**State:FirstFInETFF**

* **UpFineNeedU**

顶部四个小块完成，但是顶层错位，需要一个U归位

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor),

ColorBindOrientation(Front, (getFaceColorFromOrientation(Left))))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U)

* **UpFineNeedUpai**

顶部四个小块完成，但是顶层错位，需要一个U归位

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor),

ColorBindOrientation(Front, (getFaceColorFromOrientation(Right))))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U’)

* **UpFineNeedU2**

顶部四个小块完成，但是顶层错位，需要一个U归位

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor),

ColorBindOrientation(Front, (getFaceColorFromOrientation(Back))))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U2)

* **IncreaseOne**

小块在工作区下方，并且黄色面朝前，且小块正确位置在工作区上方，锁定四号区用来标志下次做减一

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRD),

ColorBindOrientation(Right, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(R’, D’, R, D)LockCubie(U, 4)

* **ReverseIncreaseOne**

已经做过一次加一操作，这次进行减一

CubieBeLocked (0)&CubieBeLocked (4)&!CubieBeLocked (7)

后续Action:

Rotate(D’, R’, D, R)UnLockCubie(0)UnLockCubie(4)

* **DecreaseOne**

小块在工作区下方，并且黄色面朝右，且小块正确位置在工作区上方，锁定四号区和7号区用来标志下次做加一

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRD),

ColorBindOrientation(Front, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(D’, R’, D, R)LockCubie(U, 4)LockCubie(U, 7)

* **ReverseDecreaseOne**

已经做过一次加一操作，这次进行减一

CubieBeLocked (0)&CubieBeLocked (4)&CubieBeLocked (7)

后续Action:

Rotate(R’, D’, R, D)UnLockCubie(0)UnLockCubie(4)UnLockCubie(7)

* **IncreaseTwo**

小块在工作区上方，并且黄色面朝前，且小块正确位置在工作区上方，并且顶层其余三个小块还并没有全部完成，锁定五号区用来标志下次做减二

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Right, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)&

!(Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor)))

后续Action:

Rotate(R’, D’, R, D, R’, D’, R, D)LockCubie(U, 5)

* **ReverseIncreaseTwo**

已经做过一次加二操作，这次进行减二

CubieBeLocked (0)&CubieBeLocked (5)&!CubieBeLocked (7)

后续Action:

Rotate(D’, R’, D, R, D’, R’, D, R)UnLockCubie(0)UnLockCubie(5)

* **DecreaseTwo**

小块在工作区上方，并且黄色面朝右，且小块正确位置在工作区上方，并且顶层其余三个小块还并没有全部完成，锁定五号区和7号区用来标志下次做加二

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Front, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)&

!(Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor)))

后续Action:

Rotate(D’, R’, D, R)LockCubie(U, 5)LockCubie(U, 7)

* **ReverseDecreaseTwo**

已经做过一次加二操作，这次进行减二

CubieBeLocked (0)&CubieBeLocked (5)&CubieBeLocked (7)

后续Action:

Rotate(R’, D’, R, D)UnLockCubie(0)UnLockCubie(5)UnLockCubie(7)

* **IncreaseThree**

小块在工作区下方，并且黄色面朝下，且小块正确位置在工作区上方，锁定六号区用来标志下次做减三

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRD),

ColorBindOrientation(Down, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(R’, D’, R, D, R’, D’, R, D)LockCubie(U, 6)

* **ReverseIncreaseThree**

已经做过一次加三操作，这次进行减三

CubieBeLocked (0)&CubieBeLocked (6)&!CubieBeLocked (7)

后续Action:

Rotate(D’, R’, D, R, D’, R’, D, R)UnLockCubie(0)UnLockCubie(6)

* **DoUForIOrD**

小块在工作区下方，并且黄色面朝前，小块需要一次U操作来移动到在工作区上方

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRD)) &

!CubieBeLocked(4)&!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U)

* **DoUpaiForIOrD**

小块在工作区下方，并且黄色面朝前，但要去的位置并不在工作区上方，该位置需要一次U’操作来移动到在工作区上方

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FRD)) &

!CubieBeLocked(4)&!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U’)

* **DoU2ForIOrD**

小块在工作区下方，并且黄色面朝前，但要去的位置并不在工作区上方，该位置需要一次U2操作来移动到在工作区上方

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FRD))&

!CubieBeLocked(4)&!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U2)

* **FindBRUUnHome**

做完一次加或者减后，需要转动上层，假如找到BRU位置还没完成

!Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor))&

(CubieBeLocked(4)|CubieBeLocked(5)|CubieBeLocked(6))&!CubieBeLocked (0)

后续Action:

Rotate(U)LockCubie(U, 0)

* **FindFLUUnHome**

做完一次加或者减后，需要转动上层，假如找到FLU位置还没完成

!Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor))&

(CubieBeLocked(4)|CubieBeLocked(5)|CubieBeLocked(6))&!CubieBeLocked (0)

后续Action:

Rotate(U’)LockCubie(U, 0)

* **FindBLUUnHome**

做完一次加或者减后，需要转动上层，假如找到BLU位置还没完成

!Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

(CubieBeLocked(4)|CubieBeLocked(5)|CubieBeLocked(6))&!CubieBeLocked (0)

后续Action:

Rotate(U2)LockCubie(U, 0)

* **FindNoCubieUnHome**

做完一次加或者减后，需要转动上层，假如找到BLU位置还没完成

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor))&

(CubieBeLocked(4)|CubieBeLocked(5)|CubieBeLocked(6))&!CubieBeLocked (0)

后续Action:

Rotate(U)LockCubie(U, 0)

* FRUFine

工作区顶部是完成的小块

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Up, UpColor))&!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(U)

* PositionFRUWrongAndFRDRight

工作区底部是FRD小块，顶部是放错位置的小块，则做一个+1

!Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU)) &

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), DownColor)), FRD)) &

!CubieBeLocked(4)&!CubieBeLocked (5)&!CubieBeLocked (6)

后续Action:

Rotate(R’, D’, R, D)LockCubie(U, 4)

* **WorkSpaceNeedRotateFaceFront**

小块在工作区上方，并且黄色面朝前，且小块正确位置在工作区上方，并且顶层其余三个小块全部完成

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Front, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor))

后续Action:

Rotate(U’, R’, D’, R, D, U, D’, R’, D, R, D’, R’, D, R, U’, R’, D’, R, D, U)

處理法為：先換下隔壁的一個角，然後將原來工作區上方的角塊做兩次「加一」或兩次「減一」來正位，然後再換回原來的角。

* **WorkSpaceNeedRotateFaceRight**

小块在工作区上方，并且黄色面朝右，且小块正确位置在工作区上方，并且顶层其余三个小块全部完成

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), FRU),

ColorBindOrientation(Right, UpColor)) &!CubieBeLocked(4)&

!CubieBeLocked (5)&!CubieBeLocked (6)&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Front,FU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), FLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Left, LU)), UpColor)), BLU),

ColorBindOrientation(Up, UpColor))&

Check(At((getCombinationFromColor((getFaceColorFromOrientation(Back,BU)),( getFaceColorFromOrientation(Right, RU)), UpColor)), BRU),

ColorBindOrientation(Up, UpColor))

后续Action:

Rotate(U’, D’, R’, D, R, U, R’, D’, R, D, R’, D’, R, D, U’, D’, R’, D, R, U)

處理法為：先換下隔壁的一個角，然後將原來工作區上方的角塊做兩次「加一」或兩次「減一」來正位，然後再換回原來的角。