

```

        .data

AR       .word    0h
AI       .word    0h
BR       .word    0h
BI       .word    0h
COS      .word    0h
SIN      .word    0h


        .text

INIT     LD      #AR, DP          ; страница данных
        SSBX    SXM              ; расширение знака
        SSBX    FRCT             ; умножение дробных чисел


BTRFLY   LD      BR, T           ; T = B_real
        MPY     COS, A           ; A = B_real*cos
        LD      BI, T           ; T = B_imag
        MAC     SIN, A           ; A = B_real*cos + B_imag*sin
        MPY     COS, B           ; B = B_imag*cos
        LD      BR, T           ; T = B_real
        STH     A, BR           ; B_real = hi(A)
        MAS     SIN, B           ; B = B_imag*cos - B_real*sin
        STH     B, BI           ; B_imag = hi(B)
        LD      AI, 15, A        ; A = 1/2*A_imag
        ADD     BI, 15, A        ; A = 1/2 * (A_imag + B_imag)
        STH     A, AI           ; A_imag = 1/2 * new_A_imag
        SUB     BI, 16, A        ; A = 1/2 * (A_imag - B_imag)
        STH     A, BI           ; B_imag = 1/2 * new_B_imag
        LD      BR, 15, A        ; B = 1/2 * B_real
        ADD     AR, 15, A        ; A = 1/2 * (A_real + B_real)
        STH     A, AR           ; A_real = hi(A)
        SUB     BR, 16, A        ; A = 1/2 * (A_real - B_real)
        STH     A, BR           ; B_real = hi(A)

```