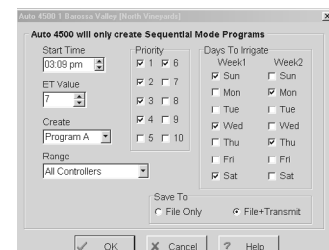
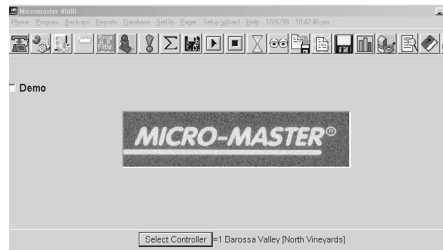


## Applications

**OVERVIEW** - The Micro-Master 4500 and 4500 Plus Software systems are state-of-the-art add-on packages to allow the remote controlling and reporting of all functions of the Micro-Master 4500 and 4500 Plus Controllers. Each system incorporates Windows 98 user friendly; mouse-driven technology. It can control up to 999 separate controllers, linked to the central computer by a number of communication protocols. It offers the user added reporting and logging features, as well as rainfall control, over and above the features of the stand-alone Micro-Master 4500 and 4500 Plus field controller. While the features of both software packages are virtually the same, the software for 4500 cannot be used with the 4500 Plus.

## Features

- Windows 98, 2000, ME or XP driven, user friendly software system.
- Operates on IBM compatible PC or laptop.
- Central computer is able to operate up to 999 separate controllers.
- Central to 4500 Plus satellite via RS232 direct cable (up to 30 metres), landline or digital GSM modem, RS485 (two wire screened sensor cable for distances up to 1000 metres), RadioMaster (low power VHF radio), UHF radio interface via the existing RS232 port.
- Central to 4500 satellite connection via RS232 direct cable (up to 30 metres), landline or digital GSM modem, RS485 (two wire screened sensor cable for distances up to 1000 metres), RadioMaster (low power VHF radio)



- Global Override controls the Rain Switch and Water Budget functions (separate percentage for both programs). The changes can be sent to a single controller, a specified group of controllers, or all controllers.
- Program Set-up allows user to set up functions such as irrigation/fertiliser units, fertiliser mix pump percentage, group or sequential mode, various program delays, rainfall cancel thresholds, system telephone numbers, rain switch and time/day set.
- Program Edit allows the input of program specific information. This includes daily irrigation actions, irrigation and fertigation run time values, time zone start/stop settings, number of cycles, start times and water budget settings.
- Filter Program Edit adjusts filtration backflush times, filter cycle delays, PD delay, PD backup times, inter-station delay and shows number of filter backflush cycles that have occurred.
- Reset controller run times allows for the remote resetting of controller run time logged information. Useful for gathering season by season operation information. Resets can be done on a single controller, a group of controllers, or all controllers.
- Irrigation Reports show totalised irrigation and fertigation run times, and precipitation for each valve. All or individual totalised readings can be reset to zero at any time (does not effect controller logged run times). Also shows irrigation and fertigation meter readings, and expected irrigation flows that can also be reset to zero.
- Manual Program Start and Stop allows for either Program A or B to be activated or terminated from the central computer.
- Program Status (Text) shows current information of controller activity. Shows remaining run time, number of cycles run/remaining, inter-station delays, valve group details, status of fertigation and filtration programs, expected and actual flow rate information, details of rainfall, totalised flow information and status of various control inputs.



- Program Status (Graphics) allows for aerial photograph or irrigation design layout (bitmap file) to be overlaid and all information as above to be shown on screen.
- Backups allow for information regarding programs, databases and field controller to be backed up to a central computer file.
- Flow Control and Set Points Report shows expected versus actual valve/group flow rates, in graphical form, and allow for the reporting or skipping of high and low system flows. These high and low thresholds are user definable.
- Rainfall Log shows daily rainfall events, accumulated rainfall totals and displays the user defined irrigation cancel set point. Rainfall figures are resettable to zero.
- Activity Log Files show all system activity in a printable day by day format. Information contained in the logs is gathered at a settable interval of 1-99 minutes.
- Sprinkler/Emitter Database allows for the input and storage of information relating to each individual valve in the system/s, and

is then used by the software to perform various functions. This information includes the valve number, valve location, emitter type, size, arc and flow, the number of emitters, emitter spacing, application efficiency, zone and order settings, total valve flow rate, precipitation rate, various agronomic information and recommended run times relative to ET and refill points.

- Field Controller Activity report shows a summary of controller usage and status from current time back to the last activity report

request. Information on the report, by controller, includes communication check, rain switch status, totalised rainfall, expected flow total calculated from run times and data base, actual flow meter flow, Fertigation meter total flow, number of filter cycles run, alarm status, number and type of faults occurred, and the status of all sensor inputs. The report is saved to a file for printing or retrieval at a later time.

### ORDERING INFORMATION

Code	Description
MM4500P-CS	MicroMaster 4500 Plus Central Software and 1 comms. chip
MM4500PCHIP	MicroMaster 4500 Plus comms. chip
I013584	MicroMaster 4500 Central Software and 1 comms. chip
CMM4500301	MicroMaster 4500 comms. chip
CMM4000485	RS232 to RS485 2 wire adaptor (for linking 2 wire cable to PC)
I013578	RS232 Single satellite communication cable x 15 metres
I013579	RS232 Single satellite communication cable x 30 metres
I013553	Screened 2 wire communication cable x 500 metres
I013554	Screened 2 wire communication cable x 1000 metres
SYM7831	PC Anywhere software V10 Host and Remote
I01MMUSB	USB to RS232 Adaptor
I01MMRPEAT	RS485 Signal Booster