

Functions **iBearsPowerfunc** and **iBullsPowerfunc** for MQL4.

Standard functions **iBearsPower** (<http://docs.mql4.com/indicators/iBearsPower>) and **iBullsPower** (<http://docs.mql4.com/indicators/iBullsPower>) are calculated by formulas:

BEARS = LOW - EMA

BULLS = HIGH - EMA

where:

LOW - low price,

HIGH - high price,

EMA - exponential moving average.

without the possibility to choose moving average.

Functions **iBearsPowerfunc** and **iBullsPowerfunc** allow calculate value with possibility to choose moving average according to the following formulas:

BEARS = LOW - Bears_MA_mode (Applied_price, BearsPeriod)

BULLS = HIGH - Bulls_MA_mode (Applied_price, BullsPeriod)

double iBearsPowerfunc (string Sy, int Tf, int BearsPeriod, int Applied_price, int Bears_MA_mode, int Shift)

double iBullsPowerfunc (string Sy, int Tf, int BullsPeriod, int Applied_price, int Bulls_MA_mode, int Shift)

Parameters:

- Sy** - Symbol the data of which should be used to calculate indicator.
NULL means the current symbol.
- Tf** - Timeframe. It can be any of timeframe enumeration values (<http://docs.mql4.com/constants/timeframes>). 0 means the current chart timeframe.
- BearsPeriod** - Averaging period for calculation moving average for Bears.
- BullsPeriod** - Averaging period for calculation moving average for Bulls.
- Applied_price** - Applied price. It can be any of applied price enumeration values (<http://docs.mql4.com/constants/prices>)
- Bears_MA_mode** - MA method for Bears.
- Bulls_MA_mode** - MA method for Bulls.
It can be any of the moving average method enumeration value (<http://docs.mql4.com/constants/movings>).
- Shift** - Index of the value taken from the indicator buffer (shift relative to the current bar the given amount of periods ago).

Example Bears.

- Symbol - current chart (NULL),
- Timeframe - current chart (0),
- Period - 14,
- Applied price - close (PRICE_CLOSE),
- MA method - simple moving average (MODE_SMA),
- Index of the value taken from the indicator buffer - 0.

```
double result=iBearsPowerfunc(NULL, 0, 14, PRICE_CLOSE, MODE_SMA, 0);
```

Example Bulls.

Symbol - EURJPY,
Timeframe - H1 (PERIOD_H1),
Period - 21,
Applied price - high (PRICE_HIGH),
MA method - smoothed moving average (MODE_SMMMA),
Index of the value taken from the indicator buffer - 2.

```
double result=iBullsPowerfunc("EURJPY", PERIOD_H1, 21, PRICE_HIGH, MODE_SMMMA, 2);
```

How to include custom function into program (e.g. expert adviser, script) in MQL4.

The compiled file-library "iBearsBullsfuncs.ex4" must be copied into directory *MT4_directory\experts\libraries* . In code of the program before input parameters operator *#import* must be used (<http://docs.mql4.com/basis/preprocessor/import>).

Example.

```
//+-----+
#import "iBearsBullsfuncs.ex4"
double iBearsPowerfunc(string Sy,int Tf,int BearsPeriod,
                      int Applied_price,int Bears_MA_mode,int Shift);
double iBullsPowerfunc(string Sy,int Tf,int BullsPeriod,
                      int Applied_price,int Bulls_MA_mode,int Shift)
#import

//+-----+
int init() { return(0); }
//+-----+
int start()
{
//----
// Body of program
//----
return(0);
}
//+-----+
int deinit() { return(0); }
//+-----+
```