

# Mini Quincala Knocking Game Strategy, Tournament 2010 variant

latest Draft by Ulf 23 May 2011

The following are some current thoughts and tactics for the Mini Quincala Knocking Game – Tournament 2010 variant. They are all simply “discoveries” from non-exhaustive studies of the scores and the effect of the rules. This document is necessarily not complete in any way.

Words in *italic* are technical Quincala terms that should be clear from the examples.

Quite a lot of examples follow after the initial list of statements; to load one into Quincala Game Viewer, just *copy* the relevant “QSF-string” (enclosed by < >), then click the *Paste* button in the software (or use the keyboard to type Alt + v). If you cannot see the Paste button click the “Fn:” button until you see it.

In Acrobat Reader, to enable selection and copying, you might have to click “Select” on the top bar before you can highlight and copy the QSF-string. (Please bear with me; loading QSF strings, and therefore reading this document, will be much easier with the next version of the software.)

## Technical Terms

In order to more easily explain features and patterns in Quincala, I use a number of *technical terms*, shown in *italic font*.

### Towers and Pieces

I call any group of two or three pieces a *tower*. A *full tower* consists of all three sizes, normally of the same colour. (The expression *a complete tower* can be used for a tower containing all sizes but of two colours).

The pieces are normally called the *large piece*, the *middle piece* and the *small piece*, alternatively the large piece is of size 3, the middle piece of size 2 and the small piece of size 1. That way the two piece towers could be called 32, 21 and 31.

### Radials

A *radial* is a line of three pieces as in the starting position. It can also mean a line of three *dots* (see below) on which those three pieces start. Although there are eight radials on the board, only the four horizontal and vertical ones are used when referring to locations. The board is laid out as if the White player was sitting in the “south”, e.g. the *South Radial* starts at the dot just in front of him.

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## Move Types

As a consequence of the rules, the pieces can move in distinct ways that it can be helpful to look at. These so called *move types* are also shown in the Move Type Tutorial, available here: [Online Move Types Tutorial](#)

### **Single Piece Move**

A single piece can move like the King in chess, with the difference that it can't cross a line, but that it can move on to or underneath another piece as well as knocking.

<=QSF;0.1&Quincala;KM;554526363645364636;0.2&title=Single\_piece\_move\_examples>

### **Sowing Move**

The basic moving pattern of a tower involves sowing its bottom piece when starting a new *leg*. The primary goal of the move is usually to put a certain piece on a certain dot, and there is often very many ways to achieve that. Each way leaves a different *sowing trail* and the choice of these sowing trails sometimes determines the winner later on in the game.

This example shows that the smallest piece in a tower of three pieces can reach a maximum of 6 steps:

<=QSF;0.1&Quincala;KM;7584847788888696a6a6886868938484696a6ax84876959;0.2&title=Maximum\_sowing\_example%2C\_not\_the\_best\_strategy%3F>

### **Wave Move**

By starting the move with a larger piece which is left behind, smaller pieces can move as a consequence. This sometimes makes it possible to achieve more than one aim in one move, e.g. develop the large piece as well as moving smaller pieces.

<=QSF;0.1&Quincala;KM;75848568696a6ax84858687;0.2&title=Wave\_movement\_example>

### **Bridge Move**

A *Bridge* move is when a smaller piece is moving on top of larger pieces without losing moving potential on the way:

<=QSF;0.1&Quincala;KM;554568696a6a33444546x;0.2&title=Two\_bridge\_moves\_example>

Note that, using the bridge move, or the stepping stone move described below, a move can theoretically go on forever; a small piece can just keep on walking over connected larger pieces. This is not detrimental to the game as such, since a chess clock will ensure effective moves in a tournament, and the rules do allow Draw by agreement.

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## Stepping Stone

*Stepping-stones* are larger pieces used by smaller pieces to extend their range. The pattern of larger pieces that can be used as stepping stones (his *array*) is very important to a player, since they can drastically affect his ability to move about.

```
<=QSF;0.1&Quincala;KM;7584939368696a6a5544442637x3  
3446284a68899;0.2&title=Stepping_stone_example>
```

## Assimilation

If a stepping-stone is part of a tower, some extra pieces could be assimilated during moving. This has an even greater effect on the range than simple stepping stones:

```
<=QSF;0.1&Quincala;KM;a696966a696964636262686969x6  
26385967869;0.2&title=Assimilation_of_moving_potential_example>
```

Note that in the mini Quincala games with only three sizes, this is rarer than in variants using more sizes.

## General Tactics

### Building and Reaching

Building a *tower* of two or three pieces increases the *moving potential*: by building you can for instance reach three steps in two moves. In this example, the middle size pieces try to reach the furthest away middle piece and knock it. Black builds a tower and achieves this faster than White although he is second to move:

```
<=QSF;0.1&Quincala;KM;96872636368778365463;0.2&tit  
le=Building_and_Reaching_Example_-_not_a_real_match%21>
```

By using a tower without the largest piece to attack, the largest piece is not necessarily on a straight line if the middle piece is knocked back; this could be an advantage in certain situations; furthermore, such a smaller tower only takes one tempo to build compared to two tempi to build the full tower. Therefore, building a full tower is not always the strongest tactics.

### Hat (Locking)

The largest piece can only move in a straight line – therefore it is most difficult to knock. You often need to *lock* it or *put a hat on* it before you can knock it. In general, using an opponent's piece to make a tower of mixed colour so it cannot move is called *locking*. (Since the rules state that the move has to start with a piece or plain tower, i.e. not a tower of mixed colour.)

This example shows *locking by hat attack*, *clearing of hat*, etc, as well as a loss by the player who knocked the large piece first!

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```
<=QSF;0.1&Quincala;KM;5545263645444536464533445748  
484445364846456263634645546354456a6968685445;0.2&t  
itle=Hat_%28Locking%29_Example_1>
```

Another Hat Example, where Black's initial *hat attack* is not so successful but somehow he manages to win anyway:

```
<=QSF;0.1&Quincala;KM;3344555546362626445555x26364  
55562636345556345365747453647484736r0;0.2&title=Ha  
t_%28Locking%29_Example_2>
```

### Twins

The moving rule for this variant implies that the move has to stop when a mixed tower is created. Therefore no *double locking* is possible and thus two of the large pieces next to each other, *twins*, might form a defence.

```
<=QSF;0.1&Quincala;KM;75848439484884868899486a8877  
77a69696777978969786866869798899554444263733444437  
4886969788998844463646464858x4647575847;0.2&title=  
Twin_Defence_Example_1>
```

### Stickiness

The middle and even more the smallest pieces display a *sticky* character; any piece on top of another piece in a tower is very difficult to get rid of. In this example, White cannot win by knocking with his full tower, since Black only needs his smallest piece.

```
<=QSF;0.1&Quincala;KM;7584847788889384a6a688a65544  
442637334462848468696a6ax84a6;0.2&title=White%27s_  
tower_is_too_big_-_sticky_smallest_piece>
```

It would take White three moves to re-build his full tower and knock the two *locked* black pieces, time he has not got since Black can create a *fork* on his little piece in one move:

```
<=QSF;0.1&Quincala;KM;7584847788889384a6a688a65544  
442637334462848468696a6ax849584946a69698495a669365  
464;0.2&title=White%27s_tower_is_too_big_-_sticky_  
smallest_piece_-_Black_fork>
```

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## Opening Strategy

The main principles of Quincala opening strategy seems to be to always be aware of the risk of *knock-out lines* and *radial attacks* (see below Mid Game Strategy) and defend against them, as well as knowing which openings tend to be strong and weak.

### The Weak Opening (“Scholar's Defence?”)

A player should not open by building a tower on the middle dot on his rightmost radial. If his opponent has studied this example, such an opening will prove fatal:

```
<=QSF;0.1&Quincala;KM;8696a6a668696a6aa696966a698796758484778796848687888786r0;0.2&title=Weak_White_Opening>
```

Note that the same technique does probably doesn't work if White builds his tower on the inner dot:

```
<=QSF;0.1&Quincala;KM;96a6a668696a6aa68686x6a888693848499888875848687883948488687774868788777;0.2&title=East_inner_tower_opening_black_dart_fails>
```

Or indeed on the outer:

```
<=QSF;0.1&Quincala;KM;8696a6a668696a6a96a6a6x6a88a693848499888884a69788778797a6a6r1;0.2&title=East_Outer_tower_dart_fails_too>
```

### The Strong Opening

At present, building a heavy tower on the South East radial seems the strongest opening for White. A possible standard opening line is shown here:

```
<=QSF;0.1&Quincala;KM;758484778888848686886868;0.2&title=The_Strong_Opening_twice_declined>
```

This opening line is called “Twice Declined” since two opportunities to knock should be avoided since they would prove fatal.

### Castling

This move is called *castling*:

```
<=QSF;0.1&Quincala;KM;554444x2637;0.2&title=Castling>
```

Castling is to date primarily used as a response to a move threatening the largest piece on the East or West Radial ...

### Invitations

... here is another response to this opening move, creating an *invitation*, with a black winning line following White accepting the invitation:

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<=QSF;0.1&Quincala;KM;554444x463626264426574848758  
48448264433;0.2&title=Another\_response>

This technique can only be used in the beginning of a game before White has knocked the middle and small pieces; otherwise he will win immediately by accepting the invitation!

Note, that in the above example, if White wisely declines the invitation in turn 3, Black should not attack White either:

<=QSF;0.1&Quincala;KM;554444463626268696a6a6x26446  
4636262574848624444r1;0.2&title=Black\_fatal\_attack>

This creates a *tension*, a somewhat stable structure that is dependent on, but also affects, the position elsewhere on the board.

### **Guardian**

Black could also create a *guardian* that will protect from White's attacks:

<=QSF;0.1&Quincala;KM;554444x263637442636373626r0;  
0.2&title=Guardian\_with\_middle\_piece>

The size of the *guardian* could correspond to White's top piece:

<=QSF;0.1&Quincala;KM;5544334444x26364637442636373  
626;0.2&title=small\_guardian>

However, since the middle piece guardian could also act as a *bridge* it would protect sufficiently, at least early in the game when the position is similar to the starting position:

<=QSF;0.1&Quincala;KM;5544334444x26363744463639483  
73646;0.2&title=Middle\_size\_guardian\_as\_bridge>

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## Mid game Tactics

### *Knock-out lines*

Always look out for *Knock out lines* where your opponent could win in one move: usually the best defence is to remove the first knock (largest piece):

```
<=QSF;0.1&Quincala;KM;3344555599887777554444x2637;0.2&title=Knock-out_Line_Example_with_Castling_Defence>
```

An alternative could be to create a *knight's jump*. However, this doesn't seem to be very successful, at least not in the simple cases, as this example shows:

```
<=QSF;0.1&Quincala;KM;64636262485757624444x36474426464757483948474696a6a6r1;0.2&title=Knights_Response_to_Knock-out_Unsuccessful>
```

### **Radial Attack**

A full tower can attack an undefended *radial* like this:

```
<=QSF;0.1&Quincala;KM;6463626277888862636388a696x6336463626r1;0.2&title=Radial_attack>
```

Probably the best defence is by being able to knock the middle dot of the threatened radial with the largest piece:

```
<=QSF;0.1&Quincala;KM;8696a6a657484896a6a6x68696a6aa6889988776a8877774433336979r0;0.2&title=Defending_against_Radial_attack-1>
```

Another way of being able to knock the middle dot, with a possible losing line for the White attacker following:

```
<=QSF;0.1&Quincala;KM;6463626268696a6a626363x57476336463626473646456a482644;0.2&title=Defending_against_Radial_attack-2>
```

### **Dart**

A *dart* is a name for an attack which does not bring a large piece in the near vicinity of the opponent's pieces. This can be used to reduce the opponent's material without facing threats to one's own large piece as a consequence. This shows a white dart disabling a black full tower, with a possible white win following:

```
<=QSF;0.1&Quincala;KM;86969668696a6a646362626a6969x9678698878628484777878848778r1;0.2&title=Dart_with_a_possible_white_win>
```

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## ***Double Dart***

A *double dart* is a dart which sows the middle piece in a way that adds pressure (so accomplishing “double aims”). This is useful when attacking more than one tower:

```
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557  
4848869696686969554444778888334444998888x967888697  
8798888633646373948373644263637;0.2&title=Double_dart_with_a_possible_white_win>
```

Note that this is best achieved without a full tower; otherwise there will be a large piece that can easily be threatened, losing tempo for the attacker:

```
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557  
48488696966869699695957788884455553948487584849988  
889384848858585533336373733555463737845454588888  
547474374747555353885858x533537474837373544588888;  
0.2&title=Weak_Double_dart_using_full_tower>
```

## **End Game Tactics**

### ***Hat Locking of Largest Piece***

Many games end by one player finding a position of hat locking the largest piece without the opponent being able to clear it, see the end move of the example below (Reducing Material) for example.

### ***Reducing Material***

If no obvious winning line appears, it could help to reduce material, like in this match from 2010-09-06:

```
<=QSF;0.1&Quincala;KM;75848439484884868899486a8877  
77a69696777978969786866869798899554444263733444437  
48x869697889988444636464648584636365868364757r1;0.  
2&title=2010-09-06_Ulf_v_Phil_-1_reducing_material>
```

### ***Supported Attacks***

When first playing Quincala against an experienced player, it seems as if attacking, especially with a full tower, is a sure way of losing. One trick is to *support* the attack with another tower that can follow up and respond in turn to any responses the opponent makes – maybe creating a winning *twin*.

```
<=QSF;0.1&Quincala;KM;8696a6a66a696996a6a668696975  
848499887777938484x7797a6848696a697698797a68697879  
7;0.2&title=Two_Pronged_Attack>
```



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## *Close the Corner*

This is an example of failed Twin Defence, where White uses as special move called *Close the Corner* after Black knocks his large piece:

```
<=QSF;0.1&Quincala;KM;64636262778888a6969688686886  
96966a6978x967868697862444426374446483736463344998  
8554444887878443535r1;0.2&title=Twin_Defence_Example_2>
```

It works because Black has not got enough pieces available. In the early stages of a game, it might not work so well:

```
<=QSF;0.1&Quincala;KM;6463626268696a6a6244442637x4  
4464837696a483746r0;0.2&title=Failed_Close_the_Corner_move>
```