Synopsis

Module function for setting model parameter values, etc.

Syntax

```
Integer_Type set_par(Struct_Type)
Integer_Type set_par(String_Type,String_Type,{Float_Type | String_Type})
```

Success/Error Return Values: 1/0

Arguments:

1. A parameter information structure
   or
   1. The parameter name
   2. The field to set
   3. The new value for that field

Description

The first form of this function assumes as input the parameter information structure output by get_par, e.g.

```
sherpa> GAUSS[g]
scherpa> foo = get_par("g.pos")
scherpa> print(foo)
name = g.pos
model = gauss1d
type = src
value = 0
min = -3.40282e+38
max = 3.40282e+38
delta = -1
units = NULL
frozen = 0
linked = 0
linexpr = NULL
```

The second form of this function takes the arguments listed above; fields to set include:
Allowed set_par Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>value</td>
<td>the parameter value (either a number, or a string filename)</td>
</tr>
<tr>
<td>min</td>
<td>the current (soft) lower bound on allowed parameter values</td>
</tr>
<tr>
<td>max</td>
<td>the current (soft) upper bound on allowed parameter values</td>
</tr>
<tr>
<td>delta</td>
<td>the initial step size for the parameter in fits (or −1 to use the default step size)</td>
</tr>
<tr>
<td>frozen</td>
<td>if 1, freeze the parameter's value; if 0, thaw it</td>
</tr>
<tr>
<td>thawed</td>
<td>if 1, thaw the parameter's value; if 0, freeze it</td>
</tr>
</tbody>
</table>

See the Sherpa command CREATE for more information.

Example 1

Get a parameter structure; change two fields; set back into Sherpa:

```
sherpa> GAUSS[g]
sherpa> foo = get_par("g.pos")
sherpa> print(foo)
name             =  g.pos
model            =  gauss1d
type             =  src
value            =  0
min              =  −3.40282e+38
max              =  3.40282e+38
delta            =  −1
units            =  NULL
frozen           =  0
linked           =  0
linkexpr         =  NULL
sherpa> foo.value = 15.5
sherpa> foo.min = 0.0
sherpa> () = set_par(foo)
sherpa> SHOW g
gauss1d[g]  (integrate: on)
<table>
<thead>
<tr>
<th>Param</th>
<th>Type</th>
<th>Value</th>
<th>Min</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10 1.1755e-38</td>
<td>3.4028e+38</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.5</td>
<td>0 3.4028e+38</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 -3.403e+38</td>
<td>3.4028e+38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Example 2

Change two parameter attributes directly:

```
sherpa> GAUSS[g]
sherpa> () = set_par("g.pos","value",15.5)
sherpa> () = set_par("g.pos","min",0.0)
sherpa> SHOW g
gauss1d[g]  (integrate: on)
<table>
<thead>
<tr>
<th>Param</th>
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<th>Value</th>
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</tbody>
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```
Bugs

See the Sherpa bug pages online for an up-to-date listing of known bugs.

See Also

sherpa

autoest, background, create, create_model, createparamset, fit, freeze, get_defined_models,
get_model_params, get_models, get_num_par, get_par, get_stackexpr, getx, gety, guess, instrument,
integrate, is_paramset, jointmode, kernel, lineid, linkparam, mdl, modelexpr, modelstack,
nestedmodel, noise, paramprompt, paramset, pileup, rename, run_fit, set_paramset, set_stackexpr,
source, thaw, truncate, unlink