EPICS quick reference

List of basic EPICS records (all records are part of EPICS base distribution):

AI	Analog input.
AO	Analog output.
BI	Binary input.
BO	Binary output.
LONGIN	Integer input.
LONGOUT	Integer output.
STRINGIN	String input.
STRINGOUT	String output.
WAVEFORM	Array input/output.
SUBARRAY	Used to obtain sub-array from WAVEFORM records.
CALC	Calculation – used for simple calculations.
CALCOUT	Calculation output – same as CALC but with output.
COMPRESS	Used to collect and compress data from array.
FANOUT	Used to propagate processing (process multiplexing).
DFANOUT	Used to propagate value (value multiplexing).
MBBI	(Multi bit binary input) Used to input one of up to 16 states (enumeration type).
MBBO	(Multi bit binary output) Used to output one of up to 16 states (enumeration type).
MBBIDIRECT	Used to read 16 bit word and converts it to 16 unsigned chars each representing one bit.
MBBODIREC	Used to read 16 unsigned chars each representing one bit and converts it to one 16 bit word.
SELECT	Used to compute a value based on input obtained from up to 12 locations.
SEQ	(Sequence) Used to trigger the processing of up to 10 other records and send values to those records.
SUB	(Subroutine) Used to call an arbitrary C initialization and an arbitrary scan routine.

List of most common fields:

NAME	Record Name	INP	Input Link
DESC	Description	OUT	Output Link
DTYP	Device Type	DOL	Desired Output Location
PROC	Process Record	OMSL	Output Mode Select
FLNK	Forward Link	EGU	Engineering Units
PACT	Processing Active	HOPR	High Operating Range
STAT	Current Alarm Status	LOPR	Low Operating Range
SEVR	Current Alarm Severity	PREC	Precision
UDF	VAL Undefined	HIGH	High Alarm Limit
VAL	Value	LOW	Low Alarm Limit
RVAL	Raw Value	MDEL	Monitor Change Deadband

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List of basic commands used with EPICS from bash shell:

caget <recName>	Performs CA get. Type "caget –h" for complete help.
caput <recName> <value>	Performs CA put. Type "caput –h" for complete help.
camonitor <recName>	Performs CA monitor. Type "camonitor –h" for complete help.
makeBaseApp.pl	Creates empty or example EPICS application. Type "makeBaseApp.pl –h" for a complete help.
make	Compile and install EPICS application.
make clean uninstall	Uninstall EPICS application

List of basic commands used from iocsh:

dbl <record type> <field list>	Prints the name of the records in the run time database. If <record type> provided only records of that type are listed. If also <field list> is proved also specified fields are printed. Example "dbl ai,VAL"
dbgrep <pattern>	List record names that match pattern.
dbgf <recordName.fieldName>	Prints the filed type and value.
dbpf <recordName.fieldName> <value>	Set the field of specified record.
dbpr <recordName> <internes level>	Prints the filed values. Interest level defines which fields are displayed.
dbtr <recordName>	Process record and issues dbpr command.
dbnr	Displays number of records by types.
dbior	Displays report entry of the drivers and device support modules.
scanppl	Prints records which are processed periodically.
scanpel	Prints records which are processed by event.
scanpiol	Prints records which are processed by hw interrupt.
dbcar <recordName> <level>	Prints status of channels access links. Example: "dbcar * 2"