AmiBroker 2.00 - Guide

COLLABORATORS

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Contents

Chapter 1

AmiBroker 2.00 - Guide

1.1   AmiBroker 2.00 On-Line Documentation

```
                                            AmiBroker 2.0
                        ----------------
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                      All rights reserved.
```

This file describes stock analysis program AmiBroker 2.0.

```
            Disclaimer & Legal stuff
            . . . . from the author

            Distribution
             . . . . . . . . . about copying and distribution


            Introduction
             . . . . . . . . . what is this program for ?

            Main features
            . . . . . . . . . list of main features

            Requirements
             . . . . . . . . . what do you need to run AmiBroker ?

            Installation and running
           . . . . how to get started


            What's new
            . . . . . . . . . . . . . news & improvements list


            Windows
            . . . . . . . . . . . . description of windows
```

```
Menus
. . . . . . . . . . . . . . description of menu items

Gadgets
. . . . . . . . . . . . . description of gadgets in ToolBar


Technical indicators
 . . . . . short guide to technical analysis


ARexx
. . . . . . . . . . . . . . ARexx commands on-line reference


Registration
 . . . . . . . . . How to register ?

Registration form
. . . . . . . ready to print :-)

Next release
. . . . . . . . development plans

Getting contact with author
. . my contact address

Thanks
 . . . . . . . . . . . . . greetings list
```

1.2 index

```
Add a stock

Menu

ARexx commands

Menu/Analysis

Author's Address

Menu/ARexx

Charts: CCI

Menu/Charts

Charts: Drawing Tool

Menu/Help
```

1.3 DISCLAIMER & LEGAL STUFF

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EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE. THE ENTIRE RISK TO USE,
RESULTS AND PERFORMANCE OF THE PRODUCT IS ASSUMED BY YOU.

            AmiBroker executable and related files are

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that means you may use, copy and transfer unregistered version of product
in complete, unchanged form.
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IS DISTRIBUTED WITH REGISTERED VERSION.
YOU MAY NOT DECOMPILE, DISASSEMBLE OR ATTEMPT TO UNLOCK OR BYPASS ANY
USER ACCESS LIMITATION INCLUDED WITHIN THIS PRODUCT.

```
            AmiBroker uses ReqTools library which is
                 Copyright (C) Nico François.
```

1.4 Distribution

```
The main 'place' of distribution of this program is AmiNet.
You can find the most recent version of AmiBroker in your
nearest AmiNet mirror in 'misc/biz' directory.

The most recent AmiBroker upgrades are avaliable from AmiBroker WWW Page:

http://plukwa.pdi.net/AmiBroker/

(this URL may change in the future)

see also ftp sites:

ftp://plukwa.pdi.net/AmiBroker/
or
ftp://ftp.pwr.wroc.pl/pub/amiga/AmiBroker/


------------------------------------------------------------------------

You are allowed to copy/distribute this product in complete, unchanged form
as long as the copying fee does not exceed the cost of media.

YOU ARE NOT ALLOWED TO COPY, RENT OR LEASE KEYFILE 'broker.key' WHICH
IS DISTRIBUTED WITH REGISTERED VERSION.

If you like this program you should register by sending me proper
registration form and registration fee (15 USD).
```

1.5 Introduction

```
            AmiBroker is the program for analysing stock trends and portfolio
management. Since it was written in Poland, it was designed to
meet Warsaw Stock Exchange (WSE) trading requirements.
I realize that WSE rules could be very different from other countries'
exchange circumstances. So, when you find this program useful, and
want to register, please describe your requirements to help me meet your needs.

Version 1.6 introduced powerful ARexx command set which allows writing custom
scripts for quotation import. There is also ASCII import feature suitable
for most users.

See also:
                Main features
```

1.6   What's new in 2.0?

In version 2.0 of AmiBroker several things have been added:

- weekly and monthly charts generated from daily data
- support for non-integer amounts of shares in portfolio
  (suitable for investment founds)
- enhanced split feature: now non-integer splits (e.g. 2->3) are supported
- quarterly and annual yields in review window
- net yield in portfolio
- toolbar help hints ('bubble' help system) implemented
- data loading and saving 3 times faster !!!
- fourth market support in Stock Info and Review Windows

1.7   Main features of AmiBroker

 These are the main features of AmiBroker

1\textdegree{} Full technical analysis of stock trends - charts including:

   - daily/weekly/monthly charts
   - price
   - candlesticks (for open/close/high/low display)
   - volume
   - turnover value + moving average (NEW)
   - short-time, mid-time (NEW), long-time moving averages
   - Bollinger bands
   - Rate Of Change indicator (ROC)
   - Wilder's Relative Strength indicator (RSI)
   - Moving Average Convergence-Divergence oscillator (MACD)
   - On Balance Volume oscillator (OBV)
   - Stochastic Slow oscillator
   - Ultimate oscillator
   - risk/yield map with zooming (NEW)
   - Relative Strength (RS) with selectable reference stock (NEW)
   - Triple exponential indicator (TRIX)

   * Drawing tool for trendlines etc.
   * Zoom feature
   * All charts freely scalable ;-))

2\textdegree{} Stock information handling

   - adding new & removing old stock issues
   - split handling with automated date/ratio detection
   - corporation finaces database
   - fundamental indicators such as price-to-earnings ratio (P/E)

3\textdegree{} Convenient quotation data entry

   - configurable ASCII import feature
   - (NEW) ARexx commands for adding new quotation data
   - database with open/close/high/low prices

```
    - import from teletext ( Warsaw Stock Exchange specific )
    - import from KING-service ( WSE specific )
    - manual entry
    - removing selected quotation
```

4\textdegree{} Preferences editor:

```
    - fully customizable parameters of indicators
    - screen resolution and palette prefs
    - snapshot windows feature (NEW)
```

5\textdegree{} Portfolio management

```
    - buy/sell transactions handling
    - dividend (with setable dividend tax)
    - pay-in/pay-out evidence
    - brokerage commission editor
    - stock adding/removing
    - portfolio contents printing & export
```

6\textdegree{} SPEED !!!

```
    - chart drawing is extremely fast ( LESS THAN 1 SEC on stock A1200)
    - turbo-charged version for 68020+68881 8-))
      ( 50-300% speedup!!!)
```

7\textdegree{} ERGONOMY !!!

```
    - all or any selected number of charts can be viewed at the same time
    - instant access to any quotation data be selecting interesting point on the  ←
       chart
    - window auto-arrangement function
    - asynchronous design, all main windows are independent and can be opened
      at the same time
    - context-sensitive on-line help
    - toolbar help hints
```

8\textdegree{} ARexx

```
(NEW) Powerful set of ARexx commands providing total control over quotation
      database. (introduced in version 1.6)
(NEW) Script execution via function keys and menu-items
```

9\textdegree{} OS support

```
    - works on any kind of monitor - user selectable screen resolution/monitor ( ←
       now works even better)
    - fast-access, 8-color ToolBar providing main functions of the program
    - (NEW) AmiBroker now opens public screen allowing visitor windows to be  ←
       opened on.
    - (NEW) Interleaved bitmaps and up to 8 bitplanes screen
```

1.8 Program requirements

```
Minimum system:

   - any Amiga, 2MB RAM minimum
   - OS 2.04 or better
   - harddisk


Preffered system:

   - A1200 or better, 4MB RAM or more
   - 68030 or better, FPU
   - Hard disk
```

1.9 Installation and running

```
You can install AmiBroker with 'Install-AmiBroker' script. You will need
Installer program from Commodore (not included in this distribution).
If you have one, just double click on 'Install-AmiBroker' icon.
If you don't have Commodore's Installer program you will have to install
AmiBroker files manually.

These are the things you have to keep in mind doing manual installation:

1\textdegree{} Following files must be placed in AmiBroker main directory:

    - AmiBroker              ( program itself CPU=68000+ )
    - AmiBroker.FPU          ( program itself CPU=68020+ FPU=68881+ )
    - broker.prefs           ( preferences file - optional )
    - broker.portfolio       ( portfolio data file - optional )

2\textdegree{} In the 'data' subdirectory files containing qutation data must be  ←
   placed

    - data/AGROS
    - data/AMERBANK
    - data/BIG
    - data/BRE
    ... itd.

3\textdegree{} You will need following libraries installed in LIBS: directory:

    - diskfont.library
    - reqtools.library       ( version 38+)

   These libraries are required but not included in this distribution.

4\textdegree{} And following fonts in FONTS: directory:

    - XenPL.font
    - XenPL/8
    - XHelveticaPL.font
    - XHelveticaPL/11
```

Once you have installed the program you can run it by double-clicking
on its icon (AmiBroker or AmiBroker.FPU if you've got math co-processor)

1.10   AmiBroker main Windows

AmiBroker can open following windows:

Toolbar
. . . . ToolBar with fast-access gadgets

Select
 . . . . global stock name selector

Information
. . . . . information about corporation

Preferences
 . . . . chart preferences

Portfolio
 . . . . . . portfolio management window

Financial data
. . financial data entry window

Install ARexx macros
. install macros window

Review
. . . . review of daily quotes/returns/ P/E and P/BV

Main chart
 . . . with price, volume, etc.

Turnover
. . . . turnover/volume bar chart

ROC
 . . . . Rate Of Change chart

RSI
 . . . . Wilder's Relative Strength Index chart

MACD
. . . . MACD chart

OBV
 . . . . On Balance Volume Chart

Stochastic Slow
 . . Lane's Stochastic Slow chart

Ultimate

. . . . . . Ultimate indicator chart

Risk/Yield
. . risk/yield map

RS
. . . . Relative Strength compared to market index

TRIX
. . . . TRIX chart

Chart windows are freely scalable and can be automatically arranged (see

preferences
settings).

All this windows are asynchronous i.e. you can open as many windows as you like, and work with all of them at the same time.

If you select a stock in
Select
window all opened charts
will be redrawn.

1.11 ToolBar window

In Toolbar window there are several icons providing fast access ↩
to main
functions of th program:

– open
Main chart
window
– open
Turnover
bar-chart window
– open
MACD
chart
– open
RSI
chart
– open
ROC
chart
– open
Stochastic Slow
chart
– open
OBV
chart
– open
Ultimate
chart

– open

RS
chart
– open

TRIX
chart
– open

CCI
chart
– open

risk/yield map
– select normal pointer
– select

drawing tool
pointer

–

zoom chart
–
import from ASCII file
–
import from teletext
–
manual entry
– open
information about corp.
window
– add a

new stock
–
remove stock
–
split
– open
financial data
window
– arrange chart windows
– screen mode prefs
– palette prefs
– chart

preferences
– open
portfolio management
window
– open

review window
– quit AmiBroker

1.12 Drawing Tool

With the drawing tool you can draw trendlines by hand.
To draw a line simply press left mouse button, move
pointer to desired point and then release button.
To cancel drawing simply press ESC key or move pointer outside

the window.

1.13 Chart zooming

You can change number of displayed quotations by this gadget.
First click on the chart to select the beginning session, then press
this gadget.
To restore preferences' setting just click this gadget again.

You can also view all available quotations (zoom-out feature)
by selecting this gadget together with SHIFT key.

1.14 Select window

In this window we have got list of available stocks & indexes.
Selecting one of them will refresh all opened charts and update
information windows.

This selection is global for the program i.e. all stock functions will
reference stock selected in this window.

1.15 Portfolio management window

There are following items in the portfolio management window:

– portfolio stock list
– text fields containing date, quantity, buy price, current price, value,
  yield, and 'real' yield (this is yield minus commision)
– total stock value
– cash remaining
– total portfolio value

Following actions could be taken:

– Buy stocks – you will be asked for confirming stock selection and price
  and then you will be asked for a number of stocks you want to buy.

– Sell stocks – as before except of the fact that you have to choose the stock
from the _portfolio_ stock list.

– Dividend – after selecting that gadget you will be asked for dividend value
per one share. Program will calculate total dividend value minus income tax.

– Pay in
– Pay out

You can enter commission taken by all buy/sell transactions in

commission
window.

1.16   commission table

In this window you can enter commission taken by buy/sell transactions.
commission are in % of value of trade.

1.17   Quotation manual entry window

Manual entry of quotations isn't the most convenient method.
Polish users can import quotations from teletext and KING service.
Foreigners may use
ASCII import
feature .

If you must enter quotations by hand here's the instruction:

After selecting 'manual entry' option you will be asked about the session
date. If one exists in the database you will be able to modify existing
quotations, if not - program will add new session to its database.

After selecting session's date, the window with following fields will show up:
- Pick - gadget which picks current stock name from stock list
- Stock name
- Price entry gadget (closing price)
- Turnover value entry gadget
For continous quotations you get also
- Opening price gadget
- Day's highest price
- Day's lowest price

By default program will start from the first stock in the list, however you
can change edited stock name using 'Pick' gadget.

You can enter stock price using price entry gadget, and turnover using
next gadget. Please remember that turnover MUST be entered in thousands
of your currency. (For example if turnover value is 123200 please enter
123.2 or simply 123)

When continous quotations are enabled you will be asked for volume (not for ↩
   turnover)
You should then enter the number of shares.
You should also enter open, high and low prices into appropriate gadgets.

As you accept your entries with >TAB< key program will proceed to
the next stock in the list. (Tab-Cycle activation)

You can accept all your entries by hitting OK gadget or cancel all by
selecting >Cancel<

1.18   Financial data window

This window provides fundamental financial data of corporation as:

- sales income
- earnings before taxes (EBT)
- earnings after taxes (EAT)

These are given in a quarter base.

Program will compute P/E (Price to Earnigs ratio) and EPS (Earnigs Per Share)
indicators from given data.

1.19   Install ARexx macros

This window allows to assign particular ARexx scripts to
function keys and menu items.

Just type script name (with optional path), or use file-requester to
do this for you.

CAUTION:

DUE TO THE WAY THE AREXX WORKS, SCRIPT NAME WITH PATH COMPONENT
CAN NOT CONTAIN ANY SPACES!!!!

1.20   Main chart window

                    Here we have price chart along with (as set in
                    preferences
                    window):

- turnover/volume bar chart
- short time moving average chart
- mid time moving average chart
- long time moving average chart
- Bollinger bands chart

On the X axis months are given and on the Y - prices.
Price scale could be linear or logarithmic.

There is one important feature of this window - if you click on the chart
you will get access to any displayed quotation - following
items will be displayed on the title bar:

- date
- price
- additional infos (WSE related) (nk, ns, rk, rs, ok, os)
- percentage price change
- turnover value/volume

When continous quotations are enabled you will get following items on title bar:

```
- date
- close
- percentage closing price change
- high
- low
- volume
```

By default last quotation's data are displayed.
You can switch this cursor-line by click outside the chart but within the window.

1.21   Turnover volume/value chart

This window contains turnover volume or value chart.
Which of these depends on your settings in
preferences
window.

With version 1.7+ you get also moving average for volume/turnover.

CAUTION: For continous quotations turnover value is approximate.

1.22   Information about corporation

This window provides several infos about corporation:

Short name   - th short form of firm name, used in 'Select' window and
                   with quotation import functions. If you use them, please check
                   if Short name given in this field is the same as used in ←
                       Teletext
                   service. (this is WSE specific feature)

Full name   - official version of firm name

Code   - stock code (WSE specific)

Address   - corporation address

Issue   - total number of shares

Nominal value

Book value

Information about that if given firm is on primary or secondary market.

Continous quotation mode (this enables candlestick charts and manual entry
open/high/low/volume gadgets and candlestick charts)
- this is oposite to price fixing.

1.23 Preferences window

This window provides following chart settings:

For

main chart
we've got

- fat/thin price line switch
- mark individual quotations on/off switch
- logarithmic scale on/off switch
- add turnover/volume chart
- add short-time moving average chart
- add mid-time moving average chart
- add long-time moving average chart
- add Bollinger bands

Ranges of moving averages and width of Bollinger bands are also definable.

For other charts:

ROC
 - range

RSI
 - range

MACD
- fast and slow average range, signal average range

Stochastic Slow
- range

Ultimate
- fast, medium and slow average range

TRIX
- averaging range

CCI
- range

Turnover
- value/volume switch
Turnover moving average range

Relative Strength
comparision base (reference stock)

Additional options:

Auto-arrange charts - if this option is on chart windows are scaled and arranged
to fit the screen after every opening/closing chart window.

Number of quotations – sets maximum displayable quotation qty.

Limit number of saved quotations – if this option is ON AmiBroker will save
database with limited number of quotations. This prevents the database from
growing too much

Max. number of saved quotations – this is the limit itself. Preferable 300 or ↩
    higher.

Colors:

  These gadgets provides user definable color selection for charts, grid & ↩
    background.

1.24   Review window

This window provides overall market informations like:

– daily stock quotes in two formats
  a) Polish (close prices only)
  b) International (close/high/low + volume, continous trading)

– weekly returns comparision table
– monthly returns comparision table
– quarterly returns comparision table
– yearly returns comparision table

– Price/Earnings comparision
– Price/Book value comparision

'Pick' gadget picks current date (selected on the chart)

'Save' asks for file name and saves the list
'Print' prints displayed list
'Cancel' closes the window without any action

1.25   Technical indicators

In AmiBroker there are following technical indicators:

ROC
 . . . . Rate Of Change

RSI
 . . . . Wilder's Relative Strength Index

MACD
. . . . Movinga Average Divergence/Convergence

```
            OBV
             . . . . . . . . On Balance Volume

            Stochastic Slow
             . . Lane's Stochastic Slow

            Ultimate
            . . . . . Ultimate Indicator

            RS
            . . . . . . . . . Relative Strength compared with index

            TRIX
            . . . . . . . . TRIple eXponential oscillator

            CCI
             . . . . . . . Commodity Channel Index

 and moving averages, Bollinger bands and
            risk-yield map
                .
```

1.26   ROC - Rate Of Change

```
            ROC - Price Rate Of Change
```

   This indicator displays the rate-of-change of a security's price.
   Change is displayed as a percentage rather than as a ratio.
   Both look at today's price in comparison to the price "n" days ago.
   Prices tend to increase and retract in a cyclical wave like motion.
   The faster prices fall, the faster the rate-of-change will fall
   and the faster prices rise, the faster the ROC will rise.
   This indicator is usually displayed as an overbought/oversold format.

   Calculate the price rate-of-change by dividing the price change over
   the last n-periods by the closing price n-periods ago. This gives you
   percentage that the price has changed in the last n-periods.

   Note: You can change value of "n" in
            preferences
            window.
        Default value of ROC's n = 10.

1.27   RSI - Wilder's Relative Strength Index

```
            RSI -  Relative Strength Index
```

   The Wilder RSI is an excellent overbought/oversold indicator that can
   be used to predict trend reversal points. Do not confuse this index

with relative strength in its everyday definition as used in comparing
the movement of one security, index or group against the movement of
another security, index or group. Developed by J. Welles Wilder, Jr.
and first described in his book "New Concepts in Technical Trading
Systems", this is a momentum oscillator that measures the velocity of
directional price movement. It compares a stock's highest highs and
lowest lows over a period of time. RSI is based upon the difference
between the average of the closing price on up days vs. the average
closing price on the down days.

```
        RSI=100-[100/(1+U/D)]
  U=average of upward price closes   (EMA of gains)
  D=average of downward price closes (EMA of losses)
```

The ratio between up and down closing averages is in fact the makeup
of the index. The author (Wilder) uses an n value of 14 days but other
values may be used that better fit particular securities.

When the graph exceeds 70, stock can be near a top. When the RSI gets
close to 30, stock may be forming a major bottom. - Support and
resistance may many times show up on the index before they appear on
the bar charts. Divergence between the RSI index and price movement is
a strong indicator of a possible correction as when the price
continues to rise and the RSI is declining. If the price of the stock
continues to fall, but the RSI rises, look for a possible correction
in the price direction. Failure swings above 70 or below 30 can also
be very strong indicators of a price reversal.

```
Note: You can change value of RSI averaging range in
             preferences
             window.
      Default value of RSI's n = 9.
```

1.28 Relative Strength

```
 RS -  Relative Strength
```

  Compares the performance trend of a stock or industry group relative
  to another stock, group or index. This comparison removes the emotion
  from the marketplace. Many times a drop in relative strength can
  indicate a coming drop in actual price of the security. Do not confuse
  with Wilders's RSI.

  The concept is to identify which stock or market sector is performing
  the best. Assuming that trends will continue to persist for some time,
  it is more probable that before a stock price will drop sharply it
  will first loose relative strength against other stocks. This would
  indicate a sell prior to such a price drop. An increase in relative
  strength does not necessarily indicate that the index is heading up,
  but it does signal a buy alert.

1.29 TRIX

TRIX - TRIple eXponential

  TRI-ple eXponential. TRIX displays the % rate-of-change of a triple
  exponentially smoothed moving average of the closing price of a
  security. (Calculated as a one period rate of change of the third
  exponential moving average pass of the closing price). Designed to
  filter out insignificant cycles - those smaller than the number of
  moving averages specified. Trades should be placed when the indicator
  changes direction.

1.30 MACD

                    MACD - Moving Average Covergence/Divergence

 This indicator uses three exponential moving averages, a short or fast
  average, a long or slow average and an exponential average of their
  difference, the last being used as a signal or trigger line. To fully
  understand the basics of MACD you must first understand simple moving
  averages. The Moving Average Convergence/Divergence indicator measures
  the intensity of public sentiment and is considered by Gerald Appel,
  its developer, to be a very good indicator signaling market entry
  points after a sharp decline. This indicator reveals overbought and
  oversold conditions and generates signals that predict trend or price
  reversals. It provides a sensitive measurement of the intensity of
  public sentiment and can be applied to the stock market, to individual
  stocks or to mutual funds. In some instances, it an can provide
  advance warning of reversals allowing you to buy into weakness and
  sell into strength.

  Note: You can change parameters of MACD averaging ranges in
               preferences
                         window.
        Default values are fast avg. = 12; slow avg. = 26; signal = 9

1.31 OBV

OBV - On Balance Volume,

  OBV was created by Joe Granville, the father of OBV analysis. This is
  a running total of volume that relates price changes and volume and
  shows accumulation and distribution action.

  The classic OBV is calculated by ADDING today's TOTAL VOLUME to a
  cumulative total when PRICE CLOSES HIGHER than YESTERDAY'S close and
  SUBTRACTING today's TOTAL VOLUME from the cumulative when the PRICE
  CLOSES LOWER than YESTERDAY'S close. If price remains the same, then
  the OBV is not changed. The actual amount of the price change is
  irrelevant and only the direction of change is significant for these
  calculations.

This indicator defines trends by showing underlying strength of price
movements over time. A solid price trend is assumed to be accompanied
with a stronger volume movement in the same direction. OBV analysis
assumes that volume trends lead price trends and that OBV changes
generally precede price changes.

Look for divergence or non-confirmation between price and volume
movements. A stock that is trending in an upward direction and starts
to experience higher volume on days of lower closing prices usually
indicates an end to the current trend. Look for changes or breakouts
in OBV trends. Sell short when the OBV makes a downside breakout and
buy long when the on OBV upside breakouts.

1.32   Stochastic slow

Stochastics is an oscillator that measures the position of a stock or
security compared with its recent trading range indicating overbought
or oversold conditions. It displays current day price at a percentage
relative to the security's trading range (high/low) over the specified
period of time. When the closing price is near the top of the recent
trading range (above 80%), the security is in an overbought condition
and may signal for a possible correction. Oversold condition exists at
a point below %20. Prices close near the top of the range during
uptrends and near the bottom of the range during downtrends.

$$
\text{Fast Stoc} = \%K = \frac{(\text{today's close})-(\text{low price in period n})}{(\text{high price in period n})-(\text{low price in period n})} \times 100
$$

In a Slow Stochastics, the highs and lows are averaged over a slowing
period. The default is usually 3 for slow and 1 (no slowing) for fast.

The line can then be smoothed using an exponential moving average,
Weighted, or simple moving average %D. Confirming Buy/sell signals can
be read at intersections of the %D with the %K as well.

1.33   Ultimate

Ultimate Oscillator –
this indicator is a combination of three moving averages each of different
range and weight. The purpose for that is to make it more reliable.
Oscillator swings above 50% line are buy signals, and falls below 50% line
are sell signals. You can also look for the support and resistance lines.

1.34   cci

CCI – Commodity Channel Index

A price momentum indicator developed by Donald R. Lambert – It

measures price excursions from the mean price as a statistical
variation. The indicator works well with commodities, stocks and
mutual funds. Can be used to look for divergences between the
indicator and price and also as a overbought/oversold indicator. A buy
is registered when it crosses the -100 line, moving up, and a sell
when it crosses +100 from above.

1.35   Risk-Yield Map

This map provides fast information about risk and possible yields.
Risk is calculated as standard deviation of weekly yields.
On the X axis risk is presented and on Y axis - yield.

Thus in the upper part of the map we've got stocks with giving best yield,
with risk increasing from left to right side of the map.

With version 1.7+ selected stock is marked with a different color, and you
can zoom the part of the map by pressing left mouse button and marking
rectangle to zoom in.

1.36   Main Menu

There are following menu items in main menu:

Program

Stock

Quotations

Charts

Portfolio

Preferences

ARexx

1.37   Program menu

Here we've got following items:

About...   - general program info (ARexx port name, Public screen name)
Registration   - how to register
Database status   - gives you some useful information about database
Save database   - save changed quotation database
Quit   - exits the program

1.38   Stock menu

Here following items come :

Add new...

Remove

Stock split

Company's info

Financial data

1.39   Quotations Menu

Here we've got:

Import ASCII

Import from KINGa

Import from teletext

Manual entry
Remove quotation   – removes quotation of single stock
 Remove session   – removes quotations of all stocks in given date

1.40   Charts Menu

There are following items:

 Arrange   – scale/arrange all chart windows

Main chart

Turnover

ROC

RSI

MACD

OBV

Stochastic Slow

```
                    Ultimate

                    Relative Strength

                    TRIX

                    Risk-yield map
```

1.41 Analysis menu

```
                    Here we've got 4 items:

- Weekly returns comparision
- Monthly returns comparision
- Price/Earnings comparision
- Price/Book value comparision

 All these items open
                    Review
                    window which
enables you to view, save and print market comparision tables.
```

1.42 Portfolio menu

```
                    Here we've got 5 items:


                    Portfolio management

                    Commission table
                    Income tax     - this sets (dividend) income tax

Add stock      - add specified number of shares without changing cash
Remove stock   - removes specified shares without changing cash

Print          - this print the contents of portfolio
Export ASCII   - this saves contents of portfolio in ASCII file
```

1.43 Preferences menu

```
                    Preferences

   - Main chart     - invokes main chart
                    preferences
                       - Other charts   - invokes other charts
                    preferences
```

```
                    – Colors        – invokes color
            preferences
                – Misc settings  – invokes misc.
            preferences
                – Palette        – invokes palette requester
  – Screen mode    – invokes scren mode requester
  – Snapshot windows – this saves current windows setup and positions
  – Save           – save changed preferences to the disk
```

1.44 ARexx menu

```
            Install ARexx macros – this brings you
            Install ARexx macros
                                    window
```

Custom ARexx scripts 1..10

1.45 Help menu

```
This menu provides fast access to several important pages of AmigaGuide
help file (AmiBroker.guide).
You can also get help on particular menu item or window using context–
sensitivity feature.
All you have to do is to select window or menu item and press HELP key.
```

1.46 Import from teletext

```
AmiBroker can import quotation data from teletext data file.
Unfortunatelly this is a Warsaw Stock Exchange (WSE) specific feature.
Thus this option is unusable for non–Poles ( SORRY ).

Other import functions will be added upon request. So let me now what you need.
```

1.47 Import ASCII

```
Version 1.6 introduces easy and flexible quotation import feature.
The format of ASCII data file is very simple (take a look at example files
in 'Examples' subdirectory).

ASCII stock data file format description:

1\textdegree{} Every line starting with * (asterisk) or ; (semicolon) or "#" ( ↩
   hash)
   is treated as a comment and ignored by the program
```

2\textdegree{} Every line starting with command is interpreted in special way, ←
   commands start
   with '$' sign. Currently AmiBroker recognizes 2 special ASCII import commands:

   a) $NAME – sets stock name

      Example: $NAME APPLE

      This is effective until changed with next $NAME command

   b) $FORMAT – defines quotation data format

      Allowable parameters:

```
            DATE_USA – date in US format: MM-DD-YY
            DATE_CDN – date in Canadian format: DD-MM-YY
            DATE_INT – date in international format: YY-MM-DD

            VOLUME   – volume of trade                  \
            VOL1000  – volume in thousands of shares    – choose only one of ←
                these
            VOLMIL   – volume in millions of shares    /
            OPEN     – opening price
            CLOSE    – closing price
            HIGH     – highest price
            LOW      – lowest price
```

      DATE_xxx field is obligatory and must come first in the line.
      You can use '-', '/' or '\' as day/month/year separators, or omit ←
         separators
      at all.
      Examples (for December 5th, 1995):

```
            DATE_INT:      95-12-05 or 95/12/05 or 95\12\05 or 951205
            DATE_CDN:      05-12-95 or 05/12/95 or 05\12\95 or 051295
            DATE_USA:      12-05-95 or 12/05/95 or 12\05\95 or 120595
```

      After that you can provide VOLUME, OPEN, CLOSE, HIGH and LOW fileds in ANY ←
        order,
      but remember that this should conform your data format.
      You don't have to specify any of OPEN, HIGH or LOW.
      Only CLOSE and VOLUME must be provided.

      Example: $FORMAT DATE_INT VOLUME OPEN CLOSE HIGH LOW

          or

          $FORMAT DATE_CDN CLOSE VOL1000

3\textdegree{} AmiBroker recognizes decimal as well as true fractions in price ←
   data. True fractions
must follow the whole value after at least single space. For example you can ←
   specify:

   5.33
or
   5 1/3

AmiBroker in not limited to any kind of fraction, if you wish you can write ↩
    even: 5 333/999

1.48   Import from KING service

AmiBroker can import quotation data from KING data file.
Unfortunatelly this is a Warsaw Stock Exchange (WSE) specific feature.
Thus this option is unusable for non-Poles (SORRY).

Other import functions will be added upon request. So let me now what you need.

1.49   Adding a new stock

After selecting this function you will be prompted for new stock name.
This name is a short form of the firm. Please try not to exceed 15 chars.
For proper import functioning you should enter the name with CAPITALS.

1.50   Removing a stock

After choosing this function you will be asked for confirmation of
stock removing. Note well that this operation can not be undone !!!

1.51   Split a stock

This option provides easy way of handling stock splits.
Program will try to guess split date and ratio by analysing quotations.
If there is just a single quotation after split this should work, if not
you will be asked for split date and ratio.
Note well that this operation can not be undone !!!

From version 2.0 and up the split function offers more functionality:
you can use old-style ratio or you can specify a split using following
expression:

x->y

which means that x shares before split become y after it.

For example 2->3 means that 2 shares become 3 after the split.
So ordinary split into five pieces will be
1->5

As you have probably guessed it is possible now to perform reverse-split,
for example 2->1, which means that 2 shares are joined together into 1 share.

1.52   ARexx On-line reference

AmiBroker has built-in ARexx port with powerful command set which enables
you to write your custom scripts performing different tasks.

Sample ARexx script is included.

AmiBroker ARexx port is accessible by name "AMIBROKER.x" where x is 1,2,3, ...

Actual port name can be found in 'About' requester, but in most cases
you can assume that port name is "AMIBROKER.1".

When using any of the AmiBroker's internal commands (descibed below)
please keep in mind that ARexx commands are parsed twice: first by ARexx
server while interpreting the script, second by AmiBroker using the
dos.library/ReadArgs(). Please then, put the commands into sigle quotes
and double-quote this parameters which include spaces to prevent
from regarding them as string delimiters.

Example: 'REQUEST BODY="This is example" TITLE="Title with spaces" BUTTONS="Yes| ↩
   Oh no" '

AmiBroker passes command results to your script using special ARexx variable
RESULT. Error code is passed in RC variable, possible values of error code are:

```
   0 - success
   5 - warning
  10 - error
  20 - fatal error
```

AmiBroker internal commands description in alphabetic order:

```
Command:       ADDQUOTATION
Template:      STOCK/A,DATE/A,PRICE=CLOSE/A,OPEN/K,HIGH/K,LOW/K,VOLUME/K

Function:      Add a quotation to the database. If selected quotation already
               exists this function modifies existing price/volume data.
               STOCK  - (STRING) specifies stock name (case sensitive)
               DATE   - (STRING) YY-MM-DD, quotation date
               CLOSE  - (FLOAT)  closing price
               PRICE  - synonym to CLOSE
               OPEN   - (FLOAT)  opening price
               HIGH   - (FLOAT)  day's high
               LOW    - (FLOAT)  day's low
               VOLUME - (INT)    volume of trade

               This function will fail if there's no stock with specified name -
               use ADDSTOCK to add new stock name to the database.

               This function does NOT refresh the charts.
               Use REFRESH or ARRANGE to do that.

               ******************     CAUTION !  ************************
```

```
                    The parameter template for this command has changed in 1.7
                    Pre-1.7 scripts using keywords will work OK, but other will not.
```

```
Command:        ADDSTOCK
Template:       NAME=STOCK/A,CONT/S


Function:       Add a new stock to the database
                STOCK - (STRING) defines stock name (case sensitive)
                NAME  - synonym to stock
                CONT  - switches continous quotation mode on.
```

```
Command:        ARRANGE
Template:       -none-


Function:       Arrange and refresh all opened chart windows
```

```
Command:        ASK
Template:       STOCK/K,DATE=QUOTATION/K


Function:       Ask whether given stock/quotation exists in the database
                STOCK - stock name to search for
                DATE  - date of quotation to search for

                You can check only if given stock exists using this without
                DATE parameter.

                Returns 0 if given stock/quotation doesn't exist in database
                or      1 if it exists
```

```
Command:        DATABASE
Template:       CHANGE/S,NOCHANGE/S,SAVE/S,STATUS/S


Function:       Database control
                CHANGE   - switches database status to 'changed'
                NOCHANGE - switches database status to 'not changed'
                SAVE     - saves database to disk (if changed)
                STATUS   - query for database status, returns
                             1 - if database has been changed
                             0 - if database has not been changed

                Note: to force saving use: 'DATABASE CHANGE SAVE'
```

```
Command:        DEBUG
Template:       ON/S,OFF/S


Function:       Switch ARexx debug messages. If ON error/warning messages
                will be displayed in appropriate requester.
```

```
--------------------------------------------------------------------------------

Command:        GETQUOTATION
Template:       STOCK/A,DATE/A,PRICE=CLOSE/S,OPEN/S,HIGH/S,LOW/S,VOLUME/S

Function:       Get quotation data.
                STOCK  - (STRING) specifies stock name (case sensitive)
                DATE   - (STRING) YY-MM-DD, quotation date
                CLOSE  - get closing price
                PRICE  - synonym to CLOSE
                OPEN   - get opening price
                HIGH   - get day's high
                LOW    - get day's low
                VOLUME - get volume of trade

                Result: string containing selected data in this order
                <close> <open> <high> <low> <volume>
                with single space between actual numbers

 Example:       GETQUOTATION STOCK=APPLE DATE=96-01-03 CLOSE
                This will return closing price only

                GETQUOTATION STOCK=APPLE DATE=96-01-03 CLOSE VOLUME
                This will return closing price and volume number

--------------------------------------------------------------------------------

Command:        GETSELECTED
Template:       STOCK/S,DATE/S

Function:       Get selected stock name or quotation date
                STOCK - gimme selected stock name
                DATE  - gimme selected quotation date

--------------------------------------------------------------------------------

Command:        IMPORT
Template:       ASCII/S,TELETEXT/S,KING/S,FILE/K

Function:       Import quotation data from a specifed file.
                ASCII    - selects ASCII import mode
                TELETEXT - selects TELETEXT mode (Warsaw Stock Exch.)
                KING     - selects KING mode (WSE)

                FILE     - (STRING) specifies file name. If none specified
                             bring up file requester.

--------------------------------------------------------------------------------

Command:        QUIT
Template:       FORCE/S

Function:       Quit the program.
                FORCE/S   - supress requester asking for confirmation

--------------------------------------------------------------------------------
```

```
Command:        REFRESH
Template:       -none-

Function:       Redraw all opened charts

-----------------------------------------------------------------------

Command:        REMQUOTATION
Template:       STOCK/A,DATE/A

Function:       Remove specified quotation of stock.
                STOCK - (STRING) stock name (case sensitive)
                DATE  - (STRING) quotation date (yy-mm-dd)

                This function does NOT refresh the charts.
                Use REFRESH or ARRANGE to do that.

-----------------------------------------------------------------------

Command:        REMSTOCK
Template:       NAME=STOCK/A

Function:       Remove specified stock from the list
                STOCK - (STRING) stock name (case sensitive)
                NAME  - the same as STOCK (synonym)

                CAUTION!
                This function can NOT be undone. It removes all stock data
                from memory AND from the disk!!! Make sure that you know
                what you are doing !!!

-----------------------------------------------------------------------

Command:        REQUEST
Template:       BODY/A,TITLE/K,BUTTONS/K

Function:       Show 'easy' requester.
                BODY/A    - (STRING) defines requester body text. Multiple
                            lines are allowed - use '|' as a new line symbol.
                TITLE/K   - (STRING) requester title
                BUTTONS/K - (STRING) requester buttons. Multiple buttons
                            are allowed - use '|' to separate individual
                            button's texts.

-----------------------------------------------------------------------

Command:        SCREEN
Template:       FRONT/S,BACK/S

Function:       Bring AmiBroker screen to FRONT or put it to BACK

-----------------------------------------------------------------------

Command:        SELECT
Template:       STOCK/K,DATE/K
```

```
Function:       Select a stock or/and quotation (and mark it with a hairline
                on the chart)
                STOCK - (STRING) stock name (case sensitive)
                DATE  - (STRING) quotation date (yy-mm-dd)
                        if specified one doesn't exist the nearest next
                        will be selected.

--------------------------------------------------------------------------

Command:        VERSION
Template:       -none-

Function:       Return program version tag (STRING).

--------------------------------------------------------------------------
```

1.53 How to register?

```
                If you want to get full working version of AmiBroker, you should ←
                    send me
  proper registration request (see example
                registration form
                ).
  Please supply a valid and fully qualified address for shipment.

  Registered users receive a keyfile which enables all features of the program.
  Allow 2-4 weeks for delivery.

  Please state if you want to get keyfile via e-mail or ordinary mail.

  Registration fee is:

  * AmiBroker 2.0 LIGHT        $15 US / 20 DM / 10 GBP

    You will receive the keyfile along with the newest version of the program
    by e-mail or ordinary mail.

  * AmiBroker 2.0 FULL         $25 US / 35 DM / 15 GBP

    You will receive the keyfile along with the newest version of the program
    by e-mail or ordinary mail.

    You will receive the printed manual with technical analysis tutorial.

    You will get the AmiBroker 2.5 for free ( release date: July 1997 ).

  * AmiBroker 2.0 UPGRADE      $10 US / 15 DM / 7 GBP

    ******* FOR REGISTERED USERS ONLY *******

    You will receive:

    - AmiBroker 2.0
    - printed manual with technical analysis tutorial
```

```
    - AmiBroker 2.5 for free ( release date: July 1997 )
```

```
  You can send CASH (in opaque envelope) or pay your fee by
  bank draft/money transfer (in US dollars).

  These are account details:

  PLS PAY TO:    WIELKOPOLSKI BANK KREDYTOWY S.A.
                 WROCLAW BRANCH
  IN FAVOUR OF: TOMASZ JANECZKO
  ACCOUNT NO.:   359209-1288177-152-1787

  The address for requesting registration is:

  Tomasz Janeczko
  ul. Wroblewskiego 25/1005
  PL 51-627 Wroclaw, POLAND.

  ******************************* WARNING ************************************
  Since there have been several thefts of letters lately I strongly encourage
  you to send registration fee by REGISTERED mail. It is more expensive but
  100% safe !!!
  **************************************************************************


  PLEASE TYPE THIS ADDRESS CAREFULLY, CHECK SPELLING!!!!!
  FILL-IN REGISTRATION FORM WITH BLOCK LETTERS.


  For all other requests:

  E-Mail:  tjaneczk@asic.ict.pwr.wroc.pl
```

1.54 Registration form

```
                    AMIBROKER REGISTRATION FORM

---------------------------------------------------------------------------

    To:
    Tomasz Janeczko
    ul. Wroblewskiego 25/1005
    PL 51-627 Wroclaw POLAND

---------------------------------------------------------------------------

    Please take my registration as a AmiBroker user.

    I want to receive:

              ( ) - AmiBroker 2.0 LIGHT  ( $15 US / 20 DM / 10 GBP )
              ( ) - AmiBroker 2.0 FULL   ( $25 US / 35 DM / 15 GBP )
```

```
               ( ) - AmiBroker 2.0 UPGRADE ( $10 US / 15 DM / 7 GBP )


     Please send me the keyfile by:

               ( ) - ordinary mail
               ( ) - e-mail


     I am sending shareware fee as:

               ( ) - Cash, included with this letter
               ( ) - money transfer to this account:
                    Owner:        Tomasz Janeczko
                    Bank:         Wielkopolski Bank Kredytowy S.A.
                                  Wroclaw Branch
                    SWIFT Code:   WBKP PL PP WRO
                    Account No:   10901522-1288177-152-1787
```

Name and Surname: _____

Full address: _____

E-mail: _____   Phone: _____

Hardware config. _____

Comments   _____


```
     I have read copyright notices in manual and agree with conditions.
     Specifically, with my signature, I commit on installing the keyfile
     only on one computer and not giving it to the others.
```


     Date: _____   Signature: _____

1.55 Contact addresses

Please send all requests, suggestions, etc to:

E-mail: tjaneczk@asic.ict.pwr.wroc.pl
          janeczko@pmat.ch.pwr.wroc.pl

or

Tomasz Janeczko
ul. Wroblewskiego 25/1005
PL 51-627 Wroclaw POLAND

Check out AmiBroker WWW Page:

http://plukwa.pdi.net/AmiBroker/

1.56   Next AmiBroker release

     From version 2.0 there will be less upgrades but they will contain
much more new features. Moreover, the information about these new features
will be given in AmiBroker.guide.

So, next version (2.5) will include:

- automatic technical analysis

  program will check the quotations/indicators for user-defined signals

- new indicies:

  Money Flow Index
  Accumulation/Distribution
  Chaikin Oscillator
  Negative Volume Index

- portfolio:

  history logging

- preferences

  'Snapshot windows' will include Toolbar and Select windows also.

- system

  AmiBroker will be localized.

  Planned release date of the version 2.5 - July 1997.

1.57   Thanks

I would like to thank all registered users for their generous support.

Special thanks go to:

```
Marcin Kot           - for being the first registered user
Markus Baumeister    - for the Telestock script
Konrad Dubiel        - for bug reports & improvement suggestions
Mattias Moltkesson   - for long improvement list :)
Neil Mohr            - for great review and
                       sending me 3 Amiga Computing issues for free
Marek Pampuch        - for great article in Polish Amiga Magazine
Stefan Ossowski &
Urban D. Müller      - for free Aminet 10 & 12 CD
```