

***** XXX
 FROM
 QB011.CDE
 QC021.CAE
 QC051.ABE
 QC071.ECE
 QE021.GHE
 C1-***** CA

***** XXX
 FROM
 QE031.EGE
 QE041.AGE
 QE051.GHE
 QJ001.CEE
 QJ031.GIE
 E1-***** EA

***** XXX
 FROM
 QJ504.JGE
 QK011.CHE
 QK021.JIE
 QP021.EIE
 QQ001.NHE
 G1-***** GA

***** XXX
 FROM
 QQ021.CHE
 QQ031.GEE
 QQ101.CFE
 QQ171.NBE
 J1-***** JA

***** XXX
 FROM
 QQ181.JIE
 QQ211.LHE
 QS081.NBE
 L1-***** LA

***** XXX
 FROM
 QT041.EGE
 QV051.QIE
 N1-***** NA

EXCEP (MICROORDER)
 SEE NOTE ON QT011

000000 0200
 A O+T
 A +A.B.D
 D Q23+R
 L R+E3+S.T
 C 1+IC(21-22)
 C RESET
 R E(02-07)+ROA
 R EXCEP
 C3-***** CC
 1 CYCLE I FETCH
 RR FORMAT IC
 READ R2 TO ST
 R1 TO A. B. D
 Q TO R ADJ IC

000001 0201
 A O+T
 A +A.B.D
 D Q45+R
 L R+E3+S.T
 C 2+IC(21-22)
 C RESET
 R E(02-07)+ROA
 R EXCEP
 G3-***** GC
 1 CYCLE I FETCH
 RR FORMAT IC
 READ R2 TO ST
 R1 TO A. B. D
 Q TO R ADJ IC

000010 0202
 A O+T
 A +A.B.D
 D Q67+R
 L R+E3+S.T
 C 3+IC(21-22)
 C RESET
 R E(02-07)+ROA
 R EXCEP
 L3-***** LC
 1 CYCLE I FETCH
 RR FORMAT IC
 READ R2 TO ST
 R1 TO A. B. D
 Q TO R ADJ IC

000011 0203
 A O+T
 A +A.B.D
 D Q01+R
 L R+E3+S.T
 C 0+IC(21-22)
 C RESET
 R E(02-07)+ROA
 R EXCEP
 Q3-***** QC
 1 CYCLE I FETCH
 RR FORMAT IC
 READ R2 TO ST
 R1 TO A. B. D
 Q TO R ADJ IC

***** XXX
 GO TO
 QT051.AAE
 C9-***** CI

QT005
 (100000)
 (100001)
 (100010)
 (100011)
 (100100)
 (100101)
 (100110)
 (100111)

QT011
 (010000)
 (010001)
 (010010)
 (010011)
 (010100)
 (010101)
 (010110)
 (010111)
 (011000)
 (011001)
 (011010)
 (011011)
 (011100)
 (011101)
 (011110)
 (011111)

QT021
 (110000)
 (110001)
 (110010)
 (110011)
 (110100)
 (110101)
 (110110)
 (110111)

QT001.CCB
(100000)
(100001)
(100010)
(100011)
(100100)
(100101)
(100110)
(100111)

XXXXXX XXX
FROM
QT041.NFE
C1-XXXXXX-CA

100000 0220
A Q3+T
A →A.B.D
B 1+0
B →F
D Q45→R
L RG#E2→S.T
S MS-REQ#D-3
C RESET
C 2→IC(21-22)
R E(02-07)→ROA
R EXCEP
A3-XXXXXX-AC

IC 00
B2 NOT ZERO
READ R1 TO S.T
B2+D2 TO D REG
Q TO R ADJ IC
STORAGE REQ
1 TO F FOR
90 EMULATOR

100001 0221
A Q5+T
A →A.B.D
B 1+0
B →F
D Q67→R
L RG#E2→S.T
C RESET
C 3→IC(21-22)
R E(02-07)→ROA
R EXCEP
E3-XXXXXX-EC

IC 01
B2 NOT ZERO
READ R1 TO S.T
B2+D2 TO D REG
Q TO R ADJ IC

100010 0222
A Q7+T
A →A.B.D
B 1+0
B →F
L RG#E2→S.T
C RESET
C 0→IC(21-22)
R E(02-07)→ROA
R EXCEP
J3-XXXXXX-JC

100011 0223
A Q1+T
A →A.B.D
B 1+0
B →F
D Q23→R
L RG#E2→S.T
S MS-REQ#D-3
C RESET
C 1→IC(21-22)
R E(02-07)→ROA
R EXCEP
N3-XXXXXX-NC

IC 11
B2 NOT ZERO
READ R1 TO S.T
B2+D2 TO D REG
Q TO R ADJ IC
STORAGE REQ
1 TO F FOR
90 EMULATOR

100100 0224
A Q3+0
A →A.B.D
B 1+0
B →F
D Q45→R
L RG#E2→S.T
S MS-REQ#D-3
C RESET
C 2→IC(21-22)
R E(02-07)→ROA
R EXCEP
C6-XXXXXX-CF

IC 00
B2 ZERO
READ R1 TO S.T
D2 TO D REG
Q TO R ADJ IC
STORAGE REQ

100101 0225
A Q5+0
A →A.B.D
B 1+0
B →F
D Q67→R
L RG#E2→S.T
C RESET
C 3→IC(21-22)
R E(02-07)→ROA
R EXCEP
G6-XXXXXX-GF

IC 01
B2 ZERO
READ R1 TO S.T
D2 TO D REG
Q TO R ADJ IC

100110 0226
A Q7+0
A →A.B.D
B 1+0
B →F
L RG#E2→S.T
C RESET
C 0→IC(21-22)
R E(02-07)→ROA
R EXCEP
L6-XXXXXX-LF

100111 0227
A Q1+0
A →A.B.D
B 1+0
B →F
D Q23→R
L RG#E2→S.T
S MS-REQ#D-3
C RESET
C 1→IC(21-22)
R E(02-07)→ROA
R EXCEP
Q6-XXXXXX-QF

IC 11
B2 ZERO
READ R1 TO S.T
D2 TO D REG
ADJ IC
1 TO F FOR
90 EMULATOR

10E031
(000110)
(000111)

QJ001
(001000)
(001010)

QJ011
(001100)
(001110)

QJ021
(001101)
(001111)

QJ031
(000000)
(000010)

QJ041
(000100)
(000101)

QJ504
(001001)
(001011)

QK001
(010001)
(010010)
(010100)
(010101)
(010110)
(010111)

QK011
(010000)
(011000)

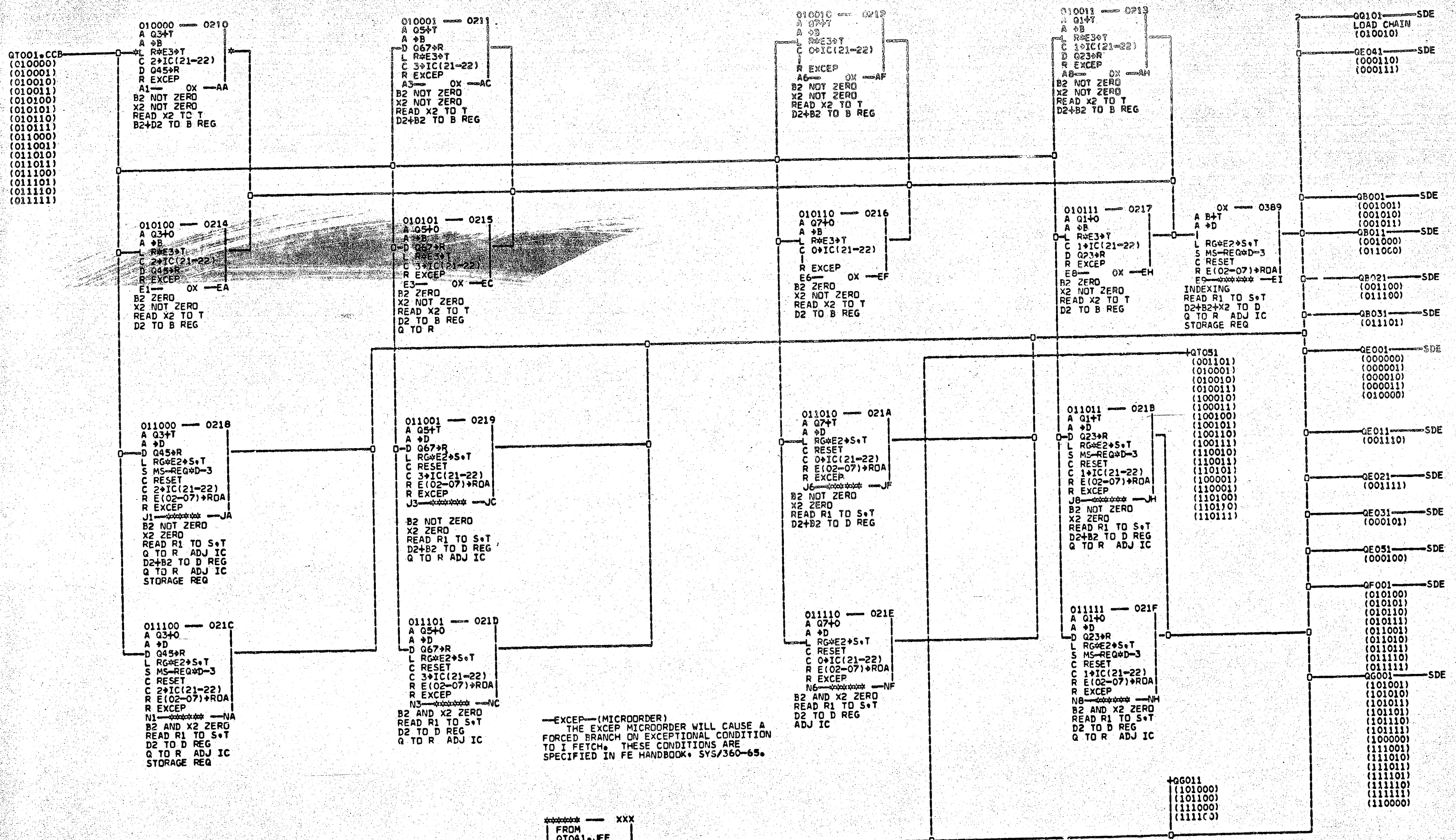
QK021
(010011)
(011100)
(011101)
(011110)
(011111)

QK021
(011010)SIDP
(011011)SPCI
2
2
QQ041
(100000)SPSB
(100001)LPSB

QQ171
(000011)

XXXXXX XXX
GO TO
QT061.CBB
Q8-XXXXXX-QI

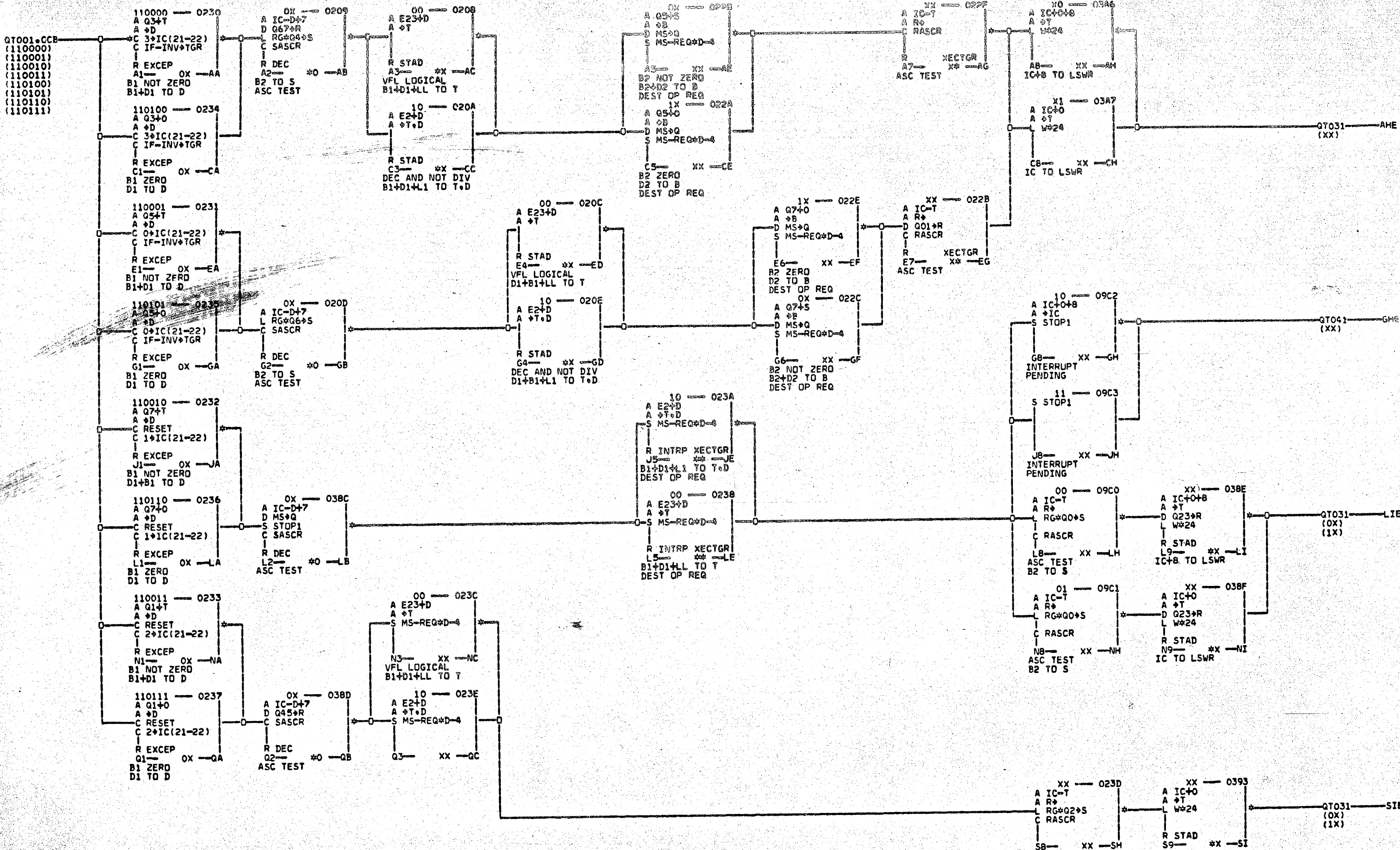
EXCEP (MICROORDER)
SEE NOTE ON QT011



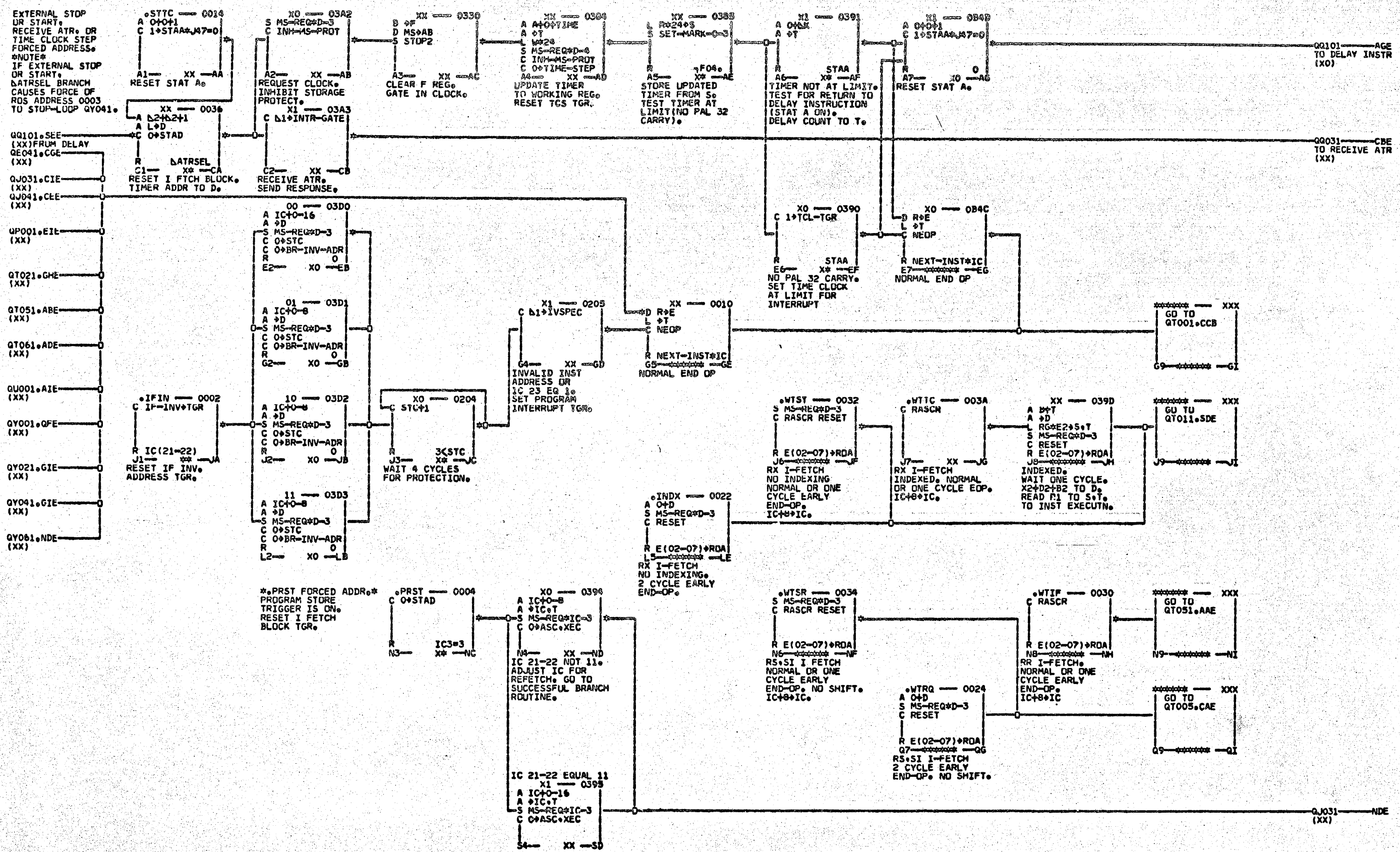
—EXCEP—(MICROORDER)
 THE EXCEP MICROORDER WILL CAUSE A FORCED BRANCH ON EXCEPTIONAL CONDITION TO I FETCH. THESE CONDITIONS ARE SPECIFIED IN FE HANDBOOK, SYS/360-65.

FROM
 QT041.JFE
 S4-XXXX-SD

14-10



12048



EXTERNAL STOP
OR START.
RECEIVE ATR. OR
TIME CLOCK STEP
FORCED ADDRESS.
NOTE
IF EXTERNAL STOP
OR START,
DATA SEL BRANCH
CAUSES FORCE OF
RDS ADDRESS 0003
TO STOP-LDDP QY041.

Q0101 SEE
(XX) FROM DELAY
Q041 CGE
(XX)
Q031 CIE
(XX)
Q041 CLE
(XX)

Q001 EIT
(XX)

Q021 GHE
(XX)

Q051 ABE
(XX)

Q061 ADE
(XX)

Q0001 AIE
(XX)

Q001 OFE
(XX)

Q021 GIE
(XX)

Q041 GIE
(XX)

Q061 NDE
(XX)

Q0101 AGE
TO DELAY INSTR
(XX)

Q0031 CBE
TO RECEIVE ATR
(XX)

GO TO
Q001.CCB

GO TO
Q011.SDE

GO TO
Q051.AAE

GO TO
Q005.CAE

Q031 NDE
(XX)

Q041

**** XXX
 FROM
 QG001 JHE
 QT001 CCE
 QTO41 NHE
 A1 ***** AA

000001 --- 0181
 C 1+INV-OP-TGR
 R
 A2 --- XX --- AB
 DP CODE 00000001

000010 --- 0182
 C 1+INV-OP-TGR
 R
 E2 --- XX --- EB
 DP CODE 00000010

000011 --- 0183
 C 1+INV-OP-TGR
 R
 G2 --- XX --- GB
 DP CODE 00000011

001011 --- 018B
 C 1+INV-OP-TGR
 R
 J2 --- XX --- JB
 DP CODE 00001011

001100 --- 018C
 C 1+INV-OP-TGR
 R
 L2 --- XX --- LB
 DP CODE 00001100

001101 --- 018D
 C 1+INV-OP-TGR
 R
 N2 --- XX --- NB
 DP CODE 00001101

001110 --- 018E
 C 1+INV-OP-TGR
 R
 Q2 --- XX --- QB
 DP CODE 00001110

001111 --- 018F
 C 1+INV-OP-TGR
 R
 A4 --- XX --- AD
 DP CODE 00001111

100101 --- 01A5
 C 1+INV-OP-TGR
 R
 C4 --- XX --- CD
 DP CODE 00100101

100110 --- 01A6
 C 1+INV-OP-TGR
 R
 E4 --- XX --- ED
 DP CODE 00100110

100111 --- 01A7
 C 1+INV-OP-TGR
 R
 O --- O
 G4 --- XX --- GD
 DP CODE 00100111

110101 --- 01B5
 C 1+INV-OP-TGR
 R
 J4 --- XX --- JD
 DP CODE 00110101

110110 --- 01B6
 C 1+INV-OP-TGR
 R
 L4 --- XX --- LD
 DP CODE 00110110

110111 --- 01B7
 C 1+INV-OP-TGR
 R
 N4 --- XX --- ND
 DP CODE 00110111

001101 --- 010D
 C 1+INV-OP-TGR
 R
 Q4 --- XX --- QD
 DP CODE 01001101

010001 --- 0111
 C 1+INV-OP-TGR
 R
 A6 --- XX --- AF
 DP CODE 01010001

010010 --- 0112
 C 1+INV-OP-TGR
 R
 C6 --- XX --- CF
 DP CODE 01010010

010011 --- 0113
 C 1+INV-OP-TGR
 R
 E6 --- XX --- EF
 DP CODE 01010011

100001 --- 0121
 C 1+INV-OP-TGR
 R
 G6 --- XX --- GF
 DP CODE 01100001

100010 --- 0122
 C 1+INV-OP-TGR
 R
 J6 --- XX --- JF
 DP CODE 01100010

100011 --- 0123
 C 1+INV-OP-TGR
 R
 L6 --- XX --- LF
 DP CODE 01100011

100100 --- 0124
 C 1+INV-OP-TGR
 R
 N6 --- XX --- NF
 DP CODE 01100100

100101 --- 0125
 C 1+INV-OP-TGR
 R
 Q6 --- XX --- QF
 DP CODE 01100101

100110 --- 0126
 C 1+INV-OP-TGR
 R
 A8 --- XX --- AH
 DP CODE 01100110

100111 --- 0127
 C 1+INV-OP-TGR
 R
 C8 --- XX --- CH
 DP CODE 01100111

110001 --- 0131
 C 1+INV-OP-TGR
 R
 E8 --- XX --- EH
 DP CODE 01110001

110010 --- 0132
 C 1+INV-OP-TGR
 R
 G8 --- XX --- GH
 DP CODE 01110010

110011 --- 0133
 C 1+INV-OP-TGR
 R
 J8 --- XX --- JH
 DP CODE 01110011

110100 --- 0134
 C 1+INV-OP-TGR
 R
 L8 --- XX --- LH
 DP CODE 01110100

110101 --- 0135
 C 1+INV-OP-TGR
 R
 N8 --- XX --- NH
 DP CODE 01110101

110110 --- 0136
 C 1+INV-OP-TGR
 R
 Q8 --- XX --- QH
 DP CODE 01110110

QC061 --- AAE
 (101001)
 (101010)
 (101011)
 (101110)
 (101111)
 (111001)
 (111010)
 (111011)
 (111110)
 (111111)

QT041 --- ABE
 (XX)

9020 OPS

2-QQ001 (000001)SCDN
 2-QQ021 (001101)SATR

2-QQ101 (001011)DLY
 (001100)LI
 (001110)IATR

2-QQ201 (000010)CSS
 2-QQ291 (000011)CVWL
 2-QQ401 (001111)RPSB

QB001 --- AAE
 (010101)
 (011001)
 (011010)
 (011011)
 (011110)
 (011111)

QB011 --- AAE
 (010000)
 (010001)
 (010010)
 (010011)
 (010011)

QB021 --- AAE
 (011100)
 (011101)

QB031 --- AAE
 (011101)

QC001 --- AAE
 (100000)
 (100001)
 (100010)
 (100011)
 (100100)
 (100101)
 (100110)
 (100111)
 (110000)
 (110001)
 (110010)
 (110011)
 (110100)
 (110101)
 (111000)

QC031 --- AAE
 (101100)
 (111100)

QC041 --- AAE
 (101101)
 (111101)

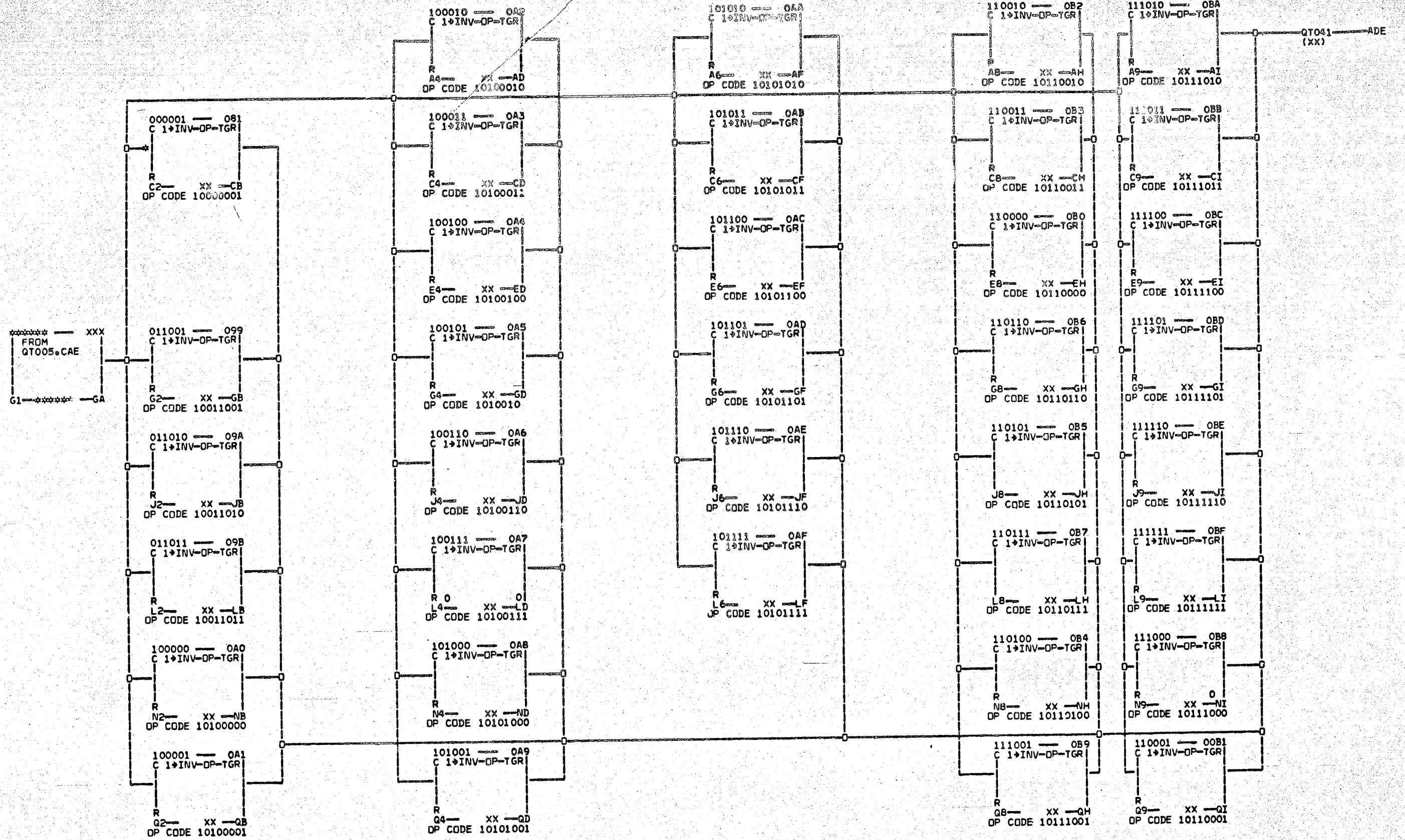
QJ031 --- AAE
 (001000)
 (001001)
 (001010)
 (001011)

QP021 --- AAE
 (010100)
 (010110)
 (010111)

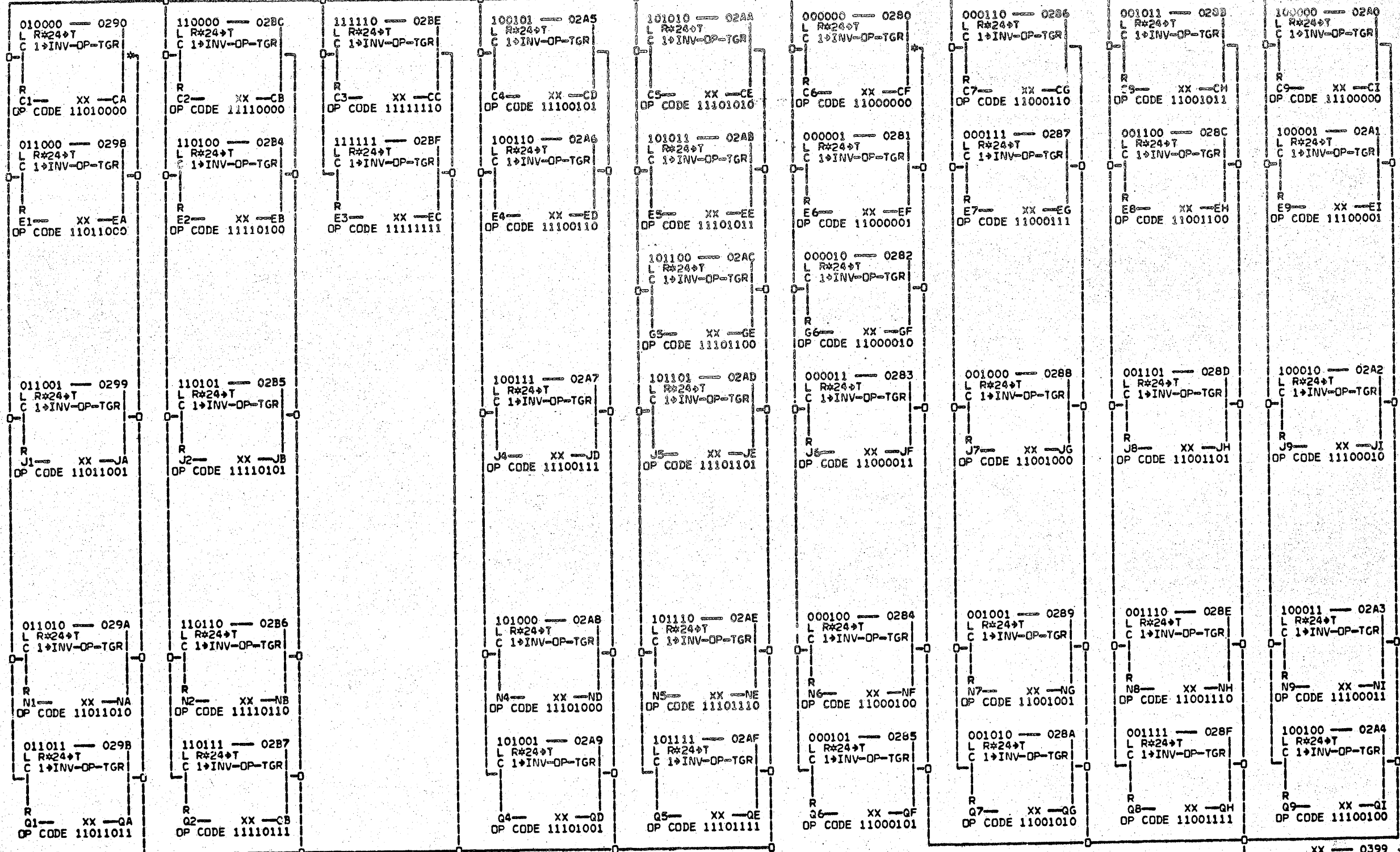
QE031 --- AAE
 (000101)

QE041 --- AAE
 (000110)
 (000111)

Q7011 SDE
 (001101)
 (010001)
 (010010)
 (010011)
 (100010)
 (100011)
 (100100)
 (100101)
 (100110)
 (100111)
 (110010)
 (110011)
 (110101)
 (110001)
 (110001)
 (110100)
 (110110)
 (110111)



***** XXX
 FROM QT031.EAE
 A1-----AA



XX 0399
 A 0+
 A +IC
 S9 XX -SI
 QY041-SIE
 (XX)

DT071