

ArbitrageWin

CryptoCurrency

Arbitrage Bots

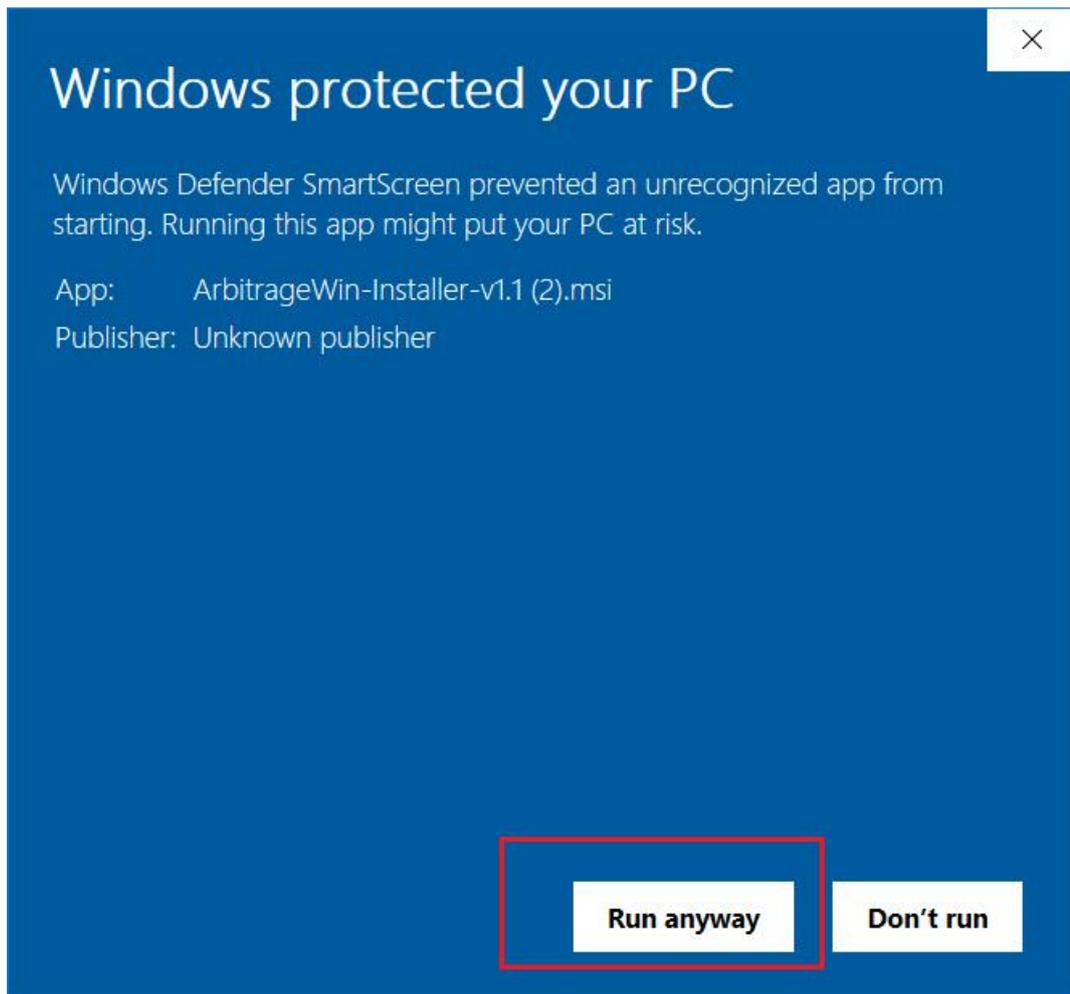
User Guides

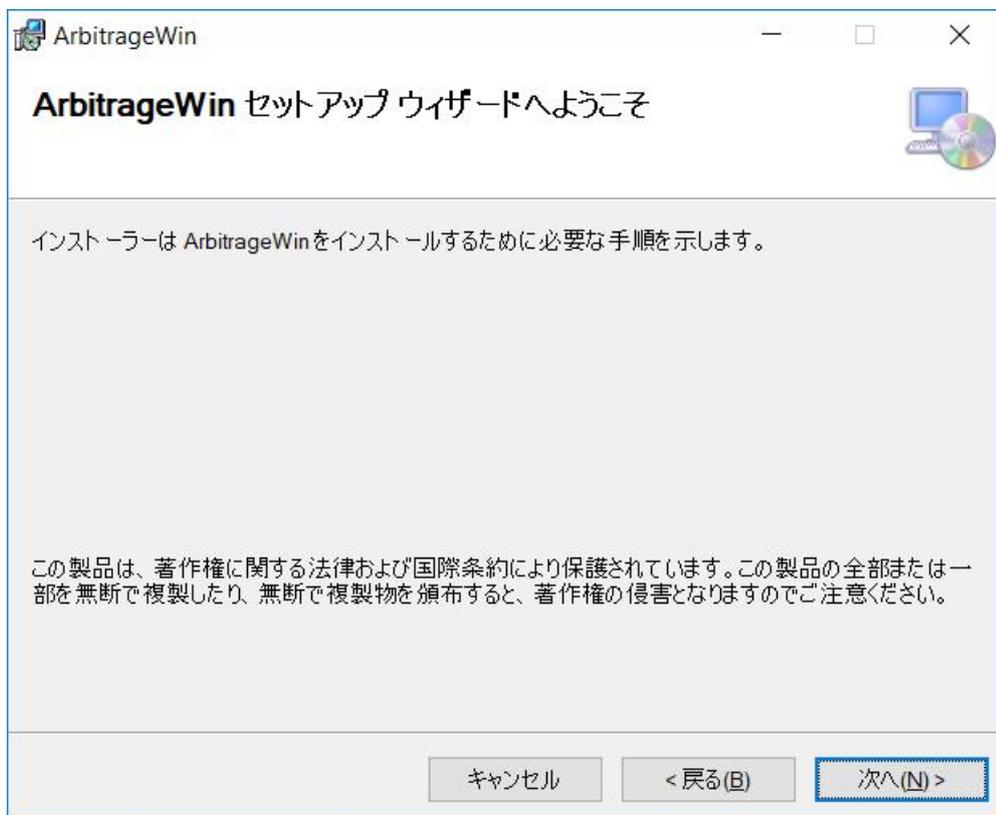
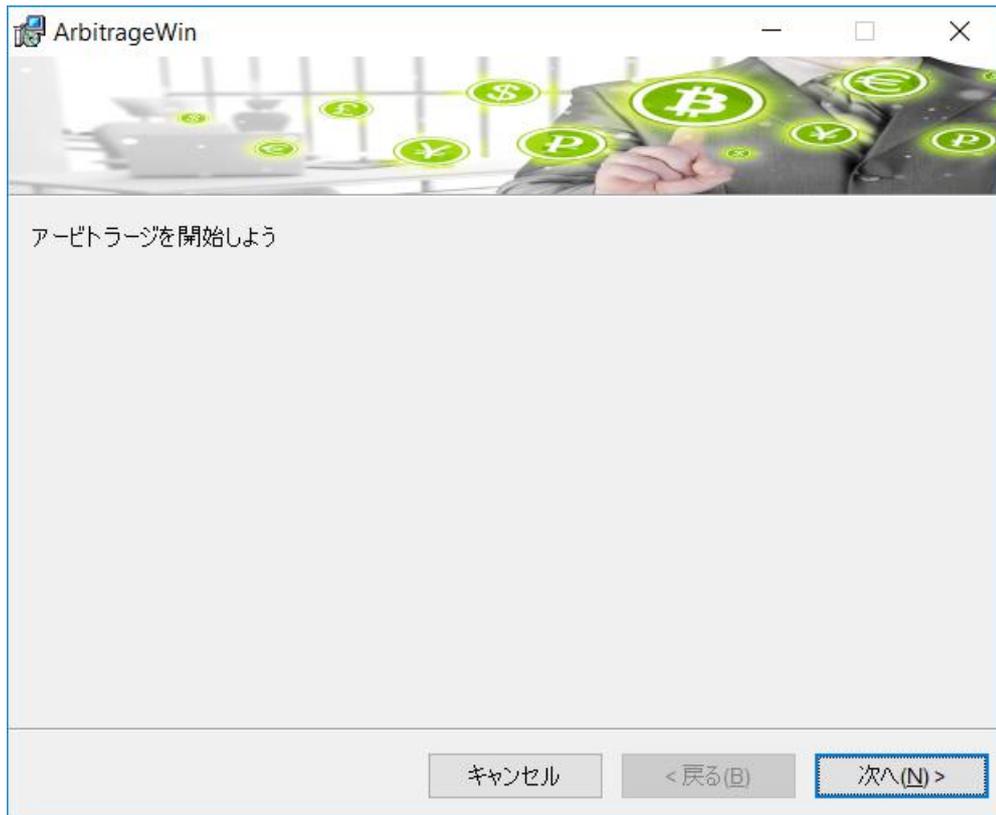
Installation

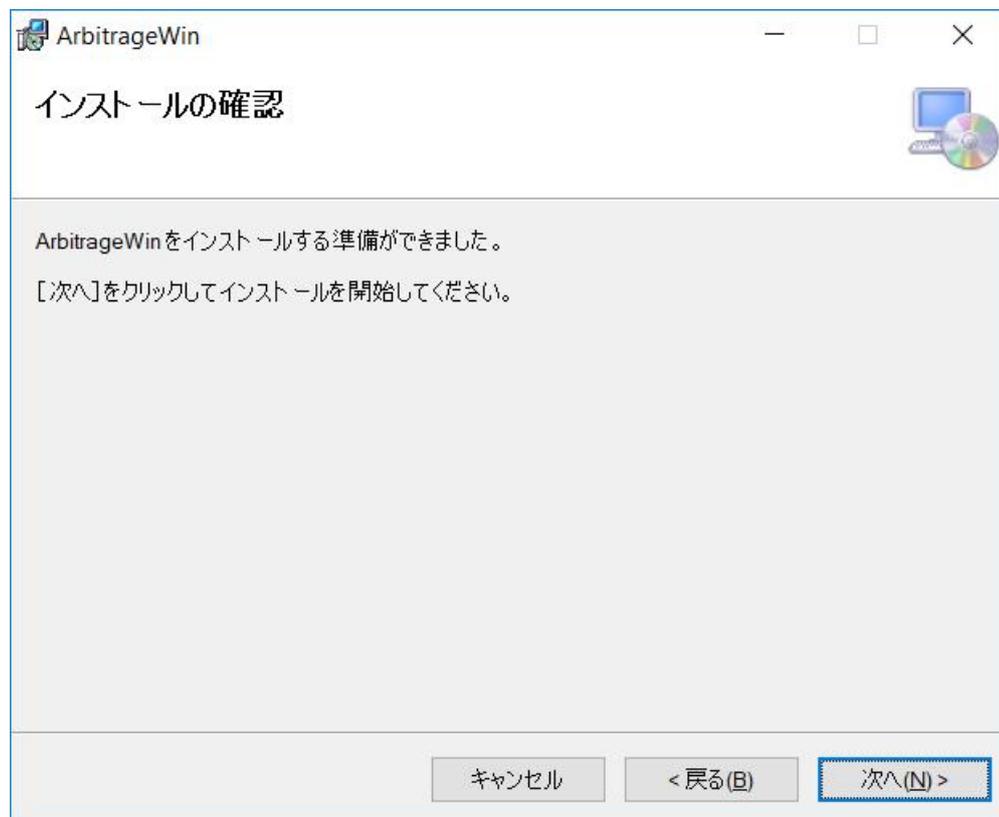
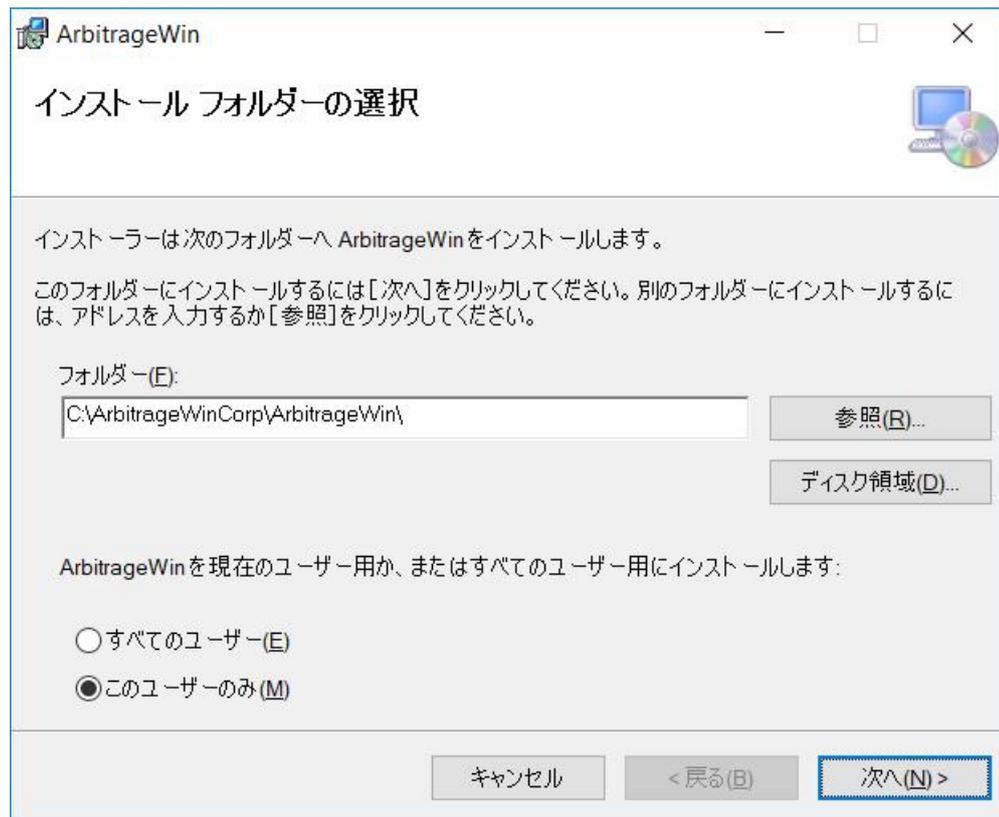
Please download installer from this link:

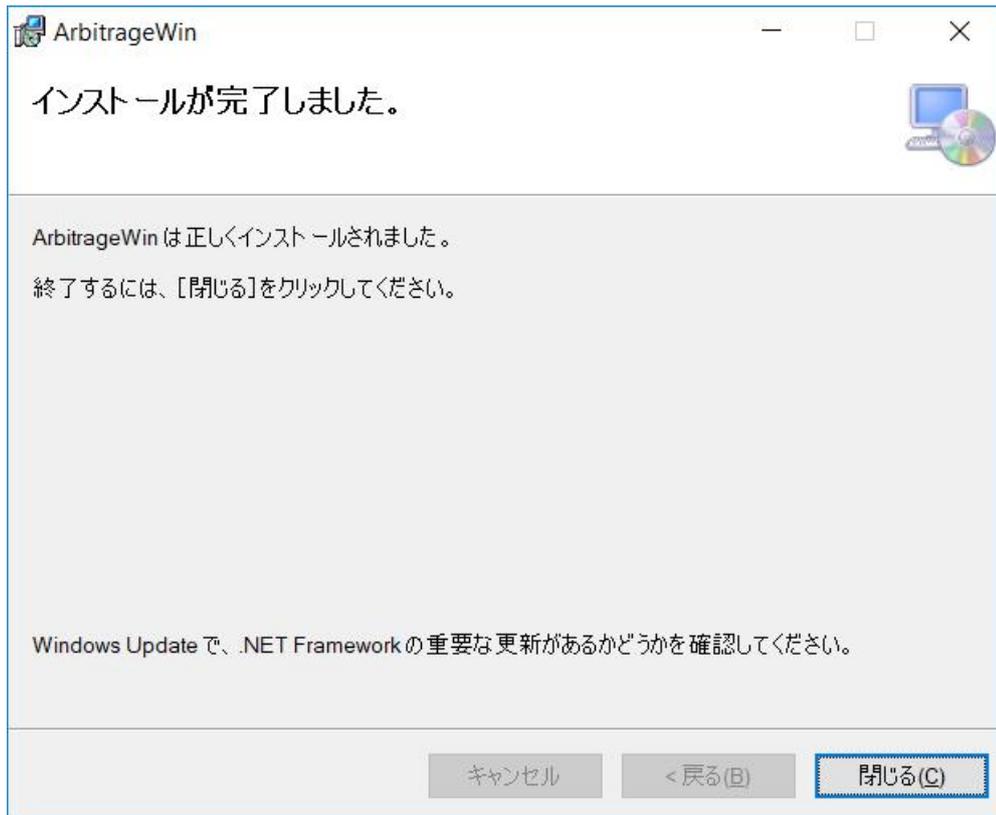
<https://arbitragewin.com/download/ArbitrageWin-Installer-v1.1.msi>

1. Double click on installer
2. Double click on ArbitrageWin-Installer-v1.1.msi. Click “Next”
3. You may see the warning popup from Windows. Please continue with “Run anyway”









1. Once it is done. GO to desktop.
2. You will see "Shortcut Arbitrage". Click the icon to start the application.

Enter License Key

1. You will be prompted to enter license key when first launch the application.
2. Key in your email address and the license key.
3. Read the Software Term and Condition. Click the “I Agree” to acknowledge the terms. Click Register button to continue.

×

アクティベーションキーを送信してください

メール

ライセンス
キー

初版 2018/10/16 ^

ソフトウェア使用許諾契約書

本ソフトウェア使用許諾契約書（以下、「本契約」という）は、SK-WIN version1.0（以下、「本ソフトウェア」という）を使用する全てのユーザー（以下「使用者」という）に適用されるものとする。使用者は本ソフトウェアを使用可能な状態にされる時点で（ダウンロード、インストール、ライセンスキーの入力、その他の行為を含むがこれに限定されない）本契約の締結に同意されたものとみなす。

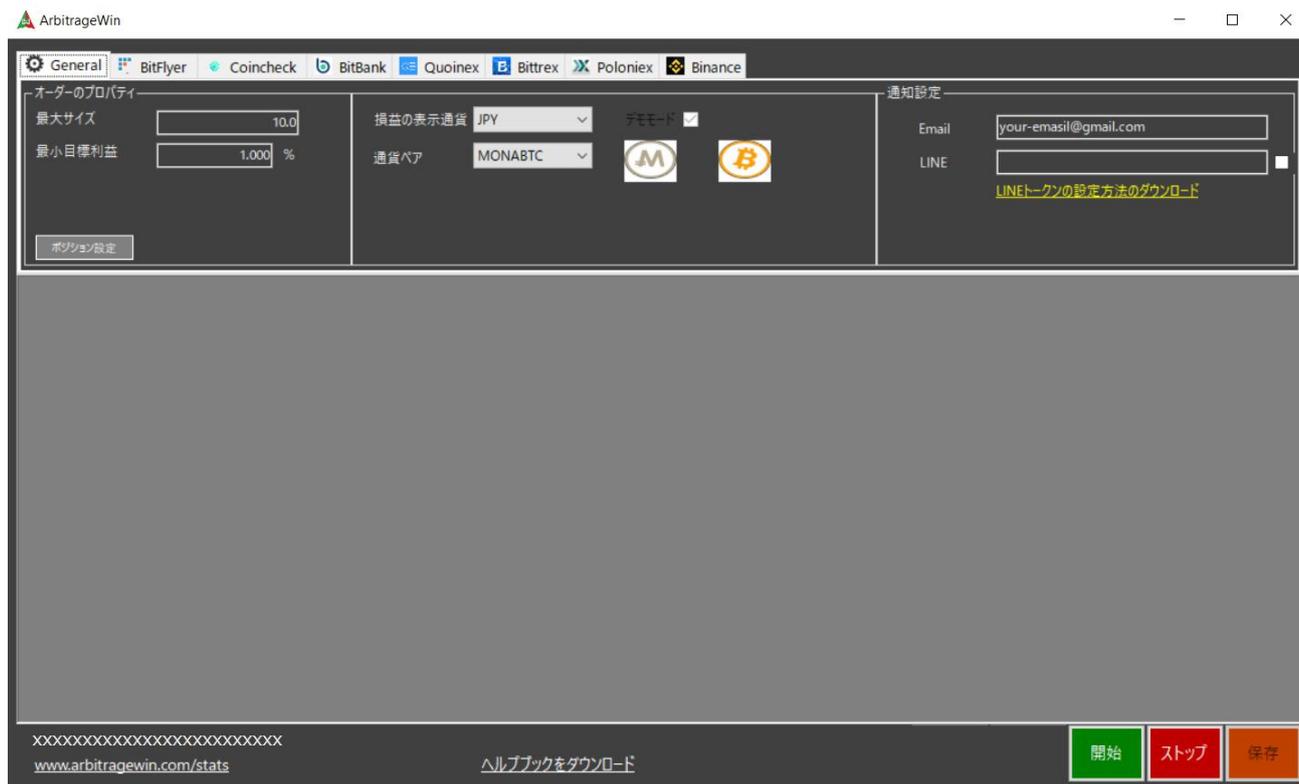
第1条（本ソフトウェア）

1. 本契約は本ソフトウェアの特定のバージョン（version1.0）のみを対象とし、本ソフトウェアの将来の機能追加やバージョンアップは含まない。
2. 本ソフトウェアの動作環境は以下の通りとする。
 - Microsoft Windows 10が動作するハードウェア

私は同意する

ライセンス登録

Close

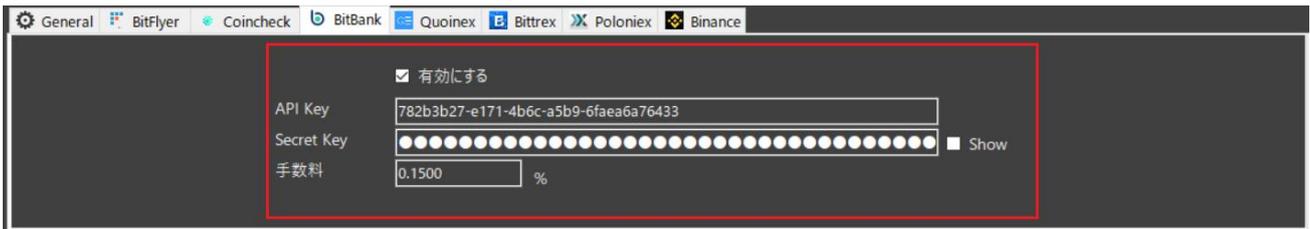


Arbitragewin Setting

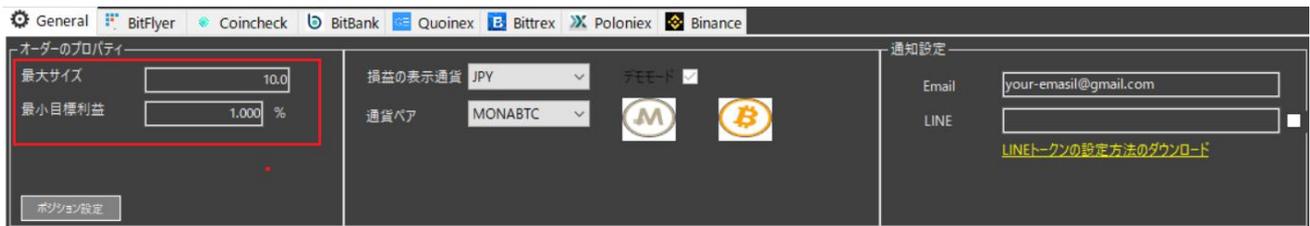
First, get the API and Secret key from each Exchanges. (The whole API setting in each exchange will not be fully covered by this user guide)

1. When you generate the API key, please ensure “Read” and “Trade” access. From the security perspective, DO NOT enable the withdrawal feature as the application will not perform any coins transferring.
2. Please input the exchange trading fee. There will be a default exchange fee setup but in case the exchange change their fee from time to time, you will have to update this. For example, Bittrex is 0.25%、BitBank is 0.15%, Binance is 0.20%. Please double confirm in each exchange you use.
3. Please refer to one of the guide in getting your API key
(We do not support any API key creation. It is your full responsibility on generating the API key.)

<https://3commas.zendesk.com/hc/en-us/articles/360000235254-Bittrex-creating-an-API-key>



Trading Pair Setting

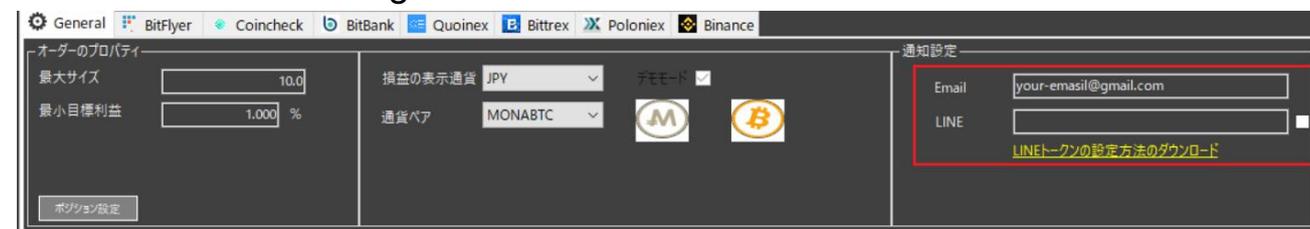


1. First, decide the trading pair you want to arbitrage. For example, MONABTC
2. Max Size: When the spreads meet your “Target spread” setting, it performs the arbitrage by sending the order with quantity you set each time. In order to avoid the transferring coin fee or opportunity of getting better output, it is suggested to set 1/15 of your total coins.
3. Target Spread : The price difference between each exchanges. If it hit the level, the bots will start sending the order to perform arbitrage. Recommended: 0.80%



4. Demo checkbox: You can check the DEMO mode. It will not send the order to exchange if it is in DEMO mode. You may want to check the connect between bots and exchanges by turning this on to make sure it works as expected.
5. Base currency: It will be always JPY. All the profit captured in BTC will be estimated in JPY.

LINE Notification Setting



1. LINE notification : Once the arbitrage is done, bots will send the notification to your LINE application. (*Please refer to page 13*)
2. Please follow the link how to to get the LINE token.

<https://arbitragewin.com/download/SetupLINEToken-English.pdf>

3. Last but not least, please input your email address again.

Save Setting

When you click SAVE button, bots will update all necessary data such as API key, LINE token to each trading pair except Max Size, Target Spread will be saved separately.

“Start” and “Stop” button

1. Once every setting is ready. Click on Start button to kick start the process.
2. Click “Stop” if you want to stop the process.



Record your coins

1. When you click Start for the first time, It will popup the following screen for you to enter the number of coins you are starting with. Please fill in and click SAVE.
2. Please see the following as example. MONABTC trading pair.

In the following example, you will put 1000 mona, 0.5 BTC in each Bitbank and Bittrex.

BITTRET ⇒ Mona=1000、BTC=0.5

BITBANK ⇒ Mona=1000、BTC=0.5

ポジション ×

初めてスタートポジションに記入してください。設定が完了したら画面は表示されません

	<input checked="" type="checkbox"/> MONA	<input checked="" type="checkbox"/> BTC
BitFlyer	<input type="text"/>	<input type="text"/>
CoinCheck	<input type="text"/>	<input type="text"/>
BitBank	1000	0.5
Liquid	<input type="text"/>	<input type="text"/>
Bittrex	1000	0.5
Poloniex	<input type="text"/>	<input type="text"/>
Binance	<input type="text"/>	<input type="text"/>

Get
保存

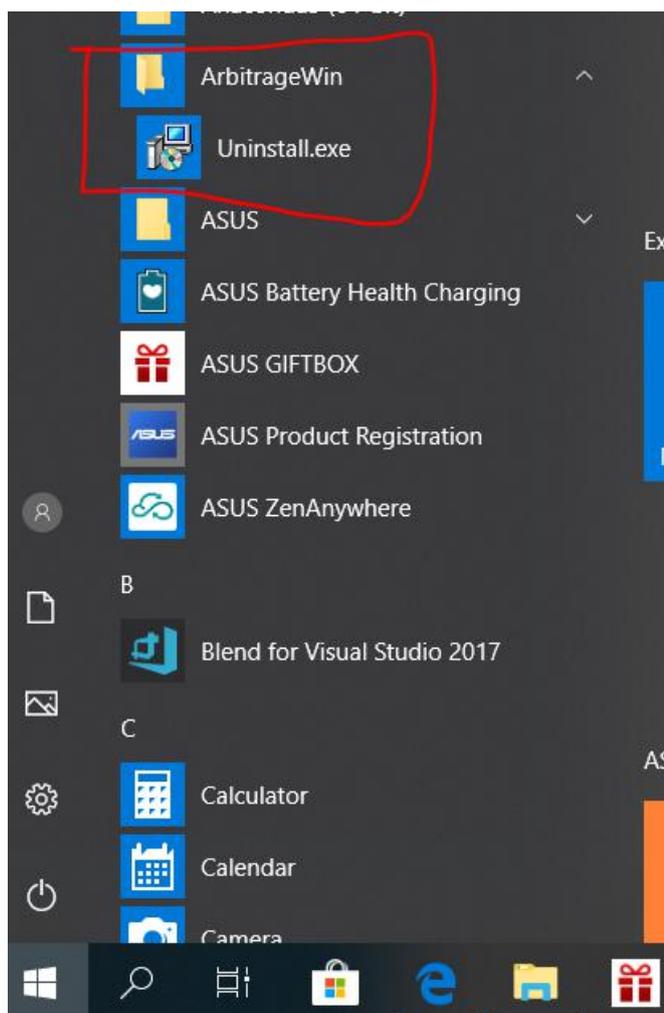
最新ポジションのリセット
最初ポジションのリセット

3. Bots will update the server every 30 mins when the bots is started. This will show how much BTC increased from your initial position . *Please refer to page 16)*

4. When you want to stop arbitraging the pair permanently after a while, please go to the screen again to click on “Reset Initial Position” and “Reset Latest Position” . This is to ensure the record stored will be clear so that you will have better view of your coins position.

Uninstall to Upgrade

1. Please close all the ArbitrageWin and ATOMIC.
2. You can uninstall your application by clicking the following.
3. Once it is done, please click on the installer again to re install the application.
4. Upgrade will not clear up the trading pair setting you had done before. If the config file is corrupted by any reason, please make the setting again.



Understand Arbitrage Risk

Execution Risk

When bots try to capture the arbitrage opportunity, it may be ended up with one sided transaction. One of the reason could be the quote set in the second order may be gone. This may ended up you have sold or bought one side but could not buy back or sell on the other side. In this scenario, your initial coins will be short or long than your initial coins position. Even though the bots will tell you unconfirmed profit in LINE notification but the order is still open in your exchanges. The profit is considered unconfirmed until the order is executed.

Let take a look on below example:

Unconfirmed Profit Example:

Bot sell 100 Mona in Bittrex with price 0.00032

Bot buy 100 Mona in Bitbank with price 0.00030. However, the order is not done and it will be leaved as leave order in Bitbank. Until this is done, the profit is considered unconfirmed.

At this point, if Mona price is going up further to 2X, if you want to buy back at this price you will need to pay 0.0006 BTC. As a result, you need to lose your own BTC to buy back MONA at higher price. When you evaluate the whole position in BTC, you will find your BTC equivalent lesser than before. This is called Market Risk.

What do you do for Unconfirmed Profit?

When your coins position is difference from initial position, you may need to make your own decision whether to cancel the existing open order and buy back at the current market price. Or you want to wait until the price come back and the open order will be executed and captured the previous unconfirmed profit as confirmed profit.

As example in previous discussion:

If you need to buy back to adjust the position:

1. Cancel the open order in the exchanges.
2. Place the same quantity in order with the current market price.

Or option 2, you leave the order as it is until it is get done. In this example, if MONA price come back to 0.0003, then your previous open order will be filled and confirmed captured the profit.

Market Risk Simulation Example

When your position expose to market risk, your total BTC equivalent position will be impacted when market move against you.

Initial Position

Total Asset $\boxed{\text{BTC} = 1.0 \text{ BTC}}$ $\boxed{\text{MONA} = 2000 \text{ MONA}}$

BTC equivalent position for MONA: $2000 \text{ MONA} \times 0.0003 = 0.60 \text{ BTC}$

BTC equivalent position in TOTAL: $1.0 \text{ BTC} + \text{MONA position :} 0.60 \text{ BTC} = \text{Total } \underline{1.60 \text{ BTC}}$

When there is unconfirmed profit in arbitrage:

① $\boxed{100\text{MONA}}$ \Rightarrow $0.00032 \text{ BTC Sell Order Filled}$ \Rightarrow $\boxed{\text{BTC} = 1.032}$ increased and $\boxed{\text{MONA} = 1900}$ decreased.

② $\boxed{100\text{MONA}}$ \Rightarrow $0.00030 \text{ BTC buy back but as leave order}$ \Rightarrow $\boxed{\text{BTC} = 1.032}$ unchanged $\boxed{\text{MONA} = 1900}$ remained unchanged

Post-Arbitrage vs Pre-Arbitrage

When there is leave order in MONA arbitrage and MONA price went up double, i.e. 0.0006BTC in price your position changed as below:

【After Arbitrage】

$1900 \text{ MONA} \times 0.0006 = 1.14 \text{ BTC}$

BTC equivalent position in TOTAL: $1.032 \text{ BTC} + \text{MONA position } 1.14 \text{ BTC} = \text{Total } \underline{2.17 \text{ BTC}}$

【Before Arbitrage】 With initial position. We evaluate with the current market price in BTC:

$2000 \text{ MONA} \times 0.0006 = 1.20 \text{ BTC}$

BTC equivalent position in TOTAL: $1.000 \text{ BTC} + \text{MONA position } 1.20 \text{ BTC} = \text{Total } \underline{2.20 \text{ BTC}}$

If you are comparing before the arbitrage, you will find the difference of $\underline{-0.03 \text{ BTC}}$

But still, your total BTC position is increased because of the market price surged.

API Risk

There might be error when the bots send the order to the Exchanges. That might causes the arbitrage transaction is not fully executed resulted your position changed due to the incomplete buy and sell transaction.

部分実行リスク

When the order is filled with fraction, the bots will not place the opposite side of the order since the order filled is too small.

LINE Notification Type

1. Arbitrage Completed: XXXBTC

This indicates the arbitrage, buy and sell side are done. The profit is confirmed.

Arbitragewin: 約定連絡 MONABTC

推定利益は (JPY 360.70) (BTC 0.00041957) (0.9963%)です。

Bitbank - Sell 約定価格=0.000285 約定数量=149.625000

Bittrex - Buy 約定価格=0.000281 約定数量=149.625

2. Leave Order XXXBTC

This indicates the arbitrage is not 100% complete. It is either buy or sell side is leave as open order. The profit is calculated based on the estimation and assumption of if the order is filled successfully. You will have to leave the order open until it get filled.

Arbitragewin: リーブオーダー MONABTC

Bitbank の注文を残して処理を続行します。Bitbank の注文が約定した場合の推定利益は (JPY 276.84) (BTC 0.00032747) (0.8333%)です。

Bittrex - Buy 約定価格=0.000303 約定数量=129.588

Bitbank - Sell 指値=0.000307 注文数量=129.588 (約定数量=0)

3. Balance Notification. You may want to adjust your position

Your coin position might be sold until it get zero or close to zero in one Exchanges and increased on the other side of Exchange. In this case, you will receive this notification. This will remind you to transfer the coins if necessary.

Arbitragewin: BTC : 通貨残高です。必要があれば調整してください

Binance-BTC: 通貨残高です。必要があれば調整してください -> 0.00122121 / 1.07646393

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Check Your Profit Online

1. You can always check your profit with your browser online. Here is the link:
<https://www.arbitragewin.com/stats/index-new.php?id=YOUR-KEY-DISPLAY-IN-ARBITRAGEWIN>
2. ArbitrageWin will update the server with best effort in every 30 minutes on the profit captured in your local machine. It display this month and previous month profits only.
3. It also indicate if your ArbitrageWin is still running in your local machine. If it is GREEN it means the bots is still working. If it is RED, it means the bots might have been stopped working due to your Windows get rebooted or updated. You need to restart the bots again at this time.

最終更新 2019-06-12 04:46:50
*** このページは全て参考用です

ステータス	今月利益	発注回数	ポジション	前月利益
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	BCHBTC >> 7 分前からオンラインです	
	ETHBTC >> 8 分前からオンラインです	
	LTCBTC >> 7 分前からオンラインです	
	MONABTC >> 8 分前からオンラインです	
	STRATBTC >> 7 分前からオンラインです	

4. Monthly Profit Detail

ArbitrageWin will update the server every 30 minutes. So that you can check your profit online in best effort. The profit is categorized as “Confirmed” and “Unconfirmed” . Whenever the profit is captured ArbitrageWin store it in the local machine. It rely on the log file captured and update to the server at best effort. At the end, this is just best effort in showing the profit. You may want to confirm with your own position in your own trading account.

Remarks : The page is only for reference. It is not intended to be used as formal document on your tax filing nor any other filing purpose use.

推定利益: 2019-06

月	通貨ペア	通貨	確定 / 未確定	総利益額 (BTC)	総利益額 (ベース通貨換算)
2019-06	BCHBTC	JPY	確定	0.002421	2,280
2019-06	BCHBTC	JPY	未確定	0.001348	1,272
2019-06	ETHBTC	JPY	確定	0.002813	2,668
2019-06	ETHBTC	JPY	未確定	0.003164	3,001
2019-06	LTCBTC	JPY	確定	0.008194	7,535
2019-06	LTCBTC	JPY	未確定	0.005158	4,703
2019-06	MONABTC	JPY	確定	0.332241	305,071
2019-06	MONABTC	JPY	未確定	0.158640	144,518
2019-06	STRATBTC	JPY	確定	0.000977	787
2019-06	STRATBTC	JPY	未確定	0.001220	983
確定約定の合計 (BTCと円換算)				0.346645	318,341
未確定約定の合計 (BTCと円換算)				0.169530	154,477

Confirmed Profit Example:

Sold 100 Mona at Bittrex with BTC price 0.000032. The order is filled.

Buy 100 Mona at BitBank with BTC price 0.00030. The order is filled.

⇒ +0.00002 BTC profit confirmed

Unconfirmed Profit Example:

Sold 100 Mona at Bittrex with BTC price 0.000032. The order is filled.

Buy 100 Mona at BitBank with BTC price 0.00030. But the order is not filled. It is leave as open order in Bitbank.

-> The profit is not confirmed until the order get filled.

BTC Equivalent Profit in your Initial Position and Latest Position

【2019-06】
スタート vs 最新のポジション

BTC換算の損益

通貨	スタート【2019-06-07】	最新【2019-01-13】	差	値段	利益損失 (BTC)
BCH	10	14.78	4.78	0.04903000	0.23436340
BTC	1.22	2.523	1.303	1.00000000	1.30300000
ETH	17	18.048	1.048	0.03116000	0.03265568
LTC	39	37.846	-1.154	0.01756000	-0.02026424
MONA	5750	6448.598	698.598	0.00024220	0.16920044
STRAT	1299.995	1620.267	320.272	0.00011730	0.03756791
	スタート数	最新数	ずれる数	ペアの最新値段	1.75652318

*** 移動中、取引注文中のコインは含まれていません

*** 全ての数字をご参考用です

1. In ArbitrageWin, you will be prompted to input your Initial Coin Position in the Position setting page. If you are changing your starting position or plan to terminate the particular pair, you will have to reset the initial position and reset latest position to clean up the position record. *(Please refer to page 9)*
2. During the process of Arbitrage, your initial coin position may be changed due to the few factor mentioned previously. In this case, you may want to buy back or sell the extra position based on your own judgment and decision.
3. If you leave the latest position different from initial position, it means you are expose to market risk explained before. You will gain more if you have extra position in the coins and if the coins price is going up. But on the other hand, your BTC equivalent position will get reduced if the coins price drops. *(Please refer to Market Risk in page 12)*

Remarks

1. Please use this as reference. The page might be confused especially when you are running multiple pairs in the same few exchanges. Please check your own position as the finite position in your own account.

ArbitrageWin Attempts Display:

【2019-06】

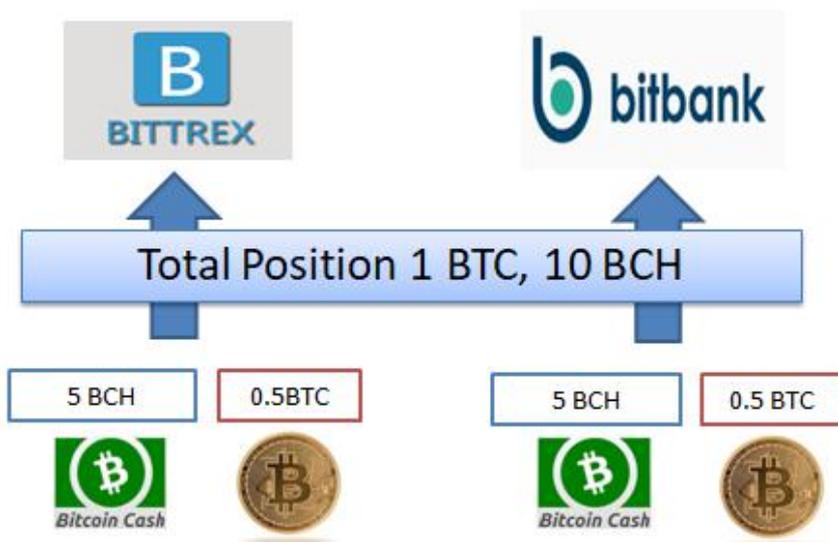
以下の取引ペアを発注したと裁定取引約定総数

BCHBTC	売買: 12441 回	約定: 12 回
ETHBTC	売買: 10134 回	約定: 18 回
LTCBTC	売買: 496 回	約定: 90 回
MONABTC	売買: 9760 回	約定: 634 回
STRATBTC	売買: 32 回	約定: 9 回

This page is to show the record of how many attempts ArbitrageWin is trying to place the order or market making whenever there is arbitrage opportunity. It gives you the ideas on how many time it tries and how many time arbitrage transaction is done.

Arbitrage Starting Approach

1. You have to deposit your existing coins to both Exchanges. In this example, 5 BCH and 0.5 BTC into Bittrex and Bitbank



2. ArbitrageWin try to sell BCH at higher price in Bittrex. At the same time if it is done, ArbitrageWin will place a Buy order to buy back the same amount of BCH coin. Eventually the price difference that captured considered your profit
3. ArbitrageWin repeat process (2) whenever the spreads exists. It may end up with the (4) scenario
4. BCH quantity in Bittrex become zero and BTC increased
5. BTC in Bitbank get reduced as it is used to buy back the BCH.
6. You may see the BTC in total increase as 0.05 BTC as profit.



7. When BCH quantity is zero in Bittrex, it means it cannot perform the sell order in Bittrex even though if there is arbitrage chances in Bittrex. At this point, you may want to transfer the BCH in BitBank to Bittrex so that the arbitrage can be restart again. You may not want to do that if situation change where Bitbank price is higher.

Arbitragewin Logic

2 type of Arbitrage Opportunity that ArbitrageWin is searching for:

1. Existing Arbitrage opportunity
2. No existing arbitrage opportunity but there is a chance to perform market making

Scenario 1:

	Broker1	Broker2	
		102	Best Ask
Best Ask	97		
		98	Best Bid
Best Bid	95		

1. ArbitrageWin will send BUY order to Exchange 1 @ 97
2. Once it get filled, ArbitrageWin send Sell order to Exchange 2 at price 98
3. The profit will be $98 / 97 - 1 = 1.01\%$

Scenario 2:

	Broker1	Broker2	
		102	Best Ask
Best Ask	100		
		98	Best Bid
Best Bid	95		

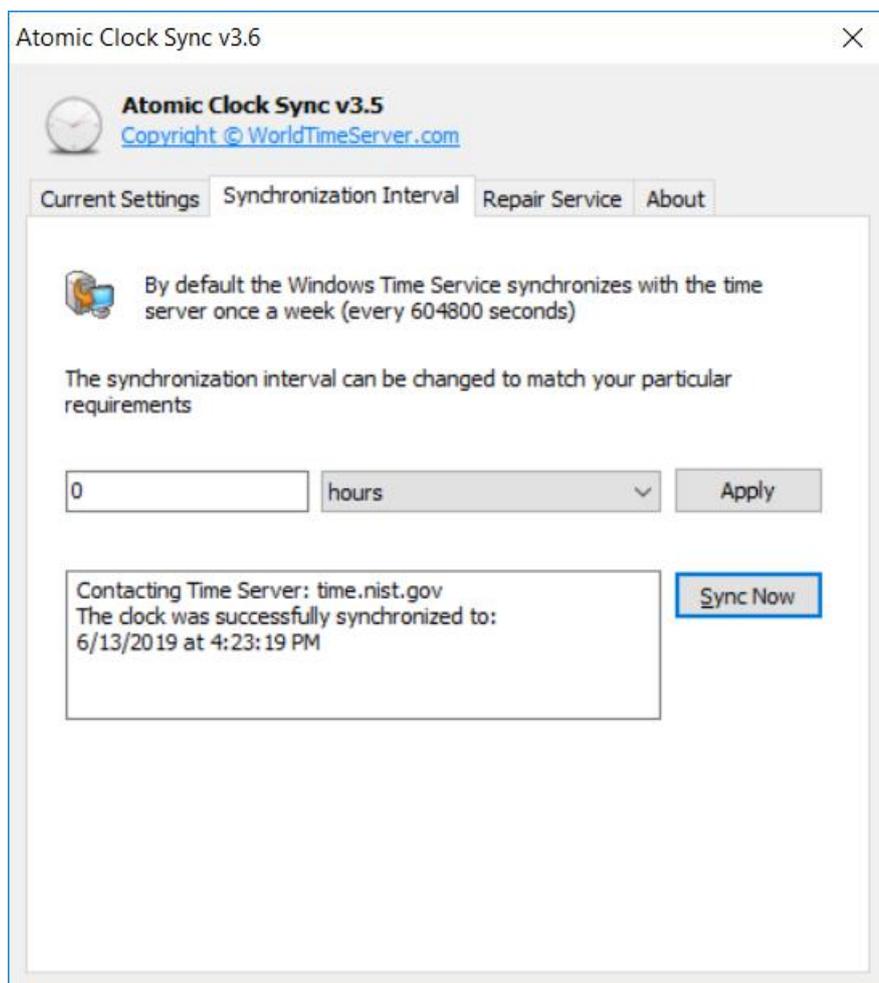
1. ArbitrageWin will send BUY order at price 95.1 in Exchange 1. It waits until the order get filled.
2. Once it is done, ArbitrageWin send SELL order @ 98 in Exchange 2.
3. The profit will be $95.1 / 98 - 1 = 3.05\%$

Atomic Clock Sync

When you run pair using Binance, you may see the 1021 error. This indicate the server time in Binance server has 1 second difference with your Windows time. In order to sync the time between your local machine with Binance, you need to run Atomic that come with the installer.

How to Run:

1. When you install ArbitrageWin, ATOMIC.exe is buddled together. You can see the shortcut in your desktop.
2. Double click on ATOMIC.exe to run.
3. Please go to the following tab as shown below. Put in 1 hour as time interval and click on Sync Now button.



4. Then go to [Repair Service] tab
5. Click on (1) to (5) button as shown below.
6. This will keep the time sync service run back-end and sync the time every 1 hour.

Atomic Clock Sync v3.6

 **Atomic Clock Sync v3.5**
Copyright © WorldTimeServer.com

Current Settings | Synchronization Interval | **Repair Service** | About

 Should you be experiencing problems with the Windows Time Service, it may no longer be installed correctly. The following button steps will likely correct the issue.

1.
2.
3.
4.
5.

If your time service is still not working correctly, it may be due to a windows bug visit this support page for for a step-by-step guide

[Advanced time-server trouble-shooting](#)

免責事項

取引における免責事項

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ソフトウェア免責事項

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