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ARGONNE NATIONAL LABORATORY

ILN RJE USER'S GUIDE FOR TI990/TX990 HOSTS

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Chapter 1

INTRODUCTION

The Intra-Laboratory Network (ILN) is a general purpose computer communications network located at Argonne National Laboratory. This network provides error-free high-speed communications between computers connected to the network. It supports the concept of a user program running on one computer establishing a 'session' with a user program running on another computer.

In addition to its general purpose capability, the ILN also provides a remote job entry (RJE) system that allows users to:

1. move files from the user's computer system to ANL's Central Computing Facility (CCF) as batch job submissions in card-image format,

2. move files from the CCF to the user's computer system as batch job retrievals in either print line or punched card format, and

3. check on the status of CCF jobs, cancel jobs, etc.

This document describes the use of the ILN RJE system for users who have TI990 computer systems running the TX990/TXDS operating system.

The ILN RJE system consists of three parts. Closest to the user is the ILN RJE utility program that runs on the user's host. (A host is a computer system that is connected to the ILN.) Between the host and the CCF is the ILN which contains, in addition to the network control, an ILN RJE facility that supports the utility program and interfaces to the CCF. The third part is the CCF, which is accessed via the CCF front-end Varian V73 communications processors.

Chapter 2 describes the procedures for running the ILN RJE utility program. Chapter 3 describes the commands that can be used to submit and retrieve jobs, check on job status, etc. Each command description includes the command syntax, a brief description of the function, and one or more examples. Chapter 4 outlines several techniques for transferring files between a host and either the Central Computing Facility or another host. Appendix A summarizes the ILN RJE system commands. This appendix is useful as a quick reference. Appendix B lists the possible error messages with short descriptions. Appendix C provides the ASCII/EBCDIC conversion table that is used in the ILN.

Throughout this User's Guide, examples are enclosed in boxes. User entries are underscored. Lower case words enclosed in greater-than and less-than symbols, e.g., <pathname>, represent a parameter such as a file designation. Upper case symbols enclosed in greater-than and less-than symbols represent non-printable user key strokes, e.g., <CR> means carriage return.

Chapter 2

RUNNING THE ILN RJE UTILITY PROGRAM

The ILN RJE utility program described in this User's Guide runs on a TI990 host. The TI990 system uses the TX990 operating system to control task execution in a real-time environment. The TX990 operating system includes the Operator Communications Package (OCP). As a supplement to the TX990 operating system, the Terminal Executive Development System (TXDS) is used to develop, maintain, and execute user application programs.

The IIN RJE utility program can be invoked from TXDS. This is done as follows. After the TX990 operating system has been loaded, OCP can be initiated at the system console by entering an exclamation mark '!'. OCP responds by prompting for a command, displaying a period '.'. Normally TXDS is installed as task hexadecimal 16, and is executed from OCP. When the TXDS 'PROGRAM:' prompt appears, the ILN RJE utility program can be executed.

```
!
.EX,16.TE<CR>
TXDS            2.4.0   79.091

PROGRAM:DSC:RJE/SYS*<CR>
RJE UTILITY V0.6 10/18/79

ENTER COMMAND-
```

The user can now enter one of the user commands described in Chapter 3.

Chapter 3

USER COMMANDS

This chapter gives the syntax and a description of each
of the commands. Examples are supplied to illustrate usage.
Any keyword may be abbreviated as long as the first two
characters are provided. For example, SUBMIT can be
shortened to SU. In addition, all parameters must be
separated by at least one blank.

3.1   CANCEL

3.1.1   Syntax

    CANCEL <jobnumber>[,<jobnumber>,...][(origin)]

3.1.2   Command Description

    The CANCEL command provides the user with the ability to
cancel, without print, one or more jobs. The optional
origin field permits the user to specify an origin other
than the default, ILN01.

3.1.3   Example

    The following example demonstrates cancelling jobs 2789
and 2899:


```
┌──────────────────────────────────────────────────────────────┐
│                                                                │
│   RJE UTILITY V0.6 10/18/79                                    │
│                                                                │
│   ENTER COMMAND-CANCEL 2789,2899<CR>                           │
│   CONSOLE QUEUED                                               │
│   COMMAND ACCEPTED                                             │
│   162336    MD902 JOB RUNDATA    2789 IS BEING CANCELED        │
│   162336    MD902 JOB PRTDATA    2899 IS BEING CANCELED        │
│   PROCESSING COMPLETE                                          │
│                                                                │
└──────────────────────────────────────────────────────────────┘
```

3.2   CONSOLE

3.2.1   Syntax

```
CONSOLE <ASP command>
ASP <ASP command>
```

3.2.2   Command Description

The CONSOLE or ASP command allows the user to issue ASP console commands not explicitly provided by the utility program.   The commands are restricted and, in general, inquiry commands are the only commands that are available.

3.2.3   Example

The following   example demonstrates a backlog inquiry by priority:

```
┌──────────────────────────────────────────────────────────────┐
│                                                                │
│   RJE UTILITY V0.6 10/18/79                                    │
│                                                                │
│   ENTER COMMAND-CONSOLE *I,B,P<CR>                             │
│   CONSOLE QUEUED                                               │
│   COMMAND ACCEPTED                                             │
│   112739       BACKLOG  OSRDR      MAIN       SETUP            │
│   112739       PRTY     NUM TIME   NUM TIME   NUM TIME         │
│   112739       N(EXP)    0    0     2    4     0    0          │
│   112739       T         1   15     1    9     2   24          │
│   112739       H         1    5     2   10     1   15          │
│   112739       N         5   31    11  132    24  535          │
│   112739       L(H)      1   60     0    0     9  349          │
│   112739       S(H)      3  180     0    0     6  220          │
│   PROCESSING COMPLETE                                          │
│                                                                │
└──────────────────────────────────────────────────────────────┘
```

3.3   FETCH

3.3.1   Syntax

```
FETCH <jobnumber> <option> <pathname>
FETCH <option> <jobnumber> <pathname>
```

where <option> is one of the following:
       PR-print file, carriage control
       PU-punch file, no carriage control
       PV-punch file, carriage control inserted
       PB-punch file, no translation (binary)

3.3.2   Command Description

The FETCH command provides the user with the ability to
retrieve PRINT and PUNCH files from the CCF.   The FETCH
option is used to indicate what type of file.   If PR is the
option selected,   the PRINT file of the designated job is
retrieved and   written to the pathname   provided with
CCF-supplied carriage   control.   If PU is specified, the
PUNCH file of the designated job is fetched and written to
the pathname provided without carriage control. If carriage
control is desired in order   to make the PUNCH file
printable, the option PV is specified.   If no translation of
the output data is desired, the PB option is specified.

3.3.3   Examples

The following   example demonstrates the retrieval of the
PRINT file for job 9999, directed to the line printer:

```
┌─────────────────────────────────────────────────────────┐
|                                                          |
|   RJE UTILITY VO.6 10/18/79                              |
|                                                          |
|   ENTER COMMAND-FETCH 9999 PR LP<CR>                     |
|   COMMAND ACCEPTED                                       |
|                                                          |
|   PROCESSING COMPLETE                                    |
|                                                          |
└─────────────────────────────────────────────────────────┘
```

This example below illustrates the retrieval of the PUNCH
file for job 9999, to be printed on the line printer:

```
RJE UTILITY V0.6 10/18/79

ENTER COMMAND-FETCH 9999 PU LP<CR>
COMMAND ACCEPTED

PROCESSING COMPLETE
```

This example below demonstrates the retrieval of the
PUNCH file for job 23, written to pathname, DSC2:EXPER1/DAT.

```
RJE UTILITY V0.6 10/18/79

ENTER COMMAND-FETCH PU 23 DSC2:EXPER1/DAT<CR>
COMMAND ACCEPTED

PROCESSING COMPLETE
```

3.4   HELP

3.4.1   Syntax

HELP

3.4.2   Command Description

The HELP command displays for the user the syntax of all
commands provided by the ILN RJE utility program.

3.4.3   Example

```
RJE UTILITY V0.6 10/18/79

ENTER COMMAND-HELP<CR>
CANCEL JOB(S) T=ILN01: CANCEL <JOBNUMBER>[,...]
CANCEL JOB(S) T=XXXXX: CANCEL <JOBNUMBER>[,...](XXXXX)
CONSOLE COMMANDS:      CONSOLE <ASP COMMAND> OR
                       ASP <ASP COMMAND>
FETCH PRINT WITH CC:   FETCH <JOBNUMBER> PR <PATHNAME>
FETCH PUNCH, NO CC:    FETCH <JOBNUMBER> PU <PATHNAME>
FETCH PUNCH, INSERT CC:FETCH <JOBNUMBER> PV <PATHNAME>
FETCH BINARY PUNCH:    FETCH <JOBNUMBER> PB <PATHNAME>
PRINT HELP FILE:       HELP
RESET INTERFACE:       RESET
TERMINATE PROGRAM:     TERMINATE
STATUS ON BADGE:       STATUS <BADGE>
STATUS ON JOBNAME:     STATUS <JOBNAME>
STATUS ON JOBNUMBER:   STATUS <JOBNUMBER>
SUBMIT 1-3 FILES:      SUBMIT <PATHNAME>[,.....]
CANCEL USER REQUEST:   <CTRL/X>
ONLY 2 CHARACTERS ARE NEEDED TO SPECIFY A COMMAND
PROCESSING COMPLETE
```

3.5   RESET

3.5.1   Syntax

RESET

3.5.2   Command Description

The RESET command is used by the user to manually reset
the interface between the TI990 and the ILN.   This causes
the ILN to   release all RJE resources allocated for   that
host.

3.5.3   Example

```
RJE UTILITY V0.6 10/18/79

ENTER COMMAND-RESET<CR>
PROCESSING COMPLETE
```

3.6   STATUS

3.6.1   Syntax

    STATUS <badge>
    STATUS <jobnumber>
    STATUS <jobname>

3.6.2   Command Description

The STATUS command provides the user with the ability to
obtain status information about jobs by badge number,
jobname, or jobnumber.   Badge numbers must have 5 digits
while jobnumbers may have from 1 to 4 digits.   Jobnames may
have from 1 to 8 characters.

3.6.3   Examples

    This example demonstrates a status inquiry for a
particular job by jobname:

```
| RJE UTILITY V0.6 10/18/79                                    |
|                                                              |
| ENTER COMMAND-STATUS RUNDATA<CR>                             |
| CONSOLE QUEUED                                               |
| COMMAND ACCEPTED                                             |
| 162219   IQ906,RUNDATA  (9,N,200K,J,M(89,598)) 299999        |
| G=ILN01 RI(C),MA(Q),PR,PU(C),JNIWR(C)                        |
| PROCESSING COMPLETE                                          |
```

    A status inquiry by badge number is demonstrated in the
following example:

```
| RJE UTILITY V0.6 10/18/79                                    |
|                                                              |
| ENTER COMMAND-STATUS 99999<CR>                               |
| CONSOLE QUEUED                                               |
| COMMAND ACCEPTED                                             |
| 162219   IQ906,RUNDATA  (9,N,200K,J,M(89,598)) 299999        |
| G=ILN01 RI(C),MA(Q),PR,PU(C),JNIWR(C)                        |
| 162219   IQ906,PRTDATA  (9,N,J) 299999 G=ILN01               |
| HOLD=T ACDS(C),PR(R),PU(C),JNIWR(C)                          |
| PROCESSING COMPLETE                                          |
```

3.7   SUBMIT

3.7.1   Syntax

    SUBMIT <pathname>[,<pathname>][,<pathname>]

3.7.2   Command Description

The SUBMIT command provides the user with the ability to
submit from one to three files as card-images to the CCF.
The files will be concatenated so that a single job can be
assembled from three separate files.   An example of the use
of this feature is to have leading JCL, trailing JCL, and
data in different files.

3.7.3   Examples

The following example demonstrates how to submit a job
that is divided into three files:

```
┌────────────────────────────────────────────────────────────┐
│                                                            │
│   RJE UTILITY V0.6 10/18/79                                │
│                                                            │
│   ENTER COMMAND-SU_DSC:JCL/JOB,DSC:X/DAT,DSC:END/JOB<CR>    │
│   COMMAND ACCEPTED                                         │
│                                                            │
│   PROCESSING COMPLETE                                      │
│                                                            │
└────────────────────────────────────────────────────────────┘
```

This example illustrates the submission of two jobs, one
right after the other:

```
┌────────────────────────────────────────────────────────────┐
│                                                            │
│   RJE UTILITY V0.6 10/18/79                                │
│                                                            │
│   ENTER COMMAND-SUBMIT_DSC1:STND/JOB,DSC1:BCK/JOB<CR>      │
│   COMMAND ACCEPTED                                         │
│                                                            │
│   PROCESSING COMPLETE                                      │
│                                                            │
└────────────────────────────────────────────────────────────┘
```

3.8   TERMINATE

3.8.1   Syntax

TERMINATE

3.8.2   Command Description

The TERMINATE   command is used to terminate the ILN RJE utility program.

3.8.3   Example

```
┌──────────────────────────────────────────────────────────────┐
│                                                              │
│   RJE UTILITY V0.6 10/18/79                                  │
│                                                              │
│   ENTER COMMAND-TERMINATE<CR>                                │
│   PROCESSING COMPLETE                                        │
│                                                              │
└──────────────────────────────────────────────────────────────┘
```

3.9   ABORT REQUEST

3.9.1   Syntax

    <CTRL/X>.

3.9.2   Command Description

   The <CTRL/X> key allows the user to abort the present
user request.   This causes the ILN to release the RJE
resources allocated for this request.

3.9.3   Example

   This example illustrates aborting a submit request:

```
RJE UTILITY V0.6 10/18/79

ENTER COMMAND-SUBMIT DSC1:STND/JOB<CR>
COMMAND ACCEPTED
<CTRL/X>
REQUEST ABORTED
PROCESSING COMPLETE
```

Chapter 4

TRANSFERRING FILES USING THE ILN RJE SYSTEM

This chapter gives examples of methods that can be used to transfer data between a host computer attached to the ILN and the CCF or between two host computers. All of these methods are based on the ILN RJE capabilities of submitting batch jobs and retrieving the PRINT and PUNCH output of batch jobs. Because all data is transferred either as part of a submitted job, or punched in card-image format from the CCF, only 80-byte records can be handled. Any record sent in that is shorter than 80 bytes will be padded with blanks. The ILN RJE facility performs all necessary ASCII-to-EBCDIC and EBCDIC-to-ASCII translations. The translation table that is used in the ILN RJE facility is listed in Appendix C.

4.1   HOST COMPUTER TO CCF TRANSFERS

To transfer a card-image file from the host computer to an OS dataset, submit the following job using the SUBMIT command:

```
//jobname JOB (Fnnnnn,2,,2),CLASS=A
      account card
// EXEC CARDSDSK,OUTDSN='Bnnnnn.prg',OUTUNIT=TSPERM
//CARDIN  DD   *

      (card-image data)

/*
```

The printed output of this job can be retrieved through the ILN using the FETCH command, or may be routed to a CCF local printer by adding a FORMAT card after the account card. The FORMAT card should be written as follows:

```
//*FORMAT  PR,DDNAME=,DEST=ANLOS.LOCAL
```

It is also possible to avoid MAIN processing (and get faster turnaround) if it is acceptable to have the OS dataset allocated on one of the TSTEMP volumes in Variable Blocked format. When the following job is submitted it will create a dataset called 'Bnnnnn.jobname.xxxxx.DATA':

```
//jobname JOB (Fnnnnn,2,,2),CLASS=A
     account card
//*MAIN ACMAIN=S75
//*PROCESS ACDS
//*FORMAT   AC,USER=Bnnnnn,DDNAME=xxxxx
//*DATASET DDNAME=xxxxx

    (user data cards)

//*ENDDATASET
```

To transfer a file from a host computer to CMS the following job should be submitted:

```
//jobname JOB (Fnnnnn,2,,2),CLASS=A
     account card
//*PROCESS  PUNCH
//*FORMAT   PU,DDNAME=CARDS,DEST=ANLVM.Bnnnnn
//*PROCESS  PRINT  (optional - to print SYSMSG)
//*DATASET  DDNAME=CARDS

    (user data cards)

//*ENDDATASET
```

4.2   CCF TO HOST COMPUTER TRANSFERS

To transfer a file from the CCF requires running a job
that punches the file to the CCF remote terminal 'ILN01'.
This PUNCH file is then transferred back to the host
computer via the ILN.   There are several methods in which a
PUNCH file can be generated.   The following examples show
some typical methods that can be used from OS batch,
WYLBUR, and CMS.

To PUNCH a card deck to the CCF remote terminal 'ILN01'
from OS batch, the following job should be submitted:

```
//jobname JOB (Fnnnnn,2,,2),CLASS=A
     account card
//*PROCESS PUNCH
//*FORMAT  PU,DDNAME=CARDS,DEST=ANLOS.ILN01
//*DATASET DDNAME=CARDS

   (user data cards)

//*ENDDATASET
```

To PUNCH the contents of a cataloged, sequential dataset
to the CCF remote terminal 'ILN01', the following job should
be submitted:

```
//jobname JOB (Fnnnnn,2,,2),CLASS=A
     account card
//*FORMAT PU,DDNAME=,DEST=ANLOS.ILN01
//   EXEC  SDSKCARD,INDSN='Cmmm.Fnnnnn.sample'
```

After either of the above jobs have run, the PUNCH output of
the job can be moved to the host computer through the ILN
using the FETCH command.

To PUNCH a dataset to the CCF remote terminal 'ILN01' from WYLBUR use the following commands:

```
   USE datasetname
   PUNCH DEST ANLOS.ILN01
```

This submits a WYLBUR punch job. After the job has run, the PUNCH output of the job can be moved to the host computer through the ILN using the FETCH command. This also produces a printed SYSMSG file that can be fetched through the ILN.

To PUNCH a dataset to the CCF remote terminal 'ILN01' from CMS, the following commands can be used:

```
   CP SPOOL PUNCH TO VNET
   CP TAG DEV PUNCH ANLOS ILN01
   PUNCH myprog fortran
   CP SPOOL PUNCH NOHOLD NOCONT CLOSE
```

After the job submitted by this sequence has run, the PUNCH output can be moved to the host computer through the ILN by using the FETCH command.

4.3   HOST COMPUTER TO HOST COMPUTER TRANSFERS

The transfer of data between host computers can be accomplished using the ILN RJE system. The scheme for doing the transfer is for the sending host computer to submit a job using the SUBMIT command that punches the data to be transferred to the CCF remote terminal 'ILN01'. The data transfer is completed when the recieving host computer computer retrieves the data using the FETCH command. For this transfer the following job should be submitted:

```
//jobname JOB (Fnnnnn,2,,2),CLASS=A
     account card
//*PROCESS PUNCH
//*FORMAT  PU,DDNAME=CARDS,DEST=ANLOS.ILN01
//*PROCESS  PRINT  (optional - to print SYSMSG)
//*DATASET DDNAME=CARDS

   (user data cards)

//*ENDDATASET
```

Appendix A

SUMMARY OF COMMANDS

CANCEL <jobnumber>[,<jobnumber>,...][(origin)]

CONSOLE <ASP command>
ASP <ASP command>

FETCH <jobnumber> <option> <pathname>
FETCH <option> <jobnumber> <pathname>

HELP

RESET

STATUS <badge>
STATUS <jobnumber>
STATUS <jobname>

SUBMIT <pathname>[,<pathname>][,<pathname>]

TERMINATE

<CTRL/X>

Appendix B

ERROR MESSAGES

This Appendix lists the error messages which may be received from the ILN RJE facility, the ILN RJE utility program or the TXDS system.

B.1 FROM THE ILN RJE FACILITY

CCF HAS JUST BECOME UNAVAILABLE - CCF or V73 communications processors have become unavailable during user request processing.

CCF UNAVAILABLE - CCF or V73 communications processors are presently unavailable.

DATA OVERFLOW - More data than expected was transferred from the ILN RJE utility program to the ILN RJE facility.

ILN RJE SYSTEM TESTING - Because of system testing, ILN resources for RJE are unavailable.

IMPROPER USE OF RESOURCE - The ILN RJE utility program has attempted to use a V73 communications processor's resource improperly.

INVALID JOB NUMBER/JOB NOT FOUND - Requested job was not found.

INVALID RESOURCE ALLOCATION - A second V73 communications processor's resource has been requested. Only one resource may be allocated for a user request.

INVALID RJE HEADER - The ILN RJE facility has received an invalid RJE header from the ILN RJE utility program.

MULTIPLE USE OF RESOURCE ATTEMPTED - The ILN RJE utility program has made a second attempt to use a V73 communications processor's resource before the first has completed.

NO RESOURCE HAS BEEN ALLOCATED TO SATISFY USER REQUEST - The ILN RJE utility program has requested the use of a V73 communications processor's resource not presently allocated to it.

RESOURCE CANCELLED BECAUSE OF INACTIVITY - The V73 communications processor's resource has been inactive for too long. The resource has been released and the request terminated.

RESOURCE CANCELLED BY USER - User has cancelled user request, and V73 communications processor's resource has been released.

RESOURCE REQUESTED NOT AVAILABLE - The V73 communications processor's resource needed to satisfy user request is already allocated to another user.

RJE RESOURCES BUSY - All ILN resources for RJE are allocated.

RJE RESOURCES UNAVAILABLE - ILN resources for RJE are unavailable.

B.2   FROM THE ILN RJE UTILITY PROGRAM

ASSIGN LUNO FAILED-XX - The LUNO cannot be assigned, reason = XX.

COMMAND TOO LONG - The command string is longer than the maximum of 60 characters.

EVENT KEY ERROR - The event key for request abort cannot be assigned.

INVALID COMMAND - The user command is not recognizable.

INVALID DATA LENGTH - The data byte count in the RJE header is inconsistent with the amount of data received.

INVALID FILENAME - The filename specified is larger than the maximum of 16 characters.

INVALID FIRST BYTE RECEIVED - The RJE protocol identifier was invalid on response.

INVALID HEADER LENGTH - The ILN RJE utility program has received an RJE header from the ILN RJE facility with an invalid length.

INVALID JOBNUMBER - The jobnumber is not 1 to 4 digits.

INVALID OPTIONS - The options field has a syntax error.

NETWORK NOT ACTIVE - The ILN is not ready to communicate.

NETWORK WENT INACTIVE - The ILN has become unavailable.

NO COMMON - The required common is not generated in the TX990 operating system.

NO EOR OR EOF ON RECORD FROM NETWORK - The expected EOF or EOR was not found; processing continues.

OPEN FILE FAILED-XX - The requested file cannot be opened, reason = XX.

OVERFLOW - More data than expected was transferred from the ILN RJE facility to the ILN RJE utility program.

READ I/O ERROR-XX - System read error occurred, reason = XX.

UNKNOWN NETWORK STATUS - The ILN RJE utility program has received an RJE header from the ILN RJE facility with an unknown status.

WRITE I/O ERROR-XX - System write error occurred, reason = XX.

B.3   FROM THE TXDS SYSTEM

BAD DISC NAME

DISKETTE IS FULL

DISKETTE NOT READY

FILENAME IS UNDEFINED

PATHNAME HAS A SYNTAX ERROR

TIMEOUT OR ABORT

Appendix C

ASCII-EBCDIC TRANSLATION TABLE

ASC-EBC	ASC-EBC	ASC-EBC	ASC-EBC	ASC-EBC	ASC-EBC
00 00	2B 4E	56 E5	81 21	AC 54	D7 AF
01 01	2C 6B	57 E6	82 31	AD 55	D8 B0
02 02	2D 60	58 E7	83 22	AE 56	D9 B1
03 03	2E 4B	59 E8	84 23	AF 57	DA B2
04 37	2F 61	5A E9	85 24	B0 58	DB B3
05 2D	30 F0	5B 4A	86 15	B1 59	DC B4
06 2E	31 F1	5C E0	87 06	B2 62	DD B5
07 2F	32 F2	5D 5A	88 17	B3 63	DE B6
08 16	33 F3	5E 5F	89 28	B4 64	DF B7
09 05	34 F4	5F 6D	8A 29	B5 65	E0 B8
0A 25	35 F5	60 79	8B 2A	B6 66	E1 B9
0B 0B	36 F6	61 81	8C 2B	B7 67	E2 BA
0C 0C	37 F7	62 82	8D 2C	B8 68	E3 BB
0D 0D	38 F8	63 83	8E 09	B9 69	E4 BC
0E 0E	39 F9	64 84	8F 0A	BA 70	E5 BD
0F 0F	3A 7A	65 85	90 1B	BB 71	E6 BE
10 10	3B 5E	66 86	91 30	BC 72	E7 BF
11 11	3C 4C	67 87	92 1A	BD 73	E8 CA
12 12	3D 7E	68 88	93 33	BE 74	E9 CB
13 13	3E 6E	69 89	94 34	BF 75	EA CC
14 3C	3F 6F	6A 91	95 35	C0 76	EB CD
15 3D	40 7C	6B 92	96 36	C1 77	EC CE
16 32	41 C1	6C 93	97 08	C2 78	ED CF
17 26	42 C2	6D 94	98 38	C3 80	EE DA
18 18	43 C3	6E 95	99 39	C4 8A	EF DB
19 19	44 C4	6F 96	9A 3A	C5 8B	F0 DC
1A 3F	45 C5	70 97	9B 3B	C6 8C	F1 DD
1B 27	46 C6	71 98	9C 04	C7 8D	F2 DE
1C 1C	47 C7	72 99	9D 14	C8 8E	F3 DF
1D 1D	48 C8	73 A2	9E 3E	C9 8F	F4 EA
1E 1E	49 C9	74 A3	9F E1	CA 90	F5 EB
1F 1F	4A D1	75 A4	A0 41	CB 9A	F6 EC
20 40	4B D2	76 A5	A1 42	CC 9B	F7 ED
21 4F	4C D3	77 A6	A2 43	CD 9C	F8 EE
22 7F	4D D4	78 A7	A3 44	CE 9D	F9 EF
23 7B	4E D5	79 A8	A4 45	CF 9E	FA FA
24 5B	4F D6	7A A9	A5 46	D0 9F	FB FB
25 6C	50 D7	7B C0	A6 47	D1 A0	FC FC
26 50	51 D8	7C 6A	A7 48	D2 AA	FD FD
27 7D	52 D9	7D D0	A8 49	D3 AB	FE FE
28 4D	53 E2	7E A1	A9 51	D4 AC	FF FF
29 5D	54 E3	7F 07	AA 52	D5 AD	
2A 5C	55 E4	80 20	AB 53	D6 AE	