RAW Record Format

```
I, 'NAME', BASKV, IDE, AREA, ZONE, OWNER, VM, VA, NVHI, NVLO, EVHI, EVLO
```

RAWX Data Table Format

```
"bus":{
    "fields":["ibus", "name", "baskv", "ide", "area", "zone", "owner", "vm",
              "va", "nvhi", "nvlo", "evhi", "evlo"],
    "data":[
        [101, "NUC-A", 21.6, 2, 1, 1, 1, 1.01, -19.0, 1.1, 0.9, 1.1, 0.9],
        ...

        [93002, "INDGEN2", 0.69, 1, 5, 6, 5, 0.94, -4.3, 1.1, 0.9, 1.1, 0.9]
    ]
}
```

Field	RAWX Key	Description
I	ibus	Bus number (1 through 999997). No default allowed.
NAME	name	Alphanumeric identifier assigned to bus I. NAME may be up to twelve characters and may contain any combination of blanks, uppercase letters, numbers and special characters, but the first character *must not* be a minus sign. NAME *must* be enclosed in single or double quotes if it contains any blanks or special characters. NAME = twelve blanks by default
BASKV	baskv	Bus base voltage; entered in kV BASKV = 0.0 by default
IDE	ide	Bus type code: • 1 - for a load bus or passive node (no generator boundarycondition) • 2 - for a generator or plant bus (either voltage regulating or fixed Mvar) • 3 - for a swing bus • 4 - for a disconnected (isolated) bus IDE = 1 by default
AREA	area	Area number (1 through 9999). AREA = 1 by default
ZONE	zone	Zone number (1 through 9999). ZONE = 1 by default
OWNER	owner	Owner number (1 through 9999). OWNER = 1 by default

Field	RAWX Key	Description
VM	vm	Bus voltage magnitude; entered in pu. VM = 1.0 by default
VA	va	Bus voltage phase angle; entered in degrees. VA = 0.0 by default
NVHI	nvhi	Normal voltage magnitude high limit; entered in pu. NVHI = 1.1 by default
NVLO	nvlo	Normal voltage magnitude low limit, entered in pu. NVLO = 0.9 by default
EVHI	evhi	Emergency voltage magnitude high limit; entered in pu. EVHI = 1.1 by default
EVLO	evlo	Emergency voltage magnitude low limit; entered in pu. EVLO = 0.9 by default

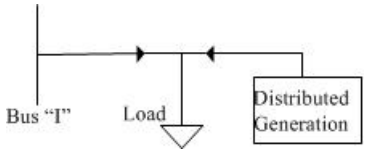
Bus data input in the RAW file is terminated with a record specifying a bus number of zero.

1.7.1. Bus Data Notes

VM and VA need to be set to their actual solved case values only when the network, as entered into the working case via activity READ, is to be considered solved as read in. Otherwise, unless some better estimate of the solved voltage and/or phase angle is available, VM and VA may be omitted (and therefore set to their default values; see Default Values).

1.8. Load Data

Each network bus at which load is to be represented must be specified in at least one load data record. Multiple loads may be represented at a bus by specifying more than one load data record for the bus, each with a different load identifier.



Each load at a bus can be a mixture of loads with three different characteristics: the Constant Power Load Characteristic, the Constant Current Load Characteristic, and the constant admittance load characteristic. For additional information on load characteristic modeling, refer to Load, activities CONL and RCNL, Modeling Load Characteristics and Basic Load Characteristics.

RAW Record Format (on single line)

```
I, ID, STATUS, AREA, ZONE, PL, QL, IP, IQ, YP, YQ, OWNER, SCALE, INTRPT,
DGENP, DGENQ, DGENM, LOADTYPE
```