Application Note #156:

CH2124/60 iModem Default Configuration Profile

INTRODUCTION
The CH21XX iModem is delivered with a default configuration profile that will allow transmission of emails "right out of the box." Application Note # 156 explains in detail each of the default configuration parameters. The default configuration is provided as a convenience to our customers and it enables our customers to demonstrate proper operation of both the iModem and the iModem Evaluation Board without the need for personalization or customization of the iModem ISP parameters.

The default profile is intended for use on an interim basis and the user should expect that some amount of personalization/customization will be needed to tailor the iModem's performance to the user's specific application requirements. The factory installed default configuration can be modified by the user as desired. Refer to Application Note # 155, **@T**® Command Set Description and Usage for CH2124/60 iModem Products, for a complete description of the available **@T**® commands.

For a detailed description of the acronyms contained within this document, refer to Cermetek Application Note # 158, Cermetek iModem Caveats and Definitions.

@T® **Command Syntax.**
The **@T**® command syntax is identical to the industry standard Hayes AT command syntax. For a complete description of all available **@T**® commands, refer to Application Note #155.

For the purposes of this document, the following conventions will be observed:

> **<CR>** is used to denote carriage return (equivalent to HEX 0D).
> **<LF>** is used to denote line feed (equivalent to HEX 0A).
> Enter: is used to denote the command string to be sent to the iModem.
> Action: is used to denote the action required by the user.
> Response: is used to denote the response sent (or action taken) by the iModem.

Any information listed in bold is a required portion of the command string. Brackets [] not in bold are intended to serve as delimiters only and are not part of the required command string. All embedded spaces are ignored except in the data field.

Each command line has the following format:

> **@T**[**command**][**=data field**]**<CR><LF>**

> Where: **@T**® is the iModem command attention sequence. Upper or lower case **T** is acceptable.
> [**command**] is the specific command. Upper or lower case characters are acceptable.
> [**=data field**] is the data field. Any ASCII character is acceptable (including blank spaces).
> The **=** sign must precede the information entered in the data field (except for the case of query commands).
> Use **?** in the data field for the case of query commands. An **=** sign is not required for queries.
> **<CR><LF>** is the termination sequence for all commands except for the **@TM1** command as indicated below.
> > **@T**[**M1**][**=data field**]**<CR><LF>.<CR><LF>**.

ISP Parameters. The Cermetek CH21XX iModem displays the ISP parameters with the appropriate **@T**® command required for modification of the parameter in parenthesis. This is provided as a convenience to the user.

DEFAULT ISP CONFIGURATION PROFILE
The following ISP configuration profile information is preprogrammed into the iModem:

1. ISP account ID and password.
2. Local Sunnyvale, CA, dial-up ISP (Internet Service Provider's) access phone number.
3. Email destination address.
4. Email subject line.
5. Email message.

The default ISP configuration profile may be viewed by issuing either the **@TV** or the **@TVn** command to the iModem.

Example 1.   Enter: **@T[V][]<CR>**   View currently active iModem configuration profile
                 Result: **ISP Number (@TN1=n): 14089908604**
                           LOGIN NAME (@TL1=n): username@imodem.net
                           POP3 LOGIN ID (@TLM=n): username
                           LOGIN PASSWORD (@TP1=n): userpassword
                           SMTP ADDRESS (@TOS1=n): C7AB36F7
                           POP3 ADDRESS (@TOP1=n): 18D6D210
                           FROM (@TE1=n): username@imodem.net
                           NAME (@TU1=n): DeviceName
                           TO (@TA1=n): username@imodem.net
                           SUBJECT (@TS1=n): iModem Test
                           MESSAGE (@TM1=n, end with <CR>.<CR>):

                           This Message has been sent courtesy of
                           Cermetek Microelectronics, using the
                           CH21XX iModem.

                           OK

NOTE
The SMTP server is used by the iModem to send email. The POP3 server is used by the iModem to retrieve and delete email.

ISP Number (@TN1=n): 14089908604. This is the local ISP access telephone number. The default ISP access phone number is selected to be within the customer's area code, whenever possible. The long distance area code will be included in the PSTN dial string for completeness unless directed otherwise by the customer. When requested, the iModem will be programmed with an access number (e.g., 9) as part of the PSTN dial string. If the customer wishes to obtain a different local access number, please visit the Cermetek http://www.cermetek.com website. Click on the local access item. This will display a listing of over 2000 U.S. based local access phone numbers.

LOGIN NAME (@TL1=n): username@imodem.net. This is the ISP account name established by Cermetek. If directed otherwise by the customer, a non-iModem.net Network Login Name will be programmed.

POP3 LOGIN ID (@TLM=n): username. This is the POP3 server Login ID.

LOGIN PASSWORD (@TP1=n): userpassword. This is the ISP password. This password is associated with the LOGIN NAME user account (@TL1). Again, if specified the customer, a different Login Password will be programmed.

SMTP ADDRESS (@TOS1=n): C7AB36F7. This is the SMTP mail server hexadecimal address associated with the ISP account. SMTP is used for SEND EMAIL.

For non-Cermetek accounts, the user obtains the required SMTP mail server address by contacting the ISP's technical support line. This address must be entered as a hexadecimal number. Alternately, the user may obtain the SMTP address directly by visiting the http://www.cermetek.com website and using the MX Record search routine by clicking on the MX Lookup item. When the pop up window appears, type in the symbolic address. Note that more than one address will appear. Pick the one with the highest weighting number. If the user chooses to use the Cermetek SMTP, no changes are necessary and the default SMTP IP address is acceptable.

POP3 ADDRESS (@TOP1=n): 18D6D210. This is the POP3 mail server address for the ISP displayed in hexadecimal. POP3 is used to RETRIEVE EMAIL.

For non-Cermetek accounts, the user obtains the required POP3 mail server address by contacting the ISP's technical support line. This address must be entered as a hexadecimal number. If the user chooses to use the iModem.net ISP mailbox, established by Cermetek, then the default POP3 IP address is acceptable and no changes are necessary.

FROM (@TE1=n): username@imodem.net. This is the default Cermetek iModem.net ISP dial-up email account. Cermetek provides this account on a 1 year free trial basis.

TO (@TA1=n): username@imodem.net. This is the default destination email address. Cermetek provides this email box on a 1 year free trail basis on our iModem.net ISP and is provided as a courtesy to our customers.

SUBJECT (@TS1=n): iModem Test. This is the default email subject line.

NAME(@TU1=n): DeviceName. This is a user definable name or ID. It is intended to function as a user settable ID to assist the user with differentiating between iModem messages sent from multiple iModems located at the same site.

VERIFICATION DATA
Each iModem is shipped with the following verification information:
1. CH21XX Programming Summary Form.
2. Test Data Verification Printout.
3. Sample FAX printout (optional).

CH21XX Programming Summary Form. This document summarizes all iModem and ISP configuration parameters.

Test Data Verification Printout. This document lists the iModem parameters displayed with the **@TV** and **@TM1??** commands. The status messages received during a test email transmission of the iModem using the personalized ISP configuration parameters supplied by the customer is also listed on the printout.

DEFAULT EMAIL MESSAGES
The iModem contains two preprogrammed email messages. The content of these messages is described below.

User Defined Message. This is the default email message. This message is completely modifiable by the user. However, the User Defined message does not report the status the iModem input pins.

The User Defined Email Message may be viewed by issuing the **@TM1?** command to the iModem.

Example 3.   Enter: **@T[M1][?]<CR>**
                Response: **This Message has been sent courtesy of**
                            Cermetek Microelectronics, using the
                            CH21XX iModem.

	Note that the **<CR><LF>.<CR><LF>** termination sequence is repeated verbatim in the message text.
.	This sequence is needed by the various internet protocols to indicate end-of-message.
OK	The **<CR><LF>.<CR><LF>** will not appear in the transmitted email.

Input Port Status Message. This is the alternate email message. This message reports the status of the iModem input pins. The Input Port Status Message contains two components:
1. The body of the message.
2. The input pin status.

The body of this message is NOT user modifiable. However, the Input Port Status is determined by the voltage value (either TTL LOW or TTL HIGH) presented to the iModem INPUT 1 and INPUT 2 pins at the time the message is sent. These voltage values are established by the user's application and, therefore, are controllable by the user.

The Input Port Status message may be viewed by issuing the **@TV1** command to the iModem.

Example 2.   Enter: **@T[V1][]<CR>**
                 Response:

Remote product message

Input 1 LOW   Depends on status of Input 1: either TTL HIGH or TTL LOW

Input 2 HIGH   Depends on status of Input 2: either TTL HIGH or TTL LOW

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