

```
//Accurate MACD.mq4
```

```
#property indicator_separate_window  
  
#property indicator_buffers 4  
  
#property indicator_color1 Aqua  
#property indicator_color2 Red  
#property indicator_color3 OrangeRed  
#property indicator_color4 BlueViolet  
  
#property indicator_width1 1  
#property indicator_width2 1  
#property indicator_width3 2  
#property indicator_width4 2
```

← #property命令を記述

```
//インジケータバッファの宣言
```

```
double MACD[];  
double Signal[];  
double Up[];  
double Down[];
```

← インジケータバッファを宣言

```
//変数の宣言
```

```
extern int Fast_EMA_Period = 12;  
extern int Slow_EMA_Period = 26;  
extern int Signal_Period = 9;  
extern int Applied_Price = 0;
```

← 変数を宣言

```
int init()
```

```
{  
  //インジケータバッファのインデックス  
  SetIndexBuffer(0,MACD);  
  SetIndexBuffer(1,Signal);  
  SetIndexBuffer(2,Up);  
  SetIndexBuffer(3,Down);  
  
  //インジケータのラベル  
  SetIndexLabel(0,"MACD");  
  SetIndexLabel(1,"Signal");  
  SetIndexLabel(2,"Up");  
  SetIndexLabel(3,"Down");  
  IndicatorShortName("Accurate MACD (" + Fast_EMA_Period + ", " + Slow_EMA_Period + ",  
    " + Signal_Period + ", " + Applied_Price + ")");
```

← 基本設定を記述

```
  //インジケータのスタイル  
  SetIndexStyle(0,DRAW_LINE,STYLE_SOLID);  
  SetIndexStyle(1,DRAW_LINE,STYLE_SOLID);  
  SetIndexStyle(2,DRAW_HISTOGRAM,STYLE_SOLID);  
  SetIndexStyle(3,DRAW_HISTOGRAM,STYLE_SOLID);
```

```
  //インジケータの描画開始時点
```

```
  SetIndexDrawBegin(0,Slow_EMA_Period);  
  SetIndexDrawBegin(1,Slow_EMA_Period);  
  SetIndexDrawBegin(2,Slow_EMA_Period);  
  SetIndexDrawBegin(3,Slow_EMA_Period);
```

```
  return(0);  
}
```

```
int start()
```

```
{  
  int limit = Bars - IndicatorCounted();  
  
  //MACD  
  for(int i = limit-1; i >= 0; i--)  
  {  
    double Fast_EMA = iMA(NULL,0,Fast_EMA_Period,0,MODE_EMA,Applied_Price,i);  
    double Slow_EMA = iMA(NULL,0,Slow_EMA_Period,0,MODE_EMA,Applied_Price,i);  
  
    MACD[i] = Fast_EMA - Slow_EMA;  
    MACD[i] = NormalizeDouble(MACD[i],MarketInfo(Symbol(),MODE_DIGITS));  
  }  
  
  //シグナル  
  for(i = limit-1; i >= 0; i--)  
  {  
    Signal[i] = iMAOnArray(MACD,0,Signal_Period,0,MODE_EMA,i);  
    Signal[i] = NormalizeDouble(Signal[i],MarketInfo(Symbol(),MODE_DIGITS));  
  }  
  
  //ヒストグラム  
  for(i = limit-1; i >= 0; i--)  
  {  
    double Difference = MACD[i] - Signal[i];  
  
    if(Difference >= 0)  
    {  
      Up[i] = Difference;  
      Up[i] = NormalizeDouble(Up[i],MarketInfo(Symbol(),MODE_DIGITS));  
    }  
    else if(Difference < 0)  
    {  
      Down[i] = Difference;  
      Down[i] = NormalizeDouble(Down[i],MarketInfo(Symbol(),MODE_DIGITS));  
    }  
  }  
  
  return(0);  
}
```

← 具体的な処理内容を記述