The MATPOWER case format also allows for additional fields to be included in the structure. The OPF is designed to recognize fields named `A`, `l`, `u`, `H`, `Cw`, `N`, `fparm`, `z0`, `zl` and `zu` as parameters used to directly extend the OPF formulation as described in Section 7.1. Additional standard optional fields include `bus_name`, `gentype` and `genfuel`.[61] Other user-defined fields may also be included, such as the `reserves` field used in the example code throughout Section 7.3. The `loadcase` function will automatically load any extra fields from a case file and, if the appropriate `'savecase'` callback function (see Section 7.3.5) is added via `add_userfcn`, `savecase` will also save them back to a case file.

Table B-1: Bus Data (`mpc.bus`)

name	column	description
`BUS_I`	1	bus number (positive integer)
`BUS_TYPE`	2	bus type (1 = PQ, 2 = PV, 3 = ref, 4 = isolated)
`PD`	3	real power demand (MW)
`QD`	4	reactive power demand (MVAr)
`GS`	5	shunt conductance (MW demanded at $V = 1.0$ p.u.)
`BS`	6	shunt susceptance (MVAr injected at $V = 1.0$ p.u.)
`BUS_AREA`	7	area number (positive integer)
`VM`	8	voltage magnitude (p.u.)
`VA`	9	voltage angle (degrees)
`BASE_KV`	10	base voltage (kV)
`ZONE`	11	loss zone (positive integer)
`VMAX`	12	maximum voltage magnitude (p.u.)
`VMIN`	13	minimum voltage magnitude (p.u.)
`LAM_P`†	14	Lagrange multiplier on real power mismatch (u/MW)
`LAM_Q`†	15	Lagrange multiplier on reactive power mismatch (u/MVAr)
`MU_VMAX`†	16	Kuhn-Tucker multiplier on upper voltage limit (u/p.u.)
`MU_VMIN`†	17	Kuhn-Tucker multiplier on lower voltage limit (u/p.u.)

† Included in OPF output, typically not included (or ignored) in input matrix. Here we assume the objective function has units u.

[61] All three of these are cell arrays of strings. See `gentypes` and `genfuels` for more information on the corresponding fields.