TSO Application Programmer Toolbox
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Definition of syntax:
- Key upper case words/letters as is.
- Lower case words indicate a variable.
- **Bold** type indicates a default value.
- Strings enclosed in braces {} are treated as a required parameter list. One of the options must be selected.
- Strings enclosed in brackets [] are treated as an optional parameter list. Zero or one of the options may be selected.
- Strings not enclosed in braces {} or brackets [] are treated as required.

Definition of variables:
catalog = is the catalog name used to locate the dsname.
clipboard = is the name of the ISREDIT CUT/PASTE clipboard where data is temporarily stored.
clistname = is the name of a CLIST.
col = is a column number.
col-1 col-2 … col-9 col-10 = are the beginning ending column pairs.
count = an integer number.
date = yyyymmdd | yyyyddd | 0cyyddd | yyddd
ddname = is the DD / file name.
dsname = is the fully qualified data set name or a PDS with member name.
dsnlevel = prefix portion of dsname terminated with an asterisk (i.e. RLIB.*).
dsnpattern = is a valid data set name pattern
    (i.e. userid.**; RLIB.*LIB; RLIB.*.PROCLIB; RLIB.**.PROCLIB; RFIL.TS*.**;
    RFIL.%%OLV.%%BCR*.**)
equation = is the right hand side of any valid mathematical equation.
execname = is the name of a REXX EXEC.
gdgname = Generation Data Group (GDG) name.
gdsname = Generation Data Set (GDS) name.
iparm = is the REXX exec input parameter string.
incr = is an integer increment value.
lgth = is the integer length of a string.
lorange:hirange = start and end (inclusive), length plays a role.
lptr = can be a label, a relative row number, or maybe the cursor row column, number of rows from top
    of screen.
mbrpattern = is a PDS member name or pattern (i.e. A%34*)
member = is a PDS member or data set name.
modname = is the name of an executable module.
range = is a pair of labels defining the <u>from</u> row and the <u>to</u> row.
start = is the beginning sequence number.
stggrp = is a valid storage group.
stggrp-1,stggrp-2, … = is a list of valid SMS storage groups.
string = is a character string.

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string-1 string-2 = is the <u>from</u> string, <u>to</u> string value pair.
unit-1 = is the unit address.
unit-1 unit-2 = is the <u>from</u> unit address, <u>to</u> unit address pair.
userid = is the TSO User ID.
volpattern = is a valid volume id or volume pattern (i.e. TSO001, TSO*, TSO00?).
vol-1,vol-2, … = is a list of valid volume id(s).
ww = work week (1:53) where a work week is Mon:Sun.
* = from the current row to the end of the member, or current column to the end of the row

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	The documentation for each macro specifies the environment the macro was written to execute in: • TSO • TSO/ISPF • ISREDIT For TSO/ISPF you must prefix the macro name on the command line with TSOƄ. For ISREDIT you may prefix the macro name with a % sign to shorten the search path. When entering a macro name on the row command line of the ISPF DSLIST panel (=3.4), use the "/" to pass the data set name to the macro. Useful PF key settings for the ISPF environment: • PF2 – BOTTOM;LEFT;RIGHT;TOP to populate the DSLIST panel • PF9 – SWAP LIST to open a pop-up of your logical sessions • PFn – NRETRIEVE data set name retrieval • PF12 – CRETRIEVE command retrieval • PF13 – RETP to open a pop-up of your command stack • PFn – TSO, so that you can eliminate prefixing TSO macros on the command line. Enter the TSO macro name on the command line and press the designated PF key. Useful PF key settings for the ISREDIT environment: • PFn – REPEAT only works with macro FALT • PF3 – QUIT • PF4 – SPLTJN • PFn – EOL
userid	ex 'userid.WORK.EXEC(userid)' TSO/ISPF EXEC macro used to allocate user specific libraries to TSO or ISPF environment. This macro uses macro KONKAT to concatenate user libraries to TSO or ISPF environment. **This is an environment customizing macro and should be saved in the user's private REXX library. See macro SYSEXEC for an alternate method.** From ISPF Command Shell (=6), key macro userid in the command line.

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ADRSPC	[([LINE | **SCREEN**] [RECAP | **VERBOSE**]] LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode. RECAP/VERBOSE – specifies the amount of output presented. TSO/ISPF EXEC macro used to retrieve information from all the active MVS address spaces. Similar to SDSF DA. For help information, key "TSO ADRSPC ?" on the command line.
ALIGN	[range] 'string' [([STD | COBOL]] STD/COBOL – establishes the Language for specific edits. The default Language may be established by macro SETUP2 or LANG. ISREDIT EXEC macro used to align text on a row, via a case sensitive string. Excluded rows are ignored. For help information, key "ALIGN ?" on the command line.
ALLMBRS	member [(execname] TSO/ISPF EXEC macro used to access a target PDS and edit (ISREDIT) member names found in member using macro execname. You may create member using macro PDSMLST. Key macro ALLMBRS on any ISPF command line. The member refers to a member list created by macro PDSMLST. The macro will ask for the target PDS name. All the PDS member names found in member will be edited in the target PDS, via the macro execname. For help information, key "TSO ALLMBRS ?" on the command line.
AMB	member TSO/ISPF EXEC macro used to invoke MVS AMBLIST to retrieve the link-edit/binder date and time. From the ISPF DSLIST/Member (=3.4) panel enter macro name AMB in the row command area of the desired member of the LOADLIB.

	For help information, key "TSO AMB ?" on the command line.

ASA2PC	ISREDIT EXEC macro (CBT) to convert American National Standard (ASA) printer control characters to postscript compatible print control characters. Use this macro prior to downloading the member to a PC file that you want to print on a network printer.
	
	ASA printer control characters
	    • ƀ – print and advance one line
	    • 0 – advance one line prior to printing
	    • 1 – advance to top of page before printing
	    • + – print without advancing one line
	
	For help information, key "ASA2PC ?" on the command line.

BIN2DEC	$base_2$ or $base_{10}$ = BIN2DEC($base_2$) TSO EXEC macro and/or REXX function used to convert a $base_2$ number to a $base_{10}$ number.
BLDADR	{dsname | NONE} [(COPY | **DUMP** | RESTORE] COPY – build ADRDSSU logical copy command. DUMP – build ADRDSSU logical backup command. RESTORE – build ADRDSSU logical restore of backup command. TSO/ISPF EXEC macro used to build MVS ADRDSSU utility control statement(s) from the ISPF DSLIST (=3.4) panel. From the ISPF DSLIST (=3.4) panel, populate all the variables by scrolling to the bottom of the panel group, and scroll left one panel. Any error you may receive will probably be related to the table (panel), not being populated. You may use macro DSNFLTR to alter the list of data set names presented. Key macro BLDADR on the command line. Specify dsname to write the created control statement(s). If NONE is specified, the list of control statement(s) will be placed on the DEFAULT clipboard so that you can use the ISREDIT PASTE macro.

	For help information, key "TSO BLDADR ?" on the command.
BLDADR1	{dsname | NONE} [([VOLUME [volpattern] | UNIT [unit-1[:unit-2]]]] TSO/ISPF EXEC macro used to build MVS ADRDSSU utility control statement(s) to PRINT the IPL Text found on selected volume(s). Key macro BLDADR1 on the command line. Specify dsname to write the created control statement(s). If NONE is specified, the list of control statement(s) will be placed on the DEFAULT clipboard so that you can use the ISREDIT PASTE macro. Process invokes TSO command (DUDASD CBT file#612), via REXX %DUDASD macro to extract the list of device(s) and volid(s), place them on the output data stack, pass them back to BLDADR1 to create the control statements.
BLDDD	{dsname | NONE} [([DEL | NEW | **SHR**]] DEL – build DD statements with DISP=(MOD,DELETE,…). NEW – build DD statements with DISP=(NEW,…). SHR – build DD statements with DISP=SHR. TSO/ISPF EXEC macro used to build DD statement(s) from the data collected from the ISPF DSLIST (=3.4) panel. From the ISPF DSLIST (=3.4) panel, populate all the variables by scrolling to the bottom of the panel group, and scroll left one panel. Any error you may receive will probably be related to the table (panel), not being populated. You may use macro DSNFLTR to alter the list of data set names presented. Key macro BLDDD on the command line. Specify dsname to write the created control statement(s). If NONE is specified, the list of control statement(s) will be placed on the DEFAULT clipboard so that you can use the ISREDIT PASTE macro. For help information, key "TSO BLDDD ?" on the command.
BLDICAT	{dsname | NONE} [([catname] [volist]] catname – master/user catalog name.

	volist – volume list (one or more volid(s) separated by at least one space). TSO/ISPF EXEC macro used to build IDCAMS control statement(s) to indirectly catalog data set names collected from the ISPF DSLIST (=3.4) panel. From the ISPF DSLIST (=3.4) panel, populate all the variables by scrolling to the bottom of the panel group, and scroll left one panel. Any error you may receive will probably be related to the table (panel), not being populated. You may use macro DSNFLTR to alter the list of data set names presented. Key macro BLDICAT on the command line. Specify dsname to write the created control statement(s). If NONE is specified, the list of control statement(s) will be placed on the DEFAULT clipboard so that you can use the ISREDIT PASTE macro. For help information, key "TSO BLDICAT ?" on the command.
BLDIDC	member [([CANCEL] [**DEFINE**] [DEFPTH] [DELETE] [IF] [LISTCAT] [PRINT] [REPRO] [SET] [VERIFY]] CANCEL – copy CANCEL statement to member. DEFINE – copy appropriate AIX | CLUSTER | GDG | PATH statement to member. DEFPTH – copy DEFINE PATH to member, select with DEFINE for AIX (ex. DEFINE DEFPTH). DELETE – copy DELETE statement to member. IF – copy IF statement to member. LISTCAT – copy LISTCAT statement to member. PRINT – copy PRINT statement to member. REPRO – copy REPRO statement to member. SET – copy SET statement to member. VERIFY – copy VERIFY statement to member. ISREDIT EXEC macro used to copy IDCAMS model command statement(s) from a source PDS (userid.WORK.MODEL) to a member in a target PDS (userid.WORK.IDCAMS). Build ISREDIT EXEC macro ##IDC01 using the LISTCAT information to modify the model statements copied to member. Save macro ##IDC01 to a REXX PDS (userid.WORK.REXXLIB). Edit member, applying custom changes to the model statements to match the desired VSAM data set. From within LISTCAT listing (use macro LCAT to create) key macro

	BLDIDC on the command line. The optional parameters will be copied in the order presented. For help information, key "BLDIDC ?" on the command line.
BLDIEBC	dsname [(SELECT lorange [:hirange]] SELECT – states that a member name range (inclusive) follows. Length plays a role in the compare process. Example: SELECT AMA or SELECT AMA:AMC TSO/ISPF EXEC macro used to create the PARMLIB member containing the MVS IEBCOPY control statement(s) for the source PDS. The source PDS member names are collected, and IEBCOPY control statement(s) are created to copy the members to the target PDS (source library or program library). The IEBCOPY control statement(s) will be stored in the appropriate library set PARMLIB (i.e. libset.PROD.PARMLIB) under a derived member name (xBATLOAD, xCICSLOD, xCTCCOPY, xEZTLIB, xMAPCOPY, xSRCBASE, xSRCLIB, xBATLODO, xSRCLIBO) where "x" is either "A" for ALLTEL or "B" for BANCORP. From the ISPF DSLIST (=3.4) panel, key macro BLDIEBC on the row command line of the desired dsname (source PDS). For help information, key "TSO BLDIEBC ?" on the command line.
B32TODEC	$base_{32}$ or $base_{10}$ = B32TODEC($base_{32}$) TSO EXEC macro and/or REXX function used to convert a $base_{32}$ number to a $base_{10}$ number. LE uses $base_{32}$ numbers in their messages.
CATLIST	[([LINE | **SCREEN** | QUEUE | STACK]] LINE/SCREEN/QUEUE/STACK – specifies the presentation form of the report. Terminal LINE mode, SCREEN mode, or output data stack, where QUEUE is FIFO, and STACK is LIFO. TSO/ISPF EXEC macro (CBT) used to present all of the names of the User/Master Catalogs on the system.

	For help information, key "TSO CATLIST ?" on the command line.
CC	col ['string' | X'hstring'] ISREDIT EXEC macro used to position the cursor on the target row and col. It can be used to insert either character or hexadecimal data at some specified column in the target row. For help information, key "CC ?" on the command line.
CENTER	{lptr | range | *} ISREDIT EXEC macro used to center the text between the ISREDIT bounds settings. You may need to specify bounds prior to invoking this macro. For help information, key "CENTER ?" on the command line.
CHANGES	[dsname] [[BR | BROWSE] | [ED | EDIT]] [ONLY] [HELP] dsname – data set or member (previous version) to be compared against for changes. BR|BROWSE – SUPERC report instead of merging the report into the current Edit session. ED|EDIT – SUPERC report instead of merging the report into the current Edit session. ONLY – changed rows are presented. HELP – presents Help information. ISREDIT EXEC macro (unknown origins) used to present all of the changes made to the edited member. If dsname is provided, then it is the differences between the member being edited and the dsname. If dsname is not provided then it is the differences in the edited member since the last ISREDIT command SAVE was issued. Macro SAVE invokes CHANGES ONLY if Change ID has been set. For help information, key "CHANGES HELP" on the command line.
CHANNEL	[([**STATUS**] [LINE | **SCREEN**]]

	STATUS – display the channel status matrix. LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode. TSO/ISPF EXEC macro (CBT) used to present defined channels. For help information, key "CHANNEL ?" on the command line.
CHGID	{lptr | range | *} [({RESET | SET 'cnnnnnn'} [STD | COBOL]] RESET – clear the Change ID and MASKLINE. SET 'cnnnnnn' – initializes the Change ID. STD/COBOL – establishes the Language which determines the columns where the Change ID will be placed on the row. The default Language may be established by macro SETUP2 or LANG. STD – Change ID is located in columns 63:70 COBOL – Change ID is located in columns 73:80 ISREDIT EXEC macro used to put Change ID's on all rows that have been modified since the last SAVE command. A MASKLINE is created so that all row insertions will have Change ID's included. For help information, key "CHGID ?" on the command line.
CKSEQ	{lptr | range | *} [([STD | COBOL]] STD/COBOL – establishes the Language which determines the columns where the sequence numbers are located on the row. The default Language may be established by macro SETUP2 or LANG. STD – sequence numbers are in columns 73:80 COBOL – sequence numbers are in columns 1:6 ISREDIT EXEC macro used to verify that the edited member has ascending sequence numbers. Excluded rows are ignored. Start row is the current row. For help information, key "CKSEQ ?" on the command line.

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CLRSEQ	[range] [([STD	COBOL]] STD/COBOL – establishes the Language which determines the columns where the sequence numbers are located on the row. The default Language may be established by macro SETUP2 or LANG. STD – sequence numbers are in columns 73:80 COBOL – sequence numbers are in columns 1:6 ISREDIT EXEC macro used to clear the sequence number field. Only files with 80 byte fixed length records will be processed. Excluded rows are ignored. Non-numeric fields will not be cleared. For help information, key "CLRSEQ ?" on the command line.
CMORE	[range] [([AFTER	**BEFORE**] [count]] AFTER/BEFORE – specifies where to un-exclude rows in an exclude group. count – is the number of rows to un-exclude. The default is 3. ISREDIT EXEC macro (CBT) used to un-exclude count number of rows AFTER or BEFORE a group of EXCLUDEd rows. For help information, key "CMORE ?" on the command line.
COLUTIL	col-1 col-2 col-3 {**MOVE**	COPY	SWAP} [range] -or- {LEFT	RIGHT} count [range] -or- CUT col-1 col-2 [range] col-1 col-2 – specifies source beginning and ending columns. col-3 – specifies target beginning column. MOVE/COPY/SWAP – specifies the action to be taken. LEFT/RIGHT – specifies the direction of the shift. ISREDIT EXEC macro (CBT) used to operate on columns of data. Excluded rows are ignored. This is a very interesting edit macro written by Mark Zelden. For help information, key "COLUTIL ?" on the command line. Use ISREDIT

	RESET command to remove the help NOTE lines.
COUNT	{lptr | range | *} [(**LINES** [**WORDS** | NOWORDS] [**CHARS** | NOCHARS] [**LENGTH** | NOLENGTH] [**DISPLAY** | QUEUE | STACK]] LINES – specifies that rows will be counted. WORDS/NOWORDS – specifies whether words will be counted. CHARS/NOCHARS – specifies whether characters will be counted. LENGTH/NOLENGTH – specifies whether shortest and longest line length will be captured. Label(s) .PTS and .PTL will be set if LENGTH is specified. DISPLAY/QUEUE/STACK – specifies how the results are to be presented. Where QUEUE is FIFO and STACK is LIFO. ISREDIT EXEC macro used to count the number of rows, words, and characters in a member. It can also determine the shortest and longest row in the member. Excluded rows are ignored. For help information, key "COUNT ?" on the command line.
CSISRCH	dsnpattern [catalog] TSO/ISPF EXEC macro (CBT) used to invoke the Catalog Search Interface (CSI) to collect and present data set information (i.e. catalog name, file type, data set name, and volume list).
DATE	[date] TSO/ISPF EXEC macro will present information about the date. Current System date is the default. For help information, key "TSO DATE ?" on the command line.
DATES	[date] TSO EXEC macro will present detailed information about the date. Current System date is the default.
DDSCAN	member ISREDIT EXEC macro (CBT) used to locate a member name within the list

	of data set name(s) under a DD statement. Place cursor on the row with the DD name. The macro interfaces with ISRFIND.
DEBUGOFF DEBUGON	TSO/ISPF EXEC macros used to set the ISPF Profile variable DEBUG to either ON | OFF for testing purposes. Most of the REXX macros provided in this Toolbox access the DEBUG variable.
DEC2BIN	$base_{10}$ or $base_2 = DEC2BIN(base_{10})$ TSO EXEC macro and/or REXX function used to convert a $base_{10}$ number to a $base_2$ number.
DEC2B32	$base_{10}$ or $base_{32} = DEC2B32(base_{10})$ TSO EXEC macro and/or REXX function used to convert a $base_{10}$ number to a $base_{32}$ number. LE uses $base_{32}$ numbers as error numbers in their messages.
DEC2HEX	$base_{10}$ or $base_{16} = DEC2HEX(base_{10})$ TSO EXEC macro and/or REXX function used to convert a $base_{10}$ number to a $base_{16}$ number.
DEC2OCT	$base_{10}$ or $base_8 = DEC2OCT(base_{10})$ TSO EXEC macro and/or REXX function used to convert a $base_{10}$ number to a $base_8$ number.
DOM	yyyymmdd TSO EXEC macro used to convert a Gregorian date to a string expressing the

	occurrence (e.g. 1:5) of day in month and day title.
DOW	yyyymmdd or string = DOW(yyyymmdd) string – 1st word specifies the week day number (e.g. 1:7); 2nd word specifies the week day title (e.g. Sun, Mon, Tue, Wed, Thu, Fri, Sat) TSO EXEC macro and/or REXX function used to convert a specific Gregorian date to a week day number and day title.
DOW1	yyyymmdd or string = DOW1(yyyymmdd) string – 1st word specifies the week day number (e.g. 1:7); 2nd word specifies the week day title (e.g. Mon, Tue, Wed, Thu, Fri, Sat, Sun) TSO EXEC macro and/or REXX function used to convert a specific Gregorian date to the ISO 8601 standard week day number and day title.
DOW2	yyyymmdd or string = DOW2(yyyymmdd) string - 1st word specifies the week day number (e.g. 1:7); 2nd word specifies the week day title (e.g. Sat, Sun, Mon, Tue, Wed, Thu, Fri) TSO EXEC macro and/or REXX function used to convert a specific Gregorian date to week day number and day title.
DOW3	yyyymmdd or string = DOW3(yyyymmdd) string - 1st word specifies the week day number (e.g. 1:7); 2nd word specifies the week day title (e.g. Sun, Mon, Tue, Wed, Thu, Fri, Sat) TSO EXEC macro and/or REXX function used to convert a specific Gregorian date to week day number and day title.

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DPSCB	[([LINE | **SCREEN**]] LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode. TSO/ISPF EXEC macro used to display the TSO Protected Step Control Block (PSCB). Invokes TSO command (LPSCB CBT file#300). For help information, key "TSO DPSCB ?" on the command line.
%DSAT	dsname | dsnlevel TSO/ISPF EXEC macro used to display data set attributes, via TSO command (DSAT CBT file#296). For help information, key "TSO %DSAT ?" on the command line.
DSAT	dsname | dsnlevel [options] Options: **ALL** | DAONLY — List all data set names under an index level. **ALLOC** | NOALLOC — List allocation information. CCHHR | **NOCCHHR** — List format-1 DSCB address. **CRDATE** | CRDATE — List creation date. **DCB** | NODCB — List DCB information (i.e. RECFM, LRECL, BLKSIZE) DEVICE | **NODEVICE** — List device name (i.e. 3390). DEVTYPE | **NODEVTYPE** — List device type code. DSONLY — Treat names as data set names, not index names. **DSORG** | NODSORG — List data set organization. EXDATE | **NOEXDATE** — List expiration date. EXTENTS | **NOEXTENTS** — List the extent information following the data set information. FULL | **NOFULL** — FULL overrides with CCHHR, DEVICE, GDGDATA, LASTREF, SECONDARY. GDGDATA | **NOGDGDATA** — List GDG indexes. HARDCOPY(ddname) — Overrides with NOPRINT. Specifies the ddname to direct the output to.

	HEADER | NOHEADER	Create header line.
	LASTREF | **NOLASTREF**	List last reference date.
	PDS | **NOPDS**	List PDS directory information.
	PRINT | NOPRINT	Output is to be displayed.
	SECONDARY | **NOSECONDARY**	List secondary allocation information.
	SEQNO | **NOSEQNO**	List file sequence number.
	SERIAL | NOSERIAL	List volume serial number(s).
	SMS | **NOSMS**	List SMS information (i.e. DATACLASS, MGMTCLAS, STORCLASS).
	TOTALS | TOTALS	List totals at the end.
	VOLUME(volser,...)	Specifies the volume to search for a data set.
	TSO command (DSAT CBT file#296) used to display data set attributes.	
DSINFO	dsname [([volid] [DSCB | **NODSCB**] [LINE | **SCREEN**]] volid – volume id for the dsname. DSCB/NODSCB – specifies whether to include the DSCB (VTOC Format 1 record) in the output. LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode. TSO/ISPF EXEC macro used to present the information collected, via the ISPF command DSINFO. From the ISPF DSLIST (=3.4) panel, key macro DSINFO on the row command line of the desired dsname. For help information, key "TSO DSINFO ?" on the command line.	
DSNFLTR	X [(kwd=value] | FLIP | HR | TALLY X – exclude specific data set entries from panel. FLIP – used to make hidden rows visible or visible rows hidden, just like when you are in ISREDIT mode. HR – invoke HSM HRECALL on all MIGRAT1 visible data sets. TALLY – will return the number of visible data sets and the total track count and total extent count for those data sets. kwd – VOLume | TRAcks | XT | DEVice | DSOrg | RECfm | LREcl | BLKsz |	

	CREated | EXPirati | REFerred | CATalog | DSName value – any exact value, or any partial value for VOL | DEV | CRE | EXP | REF | CAT | DSN. Otherwise, only exact value is matched. TSO/ISPF EXEC macro used to filter the available data sets on the ISPF DSLIST (=3.4) panel. To get ISPF to populate all the variables you must scroll to the bottom of the panel group, and scroll left one panel. Any errors you receive will probably be related to the table (panel), not being populated. For help information, key "TSO DSNFLTR ?" on the command line.
DSPACE M01 M02 M03 M09 M27 M54 EMPTYDSK	[volpattern] TSO command(s) (DSPACE CBT file#612) used to present the amount of free space on one or more DASD volumes. For help information, key "TSO HELP DSPACE" on the command line.
%DUDASD	[volpattern | [unit-1:unit-2]] [([ALL | **ONLINE**] [LINE | **SCREEN** | QUEUE]] ALL/ONLINE – specifies which DASD be reported. LINE/SCREEN/QUEUE – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode, or QUEUE (FIFO) to place the items on the output data stack (one item per row). TSO/ISPF EXEC macro used to present the information collected, via the TSO command (DUDASD CBT file#612). For help information, key "TSO %DUDASD ?" on the command line.
DUDASD *online devices* DUO *online devices* DUA *all devices*	[volpattern] [unit-1:unit-2] [unit-1:unit-2] unit-1 – default 0000 unit-2 – default FFFF TSO command(s) (DUDASD CBT file#612) used to present the list of DASD

	devices. Provides the same information as the MVS command(s):
	   • D U,DASD,ONLINE
	   • D U,DASD,ONLINE,uuuu
	   • D U,DASD,,uuuu
	
	Presentation is in the following form:
	unit
	volid | OFFLNE | F-NRD
	A | O | P | S – UCB allocated / unallocated / offline pending / SYSTEM pack
	R – TSO SYSTEM has RESERVED the device
	RSD | RSV – RESIDENT / RESERVE
	/P – PUBLIC pack
	/S – STORAGE pack
	
	For help information, key "TSO HELP DUDASD" on the command line.

DUP	{lptr | range | *} {col-1 col-2 | *} [([APPEND | INSERT | **REPLACE**]] {col-1 col-2 | *} – specifies data on the current row to be applied to the following rows. APPEND/INSERT/REPLACE – specifies how the data is to be applied to the following rows. ISREDIT EXEC macro used to duplicate the data in the current row to the following rows. Excluded rows are ignored. For help information, key "DUP ?" on the command line.
EASTER	yyyy or yyyymmdd = EASTER(yyyy) yyyy = Year to calculate Easter. yyyymmdd = Gregorian date of EASTER for yyyy. TSO EXEC macro and/or REXX function used to compute the correct date of Easter for years 1583 through 4099.
ENVVAR	x = ENVVAR(fldname[,value]) where fldname is:

	• CPPdnm – SP Product name • CPUmodl – CPU model • DEst – default printer destination for TSO • DFplvl – DFP level • Hwname – Hardware name • IOdf – I/O data set definition • IPA – IPL IPA load parm and data set name • IPLDAte – IPL date • IPLDEv – IPL device and volid • IPLTime – IPL time • JEs2pdnm – JES2 product name • JOBAcct – Job accounting information • JOBId – Job ID • JOBNm – Job name • LOadparm – IPL load parm • LPARMode – LPAR mode • LPARName – LPAR name • MCat – Master Catalog volid, VSAM | ICF, and data set name • PGrname – Programmer name • PLexname – SYSPLEX name • RACFGrp – RACF group • RACFUser – RACF user • REAlstg – real storage in megabytes • REGsize – Region size in kilobytes • SEcurity – security application (RACF, TopSecret, ACF2) • SMFid – SMF ID • SMSstat – SMS status • SWAloc – SWA location (Above/Below) • Tsoattr – TSO user attributes • VTAMLvl – VTAM release level • VTAMTerm – VTAM terminal id value: SMF ID or null (only valid when used with SMFid) REXX function (CBT) used to retrieve information from z/OS control blocks. This function is to be used in other REXX macro(s).
EOL	ISREDIT EXEC macro used to position the cursor at the end of the row the cursor is located. This macro works best if assigned to a PF key (i.e. PF16).

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ESOTERIC	TSO/ISPF EXEC macro used to display system esoteric device names, via TSO command (TSOESO CBT file#682).
FALT	{lptr | range | *} col-1 col-2 'string' [(cond [**CLEAR** | SAVE]] col-1 col-2 – specifies the data extracted from the selected row(s) to be used in the comparison against the string. string – a case sensitive string to be compared against. cond – specifies the condition to be tested (i.e. **GE**, GT, EQ, LE, LT, NE). CLEAR/SAVE – clear or save information for the REPEAT feature. ISREDIT EXEC macro used as an alternate find, for data located in col-1 thru col-2 that is GE | GT | EQ | LE | LT | NE to the string. Excluded rows are ignored. For help information, key "FALT ?" on the command line.
FINDDSN	TSO/ISPF EXEC macro (CBT file#624) used to interface with IDCAMS DCOLLECT to return a list of data set name(s) and volume(s) they reside on whether cataloged or not. You will be prompted for partial or full data set name and prompted for partial or full volume id. The information will be returned in volume id order. The output data set name is (userid.FINDDSN.REPORT).
FINDMBR	mbrpattern TSO/ISPF EXEC macro used to locate a member and/or member pattern from the available data sets on the ISPF DSLIST (=3.4) panel. To get ISPF to populate all the variables you must scroll to the bottom of the panel group, and scroll left one panel. Any errors you receive will probably be related to the table (panel), not being populated. For help information, key "FINDMBR ?" on the command line.
FMAX	{lptr | range | *} col-1 col-2 col-1 col-2 – specifies the data extracted from the selected row(s) that will be compared against.

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	ISREDIT EXEC macro used to find the maximum value within col-1 and col-2 of all rows selected. Excluded rows are ignored. For help information, key "FMAX ?" on the command line.
FMIN	{lptr | range | *} col-1 col-2 col-1 col-2 – specifies the data extracted from the selected row(s) that will be compared against. ISREDIT EXEC macro used to find the minimal value within col-1 and col-2 of all rows selected. Excluded rows are ignored. For help information, key "FMIN ?" on the command line.
FPASTE	[range] 'string' [([**AFTER** | BEFORE] [DELETE | **KEEP**] [clipboard]] AFTER/BEFORE – specifies where to PASTE the contents of the clipboard in relation to the row the string is located. DELETE/KEEP – states the disposition of the clipboard contents after the PASTE. clipboard – specifies the alternate clipboard name used with the ISREDIT command CUT. ISREDIT EXEC macro used to PASTE the contents of the clipboard AFTER or BEFORE each occurrence of the string. Excluded rows are ignored. For help information, key "FPASTE ?" on the command line.
FULLDSN	gdsname = FULLDSN(gdgname) REXX assembler function (FULLDSN CBT file#183) used to retrieve the Generation Data Set name (GDS) from the Generation Data Group name (GDG). This function is to be used in other REXX macro(s).
GDG2GDS	lptr ISREDIT EXEC macro used to present the Generation Data Set (GDS) name related to the Generation Data Group (GDG) being pointed to by lptr or line that the cursor is on, via REXX assembler function (FULLDSN CBT

	file#183). The string following "DSN=" will be extracted. For help information, key "GDG2GDS ?" on the command line.
GMT	offset = GMT() TSO EXEC macro and/or REXX function used to retrieve the signed offset in hours and minutes to GMT.
G2J	yyyymmdd or yyyyddd = G2J(yyyymmdd) TSO EXEC macro and/or REXX function used to convert a Gregorian date to a Julian date.
G2W	yyyymmdd or yyyy-Www-d = G2W(yyyymmdd) TSO EXEC macro and/or REXX function used to convert a Gregorian date to a ISO 8601 Standard work week.
HBOX	[([STD | COBOL]] STD/COBOL – establishes the Language which determines the column where the comment will be placed on the row. The default Language may be established by macro SETUP2 or LANG. STD – Revision/History box starts in col 1 COBOL – Revision/History box start in col 7 ISREDIT EXEC macro used to place the Revision/History box following the current row or following the row the cursor is on. For help information, key "HBOX ?" on the command line.
HEX2DEC	$base_{16}$ or $base_{10}$ = HEX2DEC($base_{16}$)

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	TSO EXEC macro and/or REXX function used to convert a base$_{16}$ number to a base$_{10}$ number.
HSMLIST	{dsname | dsnlevel} [([**VIEW** | NOVIEW] [**DELETE** | NODELETE]] VIEW/NOVIEW – create and view or do not view the HSM HLIST listing of both migrated and backup history. DELETE/NODELETE – delete or do not delete the target SEQ file listing (userid.HLIST.*) on exit. TSO/ISPF EXEC macro used to invoke HSM to create the target SEQ file of the HLIST report containing both the migration and backup history. From the ISPF DSLIST (=3.4) panel, key macro HSMLIST on the row command line of the desired dsname. For help information, key "TSO HSMLIST ?" on the command line.
INFO	ISREDIT EXEC macro used to display a number of informational fields associated with the member and edit session.
IPLHIST	REXX macro (IPLHIST CBT file#434) used to extract IPL information, via the REXX function (IPLINFO CBT file#434) and write it to an IPL history PDS (name to be determined by site). Should be implemented in IPL start-up JCL in each LPAR. Each LPAR will have a member prefixed with a "$". Entries within each member will be in LIFO order. REXX macro (LASTIPL CBT file#434) is to be used to display this information.
IPLINFO	[[**ALL**] [IPL] [VERsion] [STOrage] [CPU] [IPA] [SYMbols] [VMAp] [PAGe] [SMF] [SUB] [ASId] [LPA] [LNKlst] [APF] [SVC]] [NOBrowse] NOBrowse – eliminate browsing of output. Allows output to be trapped and parsed from another macro. -or- string = IPLINFO(VAR,internal_var1_name, internal_var2_name, …) -or- string = IPLINFO(VAR2,'dlm',internal_var1_name, internal_var2_name, …)

	dlm – the user specified delimiter that IPLINFO will use to separate the internal variable names. This will allow for easier user parsing when spaces are embedded in the internal variables. The delimiter can be one or more characters. TSO/ISPF EXEC macro, ISREDIT EXEC macro, REXX function, or USS WEB Server (IPLINFO CBT file#434) used to extract system information.
ICISZ	nbr nbr – number of data CI/CA. ISREDIT EXEC macro used to collect information from an IDCAMS PRINT (saved as a sequential file or a PDS member) of a VSAM KSDS index component (maximum of 20 index records). Compute the average compressed key length and the minimum index CISZ. Present results in the member as a MSGLINE. From within a saved IDCAMS PRINT listing, key macro ICISZ on the command line in either VIEW/EDIT mode. For help information, key "ICISZ ?" on the command line.
ISRDDN	TSO command used to present data set allocations for your TSO session. There are many sub-functions and line commands available. For help information, press the PF1 key.
ISRFIND	TSO command used to find a member name from the list of TSO data sets allocated. Also look at DDSCAN.
IUDIR	dsname (fileset applrel fileset – 1st character of the IU CNTLFILE high-level qualifier (e.g. B, C, D, P, Q, R, T, X, Z). applrel – Systematics application and release number (e.g. AM212, GN212, etc.).

	TSO/ISPF EXEC macro used to extract (Systematics) IU Control File information for each member name found in dsname. The macro will ask for the name of the output sequential file to save the source member list in. For help information, key "TSO IUDIR ?" on the command line.
J2G	yyyyddd or yyyymmdd = J2G(yyyyddd) TSO EXEC macro and/or REXX function to convert a Julian date to a Gregorian date.
KONKAT	ddname dsname [([EVEN | **ONLY**] [**FIRST** | LAST] [MSG | **NOMSG**]] EVEN/ONLY – reallocate dsname to ddname EVEN if it is already present or ONLY if it is not already present. FIRST/LAST – allocate before or after other data sets. MSG/NOMSG – present ALLOC diagnostic messages or disable message presentation. TSO/ISPF EXEC macro used to concatenate a dsname to an existing optional/required ISPF ddname. Can be used after ISPF is initialized for the following optional ISPF ddname(s): • SYSPROC – CLIST/REXX library • SYSEXEC – REXX library Can be used under native TSO, prior to ISPF initialization for the following required ISPF ddname(s): • ISPLLIB – load library • ISPMLIB – message library • ISPPLIB – panel library • ISPPROF – profile data set • ISPSLIB – skeleton library • ISPTABL – table library • ISPTLIB – read only table library For help information, key "TSO KONKAT ?" on the command line.

LABELS	([CLEAR | DISPLAY | RESTORE | **SAVE**] [ALL]
	CLEAR – erase the label variable for this member or ALL members from the user's ISPF PROFILE.
	DISPLAY – display the label variable for this member or ALL members from the user's ISPF PROFILE.
	RESTORE – restore the label variable for this member from the user's ISPF PROFILE.
	SAVE – save the label information for this member in the user's ISPF PROFILE.
	ALL – apply action to all members referenced in the user's ISPF PROFILE.
	ISREDIT EXEC macro used to manage the labels specified in an edited member. The labels in a data set are saved in the active PROFILE data set in variable LBLS@@.
	For help information, key "LABELS ?" on the command line.
LANG	([STD | COBOL]
	STD/COBOL – establishes the Language which is used by many of the macros to determine certain defaults. The default Language may be established by macro SETUP2 or LANG.
	ISREDIT EXEC macro used to mimic the TSO Profile Language setting established by the PDS name last qualifier. The macros (ALIGN, CHGID, CKSEQ, CLRSEQ, HBOX, RESEQ, SPLTLN) will retrieve the variable from the user's ISPF PROFILE.
	For help information, key "LANG ?" on the command line.
LASTIPL	TSO/ISPF EXEC macro (LASTIPL CBT file#434) used to display the saved IPL date and time for all LPAR(s).
LCAT	dsname [([**VIEW** | NOVIEW] [**DELETE** | NODELETE]]
	VIEW/NOVIEW – create and view or do not view the listing formatted LISTCAT.
	DELETE/NODELETE – delete or do not delete the target SEQ file listing (userid.LISTCAT.*) on exit.

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	TSO/ISPF EXEC macro used to create the target SEQ file containing the IDCAMS LISTCAT report of dsname. From the ISPF DSLIST (=3.4) panel, key macro LCAT in the row command line of the dsname. For help information, key "TSO LCAT ?" on the command line.
LDSI	dsname [([**DIRINFO** | NODIRINFO] [RECALL | **NORECALL**] [LINE | **SCREEN**]] DIRINFO/NODIRINFO – specifies whether to return PDS or PDS/E directory information. RECALL/NORECALL – specifies whether to restore migrated data sets. LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode. TSO/ISPF EXEC macro used to present the information collected, via the TSO command LISTDSI. From the ISPF DSLIST (=3.4) panel, key macro LDSI on the row command line of the desired dsname. For help information, key "TSO LDSI ?" on the command line.
LJUST	{lptr | range | *} ISREDIT EXEC macro used to left justify the text between the ISREDIT bounds settings. You may need to specify bounds prior to invoking this macro. For help informcation, key "LJUST ?" on the command line.
LMA	member TSO/ISPF EXEC macro used to invoke EQALMA (IBM Debug Tool Library Module Analysis) to retrieve the compiler and link-edit/binder information for the member. From the ISPF DSLIST/Member (=3.4) panel, key macro LMA on the row

	command line of the desired member of the LOADLIB. For help information, key "TSO LMA ?" on the command line.

LOCATE
FINDCMD
FINDPRG
	clistname | execname | modname
	
	TSO command (LOCATE CBT file#612) used to determine what library a command or module resides:
	• ISPF environment
	  ○ JOB PACK AREA (JPA)
	  ○ LIBDEF ISPLLIB
	  ○ ISPLLIB
	  ○ TASKLIB (i.e. TSOLIB ACT DA('dsname'))
	  ○ STEPLIB
	  ○ Fixed/Modified LPA (i.e. FLPA, MLPA)
	  ○ PLPA (i.e. LPALST dsname)
	  ○ Dynamic LINKLIST
	  ○ Nucleus
	  ○ user SYSUEXEC/SYSUPROC
	  ○ Application EXEC/CLIST
	  ○ SYSEXEC/SYSPROC
	• Native TSO environment
	  ○ JOB PACK AREA (JPA)
	  ○ TASKLIB (i.e. TSOLIB ACT DA('dsname'))
	  ○ STEPLIB
	  ○ Fixed/Modified LPA (i.e. FLPA, MLPA)
	  ○ PLPA
	  ○ Dynamic LINKLIST
	  ○ NUCLEUS
	  ○ user SYSUEXEC/SYSUPROC
	  ○ Application EXEC/CLIST
	  ○ SYSEXEC/SYSPROC

MAPPEND MAPPEND1	dsname TSO/ISPF EXEC macro used to append the matching member of a source PDS to the target PDS (e.g. dsname). The macro will ask for the source PDS name. The entire target PDS (i.e. dsname) is processed. From the ISPF DSLIST (=3.4) panel, key macro MAPPEND on the row command line of the dsname.

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	For help information, key "TSO MAPPEND ?" on the command line.
MATH	equation TSO/ISPF EXEC macro used to emulate a calculator. The following actions are valid: add (+), subtract (−), multiply (*), divide giving real quotient (/), divide giving integer quotient (%), divide giving integer remainder (//), and exponentiation (**) raising a number to a power. For help information, key "TSO MATH ?" on the command line.
NBROF	n = NBROF(haystack,needle) n = Number of occurrences of needle in haystack. REXX function used to return the number of occurrences of needle in haystack. This function is to be used in other REXX macro(s).
NOTEPAD	 ISREDIT EXEC macro used to place data in the DEFAULT clipboard to be later pasted into other files or members. This macro is written to be called by other REXX macro(s).
OCT2DEC	$base_8$ or $base_{10} = OCT2DEC(base_8)$ TSO EXEC macro and/or REXX function used to convert a $base_8$ number to a $base_{10}$ number.
PACK	x = PACK(nbr,scale,precision) nbr = IBM zone decimal number. scale = total number of digits, must be odd, defaults to significant digits of nbr. precision = number of decimal positions, defaults to zero. REXX function (CBT) used to convert IBM zone decimal values to IBM internal decimal format. This function is to be used in other REXX macro(s).

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PDSDIR	dsname [([LINE	**SCREEN**	QUEUE] [SELECT lorange [:hirange]]] LINE/SCREEN/QUEUE – specifies the presentation form of the report. Terminal LINE mode, SCREEN mode, or output data stack, where QUEUE is FIFO. SELECT – states that a member name range (inclusive) follows. Length plays a role in the compare process. Example: SELECT AMA or SELECT AMA:AMC TSO/ISPF EXEC macro (CBT) used to extract all of the PDS directory information and present it in the form specified. For help information, key "TSO PDSDIR ?" on the command line.
PDSDIR1	dsname TSO EXEC macro (CBT) used to extract all of the PDS directory information for each member name passed. The input data stack (FIFO) will contain the list of input member name(s) used. The output data stack (FIFO) will contain the PDS directory information for each input member name. This macro was written to be called by other REXX macro(s) and can be executed in batch.
PDSMLST	dsname [({SELECT [lorange [:hirange]]	mbrpattern}] SELECT – states that a member name range (inclusive) follows. Length plays a role in the compare process. Example: SELECT AMA or SELECT AMA:AMC TSO/ISPF EXEC macro used to create a new member in an output/data library PDS containing all the member names (one per row) in the source PDS (i.e. dsname), via macro STKMBRS. The macro will ask for the output/data library PDS name and member to save the source member list in. From the ISPF DSLIST (=3.4) panel, key macro PDSMLST on the row command line of the desired source dsname. For help information, key "TSO PDSMLST ?" on the command line.

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PDSUTIL	member TSO/ISPF EXEC macro used to invoke ISPF Library Management (LM) actions found in member. From the ISPF DSLIST/Member (=3.4) panel, key PDSUTIL on the row command line of the desired member of the data library (created by macro PDSMLST). Some additional changes will need to be made to member before processing. The 1st column of data needs to be the LM action (DELETE, RENAME, COPY, MOVE) to apply to each member (2nd column). If RENAME is selected then the new member name needs to be added (3rd column). Each column must be separated using a comma. Use macro DUP to make the changes. COPY and/or MOVE action must follow all DELETE and RENAME actions. The macro will ask for the target PDS name. All the collected member names found in member will be processed using the LM actions on the target PDS. If a COPY and/or MOVE action is found then the macro will ask for the source PDS name. For help information, key "TSO PDSUTIL ?" on the command line.
PWRISRT	dsname [(execname] TSO/ISPF EXEC macro used to access a source PDS and edit (ISREDIT) all of the members using macro execname. From the ISPF DSLIST (=3.4) panel, key PWRISRT on the row command line of the desired data library. For help information, key "TSO PWRISRT ?" on the command line.
QUIT	 ISREDIT EXEC macro used to determine the update status of the desired member being Edited or Viewed (modified, not modified). If not modified then ISREDIT command CANCEL is issued. If modified then an informational message is presented and the user will be required to either issue the ISREDIT command SAVE or CANCEL or macro VSAVE (if in VIEW mode). This macro works best if assigned to a PF key (i.e. PF3).

REPEAT	ISREDIT EXEC macro used to re-invoke a previous macro that has been written to be compatible with REPEAT. It works similar to the RFIND macro for the FIND command. This macro works best if assigned to a PF key (i.e. PF2).
RESEQ	{lptr | range | *} [start incr] {col-1 col-2 | ({STD | COBOL}} STD/COBOL – establishes the Language which determines the sequence number starting values, increments, and columns where the sequence numbers will be placed on the row. The default Language may be established by macro SETUP2 or LANG. STD – incr is 1000, col-1 is 73, col-2 is 80 COBOL – incr is 100, col-1 is 1, col-2 is 6 ISREDIT EXEC macro used to re-sequence from the current row forward. The entire member or some smaller portion of the member can be selected. If the current row or row that the cursor is position on contains a valid sequence number then it becomes the default starting sequence number. Excluded rows are ignored. For help information, key "RESEQ ?" on the command line.

REVIEW
REV
REVED
REVAUTH
	dsname | 'ACTIVE' | ddname FILE | /pathname
	
	Operands:
	• Volume(volid)
	• Unit(unitaddr)
	• Quick
	• DATA – control data is displayed rather than interpreted
	  ◦ VSAM component – show physical record
	  ◦ VSAM KSDS cluster – access records in RBA order
	  ◦ PDS – access the directory instead of the member
	  ◦ RECFM=F – access is slower
	  ◦ SUBSYSTEM – if the data set has members but the subsystem does not support partitioned access
	  ◦ PCX, BMP, and GIF file types – display data and bypass rendering of picture
	• GEN – display member list of a version 2 PDS/E with all generations

- Top('rel-addr')
- Subsys('subsys') - 1 to 4 character subsystem name
- XISPMODE – only affects processing in an ISPF environment

TSO command (REVIEW CBT file#134) used to display/view a data set or UNIX entity. ISPF version is invoked by entering TSO RFE to present a ISPF panel.

PF keys:

PF1 – HELP	PF13 – TOP
PF2 – START	PF14 – BOTTOM
PF3 – END	PF15 – END
PF4 – TSO	PF16 – SMF
PF5 – RFIND	PF17 – RFIND
PF6 – RCHANGE	PF18 – EREP
PF7 – UP	PF19 – UP
PF8 – DOWN	PF20 – DOWN
PF9 – SWAP NEXT	PF21 – HEX
PF10 – LEFT	PF22 – ASCII
PF11 – RIGHT	PF23 – TSO REV
PF12 – RECALL	PF24 – RECALL

Sub-commands available in all display modes:

?	Display current release.
.label	Can be entered on the command line or in the row command area.
BOTTOM	
BOT	Scroll down to the last row.
CDE	
JPA	Display Job Pack Area Contents Directory Elements.
DOWN	n | H | P | C | M
+	
	Scroll forwards a specified number of rows.
END	
CANCEL	
CAN	End the command.
EXIT	
RETURN	
=X	Terminate the REVIEW session.
HEL	
FSHELP	
FSH	Not intercepted by ISPF.
HELP	Intercepted by ISPF if running under ISPF.

	KEYS	Display current PF key values.
	PFK0	Set Program Function Keys to default values.
	PFKn	Set Program Function Key "n" to a value.
	RECALL	
	RETRIEVE	Recall previously keyed in commands.
	SCRNAME	Assign a name to this logical screen session.
	START	
	SPLIT	Create a new ISPF REVIEW Front End (RFE) session.
	SWAP	List or transfer control between RFE sessions.
	TASK	
	TCB	
	RB	Display Task Control Block (TCB).
	TOP	Scroll up to the 1st row.
	TSO	
	TSS	Issue TSO command.
	UP	n | H | P | C | M
	-	
		Scroll backwards a specified number of rows.
	Sub-commands available when viewing file data:	
	APPEND	
	ADD	
	TACKON	Copy data being viewed (from 1st row on screen) to an output file (non-destructive).
	ASCII ON	
	ASCII OFF	
	ASCII	Toggle the translation of ASCII to EBCDIC.
	BROWSE	Process current data set with ISPF BROWSE.
	COPYOUT	
	CUTOFF	
	CUT	
	CUTOVER	Copy data being viewed (from 1st row on screen) to an output file (destructive).
	DIR	Display the directory of the PDS.
	EDIT	Process current data set with ISPF EDIT.
	EREP ON	
	EREP OFF	
	EREP	Toggle conversion of LOGREC record into a readable format.
	FIND	
	F	Search for the specified data or pattern. Command format is the same as ISREDIT FIND except range operands are not supported.

FINDNOT FN		Search until the specified data or pattern is not found. Same format as the REVIEW FIND command.
FINDSMF FS		Search for an SMF record type and optional sub-type.
		Syntax: FS smf-type [smf-subtype] [FIRST | NEXT | PREV | LAST | REST | ALL]
		where: smf-type is a decimal integer 0:255; smf-subtype is a decimal integer 0:255.
FMT ON FMT OFF		Toggle the formatting of data records.
FMTVAR FV		Specify the data type of a data item.
FORMAT FMT		Format record data in accordance to a source Assembler data definition member found in PDS REVFMTS. You are also able to format VTOC records without the PDS REVFMTS.
HEX ON HEX OFF HEX		Toggle the screen display in either hex or character mode.
INFO		Display the current data set attributes.
LEFT <	n | H | P | C | M	
		Scroll left a specified number of columns.
LIST L	n	
LOC LOCATE		Display the specified record number.
MEMBER MEM		Switch to specified member within the same PDS.
NEWTOP		Specify a relative physical address to be considered as the top-of-the-data. Useful for looking past I/O errors, end-of-file markers, and deleted members.
RESET RES		Deactivate line exclusion caused by the ALL or REST operand of a FIND or FINDNOT operation.
RFIND IFIND		Repeat the previous FIND or FINDNOT operation.
RIGHT	n | H | P | C | M	

	>	
		Scroll right a specified number of columns.
	SMF ON	
	SMF OFF	
	SMF	Toggle conversion of SMF record into a readable format.
	SUBMIT	
	SUB	
	SB	Submit the data set or member being viewed.
	VIEW	Process current data set with ISPF VIEW.
	Sub-commands available with viewing directories:	
	BROWSE	
	B	Invoke ISPF BROWSE for member.
	DELINK	
	DL	Delink load modules (PDS only) and write the object deck to a sequential data set. Only tagged members or all.
	EDIT	
	E	Invoke ISPF EDIT for member.
	OFFLOAD	
	OFF	(not for program objects or UNIX files) Offload source and write to a sequential data set in IEBUPDTE format and control statements. Only tagged members or all.
	PDSLOAD	
	PDS	(not for program objects or UNIX files) Using sequential data set (IEBUPDTE format) write it to a PDS or PDS/E.
	REFRESH	
	REF	Refresh in-storage directory copying the external directory. Tagged entries will not be maintained.
	RESET	
	RES	Untag all entries without refreshing from external directory.
	RFIND	
	IFIND	Position directory to the next tagged entry.
	SEARCH	
	FIND	
	F	Search PDS, PDS/E, UNIX data set for specific data. Supporting panels will be displayed.
	SELECT	
	SEL	
	S	Specify member of (PDS, PDS/E, UNIX) to be

		browsed.
	SEQLOAD	
	SEQ	(PDS and PDS/E only) Offload source and write to a sequential data set without IEBUPDTE control statements. Only tagged members or all.
	SORT	Order the directory entries in a specific order. Use HELP for available options.
	TAGFLIP	
	TF	Toggle tag status for every entry in the selection list.
	UPDATE	
	U	Invoke REVEDIT to process the specified member.
	VIEW	
	V	Invoke ISPF VIEW for member.

Selection codes for use on the directory display:

/	Select member from a PDS, PDS/E, or UNIX member list, as if the DATA operand had been specified. No interpreting data content.
A	Select member from a UNIX member list. Treat member as an ASCII text file.
B	Browse a member from a PDS, PDS/E, or UNIX member list.
D	Delete a member of an un-concatenated PDS.
E	Edit a member from a PDS, PDS/E, or UNIX member list.
H	Display the source history information of the member.
M	Display the module map for a load module or compatible program object.
N	Rename member (prompted for new name).
R	Restore a deleted member of a PDS, prior to a REFRESH or RESET.
S	Select member from a PDS, PDS/E, or UNIX member list, without the DATA operand. Interpret data content.
T	Tag member entries of a PDS or PDS/E for later group processing.
U	Edit a member via REVEDIT.
V	View a member from a PDS or a PDS/E.

Sub-commands available when editing file data:

AUTOSAVE	Control the SAVE action of the END sub-command.
BOUNDS	Control the column range to which commands apply.
CAPS ON	
CAPS OFF	
CAPS	Toggle case.
CHANGE	Search for specified data and replace it. Command format is the same as ISREDIT CHANGE.
COLS ON	
COLS OFF	

	COLS	Toggle column marker line.
	COPY	Copy a data set into the edit session data.
	CREATE	
	CRE	Create a new data set or member with the edit session data.
	CUT	Copy records from the edit session to the clipboard.
	DELETE	
	DEL	Delete all excluded or all non-excluded lines in edit session.
	DSNCHECK	Control catalog look up when HI JCL is set.
	EXCLUDE	
	X	Exclude lines from display. Command format is the same as ISREDIT EXCLUDE.
	FIND	
	F	Search for the specified data or pattern. Command format is the same as ISREDIT FIND except range operands are not supported.
	FIND	
	IFIND	Repeat the previous FIND or FINDNOT or EXCLUDE or EXNOT.
	FINDNOT	
	FN	Search until the specified data or pattern is not found. Same format as the REVED FIND command.
	FLIP	Toggle the exclusion status of every data record in the edit session.
	HEX ON	
	HEX OFF	
	HEX	Toggle display data in hexadecimal.
	HI AUTO	
	HI ASM	
	HI CLIST	
	HI JCL	
	HI OFF	
	HI PLI	Toggle syntax highlighting based on language.
	LEFT	n | H | P | C | M
	<	
		Scroll to the left a specified number of columns.
	LEVEL	Set the modification level of the member.
	line commands	(– shift data left.
		) – shift data right.
		A – target of copy/move is after this row.
		B – target of copy/move is before this row.
		C – row(s) to be copied.

		D – row(s) to be deleted.
		F – 1st row(s) of excluded block are unexcluded.
		I – insert new row(s) after this row.
		M – row(s) to be moved.
		O – row(s) to be overlaid.
		R – row(s) to be repeated.
		S – row(s) of excluded block are unexcluded.
		U – row(s) to be translated to upper case.
		W – row(s) to be translated to lower case.
		X – row(s) to be excluded.
		TF – reflow text.
		TS – split text to a new row and insert
		TE – use rest of screen as a single entry field.
	LIST	n
	L	
	LOC	
	LOCATE	Display the specified record number.
	NULL ON	
	NULL OFF	
	NULL	
	NULLS	Toggle trailing blanks to null.
	NUMBER	Set sequence numbering on or off.
	PASTE	Copy records in the clipboard into the edit session.
	PROF ON	
	PROF OFF	
	PROF	Toggle profile settings line.
	PROFILE	Display profile settings.
	PROF	
	RCHANGE	Repeat the previous CHANGE command.
	ICHANGE	
	REDO	Reapply an UNDO.
	RENUM	Re-sequence the member.
	REPLACE	
	REP	
	REPL	Replace a data set or member with the edit session data.
	RESET	
	RES	Reset various pending actions and controls.
	RIGHT	n | H | P | C | M
	>	
		Scroll to the right a specified number of columns.
	SAVE	Externalize the data in the edit session back to the data set or member.

	SORT	Sort member in a specific order.
	STATS	Set member statistics.
	SUBMIT	
	SUB	
	SB	Submit the data set or member being edited.
	TABS	Set software tabbing columns.
	UNDO	Undo a change made to the data in the edit session.
	UNDO ON	
	UNDO OFF	Toggle the UNDO setting.
	UNNUM	Clear sequence numbers in member.
	VERSION	Set the version level of the member.
	ZAP	Control whether PDS members with fixed length records that have an unchanged record count will update-in-place or be written back to a different location.
	Sub-commands available when viewing virtual storage:	
	DROP	Remove previously defined EQUATE.
	EQUATE	
	EQ	Set a label name for a storage address.
	LEFT	
	<	Display previous storage address in the trace table.
	LIST	
	L	
	LOC	
	LOCATE	Display storage contents at specified address.
	RIGHT	
	>	Display next storage address in the trace table.
RJUST	{lptr	range	*} ISREDIT EXEC macro used to right justify the text between the ISREDIT bounds settings. You may need to specify bounds prior to invoking this macro. For help information, key "RJUST ?" on the command line.	
RPASTE	[range] [([**AFTER**	BEFORE] [DELETE	**KEEP**] [clipboard]] AFTER/BEFORE – specifies where to PASTE the contents of the clipboard in relation to the row. DELETE/KEEP – states the disposition of the clipboard contents after the	

	PASTE. clipboard – specifies the alternate clipboard name used with the CUT command. ISREDIT EXEC macro used to PASTE the contents of the clipboard AFTER or BEFORE each row in the range. Excluded rows are ignored. For help information, key "RPASTE ?" on the command line.
RPIJOIN	member TSO/ISPF EXEC macro used to join (FIS) COBOL RPI 80 byte source records in to RPI 150 byte source records and write them to the target PDS. From the ISPF DSLIST/Member (=3.4) panel, key macro RPIJOIN on the row command line of the member (COBOL RPI 80 byte source). The macro will ask for the target PDS name. The member will be created in the target PDS (RPI 150 byte source). **Note:** it is much easier editing an RPI source at 150 wide, correct spacing of print lines is more apparent. For help information, key "TSO RPIJOIN ?" on the command line.
RPISPLT	member TSO/ISPF EXEC macro used to split RPI 150 byte source records in to (FIS) COBOL RPI 80 byte source records and write them to the target PDS. From the ISPF DSLIST/Member (=3.4) panel, key macro RPISPLT on the row command line of the desired member (RPI 150 byte source). The macro will ask for the target PDS name. The member will be created in the target PDS (COBOL RPI 80 byte source). For help information, key "TSO RPISPLT ?" on the command line.

RXSMS	RC = RXSMS(request,stemname[,searcharg])
	
	request – action to be taken, variable or literal containing:
	  • "AVL" – all volumes list
	  • "SGL" – storage group list

	• "SGV" – storage group volser list • "VSG" – volser of a storage group • "VOL" – volume definition for a volser • "DCL" – data class list • "SCL" – storage class list • "MCL" – management class list • "LSPACE" stemname – REXX stem variable or literal to receive the data. searcharg – is a variable or literal containing volser or storage group name to retrieve data about. Mandatory for SGV, VSG, and VOL request. REXX assembler function (RXSMS CBT file#183) to retrieve SMS information. This function is to be used in other REXX macro(s).

RXVSAM	RC = RXVSAM(request,ddname[,key | filetype][,recordarea])
	
	request – action to be taken, variable or literal containing:
	• "OPENINPUT" | "OPENOUTPUT" | "OPENIO"
	• "CLOSE"
	• "READ" | "READGENERIC" | "READNEXT" | "READPREV" | "READLAST"
	• "WRITE" | "REWRITE" | "DELETE"
	• "STARTFWD" | "STARTBWD"
	ddname – DD name of the target VSAM file, variable or literal.
	key | filetype:
	• key is – KSDS key or RRN or RBA
	  ◦ variable or a literal
	  ◦ for RRN and RBA specify a decimal value
	• filetype – only required for OPEN type request
	  ◦ variable or literal containing "ESDS"
	  ◦ variable or literal containing "KSDS"
	  ◦ variable or literal containing "RRDS"
	recordarea – variable or literal containing the name of the record:
	• defaults to "RXVSAM_RECORD"
	Variable RXVSAM_VSAMERRORMSG is set with the VSAM return and reason codes, and the location in RXVSAM.
	
	REXX assembler function (RXVSAM CBT file#268) used to access VSAM files. This function is to be used in other REXX macro(s).

SAVE	ISREDIT EXEC macro used to verify the member is in an acceptable state

	prior to exit. It verifies that the sequence numbers are in order (macro CKSEQ). Issues an error message if not, or optionally (PROFILE variable) re-sequences those that are not (macro RESEQ). If the Change ID has been set, it verifies the member has been modified (macro CHANGES). It will overlay those rows that have changed with the Change ID (macro CHGID). Finally, it will write the member back to the source data set, if changes have been made. To invoke ISREDIT SAVE command instead of this macro, key BUILTIN SAVE. **This is a user customized macro and should be saved in the user's private REXX library. See macro SYSEXEC to activate your own private REXX library.** You can use SHOWV macro to present whether the SAVE macro is active or not. For help information, key "SAVE ?" on the command line.
SETUPALI	Set the ISREDIT user session initial macro (drop down CUA Edit_Settings) to be SETUPALI if you want to establish your own aliases for built-in commands and macros, via the ISPF DEFINE command. **This is an environment customizing macro and should be saved in the user's private REXX library. See macro SYSEXEC to activate your own private REXX library.**
SETUP2	Set the ISREDIT initial macro on the edit entry panel (=2) or (=3.1) to be SETUP2 if you want to establish your own ISREDIT PROFILE settings. The SETUP2 macro will establish default PROFILE values as well as other global variables using the data set name being edited as the controlling factor. If the member being edited can be determined to be either COBOL or ASM then the ISREDIT SAVE command will be replaced with the SAVE macro. You can always over-ride the use of the SAVE macro by issuing the BUILTIN SAVE command. **This is an environment customizing macro and should be saved in the user's private REXX library. See macro SYSEXEC to activate your own**

	private REXX library. If SETUP2 is not used, you can invoke macro LANG to establish the member Language setting. It and other PROFILE variables may be presented by invoking macro SHOWV.
SHIFT	{lptr | range | *} col-1 col-2 ISREDIT EXEC macro used to shift data from col-1 column to col-2 column. Excluded rows are ignored. For help information, key "SHIFT ?" on the command line.
SHOWDASD	[volpattern | * | SG=stggrp] TSO/ISPF EXEC macro (SHOWDASD CBT file#183) used to present the on-line DASD information collected, via the REXX assembler function (RXSMS CBT file#183) on ISPF panels. Enter "S" in the row command line to display all data sets on the volume. Enter "V" in the row command line to display the VTOC information for the volume.
SHOWV	TSO/ISPF EXEC macro used to present the PROFILE variable settings for Debug, Change ID, Language, use your own SAVE macro, and re-sequence during SAVE macro invocation.
SMSINFO	{ [CLASS | DATA | STORAGE | MANAGEMENT] | [DASD | STGGRP] } [([LINE | **SCREEN**] [SPACE | **NOSPACE**] [VOL=ALL | volser] [STG=ALL | stggrp]] CLASS – list all SMS data, storage & management classes. DATA – list all SMS data classes. STORAGE – list all SMS storage classes. MANAGEMENT – list all SMS management classes. DASD – list volume information. STGGRP – list storage group information. LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode.

	SPACE/NOSPACE – specifies if LSPACE information will be generated for a specific volser.
	VOL=ALL | volser – specifies the volume scope.
	STG=ALL | stggrp – specifies the storage group scope.
	
	TSO/ISPF EXEC macro used to present the information collected, via the REXX assembler function (RXSMS CBT file#183).
	
	Example:
	TSO SMSINFO CLASS
	TSO SMSINFO DASD (VOL=ALL
	TSO SMSINFO DASD (VOL=volser
	TSO SMSINFO DASD (VOL=volser SPACE
	TSO SMSINFO DASD (STG=stggrp
	TSO SMSINFO STGGRP (STG=ALL
	TSO SMSINFO STGGRP (VOL=volser
	
	Report flags:
	
	<pre>DS4SMSFG - x'C0' SMS
	          x'40' initial status
	          x'00' not SMS
	DS4VTOCI - x'80' index is valid
	          x'40' index is disabled
	          x'20' extended free space management
	          x'08'
	          x'04' DIRF
	          x'02' DIRF reclaimed
	          x'01' index created
	SGDFLAGS - x'80' HSM auto-backup
	          x'40' auto migration
	          x'20' auto dump
	          x'10' thresholds specified
	          x'08' guaranteed backup freq specified
	          x'04' guaranteed backup freq NOLIMIT
	          x'02' interval migration
	          x'01' primary space management
	VLDGLAGS - x'80' volume in conversion
	          x'40' volume online
	VLDSGST -</pre>
	For help information, key "TSO SMSINFO ?" on command line.

SPACE	[VOLUME(vol-1,vol-2, … | *)] | [POOL(stggrp-1,stggrp-2, … | *)] TSO/ISPF macro used to collect storage information, via IBM IDCAMS DCOLLECT command and present it to the requester, via ISPF panels. Most of the row commands (C, D, S, V) require a lot of time and resources. So, do

	not be a pig. For help information, press PF1 key.
SPLTCOL	{lptr | range | *} col-1 … col-1 … – is a list of one or more column numbers in ascending sequence. ISREDIT EXEC macro used to split a row at specific column positions. Excluded rows are ignored. For help information, key "SPLTCOL ?" on command line.
SPLTJN	ISREDIT EXEC macro used to split a row at the cursor position or to join a row at the cursor position. If the cursor is placed over a displayable character, the split will occur. If the cursor is placed over white space, a join will occur. This macro works best if assigned to a PF key (i.e. PF4). For help information, key "SPLTJN ?" on command line.
SPLTLN	[range] 'string' [([AFTER | **AT**] [indent] [STD | COBOL]] string – specifies a case sensitive string. AFTER/AT – specifies where to split the row in relation to the string. indent – specifies the number of columns to indent the new row. The default is 5. STD/COBOL – establishes the Language for specific edits. The default Language may be established by macro SETUP2 or LANG. ISREDIT EXEC macro used to split the row AFTER or AT the string. Excluded rows are ignored. For help information, key "SPLTLN ?" on the command line.
STATUS	ISREDIT EXEC macro used to present the update status of the member being edited or viewed (modified, not modified).
STEMEDIT	RC = STEMEDIT(request,stemname[,firstelement][,stemcount][,title][,panel]

	[,lrecl][,recfm][,profile][,varlen] request – action to be taken, variable or literal containing: • "BROWSE" – for BRIF service • "EDIT" – for EDIF service • "VIEW" – for VIIF service stemname – REXX stem variable or literal to receive the data. If omitted, data will be retrieved from the data stack. firstelement – 1st element of the stem element to be returned. Default is 1. stemcount – number of stem elements to return. Default is the number of initialized variables on the stem. title – arbitrary string that identifies the stem elements. Max value is 54. panel – ISPF panel name to present. Defaults exist. lrecl – logical length of each record to return. Default is 255. recfm – record format ("F", "FA", "FM", "**V**", "VA", "VM", or "U") of the records to return. profile – profile to use when presenting data, via the VIIF or EDIF service. Default is "TEXT". varlen – form of variable list when using a generic stem variable (*.), "S" for variable names shorter than 40 characters, "L" for variable names up to 255 characters long. REXX assembler function (STEMEDIT CBT file#183) used to present the REXX stem data or data stack. This function is to be used in other REXX macro(s).
STEMPULL	RC = STEMPULL(token,code) token – 16 byte variable returned by function STEMPUSH. code – deletion code, variable or literal containing: • "DELETE" - default value • "NODELETE" RC – return code variable containing: • 0 – one or more stem variables have been pulled • 1 – out of space • 2 – empty • 4 – token is unknown • 8 – token is missing or code is invalid REXX assembler function (STEMPULL CBT file#411) used to retrieve stem data from a data-space created by REXX assembler function (STEMPUSH CBT file#411). This function is to be used in other REXX macro(s).

STEMPUSH	token = STEMPUSH(maxblk,stemlist) maxblk – specifies the size of the data-space (persistent storage). The format is "MAXBLOCKS=nnnnn", where n is the number of 4K blocks. Default is 4000. stemlist – the stem names to be saved in the data-space. One or more stem names in quotes and separated by a comma. token – 16 byte variable that identifies the data-space. REXX assembler function (STEMPUSH CBT file#411) used to save stem variables that need to be passed to other REXX macro(s). REXX doesn't allow you to pass stem variables in a parameter list to other REXX macro(s). You can pass the token created by STEMPUSH. This function is to be used in other REXX macro(s).
STKCRDS	[dsname] TSO EXEC macro used to retrieve all the records in an input data set and place them on the output data stack (FIFO) before returning to the calling program. If the data set name is passed then it will be dynamically allocated and assigned to the ddname CTLCRDS. This macro was written to be called by other REXX macro(s) and can be executed in batch.

STKDSNS	TSO/ISPF EXEC macro is used to extract the data set names and other attributes and place them on the output data stack (FIFO) before returning to the calling macro.
	
	From the ISPF DSLIST (=3.4) panel, populate all the variables by scrolling to the bottom of the panel group, and scroll left one panel. Any error you may receive will probably be related to the table (panel) not being populated. You may use macro DSNFLTR to alter the list of data set names presented. Enter calling macro, in the row command line of the desired data set and press ENTER.
	
	The information is parsed into the following strings and each string is terminated with a semi-colon:
	    • dsname – contains the 44-byte data set name
	    • volinfo – contains the 7-byte VOLSER

	• spcinfo – contains TRKS, %used, extents, and device • attrinfo – contains DSORG, RECFM, LRECL, and BLKSIZE • dateinfo – contains creation, expiration, and reference date • catname – contains the 44-byte catalog name These strings are appended and then placed on the output data stack (FIFO), one for each row of the ISPF DSLIST (=3.4) panel. This macro is written to be called by other REXX macro(s).
STKMBRS	dsname ISREDIT EXEC macro used to invoke LISTDS to retrieve all the member names in a PDS or PDS/E and place them on the output data stack (FIFO) before returning to the caller. This macro was written to be called by other REXX macro(s) and can be executed in batch.
SUM	{lptr | range | *} col-1 col-2 (equation ISREDIT EXEC macro used to apply an equation to a defined column of numbers. Specify variable "NBR" within the equation or by itself to refer to the data being selected. If "NBR" is not numeric, the data is ignored. Excluded rows are ignored. The internal equation calculated is answer = answer + (equation). For help information, key "SUM ?" on the command line.
SYSEXEC	[([ACTIVATE | DEACTIVATE | **DISPLAY**]] ACTIVATE/DEACTIVATE – specifies the ALTLIB command action to take. DISPLAY – presents search order by DD name. TSO/ISPF EXEC macro used to ACTIVATE/DEACTIVATE a user REXX ALTLIB. This will give the user access to their personal REXX library (userid.WORK.REXXLIB) in the current TSO session. For help information key "TSO SYSEXEC ?" on the command line.

TSO Application Programmer Toolbox
REXX

TASID	TSO/ISPF EXEC macro (written by retired IBM'er Doug Nadel, can still be found on IBM's URL address, but is not supported) used to display system information.
TRAP	tsocmd [([**VIEW** | NOVIEW] [**DELETE** | NODELETE]] VIEW/NOVIEW – create and view the formatted listing of the TSO command output. DELETE/NODELETE – delete or do not delete the target SEQ file listing (userid.tsocmd.*) on exit. TSO/ISPF EXEC macro (CBT) used to create the target SEQ file containing the TSO command output. Traps only TSO output written, via TSO PUTLINE (output of REXX SAY is included). For help information, key "TSO TRAP ?" on the command line.
TSUALL	[([LINE | **SCREEN** | QUEUE]] LINE/SCREEN/QUEUE – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode, or QUEUE (FIFO) to place the items on the output data stack (one item per row). TSO/ISPF EXEC macro (CBT) used to retrieve all the TSO userid(s) currently logged on and presented in ascending sort order. For help information, key "TSO TSUALL ?" on the command line.
TXT2CSV	input output [*] col-1 … [/ [DEBUG] [CSV csv]] input – input dsname or DD:ddname, of standard text file. output – output dsname or DD:ddname, of comma-separated-value file. * – replace blank columns with csv character. col-1... – beginning column for each field, if prefixed with a minus sign then the column will be eliminated from the results. / – optional parameters following. DEBUG – keyword to turn on debug mode. CSV – keyword followed by the delimiting character (csv). csv – enclose in quotes or apostrophe, default is comma.

	TSO EXEC macro used to create a comma-separated-value file from a standard text file. Probably best suited for TSO batch mode. Contact Larry Slaten for JCL.
UNPK	X = UNPK(nbr,scale,precision) nbr = IBM internal decimal number. scale = total number of digits of result field. precision = number of decimal positions. REXX function (CBT) used to convert IBM internal decimal values to IBM zone decimal format. This function is to be used in other REXX macro(s).
VMBR	lptr [([BROWSE | EDIT | **VIEW**]] BROWSE/EDIT/VIEW – specifies the mode to present the member. ISREDIT EXEC macro used to BROWSE, EDIT, or VIEW the data set name following the string "DSN=". For help information, key "VMBR ?" on the command line.
VOL2DEV	volume TSO/ISPF EXEC macro used to return the device number for a specific DASD volume serial number, via REXX assembler function (RXV2DEV CBT file#548). For help information, key "VOL2DEV ?" on the command line.
VSAVE	ISREDIT EXEC macro used to SAVE/REPLACE a modified member being VIEWed. Member statistics will not be updated.
%VTOC	TSO/ISPF CLIST macro used display an ISPF panel for input, via TSO command (VTOC CBT file#112).
WHOHAS	[**userid** | dsnpattern | *]

	TSO/ISPF EXEC macro (ENQ CBT file#716) used to present the list of enqueues on a resource (usually a data set name), via the ISPF command QUERYENQ on a ISPF panel. Refrain from using "*" as your input. The default will be your TSO userid. The macro can be entered on the ISPF DSLIST (=3.4) panel, in the row command area of the desired source data set name.
W2G	yyyy ww or yyyymmdd = W2G(yyyy,ww) TSO EXEC macro and/or REXX function used to convert a ISO 8601 standard work week to a Gregorian date. The date returned will be the 1st day (Mon) of the work week.
XDUP	{lptr | range | *} {col-1 col-2 | *} [([ALL | **LEADING**]] ALL – all occurrences are excluded. LEADING – the last occurrence is not excluded. ISREDIT EXEC macro used to EXCLUDE duplicate rows in a member. Items in the member must be in sorted order by column(s) to be selected. User has control over the column(s) selected. Results are unpredictable if any rows are excluded within the scope of the macro. You can use the ISREDIT FLIP command to switch back and forth from the DISPLAYED or EXCLUDED rows. For help information, key "XDUP ?" on the command line.
XEF	TSO/ISPF EXEC macro used to access the Extended Edit Facility (XEF). It allows you to save up to ninety-nine data set names, sequential or partitioned, for later recall. The associated panel allows you to access any of the saved data set names, via ISPF BROWSE, VIEW, or EDIT facilities.
XMITINFO	dsname [DEBUG] [DUMP] TSO/ISPF EXEC macro (CBT) used to display information about a TSO XMIT file.
XMORE	[range] [([AFTER | **BEFORE**] [count]]

	AFTER/BEFORE – specifies where to exclude rows in an exclude group. count – is the number of rows to exclude. The default is 3. ISREDIT EXEC macro (CBT) used to exclude count number of rows AFTER or BEFORE a group of EXCLUDEd rows. For help information, key "XMORE ?" on the command line.
zOSINFO	[([LINE | **SCREEN**]] LINE/SCREEN – specifies the presentation form of the report. Terminal LINE mode or SCREEN mode. TSO/ISPF EXEC macro used to present known z/OS & System information. For help information, key "TSO zOSINFO ?" on the command line.