Contents

Chapter 1

1X

1.1 Summary

```
# 1m = 11p bal either: AAK, (43)(42) or good 5m(332)
# open 11p 6+m or concentrated 54 quite often
1C*: (11)12+, 2+C
1D : (11)12+, 4+D
# open 1M 11p quite often
1M : 11+, 5+M
1N : 14-16, bal, could be 14-15, 5M(332)
2C*: (19 w/ 5m)20-21, bal; or 22+, any; or 16+ 4-L
2D*: 3-7(V)/9(NV), some 6+M
# 2M/V
2M : 8-10, 6+M
# 2M/NV
2H*: 3-9, 44+M
2S : (0)3-8, 5+S  # usually 5
2N*: 3-8, 55+m; could be wilder and 54+m NV/V, 64+m 3th seat
3X : nat pre
3N*: gambaling
4X : nat pre
4N : strong mms, slam interest
5m : nat pre
5M : nat, slam interest
```

1.2   1C

```
1C -
1D*: 4+H
1H*: 4+S
1S*: inv+, 4+D; or 5+D
   - 1N : min, 2-D or 4333 or some 4332
   - 2C : min unbal
   - 2D : 3+D
1N : 6-10
2C*: GF, 4+C  # inv if PH
   - 2D*: 12-14
      - 2H*: nat or ask
   - 2M : 15+, nat, usually 3+M
   - 2N : 18-19
   - 3C : 15-17, 6+C
   - 3X*: spl
2D*: inv, 4+C  # constr if PH
   - 2M : 15+, nat, usually 3+M
   - 2N : nat min
   - 3C : nat min
   - 3X*: spl
   - 3N : 13-14, nat
2H*: 5-9, 5S4H(+)
2S : 3-7, 6+S  # not interested in 18-19 bal, 2-M
   - 2N*: feature (short) ask, inv+
2N*: 7-9, 5+C  # weaker if PH
3C*: 0-6, 5+C  # weaker if PH
3X : 7+X, about 6-6.5 tricks
```

1.2.1   Gazzilli after 1D*/1H*

```
1C - 1D*;
1H*: 4+S  # highest priority unless 4+ fit
1S*: 16+; or (13)14-15, 6+C, GT  # may be 16-17, 2425 [3H]
   - 1N*: 8+
      - 2C*: 6+C, GT
         - P  : s/o
         - 2N : re-inv
         - 3C : re-inv
      - 2D*: GF, catchall
      - 2H : 6+C, GT; and 3H  # same as 2D but w/ 3H
      - 2S*: 3H, GF
      - 2N+: nat GF
      - 3H : 4H, 16-17
      - 3S : 6C5S+, 16+
```

```
    - 2C : min
    - 2D : min
    - 2H : min
    # bids below applies to 2X above
        - 2H : 3-4H, 16-17(18)
        - 2S*: art GF
        - 2N+: nat GF   # 3H = 3-card
    - 2S*: min, 5+S  # implies 6+H
    - 2N+: C fit ST
    - 3H : solid H ST
1N : min bal
    - 2wPCB
2C : min unbal
    - 2D*: GF
    - 2H : NF
    - 2S*: GF, (3)4+C
    - 2N : inv
    - 3C : inv
    - 3D*: spl
    - 3H : inv, 6+H
    - 3S*: spl
2D*: 14-16, 6+C, 4+D
2H : min, 4+H
2S*: inv+, 4+H, spl S
2N : 18-19, bal
3C : (15)16-17, 6+C, GT
3D*: inv+, 4+H, spl D
3H*: 18-19 bal, 4+H
3S*: 20-22, 4+H, some spl
    - 3N*: ask
3N*: GF, 4+H, S void
4C*: GF, 4+H, 6+C
4D*: GF, 4+H, D void
4H*: 4+H, 20-21 bal  # or good 18-19 bal
```

```
1C - 1H*;
1S*: 16+; or (13)14-15, 6+C, GT  # may be 16-17, 4225 [3S]
    - 1N*: 8+
        - 2C*: 6+C, GT
             - P  : s/o
            - 2N : re-inv
            - 3C : re-inv
        - 2D*: GF, catchall
        - 2H*: 3S, GF
        - 2S : 6+C, GT; and 3S  # same as 2D but w/ 3S
        - 2N+: nat GF
        - 3H : 6C5H+, 16+
        - 3S : 4S, 16-17
```

```
    - 2C : min
    - 2D : min
    - 2H : min
    - 2S : min
    # bids below applies to 2X above
        - 2H*: art GF
        - 2S : 3-4S, 16-17(18)
        - 2N+: nat GF  # 3S = 3-card
    - 2N+: C fit ST
    - 3S : solid S ST
1N : min bal
2C : min unbal
    - 2D*: GF
    - 2M : NF
    - 2N : inv
    - 3C : inv
    - 3D*: spl
    - 3H*: spl
    - 3S : inv, 6+S
2D*: 14-16, 6+C, 4+D
2H*: 14-16, 6+C, 4+H
2S*: min, 4+S
2N : 18-19, bal
3C : (15)16-17, 6+C, GT
3D*: inv+, 4+S, spl D
3H*: inv+, 4+S, spl H
3S*: 4+S, 18-19 bal
3N*: 20-22, 4+S, some spl
    - 4C*: ask
4C*: GF, 4+S, 6+C
4D*: GF, 4+S, D void
4H*: GF, 4+S, H void
4S*: 4+S, 20-21 bal  # or good 18-19 bal
```

1.2.2 XYZW

```
1C - 1D*; 1H*- 1S*: see utils/XYZW/PLOB
1C - 1DH; 1N - ...: see utils/XYZW/2wPCB
1C - 1S ; 1N - ...: no 2-way
```

1.3 1D

```
1D -  # 11-21, 4+D unbal; 12-14/18-19, 4+D bal
1M : 6+, 4+M
1N : 6-10, nat
2C : inv, 6+C [3C]; or GF, 5+C
   - 2D*: 12-14  # may be 12-14 with good C support; ready to play 3N
        - 2H*: GF, ask
             - 2S*: 5D unbal
             - 2N : min bal
             - 3C : 3+C unbal
             - 3D : 6+D unbal
             - 3N : max bal
        - 2S+: nat GF
        - 3C : nat inv
   - 2M*: 15+ unbal, may be stopper
   - 2N : 18-19 bal
   - 3C : GF, 14+, 4+C
   - 3D : solid D ST
   - 3M*: GF, 4+C, spl
2D*: some 6+M pre  # not interested in 18-19 bal, 2-M
   # resp. similar to 2D/V (multi) except 3D
   - P  : s/o
   - 2H*: P/C
   - 2S*: P/C, may be interested in H
   - 2N*: ask  #
        - 3C*: min
             - 3D*: ask
             - 3H*: P/C
        - 3D*: max, H
        - 3H*: max, S
   - 3C : nat, NF
   - 3D : nat, inv  # then 3M = max and show suit
2H*: GF, 4+D  # inv if PH
   - 2S*: 15+, catchall  # GF if partner inv
   - 2N : 12-14 bal
   - 3C : nat
   - 3D : min unbal
   - 3M*: spl
   - 3N : 18-19 bal
2S*: inv, usually 4+D, not prefer to declare  # constr if PH
   - 2N : nat min
   - 3C : nat, F1
   - 3D : nat min
   - 3M*: nat, could be stopper
   - 3N : nat
2N : nat inv
```

```
3C*: 8-10, 4+D  # weaker if PH
3D*: (0)3-7, 4+D  # weaker if PH
3M : 7+M, about 6-6.5 tricks, NF
```

1.3.1 XYZW

```
1D - 1H; 1S - 2C*: see utils/XYZW/PLOB
1D - 1M; 1N - ...: see utils/XYZW/2wPCB
```

1.4   1H

```
1H -  # 12-21, 5+H
1S*: F1; 4-6, 3+H [2H]; inv, 3H [3H/4H]; constr. 5+H [4H]; 5-11, 2-H;
    12-14, 4-S bal [3N]
1N*: 5+S, F1
2C : GF, nat
2D : GF, nat
2H : 7-9, 3+S
2S*: 12+, 4+H
2N*: 8-9/12-13, 4+H, C/S spl
   - 3C*: ask
        - 3D*: C spl
        - 3H*: S spl, 8-9
        - 3S+: S spl, 12-13, cue-bid
3C*: 10-11, 4+H bal; 10-11, 4+H spl  # the latter is GF
   - 3D*: ask, ST
        - 3H*: 10-11, 4+S bal
        - 3S+: spl  # 3N* replaces the highest spl, i.e. D
   - 3H : light opening; or min, 5H(332)
3D*: 8-9/12-13, D spl
3H : pre
3S*: 10-12, S void
3N*: 12-14, 3H, bal w/o 6m, CoG
4X*: 10-12, X void
4H : pre
```

1.4.1   Gazzilli after 1S*/1N*

```
1H - 1S*: F1
1N*: 16+, any; or 12-15, 6+H
2m : 12-15, nat
2H*: 12-15, 4+S
2S*: 14-16, 6+H, 4+S
2N*: 14-16, 6+H, 4+m
   - 3C*: ask
        - 3D : 4+D
        - 3H*: 4+C
3m : 14-16, 5+m, NF
3H : 15-17, (s-)solid 6+H
3S : inv, 6H5S(+), NF
3N*: GF, solid 7+H
```

```
1H - 1N*: 5+S
2C*: 16+, any; or 12-15, 6+H
2D : 12-15, nat
```

```
2H*: 12-15, 4+C
2S : 12-15, 3+S
2N*: 14-16, 6+H, 4+X
   - 3C*: ask
        - 3D : 4+D
        - 3H*: 4+C
        - 3S : 4+S
3m : 14-16, 5+m, NF
3H : 15-17, (s-)solid 6+H
3S : inv, 6+H, 3+S
3N*: GF, solid 7+H
```

```
1H - 1S*/1N*; 1N*/2C*: 16+, any; or 12-15, 6+H
+1*: 8+, any
   - 2H : 12-15, 6+H
2X : 4-7, nat
# after a weak nat response
   - 2S*: ... (TBD)
   - 2N*: GF, some 6+H
        - 3C*: ask
             - 3X : 4+X
             - 3H*: 4+C
             - 3N : no 4-card suit
   - 3X : GF, 5+X  # except raise = inv
   - 3H : inv, 6+H
2N+: 5-7, nat  # 2N usually mms
3H : inv, 3H
4H : nat
```

```
1H - 1S*; 1N*-2C*;
2D*: some (18)19+
   - 2H*: waiting
      - 2S+: same as below
   - 3m : nat good 6+m, ST
2S : 16-18, 4+S
2N*: some 5+m  # 65 usually bids 3m then 4m
   - 3C*: ask
      - 3D : 16-18, 5+D
      - 3H*: 16-18, 5+C
3m : 16-18, 4+m
   - 3H : 2H
3H : 16-18, 6H(331/322) or 7+H
3S : 16-18, 7+H, spl S
3N : 16-17 bal
4m : 16-18, 7+H, spl m
4H : 16-18, 7+H
```

```
1H - 1N*; 2C*-2D*;
2S*: some (18)19+
   - 2N*: waiting
       - 3C+: same as below
2N*: some 5+m  # 65 usually bids 3m then 4m
   - 3C*: ask
       - 3D*: 16-18, 5+D
       - 3H*: 16-18, 5+C
       - 3S*: 19-21, 5+C
       - 3N*: 19-21, 5+D
3m : 4+m
   - 3H : 2H
3H : 16-18, 6H(331/322) or 7+H
3S : 16-18, 3+S
3N : 16-17 bal
4m : 16-18, 7+H, spl m
4H : 16-18, 7+H
# 4S ?
```

1.4.2   1H - 2S* (same as 1S - 2N*)

1.4.3   1H - (X)

```
1H - (X);
P  : weak or some unbal inv  # then bid/X = inv
XX : 10+, s-bal, usually not concentrated  # forcing pass on
1S : 5+S, F1  # system on, may be psyche but rare
1N*: 5+C, 6-10; or 4+C, GF
2C*: 5+D, 6-10; or 4+D, GF
2D*: 3+H, 4-6 or 10+
2H : 3+H, 7-9
2S+: system on
```

1.4.4   PH response

```
P - 1H;  # 12-21, 5+H
1S : 4+S
   - P  : min, 3S
   - 1N : min nat
       - 2X : nat s/o
       - 2N : inv
       - 3X : nat inv
   - 2C*: 16+, any; or 12-15, 6+H
       - 2D*: 8+
   - 2D : 12-15, nat
```

```
    - 2H*: 12-15, nat C
    - 2S : 12-15, 4S
    - 2N+: similar to 1H - 1N*- 2N+
1N*: NF, 5-11, 2-S
    - 2C*: 16+, any; or 12-15, 6+H
        - 2D*: 8+
    - 2D : 12-15, 4+D
    - 2H*: 12-15, 2+C
    - 2S+: similar to 1H - 1S*- 2S+
2C*: inv+, 3+H  # Drury
    - 2D*: 13-14 bal
    - 2H : light opening or 12- bal
    - 2S+: same as after 1H - 2H
2D : inv+, nat
2H : 6-9, 3+H
2S : 4-7, 6+S
2N*: 8-10, 4+H, some spl
3m*: 8-10, (54+) H and m
3H : pre
3S*: 10-12, S void spl
3N*: 12-14, 3H, bal w/o 6m, CoG
4X*: 10-12, X void spl
4H : pre
```

```
P - 1H - 1S ; 2C*- 2D*;
2S*: some (18)19+
    - 2N*: waiting
        - 3C+: same as below
2N*: some 5+m  # 65 usually bids 3m then 4m
    - 3C*: ask
        - 3D*: 16-18, 5+D
        - 3H*: 16-18, 5+C
        - 3S*: 19-21, 5+C
        - 3N*: 19-21, 5+D
3m : 4+m
    - 3H : 2H
3H : 16-18, 6H(331/322) or 7+H
3S : 16-18, 4+S
3N : 16-17 bal
4m : 16-18, 7+H, spl m
4H : 16-18, 7+H
# 4S ?
```

```
P - 1H - 1N ; 2C*- 2D*;
2S*: some (18)19+
    - 2N*: waiting
        - 3C+: same as below
2N*: some 5+m  # 65 usually bids 3m then 4m
```

```
    - 3C*: ask
      - 3D*: 16-18, 5+D
      - 3H*: 16-18, 5+C
      - 3S*: 19-21, 5+C
      - 3N*: 19-21, 5+D
3m : 4+m
    - 3H : 2H
3H : 16-18, 6H(331/322) or 7+H
3S : 16-18, 5+S
3N : 16-17 bal
4m : 16-18, 7+H, spl m
4H : 16-18, 7+H
```

1.5 1N

temporarily use BTUBWS

```
1N -
2C*: ask 4M
2D*→2H*: 5+H
2H*→2S*: 5+S
2S*: ask 4m. s/o in 3m; or 44+m ST or CoG
2N : inv
3m : nat 6+m inv, NF
3H*: 55+Ms, inv, NF
3S*: 55+Ms, ST
3N : s/o
4C*: ask #A
4D*→4H*: 6+H  # FP not on
     - 4S+: (E)RKC
4H*→4S*: 6+S  # FP not on
     - 4N+: (E)RKC
4S*: (stronger) Quant
4N : (weaker) Quant
5m : s/o
```

1.5.1 after Stayman

```
1N - 2C*;  # ask 4M
2D*: no 4M
   - 2H*: 5+S, inv  # may don't have 4H
     - 2S : s/o
     - 2N : s/o
         - 3m : 5+m, s/o  # ?
   - 2S*: 45xx, inv, NF
   - 3M*: 5+oM, GF
   - 4C*: ask #A
   - 4D*→4H*: 46xx+
   - 4H*→4S*: 64xx+
2H : 4M
   - 2S : 5+S, inv, NF
     - 2N : s/o
         - 3m : 5+m, s/o
   - 3H : inv
   - 3S*: 4+H, ST
   - 4C+: spl
2S : 4S
   - 3H*: 4+S, ST
   - 3S : inv
```

```
    - 4C+: spl
# below applies to all above
    - P* : weak and escaping 1N
    - 2N : inv, should have 4oM
    - 3m : ST, 5+m
    - 3N : s/o, should have 4oM
    - 4N : Quant
```

1.5.2   after Jacoby transfer

```
1N - 2D/H*;  # 5+H
2H/S*: tr. acc
     - P  : s/o
     - 2S*: inv  # [TODO] or spl S?
          - 2N : s/o
               - 3m : 5+m, s/o
     - 2N*: CoG, usually unbal  # no slam interest
          - ... 3X : nat, good stopper or suit
     - 3m : 4+m, ST
     - 3M : 6+M, inv
     - 3oM: 6+M, ST
     - 3N : s/o
     - 4m : 6+M, spl m  # [TODO] actually, BTUBWS plays this as 5+m, ST
     - 4M : mild ST
     - 4N : Quant
# 1N - 2H*; 2S*- 4H : 55+Ms, CoG
# super acc. after 1N - 2D*
2S*: max, 4+H, xx in S
2N*: max, 4+H, otherwise
3C*: max, 4+H, xx in C
   - 3D*→3H*: re-transfer  # applies to 2S, 2N, 3C
3D*: max, 5H
3H*: max, 4+H, xx in D
# super acc. after 1N - 2H*
2N*: max, 4+S, otherwise
3m*: max, 4+S, xx in m
   - 3H*→3S*: re-transfer  # applies to 2S, 2N, 3C
3H*: max, 5S
3S*: max, 4+S, xx in H
```

1.5.3   after minor Stayman

```
1N - 2S*;
2N*: no 4m
   - 3m : s/o
```

```
3m*: 4+om   # 3C could contain 4+C
# bids below applies to all above
   - 3M : spl M, may be CoG
   - 4om+1: RKC
   - 3om: s/o   # m = C
   - 4om: s/o   # m = D
```

1.5.4   comp

```
1N - (2m = nat) - X*  : t/o
1N - (2M = nat) - X   : pen
# otherwise UwU
```

1.5.5   vs CAPP

```
1N -(2C*) # some 6+X
P*  : X shows t/o afterwards
X   : inv+, near bal, FP on
2D*: Stayman
2M : s/o
   - 3M : s/o
2N*→3C*: s/o in 3m
3C*: 5+D, inv+
3D*: 5+H, inv+
3H*: 5+S, inv+
3S*: 5+C, GF
3N : s/o

1N -(2D*) # MMs
X   : can pen at least one M
P   : may be bal, inv+ (then X)
2H*: 5+C, inv+
2S*: 5+D, inv+
2N : nat inv
3m : s/o

1N -(2M)
X   : pen
```

1.5.6   vs (meckwell) DONT

```
1N -(X*) # some 6+X
XX : inv+, near bal
```

```
2N*→3C*: s/o
other: system on

1N -(2m) # m + higher
# treated as nat overcall
X* : t/o
2X : nat

1N -(2H) # MMs
X  : near bal, about Hxx+
2N*→3C*: s/o in m
2S*: inv+
3m : nat inv
3M*: GF, ask stop
3N : s/o

1N -(2S)
X  : pen
```

```
1N -(X*) # 6+m or 54M
XX : inv+, near bal, FP on
2N*→3C*: s/o in m
other: system on

1N -(2m) # m + higher
# treated as nat overcall
X* : t/o
2X : nat

1N -(2M) # nat
X  : pen
```

1.6   1S

```
1S -  # 12-21, 5+S
1N*: F1; 4-6, 3+S [2S]; inv, 3S [3S/4S]; constr. 5+S [4S]; 5-11, 2-S;
    12-14, 2-S bal [3N]
2C : GF, nat
2D : GF, nat
2H : GF, nat
2S : 7-9, 3+S
2N*: 12+, 4+S
3C*: 8-9/12-13, C/D spl
   - 3D*: ask
        - 3H*: C spl
        - 3S*: D spl, 8-9
        - 3N+: D spl, 12-13, cue-bid
3D*: 10-11, 4+S bal; 10-11, 4+S spl  # the latter is GF
   - 3H*: ask, ST
        - 3S*: 10-11, 4+S bal
        - 3N+: spl  # 3N* replaces the highest spl, i.e. H
   - 3S : light opening; or min, 5(332)
3H*: 8-9/12-13, H spl
3S : pre
3N*: 12-14, 3S, bal w/o 6m, CoG
4X*: 10-12, X void
4S : pre
```

1.6.1   Gazzilli after 1N*

```
1S - 1N*: F1
2C*: 16+, any; or 12-15, 2+C
2D : 12-15, 4+D
2H : 12-15, 4+H
2S : 12-15, 6+S
2N*: 14-15(16), 6+S, 4+X, strength concentrated
   - 3C*: ask
        - 3X : 4+X
        - 3S*: 4+C
3X : 14-15(16), 5+X, strength concentrated, NF
3S : 15-17, (s-)solid 6+S
3N*: GF, solid 7+S
```

```
1S - 1N*; 2C*: 16+, any; or 12-15, 6+S
2D*: 8+, any
   - 2S : 12-15, 6+S
   - other : nat and GF
2H : 5-7, 5+H
```

```
2S : 4-7
# bids below applies to both 2H and 2S
   - 2N*: GF, some 6+S
       - 3C*: ask
              - 3X  : 4+X
              - 3S*: 4+C
              - 3N  : no 4-card suit
   - 3X : GF, 5+X   # except raise = inv
   - 3S : inv, 6+S
2N+: 5-7, nat   # 2N usually mms, 3H probably 7+H
3N : 12-14, bal
3S : inv, 3S
4S : nat
```

```
1S - 1N*; 2C*- 2D*;
2H*: some (18)19+
   - 2S*: waiting
         - 2N+: same as below
   - 3X : nat good 6+X, ST
2S : 12-15, 6+S
2N : 16-18, some 5+X
   - 3C*: ask
      - 3D : 5+D
      - 3H : 5+H
      - 3S*: 5+C
3X : 16-18, 4+X
   - 3S : 2+S
3S : 16-18, 6S(331) or (322) or 7+S
3N : 16-17, bal
   - 4m : 6+m, ST
```

1.6.2   1S - 2N*

```
1S - 2N*: 12+, 4+S
3X : X short  # then 3N = FF
3S : 14+, w/o shortness  # then 3N = FF
3N*: FF, 12-13, w/o shortness
(TBD) after 3S/3N, choose from spl or cue-bid
# 4X usually with controls in two other suits, otherwise bid 3X instead
4m : 5+m
   - +1*: ask
       - 4S : min
4H : 5+H, extra
4S*: 5+H, min
```

1.6.3 1S - (X)

```
1S - (X);
P  : weak or some unbal inv  # then bid/X = inv
XX : 10+, s-bal, usually not concentrated  # forcing pass on
1N*: 5+C, 6-10; or 4+C, GF
2C*: 5+D, 6-10; or 4+D, GF
2D*: 5+H, 6-10; or 4+H, GF
2H*: 3+S, 4-6 or 10+
2S : 3+S, 7-9
2N+: system on
```

1.6.4 PH response

```
P - 1S -  # 12-21, 5+S
1N*: NF; 4-6, 3+S [2S]; 5-11, 2-S
    - 2C*: 16+, any; or 12-15, 6+H
        - 2D*: 8+
    - 2D : 12-15, nat
    - 2H : 12-15, 4+H
    - 2S*: 12-15, nat C
2C*: inv+, 3+S  # Drury
    - 2D*: min bal
    - 2H : nat
    - 2S : light opening
    - 2N+: same as after 1H - 2H
2D : inv+, nat
2H : inv+, 5+H
2S : 7-9, 3+S
2N*: 8-10, 4+S, some spl
3X*: 8-10, (54+) S and X
3S : pre
3N*: 12-14, 3H, bal w/o 6m, CoG
4X*: 10-12, X void spl
4H : pre
```

1.7   2C

```
2C* -
2D*: 0-2 CT
   - 2H* →2S* - 2N  : 20-21 bal
                 - 3X  : 22+, nat, 5+H
                 - 3N  : 22-24, 5H(332)
          - 2N*: 4-7, 5+S
   - 2S : 22+, 5+S
        - 3C*: cheaper minor, 0-3
   - 2N : 22-24   # 4-th seat: 24-25
   - 3C : nat, 5+C
        - 3D*: cheaper minor, 0-3
   - 3D : GF, 5+D
   - 3M : nat solid ST
   - 3N : 25-27   # 4-th seat: 26-27
   - 4m : nat solid ST
   - 4M : 8.5+ tricks
   - 5m : 8.5+ tricks
2H*: 3CT = AK
2S*: 4+CT
2N*: 3CT = KKK
3X : 0-2CT, 6+X, GF
```

1.7.1   puppet Stayman

```
2N -
3C*: ask 5M   # could be s/o 3N
   - 3D*: some 4+M
        - 3M*: 4+oM
        - 3N : s/o
3D* →3H*: 5+H
        - 3S : 4+S
   - 3S*: 3433
   - 3N+: 4H, cue   # 3N = S
   - 4H : 3H
3H* →3S*: 5+S
   - 3N*: 4333
   - 4C+: 4S, cue
   - 4S : 3S
3S*: 44+m, ST
   - 4m : 4+m
3N*: 54xx+
4C*: Gerber
4D* →4H*: 6+H, MST
4H* →4S*: 6+S, MST
```

```
4S*: good Quant
4N*: bad Quant
```