ACU-RITE 3500i

Touch-Screen Control

- Up to 4-axis plus closed-loop spindle
- Conversational and G-Code programming in one control
- Systems for knee mills, bed mills and VMC's
- USB interface

ACU-RITE

PROFITABILITY

Acu-Rite 3500i boosts efficiency, versatility,

Intuitive touch screen control streamlines programming task for faster set ups

Imagine putting at the tip of your operator's finger...

- A touch screen so intuitive, fast, and easy to use that it can cut programming and set-up times by 20%...40%...even 50% or more on key tasks.

- A platform that's two controls in one – Conversational and G-Code.

- A whole new way of programming, including built-in CAM software that allows you to create complex shapes geometry and tool path all in the same feature, as well as convert DXF files into part programs.

Designed from the ground up to streamline programming while reducing operator errors, the Acu-Rite 3500i touchscreen control saves *significant* time and cuts waste on each and every set-up and production run.

Ease of Use
- *Intuitive touch screen interface*
- *Full alphanumeric touch keyboards*
- *Machinist language canned cycles*
- *3D form help graphics*
- *Large high resolution display*

Innovative
- *Touch screen based navigation and data entry*
- *Remote Diagnostics*
- *On screen multi function calculator*
- *Coarse tool support*
- *Real time draw*
- *Conversational and G-code programming in one control*
- *Interactive part preview (e.g., Touch a line in the part preview and the coinciding block is highlighted (gouge identification)*
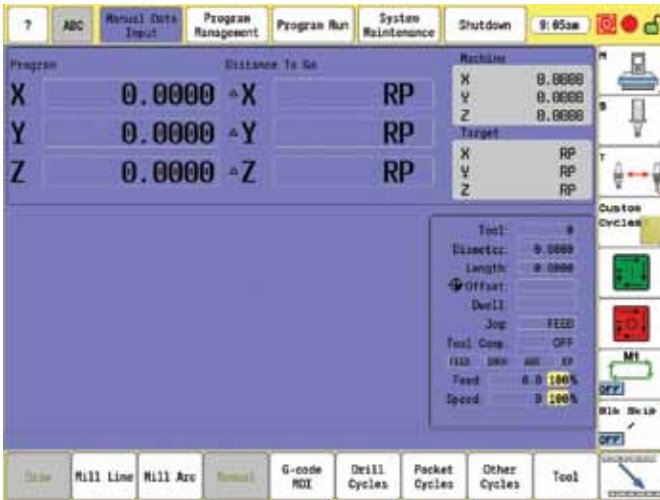
Highlights
- *Solid state flash memory storage*
- *1 Gig of RAM*
- *1 GHz Intel CPU*
- *Windows® compatible off-line system*
- *Easy to learn*
- *Intuitive navigation and programming*
- *2 USB ports*

productivity – for *significant* time-savings

Milling jobs are now as simple as...touch*...and GO!*

Easy to Learn, Intuitive to Operate

At the heart of the Acu-Rite 3500i's versatility is its touch screen interface and the innovative software driving the interface. Menus and function keys are integrated into the borders of the high-resolution, 12.1" XGA screen. Floating numeric keypads are easily dragged to the operator's preferred position

The Acu-Rite 3500i features a flexible touch screen layout that's driven by software designed from the ground up to give operators a versatile array of options. Graphical, one-touch function keys both simplify and accelerate programming and set-up tasks.
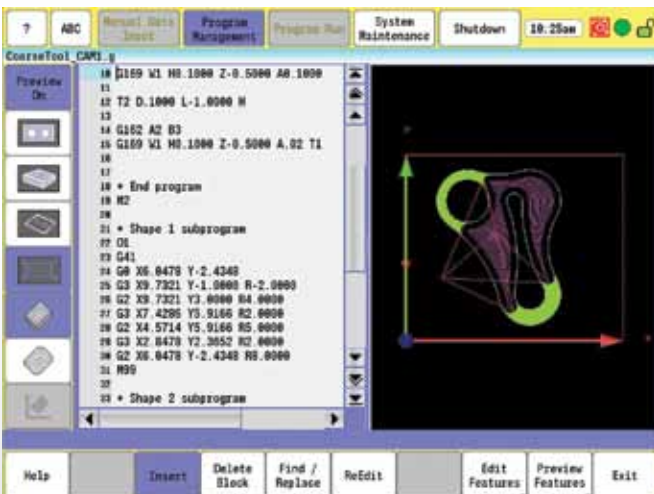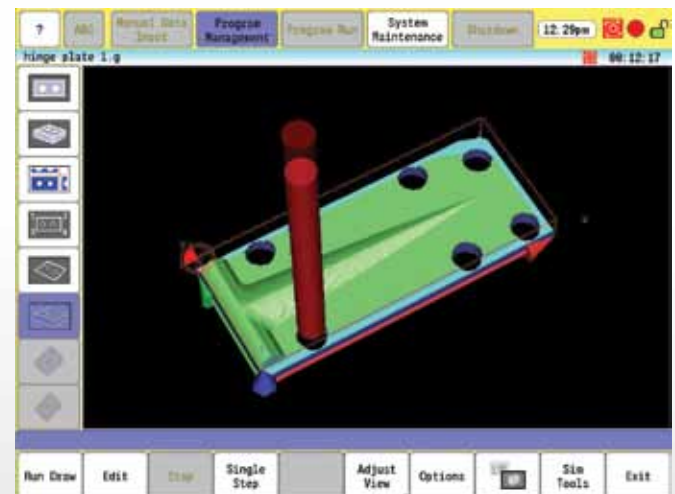
The 3500i is two controls in one, Conversational and G-Code. Conversational is programmed in plain machinist language and uses a powerful set of canned cycles to aid in quick and easy to understand programming. G-Code is entered using the on screen full keyboard or the G-Code help editor. Importing programs is fast and easy via networking and USB.

New Interface

- ■ *Intuitive touch screen interface*
- ■ *Custom PLC touch screen buttons eliminate the need for a manual panel*
- ■ *Active MDI fields*
- ■ *XGA Display (Extended Graphics Array 1024x768 resolution)*
- ■ *Text and graphical program preview in Program Manager*
- ■ *Program preview in editor*
- ■ *Full support for conversational and g-code programming*

Innovation – Coarse Tool Support

When a coarse tool is defined, the control knows what that tool can cut, removes that material first and leaves the remaining material for the fine tool. (In the image above, the PURPLE shows the coarse tool path and the GREEN indicates the fine tool path.)

Tool Life Management Support

The 3500i gives the operator control of tool life; a run time for each tool can be specified, and once the run time has been reached, the control will call the specified replacement tool. All this is controlled by the tool page.

Acu-Rite 3500i Control Kits for Retrofit Systems...

Acu-Rite 3500i Retrofit Kits are available for both new and older models of the most common knee mills and bed mills.

The Acu-Rite 3500i is ideal for retrofitting existing milling machines, elevating accuracy and expanding the types and complexity of jobs they can run. Kits for 3-axis and 4-axis systems are in-stock for most brands of knee mills and bed mills.

Typical kits consist of servo motors, drive assemblies and the ball screw, plus the 3500i touch screen control. Quill drive assemblies are also available.

Complete retrofit packages – as well as control-only kits, with standard analog drive interface – are available.

Contact your Acu-Rite sales representative for details.

Boost the productivity, accuracy and capabilities of your existing mills with the easy-to-learn, touch screen efficiency of the Acu-Rite 3500i.

VERSATILITY

Acu-Rite 3500i Control Kits – everything you need to

Accuracy
Precision-ground ballscrews with preloaded ball nut assemblies.

Performance
Finest, industrial grade processors ensure outstanding performance and operation in all areas of program management.

Safety
Software limits are standard with every package. Machine limits are optional.

Powerful AC Brushless Servo Motors
Maintains smooth operation and precise positioning.

Handwheels
Provides all manual operations. Ideal for set up and teach modes and for machining the simplest parts.

...plus Kits for New Machines

Elevate performance with next-generation touch screen technology

For builders of new machine tools, the innovative Acu-Rite 3500i control provides the perfect combination of versatility, reliability and break-through technology.

Acu-Rite 3500i kits for new machines unleash the full power of the control's revolutionary touch screen interface. Now you can integrate robust, multi-axis systems that are simpler and easier to train operators on. They also provide your customers – machine shop owners and manufacturing customers – with faster upfront paybacks and more savings on total lifetime cost of ownership.

Control packages for machining centers are available for 3-axis and 4-axis, plus closed-loop spindle. Also suitable for retrofit applications.

tap into time-saving programming efficiency

X-Axis Drive Assembly
A rugged one-piece machined casting guarantees years of reliable operation. Acu-Rite's high quality kit components finish the machine with both the appearance and performance of today's finest CNC equipment.

Y-Axis Drive Assembly
Driven by a powerful AC brushless servo motor, this assembly features a tough and extremely durable one-piece machined casting.

Quill Drive Assembly
This robust one-piece casting incorporates Acu-Rite's unique and proven quill block drive design. This Z-axis downfeed assembly ensures accuracy, repeatability and can take real cuts for many years to come. The precision-ground ballscrew is driven by a powerful AC brushless servo motor.
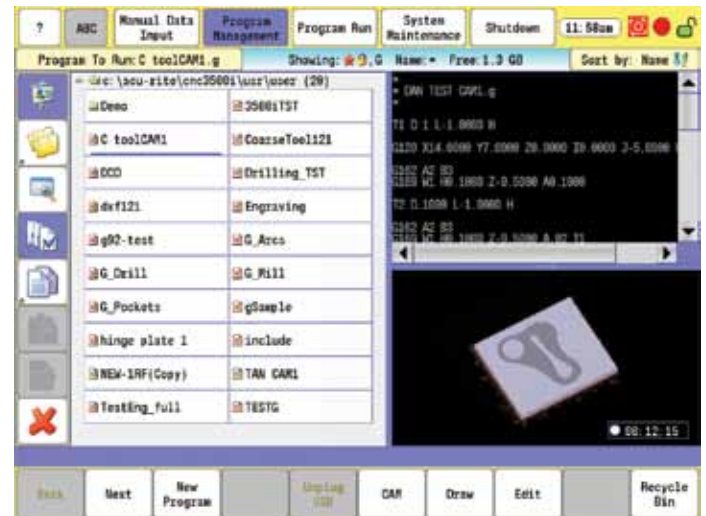
Acu-Rite 3500i Integrated CAM / DXF – Shifting Cycle Programming to Hyperspeed

When using Acu-Rite's CAM programming tool, all part geometry is generated without the need for machine code. Shapes created are saved as DXF files. The DXF format provides two major advantages for the programmer. First, users can re-edit the geometry in their own CAD system. Second, DXF conversion is uniform across the board – for both imported DXF files and those created on the Acu-Rite 3500i.
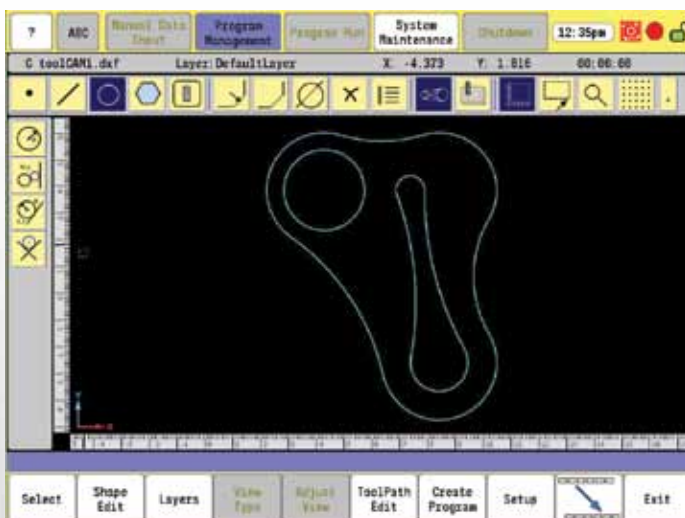
Once the shape geometry is created (or imported), the Acu-Rite 3500i CAM allows the operator to generate tool path, islands, engraving and drilling cycles, as well as access many other advanced programming features. These programs are posted as complete, modular G-code programs from within CAM, featuring easy-to-understand menus in machinist language. And being modular, cycle-based programs (unlike typical CAM-generated programs), re-editing is much more intuitive and efficient with the Acu-Rite 3500i.

CAM Highlights

- *Import and create DXF files*
- *Create complete part programs in the CAM editor*
- *Graphical definition of contours*
- *Chain construction geometry to define contours*
- *Create geometry based on definitions of points, lines and circles*
- *Toolpath generation commands: contour, pockets, engraving and drilling*
- *Smart program generation (cycle based)*
- *Direct import of DXF*
- *Feeds and speeds calculator*

Graphic preview of part program in Program Management with estimated run time.

The Acu-Rite built-in CAM software allows you to create complex shapes, geometry and tool paths all in the same feature/screen, as well as convert DXF into part programs.

Acu-Rite 3500i – Specifications

User Interface
Touch Screen interface
12.1" LCD Active Matrix (TFT, XGA) Color Display
3D Look and Feel (i.e.: buttons, menus)
Full Alpha Numeric Touch Keyboards
Basic & Scientific Calculator

General Operation
Dual Operating Mode
Actual Feed Rate Display
Spindle Speed Display (Actual or Programmed)
Active Modal Display
Timer and Parts Counter Display
Mid-Program Restart / Block Search
Selectable Block Skip
High Speed Dry-Run
Teach Mode
4th Axis Programming (Rotary or Linear)
Axis Coupling
Mid-Program Interrupt and Jog-Return

Programming
Inch/Metric Conversion
Absolute and Incremental Positions on Same Block (In G-Code)
Conversational Programming
Full G-Code Programming with Conversational Help
Blueprint Programming
Polar /Cartesian Coordinate Programming
Interactive Help Graphics
Plane Selection
Work Coordinate Offsets
Rotation / Mirroring / Scaling
Corner Rounding / Chamfering
Parametric Programming (In G-Code)
Modal Subprograms (In G-Code)
Subprograms W/Repetition, Nested 20 Levels
DXF Import
Integrated 2-1/2D CAM System
Contour Approach and Departure
Support for Coarse / Fine Tool Programming in Pockets

Program Editing
G-Code / Conversational Programming
Find / Replace
Standard Block Operations (copy, cut, paste & delete)

CAM Features
Graphical Definition of Contours
Chain Construction Geometry to Define Contours
Create Geometry Based on Definitions of Points, Lines and Circles
Tool Path Generation Commands: Contour, Pockets and Drilling
Generate Complete Part Programs
Direct Import of DXF
Feeds & Speeds Calculator
Complete Program Generation

Simulation Graphics
Rapid, Feed and Compensated Moves Shown
Isometric, XY, XZ and YZ View
Automatic Fit
Zoom
Ruler Display
Display Tool Path Compensated or Uncompensated
Solid Model Graphics
Block Number Display

Computing
Celeron 1GHz Processor
1 Gigabyte RAM
4G Flash Drive

Data Interface
Ethernet Port
RS-232 Port
Two USB Ports

Interface Capability
Standard I/O Available - Kit Products (13/9)
Standard I/O Available - OEM Products (39/28)
Expansion I/O Modules

Advanced Features
Off-Line File Management Tool (RS-232 or Ethernet)
Remote Diagnostics
Off-Line PLC Monitoring Tool
Seamless integration of OEM and user cycles
Context Sensitive Help
USB Based System Backup / Restore Utility

ACU-RITE

333 E. State Pky. • Schaumburg, IL 60173-5337
Phone: 847-490-1191 • Fax: 847-490-3931