.9 re. NO VALID GPS POSITION. Added 4.8 regarding needing to "Hangup" following calls. This is particularly important for calls using selcall systems.
AR	MH	Added a statement in section 6 about the amount of spaces used in a-sync responses and the requirement that fields like channels line up underneath each other for subsequent different calls.
AS	MRU	Updated the STATUS CALL description and the response specification for cases where a status nak response is sent or no response was received.
AT	MH	Minor cleanup and renamed BEACON to SELBEACON that seems to the the X3 name,
AU	MRU	Additions for RTU-282 mode for serial port behaviour. These affect CHAN command responses and SCAN command/responses for ALE networks. SELFID: changed to SELDID-LIST: Added STATUSACK command condition specifying that it be only be accepted as a response to STATUSCALL:... Added information to GPS position information output. Added GPS related ERROR messages. Added note about escape sequences not applicable in NGT V1.00 software release. Reformatted.
A	MRU	Put under document control.
B	ASPB	Additions for Rockwell Collins HF Messenger support and general updates. Additions for Tier2 / Mil-Std-188-141B C/R27375


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2. Executive Summary

This document specifies version 3 of the CICS (Computer Interface Command Set) control interface for transceiver systems. Version 3 of the interface is backward compatible with the version 2 interface depending on the actual transceiver configuration. See Section 8 for more information.

A number of enhancements are available in the Version 3 interface that allows it to access the features of the NGT family of transceivers. Some of these are also identified in Section 8.

This document also contains extensions to Version 3 and these will be noted as they occur with the version that they are available in. E.g. the manual sound command is available in Version 3.10 and higher.

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3. Reference Documents

[UserGuide]

9360 User Guide, 15-04053 Issue 2, August 1995

[CICS-V2]

Computer Interface Command Set, 01-00567

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4. Command Interface

The Computer Interface Command Set or CICS for short, is used to control transceiver operation from a computer terminal via a RS232 port available in a transceiver system.

In some cases it is part of a special connector known as a general purpose or GP port. The terminal must operate in full-duplex mode.

4.1 Command Input

Command input shall allow for at least 255 characters of input.

Commands are processed when the input line is terminated with an ASCII CR character.

ASCII LF characters are ignored on input.


When echoing is on, a received CR character is echoed as the ASCII CR/LF sequence.

4.2 Command Editing

A number of command editing facilities are available and listed in the table below. Basic editing is provided with the use of the Backspace character. Other editing facilities require the use of a VT100 terminal emulation.

All other characters are echoed as they are (i.e no case conversions¹ or stripping bits).

¹Note that the CICS Version 2 converted all received characters to uppercase when echoed.

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Keyboard Character	Action
Del	Delete the character under the cursor
Backspace	Delete the character to the left of the cursor
Ctrl-A	Move to start of line
Ctrl-E	Move end of line
Ctrl-K	Delete from cursor till end of line
Ctrl-U	Kill entire input line
Ctrl-R	Refreshes the input line
Cursor Up	Move backwards in the command history buffer
Cursor Down	Move forward in the command history buffer
Cursor Left	Move one character to the left
Cursor Right	Move one character to the right

4.3 Command Arguments

Commands are a sequence of characters followed by zero or more arguments separated by whitespace.

Commands and arguments may be surrounded by any amount of white space before or after the command and in between arguments.

Arguments enclosed in either single quotes or double quotes are treated as a single argument. Any white space between the quote characters is treated as part of the argument.

4.4 Input Escape

The '\' (backslash) character is treated as the start of an escaped character sequence. The following escaped characters sequences are recognised within double quoted arguments:

\n Newline


\r Carriage return

\t Horizontal tab

\nnn The ASCII character corresponding to the octal number nnn

\xhh The ASCII character corresponding to the hexadecimal number hh

Notes:

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1. The '\ ' nullifies the special meaning of the following character, if it has any, notably '\ ' and the space character
2. In NGT s/w release 1.00, escape characters are not processed correctly.

4.5 Special Characters

To allow backward compatibility with CICS Version 2 systems, the =, ? and , characters are treated specially in CICS Version 3. Where CICS Version 2 used those characters to indicate either an action ('='), a query('?') or an argument separator(','), CICS Version 3 simply assumes any command followed by an argument to be an action command and any command on its own as a query style command. Similarly arguments are separated by whitespace.

CICS Version 3 ignores the '=' and ',' characters and treats them as white-space unless specifically escaped. The '?' is only treated as white-space if it is the first character after the command. E.g. "CHAN?" is the same as "CHAN" but "CHAN 10?" means select channel "10?"

4.6 Command Prompt

CICS Version 2 does not use a prompt to indicate it is ready for command input. CICS Version 3 has a configurable prompt. Use the help command for details.

4.7 Address Arguments


Commands that involve sending a call or establishing a link to another radio require a destination address. To allow explicit control of on which network the call is made, the address may be typed as the address of the station, followed by the commercial at sign (@) and the name of the network.

For instance: the address 'JOE' tries to connect to the station JOE on whatever the current network is (as set by the SCAN command). The address JOE@CODAN will attempt to connect to JOE using the CODAN network/channels.

Where an address has a comma in it and/or a network name has a space in it, the entire address and network must be quoted e.g. "JOE,FRED@CODAN NET1".

4.8 System Behavioural Requirements

For compatibility with existing applications such as InterNav GPS tracking systems or RTU-282 installations, some commands, other than the explicit "HANGUP", will automatically hangup a call. For example after sending a GPS beacon, CICS should allow changing of the channel then sending another GPS beacon without having to

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explicitly using the new "HANGUP" command to close an existing "link". Actions that must be able to be successfully executed following a call include all further call commands plus at least:

SCAN=ON

CHANNEL=<name>

When the serial port mode is set to RTU-282, the behaviour of CICS outputs changes slightly. These changes are:

1. The response to the CHAN command does not include CHAN:<name>
2. The output of SCAN:ON,<name> will replace ON with ALE if an ALE network is being scanned.

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5. Commands

The following sections list the available CICS Version 3 commands in alphabetic order. For each command the following series of sections are used:

SYNOPSIS

Describes the formal syntax of the command.

DESCRIPTION

Is an explanation of what the command does.

PARAMETERS

Details any parameters or arguments that may be following the command.

MESSAGES

Indicate the messages that may appear asynchronously as a result of the command or an system event. For example, a command that is used to send a particular type of call, may also be listing the messages that appear when a call of the same type is received.

ERRORS

A short list of the possible errors that could occur when this command is tried. For detailed descriptions of the error messages, refer to the section **Error Messages**.

COMPATIBILITY


Describes configuration aspects that affect backward compatibility with systems expecting to operate on CICS Version 2 systems.

BUGS

Lists any known problems with the command or some side effect behaviour that is a result of the CICS Version 2 versus CICS Version 3 differences.

SEE ALSO

References related or similar commands.

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5.1 ALEBEACON — Establish a voice link with another station (V3.20)

SYNOPSIS

ALEBEACON <destination> [±LBT] [±LQA] [S] [FROM <selfid>] [S]

DESCRIPTION

Sends a request to a station to respond with some revertive indicating its availability and the quality of the audio path to that station. From the handset user interface the equivalent call is the Channel Test call. This is only available with CICS V3.20 or later.

5.2 ALECALL — Establish a voice link with another station

SYNOPSIS


ALECALL <dest> [±LBT] [±LQA] [<AMD>] [FROM | TIS | TWAS <selfid>] [S]

DESCRIPTION

Establish a voice link to another station.

PARAMETERS


Parameter	Meaning
<dest>	The address of the station to establish a voice link with, possibly including the network address. E.g. JOE@NET1
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
+LQA -LQA	(V3.20) Forces LQA exchange to be enabled (+LQA) or disabled (-LQA) for the current call.
<AMD>	(V3.20) An optional AMD message that will be sent with the call to the recipients. E.g. "HI THERE"
FROM <selfid> TIS [<selfid>] TWAS [<selfid>]	(V3.10) An optional argument specifying which selfid to use with the FROM, TIS or TWAS keyword. This may also include a network. E.g. FROM 1111@alenet. FROM – means use default link arrangement TIS – means request link (V3.20)

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TWAS – means don't request link (V3.20)


S

Audio from the speaker is muted during the call

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MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent
ALE-JOINED: <address>	(V3.20) specified station has responded to the broadcast (e.g. ANY) or multicast (e.g. NET or group individual) type call.
ALE-EXIT: <address>	(V3.20) specified station has left the link.
ALE-LINK: FAILED	the link attempt has failed to connect to the requested station.
ALE-LINK: <channel>, <src>, <dst>, <time> (on the receiving station)	<p>The link request was successful (also may appear asynchronously when an incoming link request has been detected for this interfaces seflid/s). The parameters following the message have the following meaning:</p> <ul style="list-style-type: none"> • <channel> is the name of the channel on which this call was received. • <src> is the address of the sender of this call. • <dst> is the address of this station that was used to receive the call. • <time> is a time stamp in the format ``dd/mm hh:mm".
LINK: CLOSED	The link has been closed. This may be due to a hangup command or the remote site may have terminated the connection.

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ERRORS

ERROR: System locked

ERROR: PTT Active

ERROR: No channels

ERROR: Network not found

BUGS

None.

SEE ALSO

ALETELDCALL, CALL, HANGUP, SELCALL

5.3 ALETELDCALL — Sends a telephone interconnect call

SYNOPSIS


ALETELDCALL <dest> [±LBT] [±LQA] <telephone number> [FROM <selfid>]
[S]

DESCRIPTION

Establishes a link to a radio station with a telephone interconnect facility. To disconnect the link, use the SCAN ON command to close the link and resume scanning, or use the HANGUP command to just terminate the link.

PARAMETERS

Parameter	Meaning
<dest>	The address of a station with a telephone interconnect.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
+LQA -LQA	(V3.20) Forces LQA exchange to be enabled (+LQA) or disabled (-LQA) for the current call.
<telephone>	The telephone number to be dialled by the telephone interconnect of the receiving station.
FROM <selfid>	(V3.10) The self address to use when making the call


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MESSAGES

Message	Issued when...
OK	The command has been accepted and the system starts processing the request.
CALL STARTED	The outgoing link request message is being transmitted.
CALL SENT	The outgoing link request message has been sent.
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent
ALE-LINK: FAIL	The link attempt has failed to connect to the requested station.
ALE-LINK: <channel>, <src>, <dst>, <time>	<p>On the both the sending and the receiving station when an link has been established. The parameters following the message have the following meaning:</p> <ul style="list-style-type: none">• <channel> is the name of the channel on which this call was received.• <src> is the address of the sender of this call.• <dst> is the address of this station that was used to receive the call.• <time> is a time stamp in the format ``dd/mm hh:mm".
TEL-CALL: <channel>, <src>, <dst>, <time>, <tel. number>	<p>On the receiving station when the incoming link request contains telephone number information. This typically follows the ALE-LINK: message where:</p> <ul style="list-style-type: none">• <channel> is the name of the channel on which this call was received.• <src> is the address of the sender of this call.• <dst> is the address of this station that was used to receive the call.• <time> is a time stamp in the format ``dd/mm hh:mm".• <tel. number> numeric digits representing the number to be dialed.
LINK: CLOSED	The link has been closed either by a hangup command or by the remote site terminating the connection.

ERRORS

ERROR: System locked

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BUGS

None.

SEE ALSO

ALECALL, HANGUP, PAGECALL, SCAN, TELCALL

5.4 BEACONCALL — Establish a voice link with another station (V3.20)

SYNOPSIS

BEACONCALL <destination> [±LBT] [S] [FROM <selfid>]

DESCRIPTION

Sends a request to a station to respond with some revertive indicating its availability and the quality of the audio path to that station. From the handset user interface the equivalent call is the Channel Test call. This is only available with CICS V3.20 or later and is Call system independent.

5.5 CALL — Establish a voice link with another station

SYNOPSIS

CALL <destination> [±LBT] [FROM <selfid>] [S]

DESCRIPTION


Establish a voice link to another station. Behaviour is the same as ALECALL if the NGT is scanning an ALE network otherwise it behaves as the SELCALL command. The FROM <selfid> is only available in CICS V3.10 or later. The use of +LBT and -LBT is only available in CICS V3.20 or later. For greater control of ALE calls, use the specific ALECALL command.

5.6 CHAN — Select a channel by name

SYNOPSIS

CHAN

CHAN <name>

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DESCRIPTION

Selects the channel with the indicated name. The indicated name must exist in the active channel book in the system.

PARAMETERS

Parameter	Meaning
<none>	Returns the name of the current channel in the transceiver.
<name>	Attempts to set the channel in the transceiver to the channel with the indicated name. The name is case insensitive.

MESSAGES

Message	Issued when...
CHAN: <name>	<p>the transceiver changes channel while it is not scanning.</p> <p>The channel name is output right aligned in a field width of 4 characters. Any name longer than 4 characters overflows the field width at the right side.</p> <p>Names that consist of a single word (i.e. no embedded spaces) are printed as is. Names that consist of more than one word are printed with surrounding double quotes.</p> <p>NOTE: When the serial port mode is set to RTU-282, the CHAN: <name> message is not output as a response to the CHAN command.</p>

ERRORS

ERROR: Channel not found


ERROR: No channels

ERROR: PTT active

ERROR: Scanning is on

COMPATIBILITY

To allow the CHAN command to be compatible with CICS-V2 systems, the channels in the transceiver must be programmed with all the channel names using numbers.

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BUGS

CICS V3 is assuming the channel name to be text while CICS V2 is assuming the channel to be a number. Where CICS V2 treats CHAN 1 to be equivalent to CHAN 001, this is not the case in CICS V3.

SEE ALSO

FREQ

5.7 ECHO — Enable/disable echo of the CICS interface

SYNOPSIS

ECHO [ON | OFF]

DESCRIPTION

The ECHO command allows control over the local behaviour of the CICS serial interface. The default is that echo is on. Any character that is typed is echoed back to the screen. This corresponds to the use of full duplex mode in terminal settings. Disabling echo is useful for automated control systems, where the echo of the command input can get intermixed with the responses from the system and confuse the controlling program or device.

PARAMETERS

Parameter	Meaning
<none>	Returns the current echo state of the interface.
ON	Enabled echoing of input characters.
OFF	Disables echoing of input characters.

MESSAGES


Message	Issued when...
---------	----------------

ECHO: ON

ECHO: OFF

ERRORS

None.

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BUGS

None.

SEE ALSO

None.

5.8 **FREQ — Select a channel by frequency**

SYNOPSIS

FREQ [<frequency>]

DESCRIPTION

Selects the first channel that matches the specified receive frequency. The frequency is specified in kHz with a decimal point (.) being used to specify a fraction part. When no exact frequency match can be found, the command selects the channel with the nearest frequency above the frequency specified.

PARAMETERS

Parameter	Meaning
<none>	Returns the current frequency settings of the transceiver.
<frequency>	A frequency value in kHz with a possible fraction part separated by a decimal point (.).


MESSAGES

Message	Issued when...
FREQ: xxxxx.x RX/TX	channels have equal receive and transmit frequencies.
FREQ: xxxxx.x RX, yyyyy.y TX	channels have different receive and transmit frequencies.
FREQ: xxxxx.x RX, INHIBIT TX	channels are not allowed to transmit (e.g. Tx disabled or inhibited)

ERRORS

ERROR: Channel not found

ERROR: No channels

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ERROR: PTT Active

ERROR: Scanning is on

COMPATIBILITY

CICS V2 did not accept the decimal point in the `FREQ` command.

BUGS

When selecting a channel by frequency, the `CHAN: <name>` indication is only printed when the transceiver actually changed channel to match the requested frequency. When the transceiver is already on a channel that matches the requested frequency, only the frequency specification is printed.

SEE ALSO

CHAN

5.9 GPSBEACON — Poll a station for its position

SYNOPSIS

`GPSBEACON <destination> [±LBT] [FROM <selfid>] [S]`

DESCRIPTION


Sends a request to a station to return its current position.

PARAMETERS

Parameter	Meaning
<destination>	The address of the station to get the position information from.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
FROM <selfid>	(V3.10) The self address to use for the GPS beacon.

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.

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Message	Issued when...
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.
GPS-POSITION: <channel>, <src>, <dst>, <time>, <gps>	<p>where:</p> <ul style="list-style-type: none"> • <channel> is the name of the channel on which this call was received. • <src> is the address of the sender of this call. • <dst> is the address of this station that was used to receive the call. • <time> is a (local receiver) time stamp in the format ``dd/mm hh:mm". • <gps> the position of the other station including GPS UTC time.

ERRORS

ERROR: Transmit inhibited
 ERROR: System locked
 ERROR: Destination address required

BUGS

None.

SEE ALSO

GPSPOSITION


5.10 GPSPOSITION — Send my position to another station

SYNOPSIS

GPSPOSITION <destination> [±LBT] [FROM <selfid>] [S]

DESCRIPTION

Sends my current position information to another station.

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PARAMETERS

Parameter	Meaning
<destination>	The address of the station to send my position to.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
FROM <selfid>	(V3.10) The self address to use for the GPS position call.

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent
GPS-POSITION: <channel>, <src>, <dst>, <time>, <gps> (at destination station)	where: <ul style="list-style-type: none">• <channel> is the name of the channel on which this call was received.• <src> is the address of the sender of this call.• <dst> is the address of this station that was used to receive the call.• <time> is a (local receiver) time stamp in the format ``dd/mm hh:mm".• <gps> the position of the other station including GPS UTC time.

If the position and UTC time data is all set to zero, then when the <gps> field is output, it should contain "NO VALID GPS POSITION". If there is no GPS data returned, "NO GPS CONNECTED" is output.


ERRORS

ERROR: Destination address required

ERROR: Transmit inhibited

ERROR: System locked

ERROR: No GPS unit connected

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ERROR: No valid GPS position

BUGS

None.

SEE ALSO

GPSBEACON

5.11 HANGUP — Close or Terminate a link

SYNOPSIS

HANGUP

DESCRIPTION

Closes an active link with another station. Where applicable it sends a hangup indication to the remote station, but does not resume scanning.

PARAMETERS

None.

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.


ERRORS

ERROR: No active link

ERROR: System locked

BUGS

None.

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SEE ALSO

ALECALL, ALETELDCALL, CALL, SCAN, TELCALL

5.12 HELP — Provide help on available commands

SYNOPSIS

HELP [<category>]

DESCRIPTION

Prints information on the available command categories or command details within categories.

PARAMETERS

Parameter	Meaning
<none>	Prints the categories of help available.
<category>	Prints detailed help for the commands within the named category.

MESSAGES

CICS Version 3 is implemented as a series of modules and different modules may be available depending on system configuration. Each module represents a category with one or more specific commands available.

ERRORS


None.

BUGS

Not available in CICS V2.

SEE ALSO

None.

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5.13 LBT — Listen Before Transmit (V3.20)

SYNOPSIS

LBT?
LBT MEASURE

DESCRIPTION

If no argument is supplied then LBT (or LBT?) will return the global LBT Mode setting. Otherwise, if MEASURE is specified, the LBT algorithm will monitor the current channel (usually for 2s) for the presence of data or voice. At the conclusion of this period, the function will return whether anything was detected on the channel.

PARAMETERS

Parameter	Meaning
?	View global LBT Mode
MEASURE	Performs one-off active measurement of channel audio for the presence of voice or data.

MESSAGES


Message	Issued when...
LBT: ENABLED	Global LBT mode is enabled
LBT: DISABLED	Global LBT mode is disabled
LBT: VACANT	Channel assumed to be not busy
LBT: OCCUPIED - VOICE	Voice was detected on the channel within the monitoring period.
LBT: OCCUPIED - DATA	Data was detected on the channel within the monitoring period.

ERRORS

ERROR: LBT not installed
ERROR: LBT wrong mode

BUGS

LBT algorithm does not always correctly detect the type of activity on the channel and may consider channels to be busy that contain power line EMI for example.

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5.14 LOCK — Lock the transceiver for exclusive use

SYNOPSIS

LOCK [ON | OFF | ABORT]

DESCRIPTION

LOCK arbitrates and establishes a lock on the system, so that the transceiver is exclusively allocated to the interface issuing this command. Only one lock is allowed at any one time.

On a given interface, there is only one level of locking, ie. when more than one LOCK ON command is issued, a single LOCK OFF command releases the system.

PARAMETERS

Parameter	Meaning
<none>	Returns the current lock state of the system.
ON	Attempts to lock the system.
OFF	Releases the lock on the system.
ABORT	Attempts to break a lock from another interface.

MESSAGES


Message	Issued when...
LOCK: ON	the system is locked and allocated to this interface.
LOCK: OFF	the system is currently unlocked.
LOCK: BUSY	a lock is established from another interface.
LOCK: ABORT	a lock is aborted from another interface.

ERRORS

None.

BUGS

None.

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SEE ALSO

None.

5.15 LQA — Link Quality Analysis (V3.10)

SYNOPSIS

LQA?
LQA OUTPUT
LQA OUTPUT ON | OFF

DESCRIPTION


If no argument is supplied then LQA (or LQA?) will return the most recent LQA data decoded by the ALE engine. Otherwise, the LQA command may be used to enable or disable asynchronous LQA announcements. I.e. output them to CICS whenever they are decoded.

PARAMETERS

Parameter	Meaning
?	View most recent LQA data received
OUTPUT	View whether announcements are enabled or disabled
OUTPUT OFF OUTPUT ON	Disables or enables announcements of LQA data as they are received.

MESSAGES

Message	Issued when...
LQA: <chan>, <addr>, <local>, <remote>, <score>%	Data received on channel for ALE address. The local and remote information is expressed as BER/SINAD pairs. The BER value ranges from 0 (best) to 30 (worst) or '-' which means invalid. The SINAD value ranges from 0 (worst) to 30 (best) or '-' which also means invalid. In the case where no information has yet been received, the channel and address are shown as '-'. (V3.20) The last parameter, score, is calculated using all of the local and remote values to come up with a score between 0% (worst) and 100% (best).

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5.16 MODE — Select the mode of the transceiver

SYNOPSIS

MODE [<name>]

DESCRIPTION

MODE is a combination of a sideband and an IF filter setting and are indicated by name. Most systems will have modes that match the commonly used modes like USB and LSB. However systems can be configured to have much more modes available and have them available under different names.

The mode command updates the PREFERRED MODE setting of the transceiver.

The actual mode of the transceiver depends on the allowed modes for the current channel.

PARAMETERS

Parameter	Meaning
<none>	Returns the current mode of the system.
<name>	Attempts to set the transceiver to the indicated mode if allowed for the current channel.

MESSAGES

Message	Issued when...
---------	----------------

MODE: <name>, <sideband>, <ifwidth>, <ifcenter>	
--	--

ERRORS

ERROR: System locked


ERROR: PTT active

BUGS

None.

SEE ALSO

CW, SIDEBAND, SB

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5.17 PAGECALL — Sends a message to another station

SYNOPSIS

PAGECALL <destination> [±LBT] <message> [FROM <selfid>] [S]

DESCRIPTION

Starts a call to a station with a short text message.


PARAMETERS

Parameter	Meaning
<destination>	The address of the station to send the short message to.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
<message>	The message to be sent to the other station. The message must be enclosed using either double or single quotes if it contains either spaces or quotes.
FROM <selfid>	(V3.10) The self address to use for the pagecall.

MESSAGES

Message	Issued when...
PAGE-CALL: <channel>, <src>, <dst>, <time>, <message>	
PAGE-CALL-ACK: <channel>, <src>, <dst>, <time>	where: <ul style="list-style-type: none">• <channel> is the name of the channel on which this call was received.• <src> is the address of the sender of this call.• <dst> is the address of this station that was used to receive the call• <time> is a time stamp in the format ``dd/mm hh:mm"• <message> is the textual message received. The message is printed with enclosing double quotes characters.

CALL STARTED the outgoing link request message is being transmitted.

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Message	Issued when...
CALL SENT	the outgoing link request message has been sent.
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent

ERRORS

ERROR: Destination address required

ERROR: System locked

ERROR: Transmit inhibited

BUGS

None.

SEE ALSO

STATUSCALL, STATUSCALLACK, TELCALL

5.18 PTT — Switch transmit/receive

SYNOPSIS

PTT?


PTT ON | OFF [VOICE | DATA]

DESCRIPTION

Switches the transceiver between transmit mode and receive mode and allows selection of the transceiver mode between voice and data. The selection of voice versus data also applies to the PTT mode of the GP port PTT control input. Data mode is the default behaviour after power-up until changed by the PTT command. Also selecting PTT OFF VOICE will enable enhanced audio to be output on the GP port audio output. PTT OFF DATA will enable raw received audio to be output.

PARAMETERS

Parameter	Meaning
?	Queries the current PTT state of the transceiver.
OFF	Return to receive mode.

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ON Switched the transceiver into transmit mode.

VOICE Optional mode specifier that selects voice (enhanced) mode for this and subsequent PTT's without a mode specifier. Also applies to the PTT control input on the GP port.

DATA Optional mode specifier that selects data (raw) mode for this and subsequent PTT's without a mode specifier. Also applies to the PTT control input on the GP port.

MESSAGES

Message **Issued when...**

PTT: ON, VOICE

PTT: ON, DATA

PTT: OFF, VOICE

PTT: OFF, DATA

ERRORS

ERROR: System locked

ERROR: Transmit inhibited

BUGS

Voice/Data distinction is not supported in versions earlier than 3.20

SEE ALSO

None.


5.19 SCAN — Controls scanning modes of the transceiver

SYNOPSIS

SCAN [ON | OFF | <name>]

DESCRIPTION

SCAN controls the current scanning mode of the transceiver. SCAN without any arguments returns the current scanning state and the name of the network being scanned.

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When a lock is active from this interface and a SCAN ON is issued, this will release the LOCK status (if present) i.e. it will implicitly do a LOCK OFF command. Any existing links (calls) will also be hungup.

PARAMETERS

Parameter	Meaning
<none>	Queries the current scanning state of the transceiver.
ON	Starts scanning the current network.
OFF	Stop scanning and allow manual channel changes.
<name>	Switch the network to the indicated name and start scanning on that network.

MESSAGES

Message	Issued when...
SCAN: ON, <name>	Scanning has started for the indicated network name.
SCAN: OFF	Scanning has stopped.
SCAN: ALE, <name>	(Only applicable when serial port is in RTU-282 mode.) Scanning has started for the indicated network name which uses an ALE calling system. (NOTE: This is necessary for backward compatibility with the RTU-282.)

ERRORS

ERROR: Scan list empty


ERROR: System locked

BUGS

None.

SEE ALSO

HANGUP, LOCK

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5.20 SELBEACON — Test a station for availability

SYNOPSIS

SELBEACON <destination> [±LBT] [S] [FROM <selfid>]

DESCRIPTION

Sends a request to a station to respond with some revertive indicating its availability and the quality of the audio path to that station. From the handset user interface the equivalent call is the Channel Test call.

PARAMETERS

Parameter	Meaning
<destination>	The address of the station to get a link quality indication from.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
S	Optional parameter for SILENT mode.
FROM <selfid>	(V3.10) Optional self address for selective beacon.

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent


ERRORS

ERROR: Transmit inhibited

ERROR: System locked

BUGS

None.

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SEE ALSO

CALL, SELCALL

5.21 SELCALL — Establish a voice link with another station

SYNOPSIS

SELCALL <destination> [±LBT] [S] [FROM <selfid>]

DESCRIPTION


Establish a voice link to another station.

PARAMETERS

Parameter	Meaning
<destination>	The address of the station to establish a voice link with.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
FROM <selfid>	(V3.10) Optional self address to use for call.

MESSAGES

Message	Issued when...
SELCALL: <channel>, <src>, <dst>, <time>	where: <ul style="list-style-type: none">• <channel> is the name of the channel on which this call was received.• <src> is the address of the sender of this call.• <dst> is the address of this station that was used to receive the call.• <time> is a time stamp in the format ``dd/mm hh:mm".
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.
LBT: ALL CHANNELS BUSY	(V3.20) all of the channels were busy so no call was sent

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ERRORS

ERROR: Destination address required

ERROR: System locked

ERROR: Scanning is on

BUGS

None.

SEE ALSO

ALETELCALL, CALL, HANGUP, SELCALL

5.22 SELFID — Sets the self addresses for this CICS interface

SYNOPSIS

SELFID [<address> [[,] <address>]]

DESCRIPTION


Accesses the self address(es) used by this CICS interface. At startup the CICS interface inherits the selfids from the device in which it operates (e.g. control point). The list can be changed using this command, but those changes do not reflect back to the self id addresses list from the device. Any changes to the list are lost at power-off.

PARAMETERS

Parameter	Meaning
<none>	Queries the current list of self addresses for this interface.
<address>	Sets the selfids for this interface to the one or more addresses specified on the command line. Can be fully qualified addresses like in name@network.

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.

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Message**Issued when...****SELFID-LIST:**

<address>,
 <address>,
 <address>

list the currently active selfid's for this interface. Note that any number of addresses can be listed, and each address can either be a simple or a fully qualified address.

ERRORS

ERROR: Selfid list empty

ERROR: Unknown network name in selfid

ERROR: Invalid selfid for specified network

BUGS

Only messages for calls that match one of the selfid's will be printed. i.e. once a selfid has been specified from this interface, calls received by the device on its (separate) selfid list will now show up on the CICS interface.

SEE ALSO

None.

5.23 SET — Change the value of a setting**SYNOPSIS**

set

DESCRIPTION

Set controls changing settings in CICS that controls behaviour of CICS.


PARAMETERS**Parameter****Meaning**

<none>

Queries the settings

MESSAGES**Message****Issued when...**

SET

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ERRORS


None.

BUGS

None.

SEE ALSO

None.

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5.24 SIDEBAND — Select the sideband for the current channel

SYNOPSIS

SIDEBAND [USB | LSB | AM]

SB [USB | LSB | AM]

DESCRIPTION

Sideband controls the sideband that the transceiver is operating on for the current channel. It may be abbreviated with just the word 'sb'. This command is provided for backward compatibility. The preferred command in CICS V3 is the MODE command as the mode is a native capability of the transceiver.

PARAMETERS

Parameter	Meaning
<none>	Queries the current sideband of the transceiver.
USB	Selects a transceiver mode with upper sideband and the same filter width as was currently selected.
LSB	Selects a transceiver mode with upper sideband and the same filter width as was currently selected.
AM	Selects a transceiver mode with upper sideband AND carrier. and the same filter width as was currently selected.

MESSAGES


Message	Issued when...
SIDEBAND: USB	the system switches to a mode which has upper sideband active.
SIDEBAND: LSB	the system switches to a mode which has lower sideband active.
SIDEBAND: AM	the system switches to a mode which has AM active.

ERRORS

ERROR: PTT active

ERROR: System locked

ERROR: Scanning is on

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BUGS

None.

SEE ALSO

MODE

5.25 SOUND — ALE Sounding control (V3.10)

SYNOPSIS

SOUND?

SOUND ON | OFF

SOUND NOW [±LBT] [FROM | TIS | TWAS <selfid>]

DESCRIPTION


Establish a voice link to another station.

PARAMETERS

Parameter	Meaning
?	Query whether automatic soundings are enabled or disabled
ON OFF	Enable (ON) or Disable (OFF) automatic soundings.
+LBT -LBT	Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
FROM <selfid> TIS [<selfid>] TWAS [<selfid>]	An optional argument specifying which selfid to use for sounding with the FROM, TIS or TWAS keyword. This may also include a network. E.g. FROM 1111@alenet. FROM – means use default sounding conclusion i.e. TWAS TIS – means invite calls (V3.20) TWAS – means don't invite calls (V3.20)

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.

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CALL STARTED	the outgoing soundings have started
CALL SENT	the outgoing soundings have been sent
LBT: ALL CHANNELS BUSY	all of the channels were busy so no call was sent
ALE-LINK: <channel>, <src>, <dst>, <time>	<p>A listener has responded to a call invitation and has subsequently requested a link to this station. The parameters following the message have the following meaning:</p> <ul style="list-style-type: none"> • <channel> is the name of the channel on which this call was received. • <src> is the address of the sender of this call. • <dst> is the address of this station that was used to receive the call. • <time> is a time stamp in the format ``dd/mm hh:mm".
LINK: CLOSED	The link has been closed. This may be due to a hangup command or the sounding action has finished or a remote site may have terminated the connection.

ERRORS

ERROR: System locked

ERROR: PTT Active

ERROR: No channels

ERROR: Network not found


BUGS

None.

5.26 STATUSACK — Send a status response message

SYNOPSIS

STATUSACK <destination> <message text>

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DESCRIPTION

Used to send a reply on a received STATUSCALL message. The sending station specified a time-out value in its STATUSCALL using the STATUSTIME command and upon receiving the STATUSCALL: message, the user (ie application) is required to respond using the STATUSACK command. Otherwise the interface shall respond automatically after the time-out period. This command can only be used in response to a STATUS call.

PARAMETERS

Parameter	Meaning
<destination>	The address of the station to send the response message to. This command can only be used in response to a STATUS call and this address must match the address from the received STATUS call.
<message>	The response message to be sent to the other station. The message must be enclosed using either double or single quotes to allow the use of space characters in the message.

MESSAGES


Message	Issued when...
STATUS-ACK: <channel>, <src>, <dst>, <time>, <msg>	where: <ul style="list-style-type: none">• <channel> is the name of the channel on which this call was received.• <src> is the address of the sender of this call.• <dst> is the address of this station that was used to receive the call.• <time> is a time stamp in the format ``dd/mm hh:mm".• <msg> the status acknowledgment message.
CALL STARTED	the outgoing link request message is being transmitted.
CALL SENT	the outgoing link request message has been sent.

ERRORS

ERROR: Destination address required

ERROR: System locked

ERROR: Transmit inhibited

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BUGS

None.

SEE ALSO

STATUSCALL, STATUSTIME

5.27 STATUSCALL — Sends a status request message

SYNOPSIS

```
STATUSCALL <dest> [ ±LBT ] [ ±LQA ] <message text> [ FROM <selfid> ]
```

DESCRIPTION


Sends a status call request message to a station. The indicated station shall respond with a message to the request. The response can either be from the remote transceiver directly or from an external device communicating on the CICS interface of the remote system. The message understood by the remote transceiver are the following single numeric digits:

1. Remote diagnostics status request
2. Remote configuration status request

When either the message '1' or '2' is received by a station, the station shall output the 'STATUS-CALL' message on the CICS interface - applications may need to filter out this information. The remote system shall always respond. When no STATUSACK response was received on its CICS interface within the time-out specified with the STATUSTIME command, the remote system shall respond with an status nak message which will result in the response "NO EXTERNAL UNIT CONNECTED" message. If no response is received from the remote station, then the message "NO RESPONSE" shall be output.

PARAMETERS

Parameter	Meaning
<dest>	The address of the station to send the short message to.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
+LQA -LQA	(V3.20) Forces LQA exchange to be enabled (+LQA) or disabled (-LQA) for the current call (ONLY FOR ALE).

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<message> The message to be sent to the other station. The message must be enclosed using either double or single quotes to allow the use of space characters in the message.

FROM <selfid> (V3.10) Optional self address to use for status call.

MESSAGES

Message

Issued when...

STATUS-CALL:

<channel>, <src>, <dst>,
<time>, <message>

STATUS-CALL-ACK:

<channel>, <src>, <dst>,
<time>, <message>

where:

- <channel> is the name of the channel on which this call was received.
- <src> is the address of the sender of this call.
- <dst> is the address of this station that was used to receive the call.
- <time> is a time stamp in the format ``dd/mm hh:mm".
- <message> is the status request message received or "NO EXTERNAL UNIT CONNECTED" or if a status nak response was received.

CALL STARTED

the outgoing link request message is being transmitted.

CALL SENT

the outgoing link request message has been sent.

LBT: ALL CHANNELS BUSY

(V3.20) all of the channels were busy so no call was sent

NO EXTERNAL UNIT CONNECTED OR NO RESPONSE

Returned from remote station if remote station's attached equipment did not respond to send a STATUSACK.


NO RESPONSE

ERRORS

ERROR: Destination address required

ERROR: System locked

ERROR: Transmit inhibited

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BUGS

None.

SEE ALSO

STATUSACK, STATUSTIME

5.28 STATUSTIME — Set the time-out value for status requests

SYNOPSIS

STATUSTIME [<timevalue>]

DESCRIPTION

Sets the timeout value in seconds that is used on the remote station when it receives a status call and informs the CICS port about the received call. This timeout value is part of the message that is sent by the STATUSCALL command. The remote station will wait up to indicated number of seconds for a response from the CICS port. If a STATUSCALLACK command is received from the CICS port it returns the message in a response to that command. If no response was received from the CICS port, the remote station returns a message to this station, indicating that no response was received.

PARAMETERS


Parameter	Meaning
<none>	Query what the current timeout value is.
<timeout>	Set the timeout value in seconds.

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.
STATUSTIME: <n>	a request is made for the current status timeout value.

ERRORS

ERROR: System locked

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BUGS

The timeout value is local to this CICS interface.

SEE ALSO

STATUSACK, STATUSCALL

5.29 TELCALL — Sends a telephone interconnect call

SYNOPSIS

TELCALL <destination> [±LBT] <telephone number> [FROM <selfid>]

DESCRIPTION

Starts a call to a radio station with a telephone interconnect facility.


PARAMETERS

Parameter	Meaning
<destination>	The address of the station with the telephone interconnect.
+LBT -LBT	(V3.20) Forces Listen-Before-Transmit to be enabled (+LBT) or disabled (-LBT) for the current call.
<telephone>	The telephone number to be dialled by the telephone interconnect of the receiving station.
FROM <selfid>	(V3.10) Optional self address to use for telcall

MESSAGES

Message	Issued when...
OK	the command has been accepted and the system starts processing the request.

TEL-CALL: <channel>,
<src>, <dst>, <time>, <tel.
number>

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Message

TEL-CALL: <channel>, <src>, <dst>, <time>, DISCONNECTED

Issued when...

Where:

- <channel> is the name of the channel on which this call was received.
- <src> is the address of the sender of this call.
- <dst> is the address of this station that was used to receive the call.
- <time> is a time stamp in the format ``dd/mm hh:mm".
- <tel. number> is the telephone number to be dialled by the interconnect.

CALL DETECTED

CALL STARTED

the outgoing link request message is being transmitted.

CALL SENT

the outgoing link request message has been sent.

LBT: ALL CHANNELS BUSY

(V3.20) all of the channels were busy so no call was sent

LINK: CLOSED

The link has been closed either due to a hangup command or by the remote site terminating the connection.

ERRORS

ERROR: Destination address required

ERROR: System locked

ERROR: Transmit inhibited

BUGS

None.


SEE ALSO

ALETELCALL, PAGECALL, STATUSCALL, HANGUP, SCAN

5.30 VER — Returns the version number of the CICS command set

SYNOPSIS

VER

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DESCRIPTION

Prints the version of the CICS interface. The digit after the V is the major version number and is used to indicate that there are differences in the interface that affect backward compatibility. The two digits following the '.' indicate the minor number in the interface which will be incremented as a result of problem fixes or where commands or parameters have been added without affecting the operation of other commands or parameters of commands.

PARAMETERS

None.

MESSAGES

Message	Issued when...
---------	----------------

CICS: V3.00

CICS: V3.10

CICS: V3.20

ERRORS


None.

BUGS

None.

SEE ALSO

None.

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6. Asynchronous Status Messages (to be further expanded)

A number of status messages can be issued on the interface reflecting activities in the transceiver system. Note that the asynchronous responses for received calls use a comma immediately following the previous field and a space following the comma. The amount of space between the call type with the colon and the first field with the channel has a variable amount of spaces with the intention that all the fields following line up underneath each other.

ALE-EXIT: <address>

Indicates that the specified station has left a broadcast or multicast link.

ALE-JOINED: <address>

This message will appear for each station that responds to a broadcast or multicast ALE call. e.g. member responses to a ALE NET call.

ALE-LINK: <chan>, <source>, <destination>, <time>

Indicates that an ALE link has been established.

CHAN: <name>

The system just changed channel. This message only shows when the system is not scanning. Following the colon (:) is a space and the channel name is right aligned in a field with of 4 characters and overflows to the right when longer than 4 characters. Names that have embedded spaces in them are printed with surrounding double quotes.

CALL STARTED


Printed when an outgoing call is initiated.

CALL SENT

Printed when the outgoing call has been made.

CALL DETECTED

Printed when an incoming call has been detected and is currently being received. If the transceiver is scanning and the call is for another station then it is possible that this message is displayed multiple times as the list of channels is cycled through.

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EMERGENCY

An emergency call has been received.

LBT: ALL CHANNELS BUSY

Displayed when an outgoing call has failed because every channel that was tried was skipped because the LBT algorithm detected the presence of data or voice.

LBT: <channel> BUSY

A channel has been skipped because the LBT algorithm detected the presence of data or voice.

LINK: CLOSED

Indicates that the link in use has been closed. This could be due to a local HANGUP command being issued, the automatic scan resume timer expiring or by the remote site terminating the connection.

LOCK: BUSY

Indicates that the system is locked and cannot be used from this interface.

OK

Simple prompt that indicates that the command is accepted and is being processed. Normally issued for any command that does not respond with some value immediately.

SCAN: ON, <network>


Scanning has started on the indicated network.

SCAN: ALE, <network>

(Only applicable when serial port is in RTU-282 mode.) Scanning has started on the indicated network using an ALE calling system.

SELCALL

A selcall has been received.


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STATUS-CALL

A status call request message has been received.

STATUS-CALL-ACK

A status call response has been received.

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7. Error Messages

When an error is encountered in processing the CICS command input the interface issues error messages with the key-word 'ERROR:' followed by a text message explaining the error condition. The following error messages can occur:

ERROR: Channel not found

The indicated channel name does not exist in the channels programmed in the transceiver.

ERROR: Command not recognised

The command that was input could not be recognised as any of the available commands. Use the 'help' command to look for the categories of available commands and use the 'help <category>' command to get information on the available commands within a category.

ERROR: Destination address required

The command required a destination address.

ERROR: Frequency xxxxx.x not found

When attempting to select a channel by frequency, no matching channel could be found.

ERROR: LBT not installed


A request for use of LBT has failed because the facility is not installed in the radio.

ERROR: LBT wrong mode

A request for LBT measurement has been performed in a mode which is inappropriate e.g. when the radio is keyed or is scanning.

ERROR: Internal error XXXX

Under normal conditions this error should not occur. It is an indication that something went wrong with internal processing.

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ERROR: PTT Active

The transceiver is currently transmitting and prevents the command from executing. For example channel changes are not allowed when the system is transmitting.

ERROR: Scanning is on

The system is currently in a scanning state and cannot complete the command.

ERROR: System locked

The system is locked and prevents the command from being executed.

ERROR: Transmit inhibited

The current channel does not allow keying the transceiver. It is a receive-only channel.

ERROR: Network not found

The named network does not exist in the transceiver.

ERROR: Network scan list empty

The transceiver is requested to scan a particular network, but that network does not have any channels defined to be scanned.

ERROR: Invalid address


The address used in the call is invalid for the calling system used for the network.

ERROR: Network in address not found

The network part of the address used does not exist.

ERROR: No channels programmed

The transceiver does not have any channels programmed.

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8. CICS V2 Versus V3 Compatibility

This section highlights a number of aspects in the configuration of a transceiver that affects CICS interface backward compatibility with systems that are designed for and expect a CICS Version 2 interface.

8.1 Use Of '=', '?' And ',' In Commands

CICS Version 2 used the equal sign ('=') to indicate a command that required some action and used the question mark ('?') to indicate a query. For example CHAN=1 is used to switch to channel with number 1 while CHAN? was used to request the current channel number.

CICS Version 3 abandoned this system and simply interprets the lack of any arguments to a command name as a query and as soon as an argument is present it tries to perform the action indicated by the argument.

For backwards compatibility, the CICS Version 3 command decoder simply replaces any equal sign ('=') and question mark ('?') that it encounters on the command line with a space character unless specifically escaped.

8.2 Channel Names Versus Channel Numbers

CICS Version 2 systems operated with channels referenced by number. CICS Version 3 systems references channels as a alphanumeric name.


To ensure that an automated system designed for CICS Version 2 can operated with CICS Version 3, the transceiver must be configured with channel names in numeric characters only.

Also note that in CICS Version 3 a name like '0001' is NOT identical to a name of '1'. In CICS Version 2 these where treated as equal. Take care that channels are named as the automated system is expecting them.

8.3 Scan Tables Versus Network Names

CICS Version 3 systems use the concepts of networks that define the list of channels to be scanned, while CICS Version 2 systems have up to three scan tables. The SCAN command is used to start and stop scanning and allows selection of the channel list which is being scanned. In CICS Version 2 this was achieved with a single numeric digit, while in CICS Version 3 this is the network name.

SCAN ON and SCAN OFF are compatible, but the selection of the scan list is only compatible when the networks are named as single numeric digits.

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8.4 Upper-case Versus Lower-case Input

CICS Version 2 translated every character into upper-case except when it was in the middle of a quoted string. CICS Version 3 is more relaxed in that it no longer translates echoed output to upper-case, and it allows all CICS commands to be recognised in either upper-case, lower-case or any mixture of upper and lower case.


8.5 Quoted Argument Input

CICS Version 3 allows the use of either single quotes or double quotes to delimit arguments that contain embedded spaces on any argument. CICS Version 2 only recognises the use of double quotes when a text argument was expected (like in a page call).

Also CICS Version 3 allows the use of a '\' (back-slash) character to escape the next character. In this way an embedded space can be produced without enclosing the argument in quotes.

8.6 Address Versus Networks

In CICS Version 3 addresses maybe specified with or without a network name attached. This is indicated by use of the commercial at sign (@). For example in CICS Version 3 an address can be like JOE, but could also be like JOE@CODAN. The @CODAN part is an indication that the transceiver should try to reach JOE using the CODAN network.

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9. GP Port Interface

9.1 Port Hardware

9.1.1 Audio In

Transfers the audio from the device to the transceiver for transmission when PTT is asserted.

9.1.2 Audio Out

The default audio output is the raw received audio from the transceiver.

9.1.3 PTT Input (to be updated)

When asserted requests PTT from the transceiver. When asserted while the quiet input is not asserted, this requests a casual PTT with voice mode. When asserted while the quiet IS asserted, this requests a PTT with formal lock and data mode.

When PTT is asserted within 200ms from the quiet input being asserted, this indicates an outgoing data call. When PTT is asserted after 200ms from the quiet input, this indicates an incoming data call (ie. the PTT is probably used by the modem to transmit an acknowledgment on a link request that was received).

9.1.4 Quiet Line Input

This signal is between 0 and 10V

When the quiet line is asserted, this will pause the scanning of the transceiver. When quiet is de-asserted the pause is released and scanning may resume.


The request to the transceiver is the 'Pause By Window' and allows the transceiver to go back to a previous channel is necessary.

9.1.5 BUSY Output

Signal is asserted when CICS interface on GP port reports LOCK: BUSY. Asserted low when LOCK: OFF is reported.

9.1.6 RS232

A bi-directional RS232 link. By default operating on 9600bps, No parity, 8 data bits, 1 stop bit.

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9.2 CICS Commands used by 9001/9002/3012

The following CICS commands are used by the 9001/9002/3012 modem in interfacing to NGT.

ALECALL = <address@network>

Initiate an ALE call.

SELFID = <address> [, <address>]

Set the selfid to be used for subsequent link requests with the CALL command.

HANGUP

Terminate an ALE link.

CHAN?

CHAN=<number>

Is used to select the channel in the transceiver. The modem generally issues a CHAN= command and then does a couple of CHAN? commands to verify that the channel was set. *The modem is treating the channel as a number and will print the number without leading zeros.*

ECHO=OFF


This command is used by the modem to establish that a CICS interface is available. It is also used to force CICS not to echo the command input in order to prevent the echoed characters being interspersed with characters from unsolicited CICS messages.

LOCK?

LOCK=ON

LOCK=OFF

Queries the lock state or establishes a formal lock on the system for the duration of a modem session. Is issued after any link establishment.

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SCAN?
SCAN=ON
SCAN=OFF

Used to query and set the scan state of the transceiver. The modem does not appear to use the scan table selection facility of the SCAN= command like SCAN=1.

VER?

Is used to record the version of the CICS interface.

9.3 CICS Responses

The following CICS responses are detected by the 9001/9002 modem.

CICS: Vn.mm

Is the output of the Ver? command, which is decoded into a major number and a minor number. Currently the CICS version number does not seem to be used, but as NGT reports CICS as a version 3, this can be used to handle some of the differences in the CICS commands.

CHAN

Used to decode the channel reported by the transceiver. Currently expects this to be a number between 1 and 9999. This needs to change to support NGT string naming for channels.


ECHO: OFF
ECHO: ON

Response from the ECHO command.

LOCK: ON
LOCK: OFF
LOCK: BUSY

Response from the lock command providing the current lock state of the system.

ERROR
ERROR: <msg>
ERROR <msg>
NOT FOUND

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NOT FOUND <msg>
NO CHANNELS
NO CHANNELS <msg>
PTT ACTIVE
PTT ACTIVE <msg>
SCANNING IS ON
SCANNING IS ON <msg>


Signals an error condition of some sort and is treated by the modem as a reject command.

OK
OK <msg>

Signals acceptance of the command.

SCAN: OFF
SCAN: ON, n

Is used to decide the scan state of the transceiver. When ON, it decodes what comes after the ON as the scan table being used by the transceiver.

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