

EWB Cotton Client Interface Manual

Communications

Copyright 1996-2009, EWB, Inc

Updated: May 13, 2008

COMMUNICATIONS

There are currently two (2) methods of transferring files between users and EWR, Inc.:

1. FTP via the Internet
2. Zmodem using dial-up phone lines

Ftp Server Transfers:

EWR, Inc. has an FTP (File Transfer Protocol) Server which can be used for transferring files between the user and EWR, Inc. Each user must log onto the server with a unique User ID and password in order to transfer files to EWR and to access files from EWR. In addition, a VPN (Virtual Private Network) is available to ensure maximum security.

The web address of the EWR, Inc. FTP site is: <ftp.ewrinc.net>

On FTP system, "Holder" mailboxes are established where the FTP files are stored. (Sending and Receiving). Each "Holder" who has signed a contract with EWR, Inc. selects a unique code number to be used as their holder ID or number. The first digit of the code is an alpha character used to designate the segment of the Cotton Industry the Holder is in, e.g., G = Gin, W = Warehouse, B = Bank, P = Producer, Z = Cooperative, M = Merchants.

Zmodem Transfers:

The following paragraphs describe the communications session protocol employed by the EWR PC Client and the EWR Host.

Connect and Handshake:

Upon connection to the host, the host will send to the client an ENQ (05h) character, indicating it is ready to receive the Logon string. Upon confirmation of the connection, the client waits to receive the ENQ before proceeding. Once the ENQ is received, the client proceeds to send the Logon string.

Logon String:

The client sends to the host the Logon string, which consists of the following:

OFFSET	LENGTH	FUNCTION	VALUE	MEANING
1-2	2	Program Version	20	PC Software
3-8	6	Location ID		User Dependent
9-16	8	Location Password		User Dependent
17-23	7	Holder ID		User Dependent
24-29	6	User ID		User Dependent
30-37	8	User Password		User Dependent
38-38	1	File Transfer	Z	Z Modem
39-41	3	Session Type	PCB PCR PCS	Send & Receive Receive Only Send Only
42-42	1	Compression Flag	P N	Pkzip None
43-43	1	Carriage Return	OD Hex	

Logon Confirmation:

There are two (2) possible responses from the host upon the reception of the Logon string.

- 1) The Host sends an ACK:
 - a) If the host sends an ACK (06h) character to the client, this signifies that the Logon string was accepted and the client is now logged in.
- 2) The Host sends a NAK:
 - a) If the host responds to the handshake string with a NAK (15h) character, then the Logon string was not accepted and the string should be retransmitted. If the host rejects the Logon string three times, the session will be disconnected by the host.

A possible reason for receiving three consecutive NAK's is the Password, User ID, Holder ID, Location ID or Location Password may be incorrect or invalid. The primary cause for incorrect or invalid passwords is simply that users have entered the information with errors. The passwords and ID's are case sensitive, thus resulting in the greatest cause for errors. The appropriate forms and agreements must be signed and returned to EWR, INC. before a Holder ID, User ID, and User Password will be issued.

File Transfer – Send

Upon receiving an ACK, the client sends the transmission file created by the EWR PC software or by some other vendors software. The current file transfer protocol supported is the Zmodem protocol. For each file to be uploaded to the EWR Host:

1. The FS character (1Ch) is sent to the EWR Host.
2. The file transfer protocol (Zmodem) is initiated to transfer the file.

An EOT is sent to the EWR Host when all files have been transferred to the Host.

File Transfer - Receive:

In the file transfer receive phase, the client receives a download file or files sent by the host. The file transfer protocol automatically initiates retries on packet errors. The files downloaded will use an eight-digit file name with extension "rcv". The eight digits are:

ddhhmmss, where:

dd = day of month

hh = hour

mm = minute

ss = second

For each file to be downloaded to the client:

1. The FS character (1Ch) is sent to the client.
2. The file transfer protocol (Zmodem) is initiated to transfer the file.

An EOT is sent to the client when all files have been transferred from the EWR Host

Special Characters:

Character	Hex Value
ENQ	05
ACK	06
NAK	15
EOT	04
FS	1C

PKZIP

PKZIP is a file compression/decompression utility program that can be used to decrease transmission time when uploading and downloading files. Compression will be specified by inserting "P" into the logon string, or "N" if you choose not to use compression.

To transmit files using PKZIP, insert a "P" in the login string. Before transmitting files to the host, compress them using PKZIP. The syntax for compressing a file is:

pkzip filename filename

After receiving files from the host, decompress them with PKZIP. The syntax for decompressing a file is:

pkunzip filename

Sending files to EWR:

Files, either compressed or not compressed, may be sent to the FTP server directory /UPLOAD. The compression method, if used, should be PKZIP compatible (version 2.04 or higher). The file name can consist of upper or lower case letters, digits, and some special characters (underscore, hyphen, period). After the file is successfully transferred to the FTP server, it is decompressed and decrypted, if necessary, and then passed to the Transmission Validate and Parse routine.

Retrieving files from EWR:

Uncompressed files may be retrieved from the FTP directory /DOWNLOAD/NOTZIP for specific holder. Compressed files may be retrieved from the FTP directory /DOWNLOAD/ZIP. After the file is successfully downloaded, it will automatically be removed from the FTP site. File names follow this pattern: HSB.B.NNNN.YYYYMMDD.HHMMSS.UUUUUU.dat or .zip, where:

H	H holder
S	Type of file: D=detail, A=Acknowledgment, E=Error, S=Summary
BB	2-digit batch type
NNNN	Batch number
YYYYMMDD	Date
HHMMSS	Time
UUUUUU	Unique number

Example:

HD21.0333.20020515.152019.041254.DAT for uncompressed
HD21.0333.20020515.152019.041254.ZIP for compressed (zip)

Transmission File Header and Trailer

Each transmission to the EWR host must contain a transmission header and a transmission trailer. Within the header are the location ID and location password.

The user may send as many batches as desired within a single transmission file. It is strongly recommended that individual batch sizes be limited to 10,000 records. Batches which exceed this record limit may not process completely.

The transmission trailer is optional, but if supplied, then it will be verified, and if there are any errors, then the holder will be notified with a warning acknowledgment.

Please note that the record count in the transmission trailer is equal to the count of all records in the transmission file, including the transmission header and transmission trailer.

TRANSMISSION HEADER LAYOUT**Record Size = 120**

Field	Field Name	Type	Size	Pos	Required	Description/Requirements
1	Record Type	A	1	1	Yes	B=Beginning File Record
2	Location ID	N	6	2-7	No	Location ID assigned by EWR, 6 numbers
3	Transmission Number	N	6	8-13	No	Transmission control number - User-defined
4	Location Password	AN	8	14-21	No	Password of Location ID, 8 characters case sensitive
5	Date	N	8	22-29	Yes	MMDDYYYY data file was created
6	Time	N	6	30-35	Yes	HHMMSS time file was created
7	Version		5	37-40	No	Vendor Software version
8	Vendor		20	41-60	No	Vendor of Software sending transmission file
9	Filler	A	60	61-120		Reserved for EWR, Inc. use

TRANSMISSION TRAILER LAYOUT**Record Size = 120**

Field	Field Name	Type	Size	Pos	Required	Description/Requirements
1	Record Type	A	1	1	Yes	E=Ending File Record
2	Location ID	N	6	2-7	No	Must match file header location
3	Transmission Number	N	6	8-13	Yes	Must match file header transmission
4	Record Count	N	6	14-19	Yes	Count of all records in the transmission file, not including transmission header and transmission trailer.
5	Filler	A	101	20-120		Reserved for EWR, Inc. use