0

EQU
Source A   Piece_Rotation
                        0
Source B   0

SIZE
Source   Piece_1_Matrix_R0[0,0]
                        0
Dim. To Vary   0
Size   Current_Piece_Y_Size
                        4

SIZE
Source   Piece_1_Matrix_R0[0,0]
                        0
Dim. To Vary   1
Size   Current_Piece_X_Size
                        1

SUB
Source A   12

Source B   Current_Piece_Y_Size
                        4
Dest   Current_Y_Limit
                        8

LES
Source A   Current_Y
                        5
Source B   Current_Y_Limit
                        8

COP
Source   Background_Matrix[(Current_Y+Current_
Dest
Length

GEQ
Source A   Current_Y
                        5
Source B   Current_Y_Limit
                        8

COP
Source   Piece_1_Matrix_R0[0,0]
Dest   Background_Matrix[Current_Y,Current_X]
Length   3

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y,Current_X]
Length   3

COP
Source   Piece_1_Matrix_R0[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length   3

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length   3

CMP
Expression   Next_Row_Check[0]+Next_Row_Check[1]+Next_Row_Check[2] > 0

GEQ
Source A   Current_Y
                        5
Source B   Current_Y_Limit
                        8

JS
R

Piece_1_Rotation - Ladder Diagram   **Page 2**
Tetris:MainTask:MainProgram   12/06/2025 07:16:44
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Piece_Y_Size),Current_X]
Next_Row_Check[0]
3

R
utine Name   Piece_Stopped

1

EQU
Source A   Piece_Rotation
0
Source B   1

SIZE
Source   Piece_1_Matrix_R1[0,0]
1
Dim. To Vary   0
Size   Current_Piece_Y_Size
4

SIZE
Source   Piece_1_Matrix_R1[0,0]
1
Dim. To Vary   1
Size   Current_Piece_X_Size
1

SUB
Source A   12
Source B   Current_Piece_Y_Size
4
Dest   Current_Y_Limit
8

LES
Source A   Current_Y
5
Source B   Current_Y_Limit
8

COP
Source   Background_Matrix[(Current_Y+Current_
Dest
Length

GEQ
Source A   Current_Y
5
Source B   Current_Y_Limit
8

```
┌────────────────────────┐        ┌──────────────────────────────────────────────────────┐
│ Piece_Y_Size),Current_X│        │ CMP                                                    │
│ Next_Row_Check[0]      ├──────┬─┤ Expression   Background_Matrix[(Current_Y+2),(Current_X+1)] = 0 │──
│                     2  │      │ └──────────────────────────────────────────────────────┘
└────────────────────────┘      │
                                │ ┌──────────────────────────────────────────────────────┐   ┌──────────────────┐
                                │ │ CMP                                                    │   │ MOV              │
                                └─┤ Expression   Background_Matrix[(Current_Y+2),(Current_X+1)] > 0 │───│ Source  Background_C│
                                  └──────────────────────────────────────────────────────┘   │ Dest             │
                                                                                              └──────────────────┘
```

```
┌────────────────────────────────────┐   ┌──────────────────────────────────────────┐   ┌──────────────────────────────────┐
│ olor_Matrix[(Current_Y+2),(Current_X+1)]│   │ COP                                        │   │ FLL                              │
│                                  0 │   │ Source              Piece_1_Matrix_R1[0,0]  │   │ Source                           │
│ Previous_Color                     ├───┤ Dest   Background_Matrix[Current_Y,Current_X│───│ Dest  Background_Color_Matrix[Cu │
│                                  0 │   │ Length                                   2 │   │ Length                           │
└────────────────────────────────────┘   └──────────────────────────────────────────┘   └──────────────────────────────────┘
```

COP
Source   Piece_1_Matrix_R1[0,0]
Dest   Background_Matrix[Current_Y,Current_X]
Length   2

FLL
Source
Dest   Background_Color_Matrix[Current_
Length

Piece_Color
rent_Y,Current_X]
2

COP
Source   Piece_1_Matrix_R1[1,0]
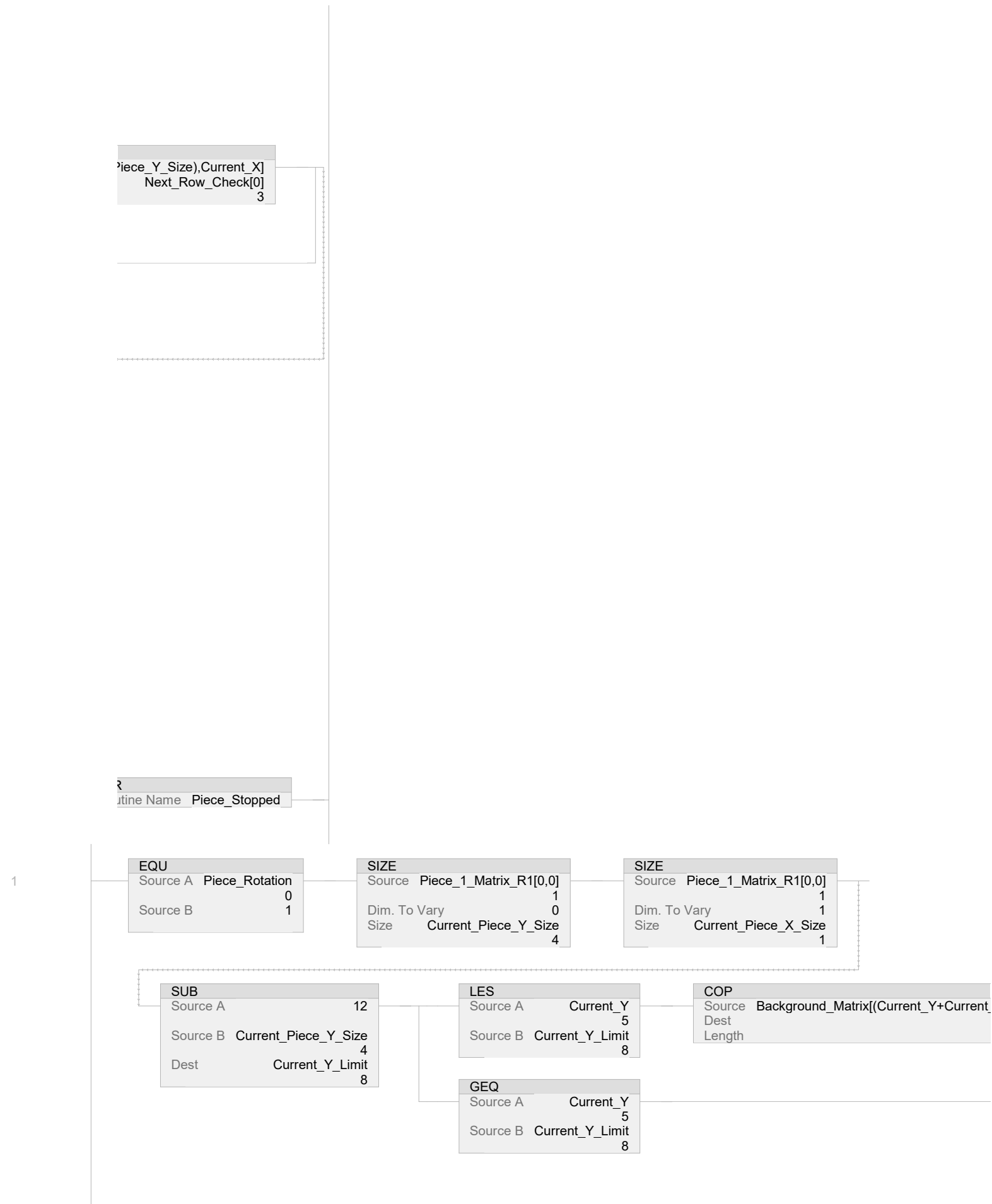Dest   Background_Matrix[(Current_Y+1),Current_X]
Length   2

FLL
Source   Piece_Co
Dest   Background_Color_Matrix[Current_Y+1,Current
Length

Piece_Color
,Current_X]
2

COP
Source   Piece_1_Matrix_R1[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length   2

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length   2

or
X]
2

COP
Source   Piece_1_Matrix_R1[2,0]
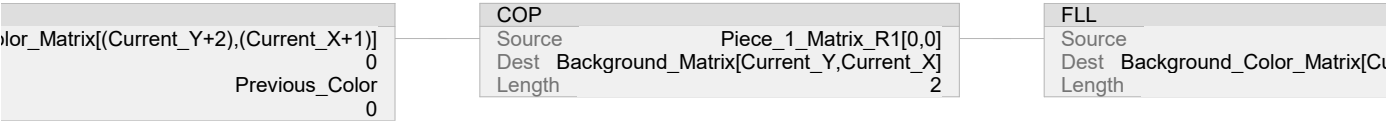Dest   Background_Matrix[(Current_Y+2),Current_X]
Length   2

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y+2,Current_X]
Length   2

```
COP
Source                    Piece_1_Matrix_R1[2,0]
Dest   Background_Matrix[(Current_Y+2),Current_X]
Length                                          2
```
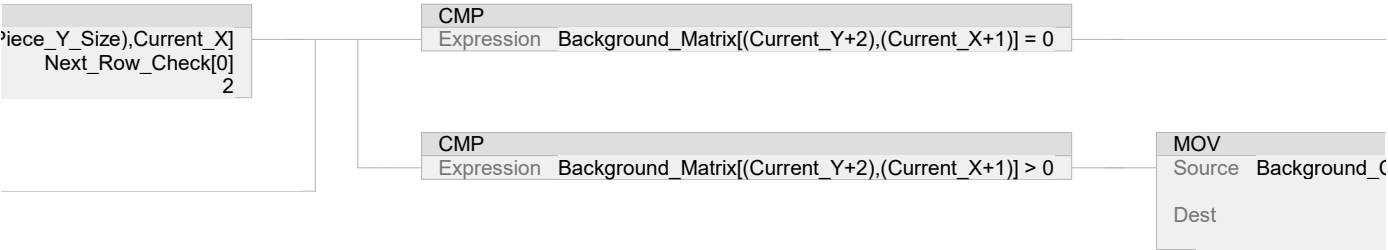
```
FLL
Source                          Piece_Color
Dest   Background_Color_Matrix[Current_Y+2,Current_X]
Length                                     2
```

```
MOV
Source                                 1
Dest   Background_Matrix[(Current_Y+2),(Current_X+1)]
                                       0
```

```
MOV
Source                       Previous_Color
                                      0
Dest   Background_Color_Matrix[(Current_Y+2),(Current_X+1)]
                                      0
```

```
CMP
Expression   Next_Row_Check[0] > 0
```

```
JSR
Routine Name   Piece_Stopped
```

```
CMP
Expression   Background_Matrix[(Current_Y+2),(Current_X+1)] > 0
```

```
GEQ
Source A           Current_Y
                           5
Source B   Current_Y_Limit
                           8
```

2

EQU	
Source A	Piece_Rotation
	0
Source B	2

SIZE	
Source	Piece_1_Matrix_R2[0,0]
	1
Dim. To Vary	0
Size	Current_Piece_Y_Size
	4

SIZE	
Source	Piece_1_Matrix_R2[0,0]
	1
Dim. To Vary	1
Size	Current_Piece_X_Size
	1

SUB	
Source A	12
Source B	Current_Piece_Y_Size
	4
Dest	Current_Y_Limit
	8

LES	
Source A	Current_Y
	5
Source B	Current_Y_Limit
	8

COP	
Source	Background_Matrix[(Current_Y+Current_
Dest	
Length	

GEQ	
Source A	Current_Y
	5
Source B	Current_Y_Limit
	8

```
Piece_Y_Size),Current_X+1]
          Next_Row_Check[0]
                         1
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),Current_X] = 0
```

```
CMP
Expression   Background
```

Piece_1_Rotation - Ladder Diagram   **Page 8**
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```
Matrix[(Current_Y+1),(Current_X+2)] = 0        COP
                                               Source                    Piece_1_Matrix_R2[0,0]
                                               Dest   Background_Matrix[Current_Y,Current_X]
                                               Length                                       3

                                               FLL
                                               Source
                                               Dest   Background_Color_Matrix[Cu
                                               Length
```
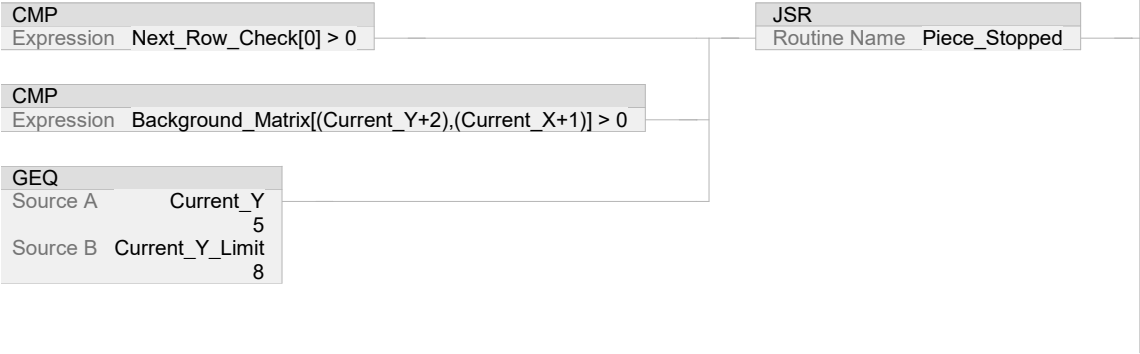
Piece_1_Rotation - Ladder Diagram
Tetris:MainTask:MainProgram
Total number of rungs in routine: 4

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```
                 Piece_Color          COP
rent_Y,Current_X]                     Source                    Piece_1_Matrix_R2[1,0]
                           3          Dest    Background_Matrix[(Current_Y+1),Current_X]
                                      Length                                          3
```

```
FLL
Source                                        Piece_Co
Dest   Background_Color_Matrix[Current_Y+1,Current_
Length
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),Current_X] > 0
```

```
MOV
Source   Background_Color_Matrix[(Current_Y+1),(Current_X)]
                                                           3
Dest                                         Previous_Color
                                                           0
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),(Current_X+2)] = 0
```

```
COP
Source                       Piece_1_Matrix_R2[0,0]
Dest   Background_Matrix[Current_Y,Current_X]
Length                                              3
```

```
FLL
Source                                        Piece_Color
Dest   Background_Color_Matrix[Current_Y,Current_X]
Length                                              3
```

```
COP
Source                       Piece_1_Matrix_R2[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length                                              3
```

```
FLL
Source                                        Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length                                              3
```

```
MOV
Source                                            1

Dest   Background_Matrix[(Current_Y+1),Current_X]
                                                  1
```

```
MOV
Source                             Previous_Color
                                                0
Dest   Background_Color_Matrix[(Current_Y+1),(Current_X)]
                                                        3
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),(Current_X+2)] > 0
```

```
MOV
Source   Background_Color_Matrix[(Current_Y+1),(Current_X+2)]
                                                           0
Dest                                         Previous_Color
```

CMP
Expression   Next_Row_Check[0] > 0

JSR
Routine Name   Piece_Stopped

CMP
Expression   Background_Matrix[(Current_Y+1),Current_X] > 0

CMP
Expression   Background_Matrix[(Current_Y+1),(Current_X+2)] > 0

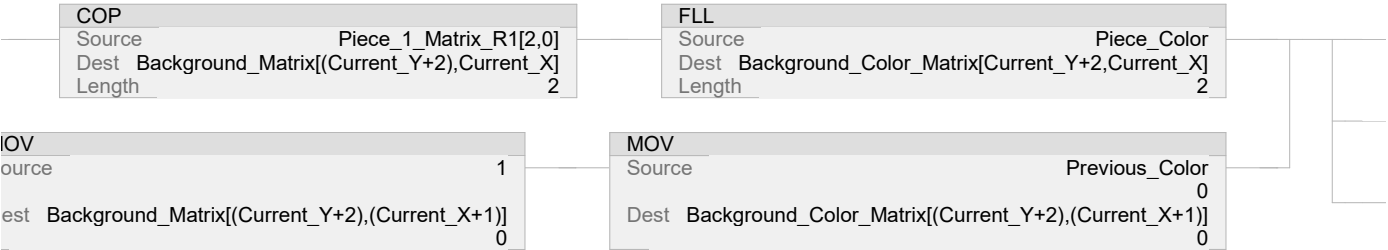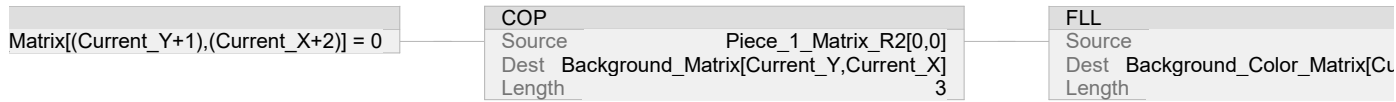**GEQ**
Source A   Current_Y
                              5
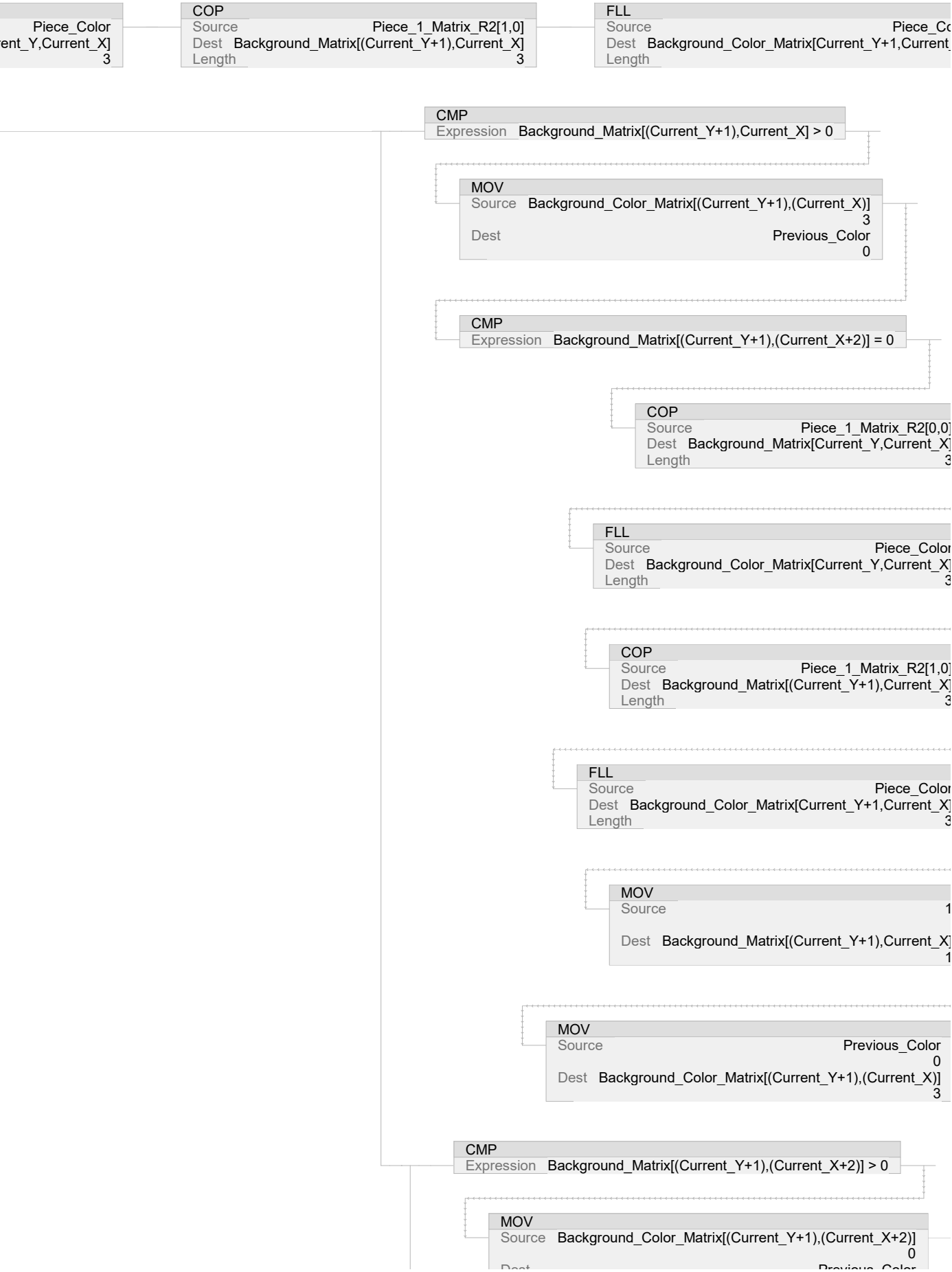Source B   Current_Y_Limit
                              8

Piece_1_Rotation - Ladder Diagram
Tetris:MainTask:MainProgram
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Piece_1_Rotation - Ladder Diagram
Tetris:MainTask:MainProgram
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```
Dest                    Previous_Color
                                     0
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),Current_X] = 0
```

```
COP
Source                  Piece_1_Matrix_R2[0,0]
Dest   Background_Matrix[Current_Y,Current_X]
Length                              3
```

```
FLL
Source                       Piece_Color
Dest   Background_Color_Matrix[Current_Y,Current_X]
Length                              3
```
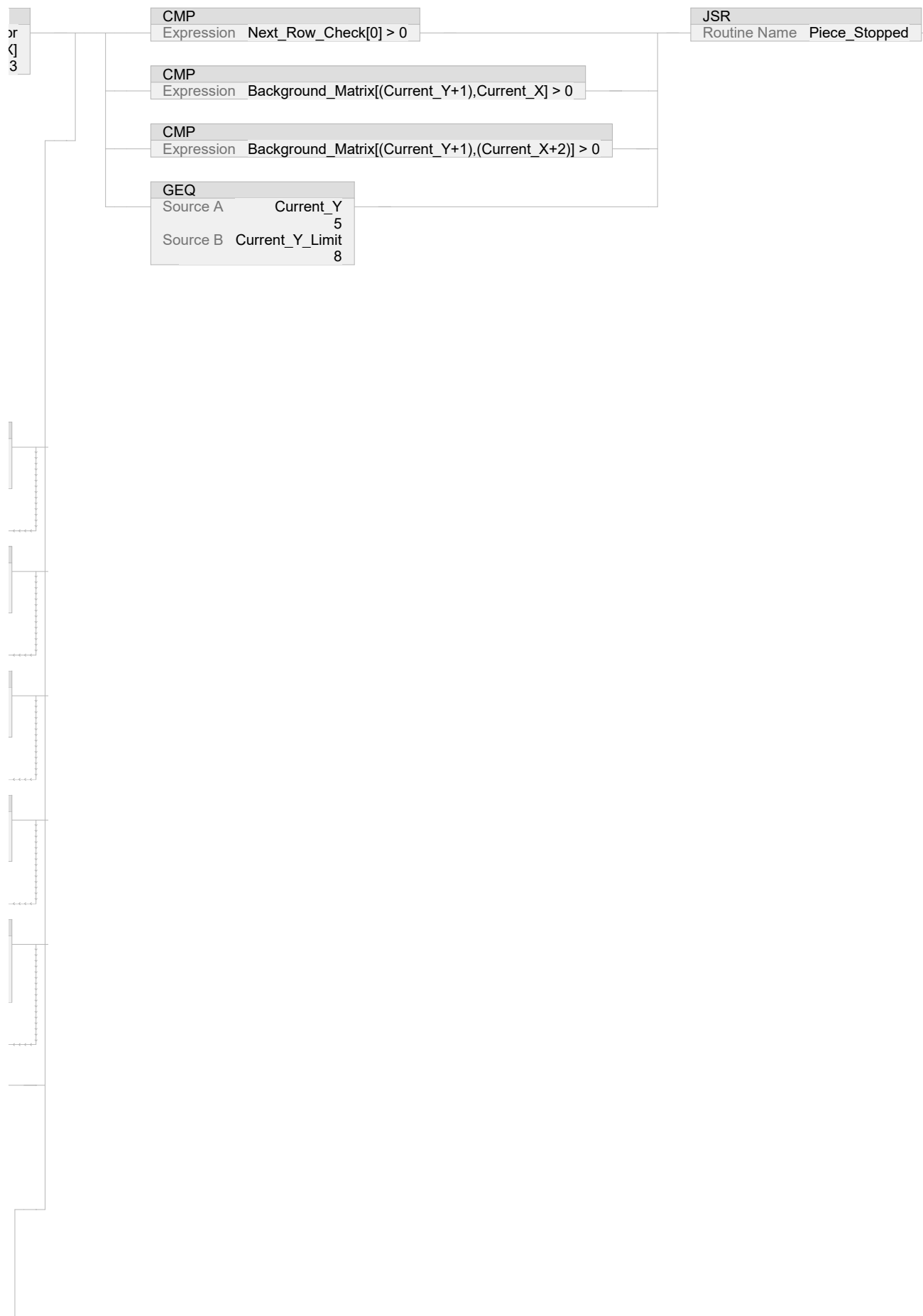
```
COP
Source                  Piece_1_Matrix_R2[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length                              3
```

```
FLL
Source                       Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length                              3
```

```
MOV
Source                              1

Dest   Background_Matrix[(Current_Y+1),(Current_X+2)]
                                     0
```

```
MOV
Source                    Previous_Color
                                     0
Dest   Background_Color_Matrix[(Current_Y+1),(Current_X+2)]
                                     0
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),Current_X] > 0
```

```
MOV
Source   Background_Color_Matrix[(Current_Y+1),(Current_X)]
                                     3
Dest                     Previous_Color
                                     0
```

```
CMP
Expression   Background_Matrix[(Current_Y+1),(Current_X+2)] > 0
```

```
MOV
Source   Background_Color_Matrix[(Current_Y+1),(Current_X+2)]
                                     0
Dest                   Previous_Color_2
                                     0
```

```
COP
Source                  Piece_1_Matrix_R2[0,0]
Dest   Background_Matrix[Current_Y,Current_X]
Length                              3
```

Piece_1_Rotation - Ladder Diagram
Tetris:MainTask:MainProgram
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```
FLL
Source                                    Piece_Color
Dest   Background_Color_Matrix[Current_Y,Current_X]
Length                                              3
```
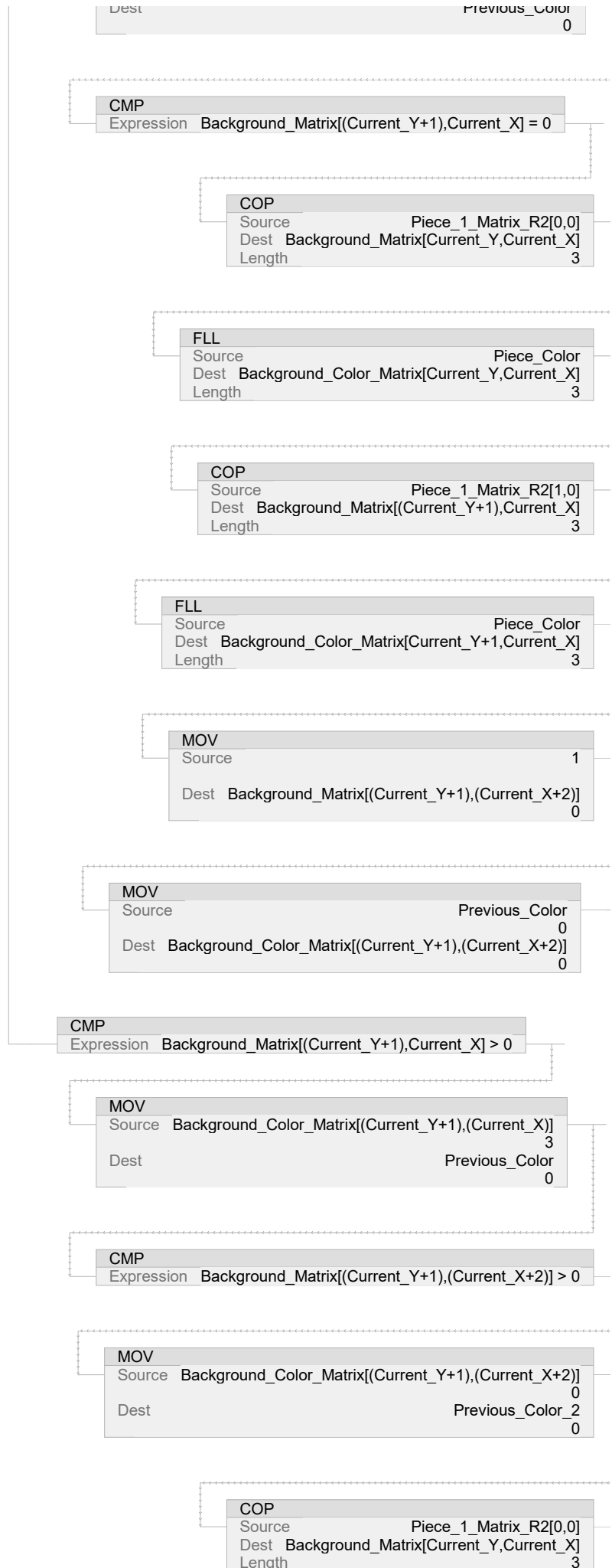
```
COP
Source                              Piece_1_Matrix_R2[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length                                              3
```

```
FLL
Source                                    Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length                                              3
```

```
MOV
Source                                              1

Dest   Background_Matrix[(Current_Y+1),(Current_X+2)]
                                                    0
```

```
MOV
Source                                              1

Dest   Background_Matrix[(Current_Y+1),Current_X]
                                                    1
```

```
MOV
Source                                   Previous_Color
                                                    0
Dest   Background_Color_Matrix[(Current_Y+1),(Current_X)]
                                                    3
```

```
MOV
Source                                  Previous_Color_2
                                                    0
Dest   Background_Color_Matrix[(Current_Y+1),(Current_X+2)]
                                                    0
```

Piece_1_Rotation - Ladder Diagram
Tetris:MainTask:MainProgram
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3

EQU	
Source A	Piece_Rotation
	0
Source B	3

SIZE	
Source	Piece_1_Matrix_R3[0,0]
	0
Dim. To Vary	0
Size	Current_Piece_Y_Size
	4

SIZE	
Source	Piece_1_Matrix_R3[0,0]
	0
Dim. To Vary	1
Size	Current_Piece_X_Size
	1

SUB	
Source A	12
Source B	Current_Piece_Y_Size
	4
Dest	Current_Y_Limit
	8

LES	
Source A	Current_Y
	5
Source B	Current_Y_Limit
	8

COP	
Source	Background_Matrix[(Current_Y+Current_
Dest	
Length	

GEQ	
Source A	Current_Y
	5
Source B	Current_Y_Limit
	8

```
Piece_Y_Size),Current_X]          CMP
Next_Row_Check[0]                 Expression   Background_Matrix[(Current_Y+2),(Current_X)] = 0
              2

                                  CMP                                                          MOV
                                  Expression   Background_Matrix[(Current_Y+2),(Current_X)] > 0   Source   Background_Col

                                                                                               Dest
```

```
_Matrix[(Current_Y+2),(Current_X)]    COP                                               FLL
                             3        Source                  Piece_1_Matrix_R3[0,0]     Source
Previous_Color                        Dest   Background_Matrix[Current_Y,Current_X]      Dest   Background_Color_Matrix[Current
             0                        Length                                      2      Length
```

COP
Source   Piece_1_Matrix_R3[0,0]
Dest   Background_Matrix[Current_Y,Current_X]
Length   2

FLL
Source   Piece_Co
Dest   Background_Color_Matrix[Current_Y,Current_
Length

Piece_Color
Y,Current_X]
2

COP
Source   Piece_1_Matrix_R3[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length   2

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length   2

or
]
2

COP
Source   Piece_1_Matrix_R3[1,0]
Dest   Background_Matrix[(Current_Y+1),Current_X]
Length   2

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y+1,Current_X]
Length   2

COP
Source   Piece_1_Matrix_R3[2,0]
Dest   Background_Matrix[(Current_Y+2),Current_X]
Length   2

FLL
Source   Piece_Color
Dest   Background_Color_Matrix[Current_Y+2,Current_X]
Length   2

MOV
Sourc

Dest

Piece_1_Rotation - Ladder Diagram
Tetris:MainTask:MainProgram
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```
OP
ource                    Piece_1_Matrix_R3[2,0]
est  Background_Matrix[(Current_Y+2),Current_X]
ength                                          2
```

```
FLL
Source                          Piece_Color
Dest   Background_Color_Matrix[Current_Y+2,Current_X]
Length                                      2
```

```
CMP
Express
```

```
                                       1
Background_Matrix[(Current_Y+2),(Current_X)]
                                       1
```

```
MOV
Source                       Previous_Color
                                          0
Dest   Background_Color_Matrix[(Current_Y+2),(Current_X)]
                                          3
```

```
CMP
Express
```

```
GEQ
Source
Source
```

```
on   Next_Row_Check[1] > 0
```

```
JSR
Routine Name   Piece_Stopped
```

```
on   Background_Matrix[(Current_Y+2),(Current_X)] > 0
```

```
                    Current_Y
                            5
              Current_Y_Limit
                            8
```

(End)