New Features

CID1500 vrs 2.31e

FSK Based Caller ID Simulator Software

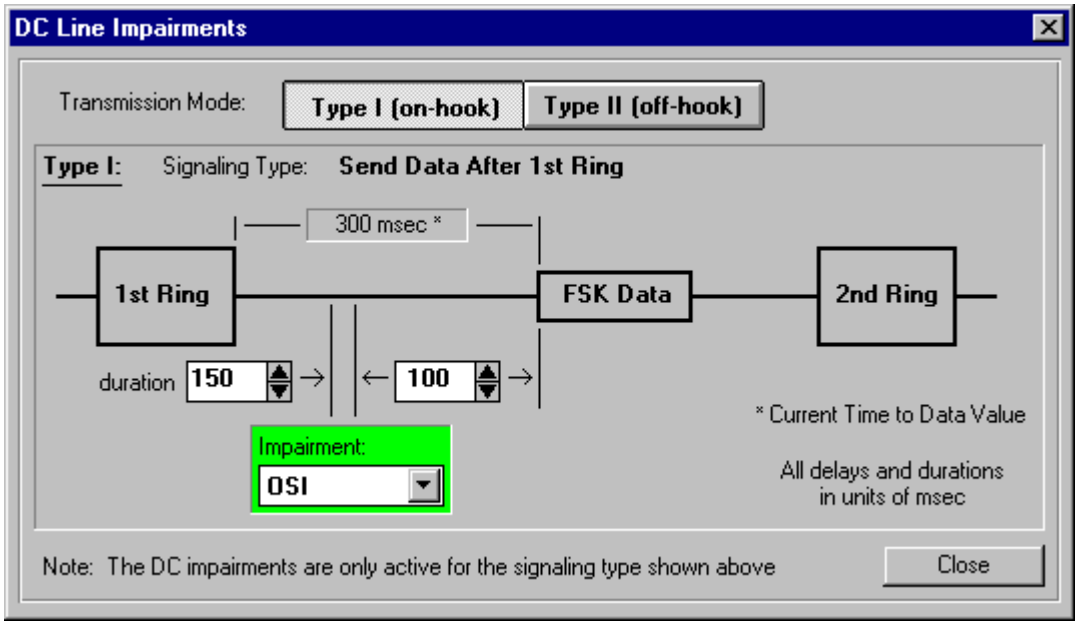
1) DC Line Impairments

A new feature in the CID1500 is the addition of programmable DC line impairments. Under certain signaling methods, the central office switch may cause the DC condition on the telephone line to undergo a polarity reversal or an OSI (open switching interval). This is unlike some signaling methods, which use a polarity reversal or OSI to inform the CPE of an impending data transmission, in that the change in the DC line conditions are only an artifact of the central office switch. As such, they do not represent any signaling information, but rather, a condition that the CPE may or may not experience. The Caller ID reception of a CPE should not be affected by the possibility of these impairments.

The Bellcore GR-30-CORE (Issue 1, December 1994) allows for a possible OSI between the end of the first ring and the start of the FSK data transmission for Type I (on-hook) Caller ID transmissions. In the Type II (off-hook) case, an OSI may precede the SAS/CAS tone and may also follow after the end of the FSK data transmission.

The DC Line Impairments options within the CID1500 software allow either an OSI or line polarity reversal as an impairment for both Type I and Type II Caller ID transmissions. In the case of Type I, the DC impairments are only active for the signaling method in which the FSK data is sent after the first ring. Other Type I signaling types that utilize line reversals, OSI's, DTAS tones, and short ringing bursts are unaffected by the DC Line Impairment settings.

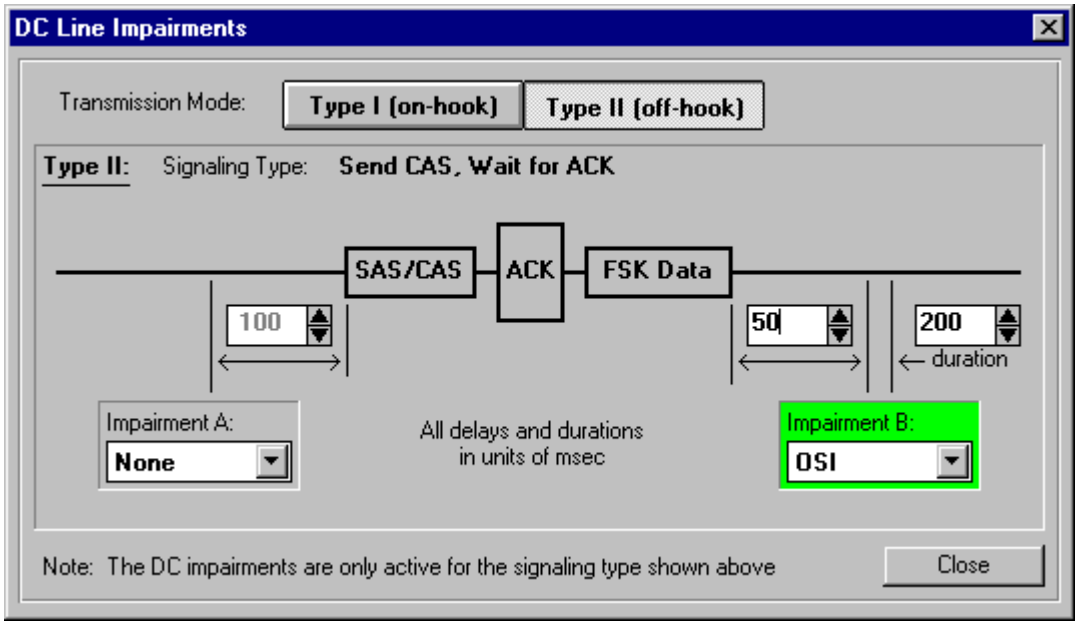
The DC Line Impairments window is displayed by clicking the mouse on the appropriate toolbar button (similar to that shown above), selecting the [CONFIGURATION] [DC LINE IMPAIRMENTS] menu, or pressing the CTRL-I key combination. In either case, a window similar to the following is shown.



A graphic diagram is used to simplify the timing relationship between the various parameters for both the Type I (on-hook) and Type II (off-hook) cases. The two Transmission Mode buttons, at the top center of the window, control whether the Type I or Type II conditions are displayed.

In the Type I case, as shown above, an impairment can be inserted between the end of the 1st ring and the start of the FSK data. The impairment type is selected from the drop-down list as, either an OSI, Line Reversal, or none. For an OSI, two timing parameters must be specified. These are the duration of the OSI and the delay from the end of the OSI to the start of the FSK data. In the case of a line reversal, only the delay from the line reversal to start of the FSK data is required. The time between the end of the first ring and the start of the FSK is determined by the “Time to Data Transmit” parameter in the Advanced Setup window. The value of this parameter is shown in the above figure as 300 msec. It is possible to set the impairment delay and duration values such that the timing will conflict with the “Time to Data Transmit” parameter. In the example figure above, if the OSI duration were to be increased to 250 msec from 150 msec, then the OSI would conflict with the ringing. In these situations, the “Time to Data Transmit” value, will be highlighted in a red background color and a warning message issued when the close button is pressed. If the conflict is not corrected, the DC impairments will not be generated during subsequent Caller ID transmissions.

By clicking the mouse on the Type II (on-hook) Transmission Mode button, the displayed timing graphic changes to a figure similar to below.



In this case, two independent impairments can be selected to occur before the SAS and CAS tones and after the FSK data transmission. As with the Type I, settings, the impairment is selected from the drop-down list box, and can be either an OSI, line reversal, or none.

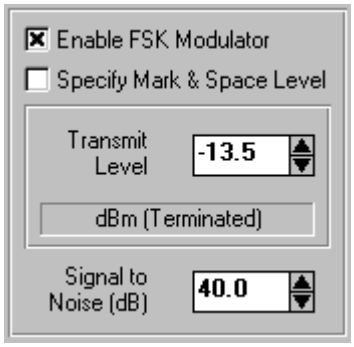
Note that if a single line reversal is selected as an impairment, then at the end of the Caller ID transmission, a second reversal is performed to ensure that the line polarity is the same as prior to the start of the Caller ID transmission.

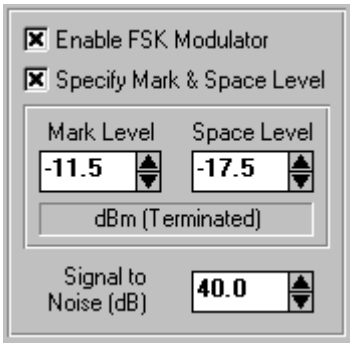
2) FSK Parameter Changes

Direct Entry of Mark & Space Tone Levels

The signal level of the FSK modulated data signal can be specified as independent mark and space tone levels, instead as the total FSK signal level. Since many of the Caller ID standards state the mark and space tone levels, it is more convenient to directly enter the levels as opposed to calculating the total level and twist level.

The FSK modulator controls, located at the right bottom corner of the Main Settings window, include a check box that, if enabled, displays the mark and space tone levels instead of the total FSK signal level. The following figures show the two possible modes of specifying the FSK signal level(s).





At anytime the total FSK transmit level is changed, the mark and space tone levels are re-calculated to reflect the new total level and maintaining the existing twist level. If the FSK twist setting is changed, the mark and space tone levels are re-calculated to reflect the new twist settings and maintaining the existing total level setting.

Changing the mark tone level will force a change of the total level and the twist setting, but maintain the space level. Likewise when changing the space level.

In either of the total FSK or mark/space level modes, the signal level unit is displayed just below the text boxes containing the level values. Three different unit systems can be specified under the More Options window. They are dBm (600 ohms), dBV, and mVrms. In addition, the levels can referenced to either an unterminated telephone line, or a telephone line terminated into 600 ohms. The More Options window is displayed by selecting the [CONFIGURATION] [MORE OPTIONS] menu command, or by pressing the CTRL-Z key combination.

Synchronizing Type II Delay-to-data from END of ACK

For Type II (off-hook) Caller ID transmissions, the CID1500 software is required to detect the ACK tone sent by the CPE. Following the detection of the ACK tone, the FSK data is then sent to the CPE. Previously, the time delay before sending the FSK data has been referenced to the detection of the ACK tone, as shown in Figure A below. This is represented by the time interval T4, as the delay from the ACK detection to the start of the FSK data transmission. The ACK detection time, T5, represents a timing uncertainty, as it can vary due to various conditions.

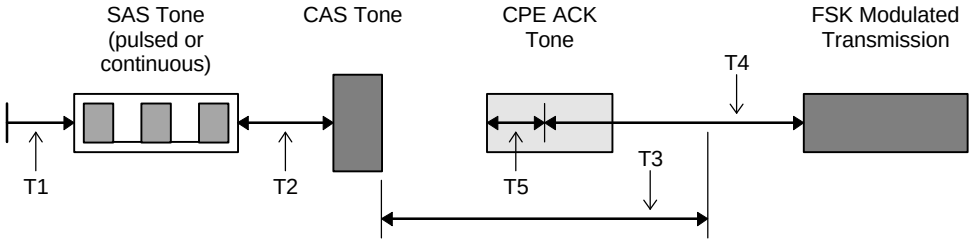


Figure A: Time delay to FSK data referenced to ACK detection

The time required for the ACK detection (T5) normally ranges from 10 to 20 msec; however, this can depend on the DC stability of the telephone line and the ACK tone purity. In situations where a CPE generates large transient signals due to a parallel set detection algorithm, or at the start of the ACK tone, the time required to properly qualify the ACK tone's frequency and level characteristics may be extended. Additionally, an ACK tone that experiences a slow or uneven ramp-up or large frequency jitter results in longer detection intervals.

The timing uncertainty introduced by the ACK detection can become a problem when testing to various standards such as the TIA-777 (Type 2 Caller Identity Equipment Performance Requirements). In the above mentioned document, the uncertain T5 delay can cause difficulties in verifying CPE conformance. As such, the CID1500 software contains an option which changes the reference point for the time delay to FSK data. If enabled, the T4 delay is referenced from the end of the ACK tone, as shown below in figure B.

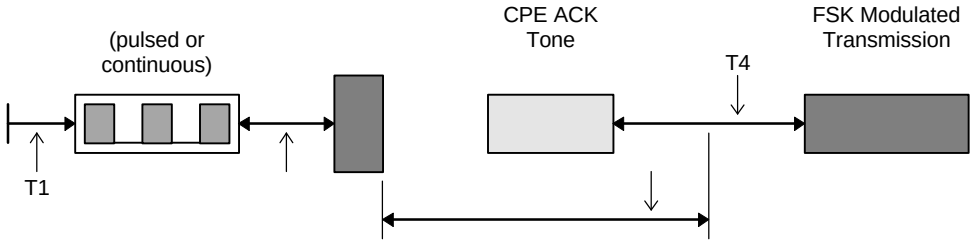
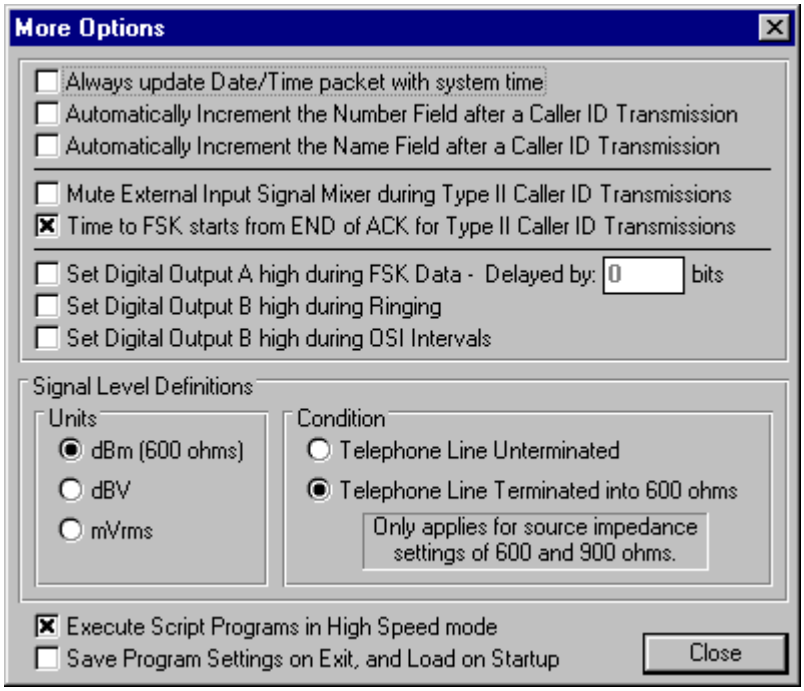


Figure B: Time delay to FSK data referenced to end of ACK

In this mode of operation, the CID1500 must still detect the ACK tone within the time-out interval of T3 by qualifying the ACK tone's level and frequency characteristics. However, once detected, the time delay to the start of the FSK data will not begin until the ACK tone has ended. It will be deemed ended when either of the low or high group tone level falls below half the power level measured at the detection point.

The timing mode used is shown in the More Options window. If the check box labeled "Time to FSK starts from END of ACK for Type II Caller ID Transmissions" is checked, then the time delay T4 will start at the end of the ACK tone instead of when the ACK tone is detected.



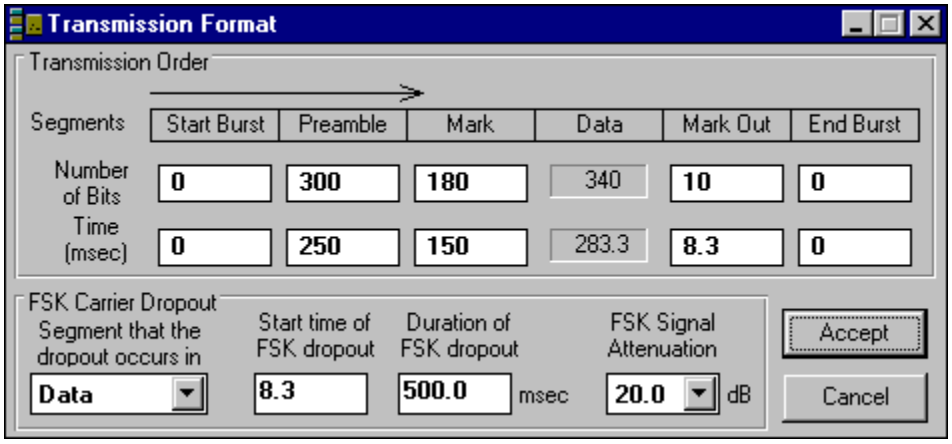
The More Options window can be viewed by selecting the [CONFIGURATION] [MORE OPTIONS] menu command, or by pressing the CTRL-Z key combination. The default setting is enabled.

FSK Signal Attenuation Control

Many of the Caller ID standards require a test(s) in which the signal level of the FSK carrier is dropped to zero for brief period of time. This is done to ensure that a CPE can withstand a signal drop-out under certain circumstances and still correctly receive the transmitted data. In addition to these tests, the ETSI ETS 300 778-1 (Terminal Equipment Requirements, Part I: Off-line data transmission) document, annex C.10, specifies a test condition where the FSK signal level is attenuated during the Caller ID message.

In order to support the Annex C.10 test, the FSK carrier drop-out controls now include a programmable attenuation setting. The level of FSK attenuation can be set from 0 dB to 60 dB in 1 dB steps, in addition to a maximum attenuation setting in which the FSK modulator's output level is set to zero.

The control settings for the FSK carrier drop-out are contained within the Transmission Format window, as shown below. The default attenuation value is set to maximum, resulting in no FSK signal if the drop-out function is enabled.



FSK Signal Startup

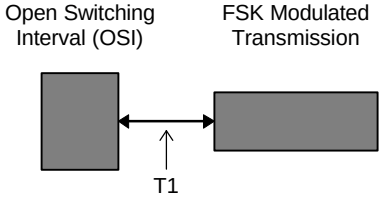
The previous versions of the CID1500 enabled the FSK modulator at a random starting phase angle. Under certain telephone line loading impedance's, the random starting phase angle could create a transient signal affecting a CPE's FSK decoder. In addition, if an interfering tone is enabled at the time of the FSK modulator startup, it may under go a single random instantaneous phase change.

This version of the CID1500 software has been altered such that the FSK modulator always starts at a zero phase angle, eliminating any possible transient signals, along with preventing any instantaneous phase changes in an interfering tone.

3) Bellcore OSI Signaling

For the Bellcore standard Type I (on-hook) Caller ID transmissions, a signaling method using an OSI (open switching interval) has been included. This is in addition to sending the Caller ID data after the first ring, or without any ringing.

By selecting the "OSI Alert (No Ring)" signaling method, in the Main Settings windows, the FSK modulated data is sent following an OSI. The OSI represents a period of time in which the DC feeding voltage is removed from the tip and ring leads. The duration of this time period is programmable under the Advanced Setting windows with a nominal value of 250 msec. Following a time delay after the OSI (T1), the FSK data transmission begins. The default delay value for T1 is 500 msec, which is programmable in the Advanced Settings window. No ringing will follow the FSK data with this signaling method.



4)

A number of improvements in the CID1500 scripting language have been implemented in this software release. These include better control over conditional execution by using various files, faster script execution, along with other minor enhancements.

New Command: IF-THEN-ELSE

These commands are: IF, ELSE, and ENDIF. In many situations they provide a simpler method to control the script program execution rather than using the BRANCHIF

The syntax of the new commands are as follows:

: (condition) THEN

[ELSE

ENDIF

command are executed. In the alternative case where the condition is evaluated to

command is used to mark the end of the conditional statements. Though the ELSE

The conditions that may be used within the IF command are the same as those for the

Always

OffHook

ACKfail

InputB

NOTinputB

NOTnetTone

The and conditions are new and represent whether or not a

When using a declared variable as the conditional, it will be evaluated according to its value is zero, it is evaluated as FALSE. For string variables, the condition is evaluated

as TRUE if the text contained within the variable is “TRUE”, otherwise it represents FALSE.

The restrictions to the IF-THEN-ELSE command structures are as follows. The IF commands may be nested to a maximum of 32 levels deep. Beyond this, an error will be generated. Also, if a BRANCHIF command is used within an IF command’s conditional statements, it’s target label must not be located beyond the current ENDIF statement or prior to the current IF statement, otherwise it will cause a error.

New Command: DCIMP

The DCIMP script command is used to control the settings of any optional DC line impairments generated during a Caller ID transmission. The syntax for the command is as follows:

Syntax*:* *DCimp (impairment) (parameter) (value)*

Where: The (impairment) field can be either:

AfterRing	(For Type I Caller ID)
BeforeSASCAS	(For Type II Caller ID)
AfterFSK	(For Type II Caller ID)

The (parameter) field can be either:

Type	(specify impairment type)
Delay	(specify impairment delay)
Duration	(specify OSI impairment duration)

the (value) field contents depend on the parameter settings:

for (parameter) = Type:

None	(turn off the impairment)
Reversal	(generate a line reversal)
OSI	(generate an OSI)

for (parameter) = Delay:
(time value in integer msec from 0 to 1000)

for (parameter) = Duration
(time value in integer msec from 1 to 1000)

As an example, the following statements generate an OSI after the first ring and before the FSK data for a Type I Caller ID transmission, with an OSI duration of 150 msec occurring 75 msec before the start of the FSK data.

DCimp AfterRing Type OSI
DCimp AfterRing Delay 75
DCimp AfterRing Duration 150

The OSI impairment is then turned off by executing:

DCimp AfterRing Type None

New Command: DO

By using the new DO command, an OSI (Open Switching Interval) can be generated by

command only supports the single action of generating an OSI; however, it may be expanded in the future to perform other actions. The syntax structure consists of the DO

specific case of performing an OSI, the additional parameter must specify its duration in milliseconds.

DO (action) (parameters)

Where:

OSI

The (parameters) field contents depend on the action:

(parameters) = OSI duration in msec

An example of performing an OSI for 500 msec is accomplished with the following script

DO OSI 500

New Command: PRINTFILE

PRINTFILE command will output a text string to a specified file. In addition to displaying literal text strings, the command can write the value of any parameter setting, script

file by specifying its name in the item list. Enclosing the parameter settings, or script variables in [ ] brackets, performs a conversion to a text string. This is required, since

[DATE], [TIME], and [NEWLINE] can be used to write the current system date, time, or start a new line respectively. The | character can be used as a shortcut to the

each item included on the PRINTFILE command line must be separated by a space.

The syntax for the PRINTFILE command is:

PRINTFILE (filename) [item 1] ... [item n]

Where:

If a complete path is not supplied, the file will be written to the same directory as the CID1500 application.

“literal text in quotation marks”
[declared string or numeric variable]

[reserved variable]
, to output a tab character (ASCII code = 9)

| to output a CR+LF character combination
{x} to output the ASCII character represented by x

Note that the PRINTFILE command does not overwrite an existing file. Instead it will append the text strings to the end of any existing file. To ensure a new file is created with the PRINTFILE command, use the DELETEFILE command to erase it first. Also, the PRINTFILE command will not add any line feed or carriage return characters unless explicitly told to do so with the [NEWLINE] reserved variable or the | character. For example the following script:

PRINTFILE test.txt "The current time is:"
PRINTFILE test.txt [TIME]

Would generate a file containing one line of text without any line feeds or carriage return characters, as in the following.

The current time is:1:50:19 PM

New Command: DELETEFILE

The DELETEFILE command is used to delete any file. It is normally used in conjunction with the PRINTFILE command to ensure that the text strings written with the PRINTFILE command are directed to a new file and not appended to an existing file. The syntax for this command is as follows:

Syntax: *DELETEFILE (filename)*

Where: (filename) is the name of the file to erase.
If a complete path is not supplied, the file is assumed to be in the same directory as the CID1500 application.

Caution should be taken in using this command, as it can erase any file. If the specified file is not found or does not exist, no error will be reported.

New Command: READFILE

Data can be read from files by using the READFILE script command. Any files read must be in an ASCII text format using a structure common to Windows .INI type files. This structure consists of groups of "sections", each containing a list of "keywords" and "values" in the following format:

[section 1]
keyword 1 = value 1
...
keyword n = value n

An example of this is:

[FSKPARAMS]
MarkFreq=1200

SpaceFreq=2200
[MESSAGEDATA]
CallingName="John Smith"
CallingNumber="6045551212"

In which the file contains two sections called “FSKPARAMS” and “MESSAGEDATA”, each further containing two keywords. The READFILE script command is used to read any of the values following a keyword into a declared variable. The syntax of the script command is as follows:

Syntax: *READFILE (filename) (section) (key) (input variable)*

Where: (filename) is the name of the file to read.
If a complete path is not supplied, the file is assumed to be in the same directory as the CID1500 application.

(section) is the text representing the section to read, without the enclosing [ ] brackets, and is case insensitive.

(keyword) is the text preceding the equal sign and is case insensitive.

(input variable) is the name of a declared script variable which will receive the specified value from the file.

Using the above example data file (called test.txt), the following script program will read the value of the MarkFreq keyword and the CallingName keyword.

```
Declare  Numeric  Mfreq
Declare  String  Cname
ReadFile  test.txt  FskParams  MarkFreq  Mfreq
ReadFile  test.txt  MessageData  CallingName  Cname
```

The value of the MarkFreq keyword (1200) is assigned to the numeric variable Mfreq, while the value of the CallingName keyword (“John Smith”) is assigned to the string variable Cname.

If the specified file name, section name, or keyword name does not exist an error message is generated and the execution of the script program is stopped.

Modified Command: SET

The SET script command has been modified such that it can be used to:

1) Change the current Caller ID standard setting
2) Specify FSK carrier drop-out attenuation settings

The effect of changing Caller ID standards using the SET command is identical to that of selecting the [CONFIGURATION] [CALLER ID STANDARD] menu command, with the exception that the script program in memory is not cleared. To use the SET command to change the Caller ID standard setting, use the following syntax:

Syntax: *SET Standard (standard name)*

Where: (standard name) can be either:
Bellcore
ETSI
Australia

The SET command has been modified to accept attenuation data when programming for a FSK carrier drop-out. The new syntax is identical to the previous command syntax, except the optional addition of specifying the FSK level attenuation value. If this parameter is left blank, then the attenuation value is maintained as its previous value. The value range of attenuation settings is from 0 to 60, with the addition of "Max". If "Max" is specified, the FSK level is set to zero during the carrier drop-out period.

Syntax: *SET Dropout (segment) (start) (duration) [attenuation]*

Modified Command: SIGNALING

With the addition of the OSI signaling type for the Bellcore Caller ID standard, the SIGNALING script command includes a new keyword in order to select it. This is accomplished by using the "OSI_no_Ring" signaling type after the SIGNALING script command, as shown below.

Syntax: *SIGNALING (signaling type)*

Where: (*signaling type*) can be either (Bellcore standard):
Data_after_Ring
No_Ringing
OSI_no_Ring
Send_CAS_Wait_ACK

Modified Command: NETTONE

The NetTone command has been enhanced by:

1) Allowing parameter passing into the NetTone command files
2) Allowing script program execution while running a NetTone file.

By using parameter passing, the CID1500 script programs can modify and/or control the NetTone command file. Up to 26 parameters can be specified by appending them to the end of the NetTone script command. Each parameter can be a numeric value, text string, user declared variable, or reserved variable. If a variable is used as a parameter, it is first evaluated to either a numeric value or text string, then passed to the NetTone file. Within the NetTone file, the use of the '%' character followed by a letter, marks the parameter. For example, if parameters are included in the command line, the CID1500 will scan the NetTone file for '%A' and replace it with the first parameter. A second parameter, if included, is substituted into any occurrences of '%B' within the NetTone file. This process is repeated for up to 26 parameters.

The second change to the NetTone command is the optional NOWAIT keyword. If placed after the NetTone file name, the CID1500 will continue to execute script

commands while the NetTone command file is running. Without the NOWAIT keyword, the CID1500 will halt the execution of all script commands until the NetTone command file has ended.

The syntax for the modified command is as follows:

Syntax: *NETTONE (filename) [NOWAIT] [parameter list]*

Where: (filename) is the name of the file to process.
If a complete path is not supplied, the file is assumed to be in the same directory as the CID1500 application.

NOWAIT, if included in the command line, it allows the CID1500 program to continue executing script commands while the NetTone program is running. If NOWAIT is not included, then no further script commands are executed until the specified NetTone program is finished.

[parameter list] is up to 26 items (separated by a space character), that are passed into the specified NetTone file. The items can text strings, numbers, declared variables, or reserved variables.

The following example allows the CID1500 to generate a stutter dial tone. By using parameter passing, both the number of tone pulses generated and the tone on/off times are programmable. The script command below uses two parameters, being the numeric values of 100 and 10 respectively.

NETTONE Example.nts 100 10

The first parameter (100) is substituted into every occurrence of '%A' found within the "Example.nts" file. As shown below, this controls the duration of the dial tone pulse as well as the duration between dial tone pulses. Likewise the second parameter (10) is substituted into every occurrence of '%B'. This parameter controls the number of loops executed.

```
* Stutter dial tone (send %b pulses then continuous dial tone)
LevelUnits  dBm              ;define lines in units of dBm
Wait  OffHook                ;wait until off-hook
Loop  %b
```

If parameters are included on the NetTone command line but the specified file does not contain any parameter markers ('%A' to '%'Z), then an error message is displayed. Likewise, if no parameters are included on the NetTone command line, but the specified file contains parameter markers, an error message will be displayed.

Additional Reserved Variables

A number of new reserved variables have been added to the scripting language. These variables contain data recorded during the previous Type II Caller ID transmission, such as the ACK tone characteristics and parallel set detect on-hook and off-hook timing. The new variables function in same manner as previous reserved variables, they can be used in the PRINTSCREEN, PRINTLOG, PRINTFILE commands for displaying the results, or with the ASSIGN, BRANCHIF, IF commands for calculations and program branching.

New Reserved Variables:

ACKLOWFREQ	Returns DTMF low group tone frequency of the last ACK
ACKHIGHFREQ	Returns DTMF high group tone frequency of the last ACK
ACKLOWLEVEL	Returns DTMF low group tone level of the last ACK
ACKHIGHLEVEL	Returns DTMF high group tone level of the last ACK
ACKDIGIT	Returns single character string with last ACK digit
ACKTIME	Returns time from end of CAS to when the ACK was detected
ACKPASS	Returns the number of times the ACK tone was successfully detected
ACKFAIL	Returns the number of times the ACK tone was not successfully detected
ACKTOTAL	Returns the total number of times a Type II Caller ID transmission was sent
ONHOOKTIME	Returns the time from the end of CAS to when the CPE went on-hook in order to perform a parallel set detect.
OFFHOOKTIME	Returns the time from the end of CAS to when the CPE returned to the off-hook state after performing a parallel set detect
INBCOUNT	Returns the number of pulses detected at the Digital Input B pin since the last time it was reset with the CLEAR INBCOUNT command.
TIMER	Returns the number of milliseconds that have elapsed since the last time the timer was cleared with the CLEAR TIMER command.

Previous Reserved Variables:

ACKCOUNTER	Returns text string containing the number of Type II Caller ID transmissions sent, included the number of successfully detected ACK tones and the number of failed ACK tones.
TIME	Returns a text string representing the current system time.
DATE	Returns a text string representing the current system date
NEWLINE	Returns a carriage return and line feed character combination

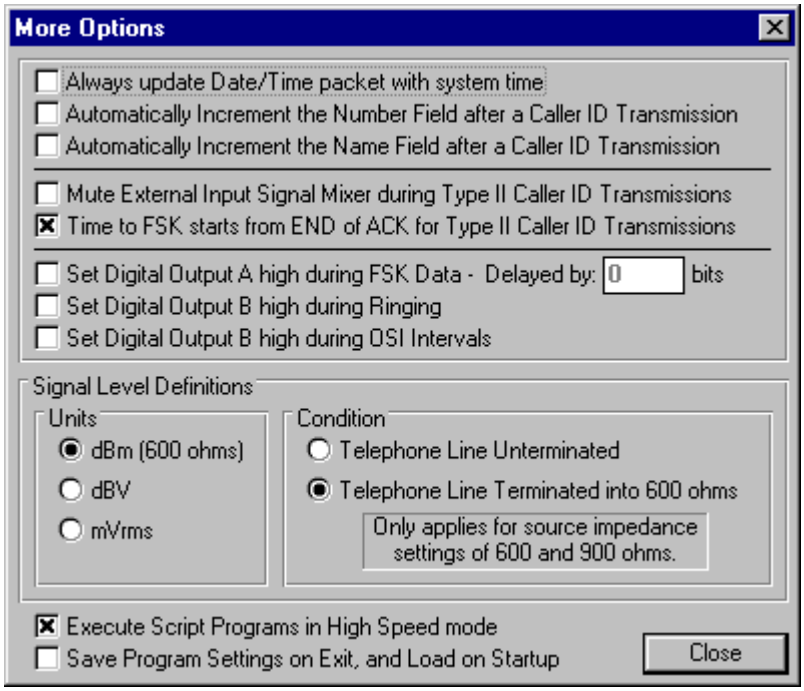
TRUE	Represents a True state for use in conditional evaluations
FALSE	Represents a False state for use in conditional evaluations

Other Scripting Changes

High Speed Script Execution

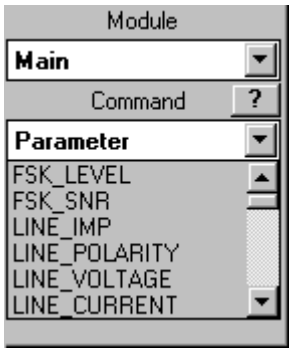
A new option, if enabled, increases the speed of script program execution. Previously, each script command was timed to execute at a nominal rate of one command every 50 msec. This resulted in relatively consistent performance for a wide variety of computer processor speeds. However, when executing large and complex scripting programs, the nominal 50 msec command execution rate caused significant program run times. The new option allows a script program's command execution rate to be determined by the inherent speed of the computer running the CID1500 program. Depending on the processor speed, this can translate into an increase of approximately ten fold for most Pentium class processors.

The high speed script execution option is located in the More Options windows. To display the window, select the [CONFIGURATION] [MORE OPTIONS] menu command, or press the CTRL-Z key combination. The figure below shows the More Options window, with the high speed script execution option located near the bottom of the window. The default more for the option is enabled.



Script Command Help

A short-cut to the on-line help has been added, by providing direct access to the script command help topics. Clicking the mouse on the button marked with a question mark displays the on-line help topic for the currently selected command. The help button is located within the Script Editor window above and to the left side of the command drop-down list box. The following figure shows the command help button within the Script Editor window.



Miscellaneous

Other minor scripting language changes include:

1. Increasing the maximum number of program labels to 200. Complex script programs using a large number of subroutines and/or BRANCHIF commands would exceed, or come close to, the previous limit of 100 labels. By expanding the maximum number of labels, and providing a more structure IF-THEN command, most programs will not encounter this limitation.

2. Increasing the maximum number of command line elements. Each script command line is composed of elements separated by one or more space characters. Previously, the maximum number of elements was 15, which could be exceeded via the PRINTSCREEN, PRINTLOG, and PRINTFILE command when generating complex output strings. The maximum number of command line elements is now 50, allowing for more complex output strings.

5) Other Program Changes

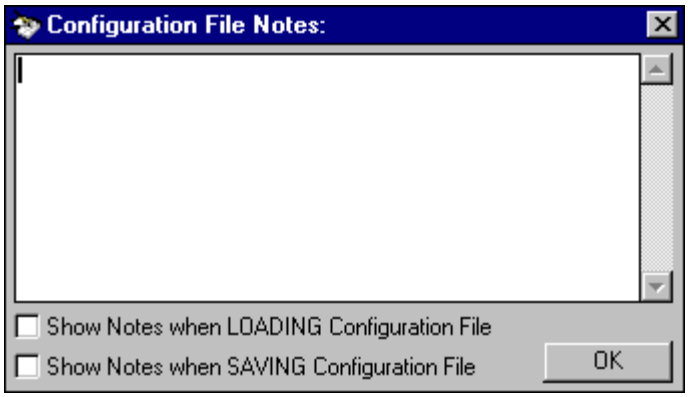
Generating Type II CID in the On-hook State

The CID1500 will allow Type II Caller ID transmissions even if the connected CPE is in the on-hook state. This ability can become useful during the development stages of Type II capable CPE devices. To send on-hook Type II Caller ID transmissions, the Data Transmission Mode selection in the Main Settings window must be set to “Type II (off-hook)”. If a Caller ID transmission is then started and the connected CPE is on-hook, a message is displayed warning the user of the CPE on-hook state. At this point, the Caller ID transmission can be aborted or continue in the on-hook state. Note that if a

Caller ID transmission is started by the script language “START” command, no warning message is displayed. If the Data Transmission Mode is set to Type II then a Caller ID transmission will be started regardless of the CPE hook switch state.

Viewing Configuration File Notes

Text notes can be stored as part of the configuration files. The notes can contain any text information of up to 10,000 characters that is always contained within the configuration file. Two options are included that if set, display the text notes when the configuration file is loaded, or when the configuration file is saved. Otherwise, the notes can be viewed and edited by selecting the [CONFIGURATION] [VIEW CONFIGURATION FILE NOTES] menu command.



The options to view the text notes during loading and saving the configuration file are controlled by the two checkboxes at the bottom of the previous figure. These settings are stored as part of the configuration file. As such, if saving a configuration with the option to view on loading is enabled, then anytime the file is loaded, the notes are displayed. This is independent of the previous option settings. Likewise for the option to display the text notes when saving the configuration file.

Correction to ETSI Timing Parameters

Some of the Type I Caller ID timing parameter values used for the ETSI Caller ID standard where not correctly loaded from configuration files. Depending on the ETSI signaling type selected, when loading configuration files, the following parameter values would be reset to their default settings.

Time to Dual Tone Alert
Time to Ring Burst Alert
Time to Data Transmit
Time to Ringing

The above error has been corrected in this software release such that value changes made to the above parameters will be stored and loaded correctly from a configuration file.

Example Script Program for TIA-777 Standard

Included in this software release is an example script program file that performs Type II Caller ID CAS signal recognition tests according to the TIA-777 (Type 2 Caller Identity Equipment Performance Requirements) document. The script program follows section 4.4.2.2, which outlines a series of tests modifying the CAS tone properties to ensure the CPE under test correctly detects the signal. The script program can be used as a template to expand the testing to include other tests specified in the TIA document. It currently focuses only on CAS signal recognition testing, since it is meant primarily as an example of the script programming language.

Adjustment of Default Bellcore Parameters

The default values of three parameter used with the Bellcore standard have been changed. The affected parameters and their new default values are:

Time to Date Transmit	500 msec	(Type I Timing Parameters)
CAS Tone # 1 Level:	-22.0 dBm	(SAS/CAS Parameters)
CAS Tone # 2 Level:	-22.0 dBm	(SAS/CAS Parameters)

The change to the default values were made in order to more closely reflect estimates for typical settings used in USA and Canada.

Adjustment to French CID Configuration File

The default settings for the French Caller ID configuration file have been updated in order to correct errors. The ringing signal and ring burst alert signal frequency has been changed to 50 Hz from a previous value of 22 Hz. Also, the system of level units used has been changed to dBm (terminated into 600 ohms) along with a default FSK sending level of -13 dBm.

Ringing Frequency:	50 Hz	(Ring Generator)
Ring Burst Frequency:	50 Hz	(Alert Tones)
Default Signal Level Units:	dBm (Terminated into 600 ohms)	
Default FSK Signal Level:	-13 dBm	