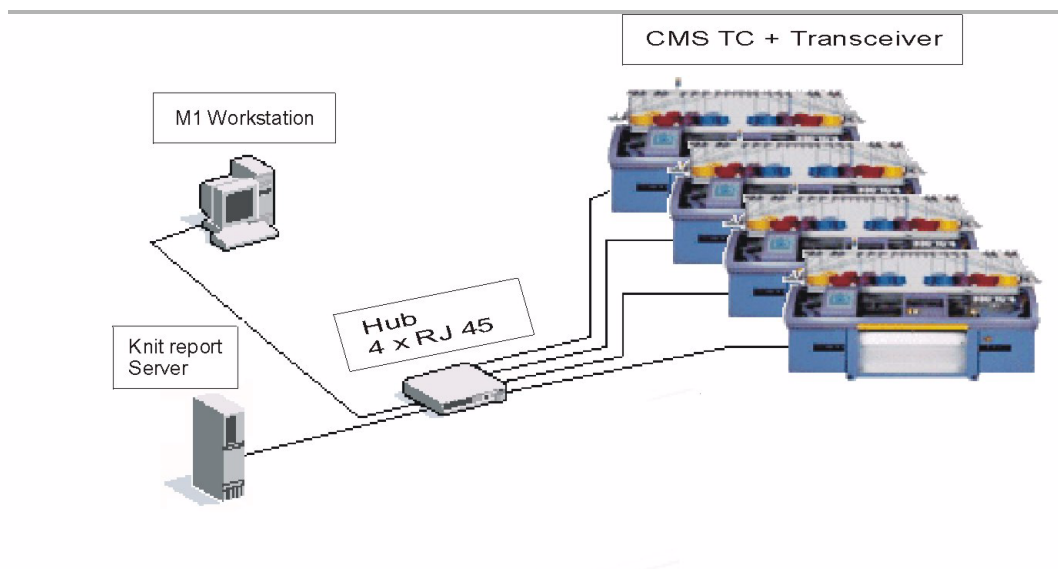


STOLL

THE RIGHT WAY TO KNIT

Networking Ethernet and Selan Manual McNet2/XP



Date: 19.5.2004

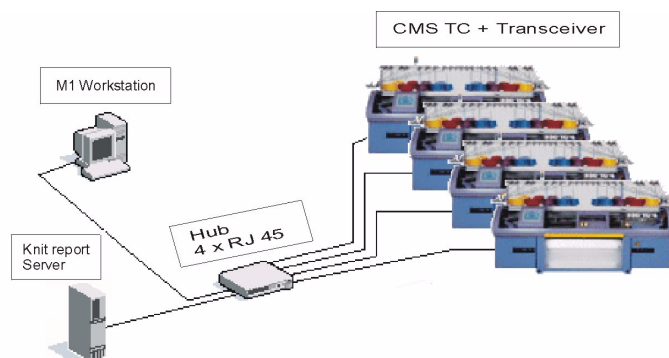
Version: McNet2/XP

H.Stoll GmbH&Co., Reutlingen; Germany

1	Network specifications	2
2	The cable network for network configuration	4
2.1	Several examples of cable installations	6
2.2	Ethernet cabling via twisted pair cable (UTP)	10
2.3	Ethernet coaxial cable installation	13
2.4	How to configure a Selan network	15
2.5	Selan and Ethernet	18
2.6	Stoll delivery program for networks	20
2.7	Hardware requirements	21
2.8	Find and rectify cable connection error	23
3	How to configure network connections on the unit	25
3.1	CMS and Ethernet - The McNet2/XP program	25
3.1.1	Windows operating system of the CMS	27
3.1.2	Update of the IPC software TC-STARTUP CMS TC	29
3.1.3	Installation of the McNet2 program	30
3.1.4	Installation procedure for McNet2 and restart of the machine	32
3.1.5	Enable or disable network functionality - Display of network parameters	34
3.1.6	Entries in the Network Settings section of the McNet-Program	36
3.1.6.1	The virtual keyboard of McNet2/XP	43
3.1.7	Entries in the Advanced Network Settings section of the McNet2/XP program	44
3.1.8	Change of the Ethernet settings at the machine	47
3.1.9	Troubleshooting and messages in McNet2/XP	49
3.1.10	Set the Online connection (CMS TC)	50
3.2	CMS and Selan	53

3.3	How to configure an M1 pattern workstation/Windows 2000/XP	54
3.3.1	Using M1 as a server	55
3.3.2	Setting up a LAN connection	55
3.3.3	Set up a network in Windows 2000/XP (M1):	57
3.3.4	To configure a connection, proceed as follows	60
3.3.5	View the status of a local connection	61
3.3.6	To install TCP/IP	62
3.3.7	How to enter the IP address of a machine or machines in the M1 program	63
3.3.8	Virus scanner	64
3.4	How to network SIRIX units	65
3.4.1	To set up a network on SIRIX:	65
3.4.2	How to incorporate CMS machines into the Selan network (SIRIX)	69
3.5	How to enter IP address for the Com server	70
3.6	How to allocate network addresses	71
3.7	Form for your IP addresses	73
3.8	Stoll networking software	74
4	Use the online connection	75
4.1	Use the online connection at the CMS	75
4.1.1	Install and test Reverse Online	75
4.1.2	How to load the operating system for the knitting machine from the M1	77
5	User accounts and user rights	79
5.1	Configuring a new user (SIRIX)	79
5.2	How to use administrator accounts (Windows 2000/XP)	80
5.3	How to create and modify user accounts (Windows 2000/XP)	81
5.4	How to utilize User groups (Windows 2000/XP)	85
5.5	How to release directories (Windows 2000/XP)	86
6	Glossar	87

Networking of Stoll knitting machines, Stoll pattern units and Stoll analysis computers (Stoll knit report).



This section explains the configuration of a local network that allows for connection of Stoll knitting machines, Stoll pattern units, Stoll pattern workstations and analysis computers to the knit report program in your plant.

This network is used for centralized administration of patterns and machine operating systems, and to acquire and evaluate machine and operating data (Stoll knit report).

Communication between Stoll CMS knitting machines and Stoll pattern design systems can take place with 3 different transfer media:

- Ethernet (CMS-TC knitting machines and M1)
- Serial (Stoll SELAN network)
- Combination of Ethernet and serial interconnection

1 Network specifications

Introduction:

In connection of the progress in networking the Stoll company provides you with the possibility of networking. By this your production depends not only on the reliability of Stoll products, but on the reliability of entire networking system. Stoll will not install a network at your plant to ensure that design, installation and putting into operation are fitted best to your requirements. This can be done by a local network supplier much better. A close teamwork is recommended at the design and documentation of the network installation in order to get the outstanding support for the Stoll products from Stoll also in the future. Following information helps you and your supplier to ensure this teamwork from the beginning on.

International standards:

Watch the following standard for networking:
Structured cabling according to ISO/IEC 11801 or EN50173

Design of a new cabling for networking:

Ground plan of the facilities with all electrical and constructional connections

1. Define a contact person of your company for the teamwork with Stoll and your local network supplier.
2. Make a list of all units you plan to put into a network (knitting machine, pattern workstations).
3. Arrange these units in the ground plan mentioned above.
4. Make an enquiry to one or more local supplier on base of this information and regarding the relevant standards.
5. Arrange contractual with the supplier that a proved network is handed over to you.
6. Let hand out to you a signed test certificate. Only in this case Stoll can take over liable a service order for the Stoll components within your network.
7. Synchronize the installation by your supplier with the desired service encouragement of the Stoll company.
8. Send the actual ground plan with positioning of the units, the cabling and the allocated IP-addresses to the Stoll helpline after the planing with your supplier has been done.



Stoll recommends a production network according to this instruction.

If you want to use an other than the recommended network configuration, e.g. in order to integrate the Stoll components into an existing network, then you have the full responsibility for this configuration and its maintenance.

Enlargement of an existing cabling:

1. Proceed as for a new cabling.
2. Insist on a test certificate.
3. Inform the Stoll helpline about the changes made.

Trouble shooting in a network:

You can find bugs in a network by systematicall search only. Following you will find some questions to incyrcle the propable cause of trouble:

- Did someone worked on a knitting machine, pattern workstation, the network or the power supply?
- Who had worked on a unit and what was done?
- Which component does not work properly?
- Are there individual units not working?
- Are all components, connected to one hub or switch, concerned?
- Are collisions displayed?
- Collisions at network cards, hubs or switches?
- Which application do not work?
- Have there been simmlar trouble?
- What caused simmlar trouble?



First of all let the responsible electrician or network supplier search for the bug refering to this information. Order a Stoll technician only if the network cabling is free of bugs.

2 The cable network for network configuration

Below is a description of four types of LAN network configurations are described. Select the relevant type of network according to the number of knitting machines and pattern units that you have. In certain cases, it may be necessary to combine different configuration options.

Type	Norm/required Hardware	Units	Line lengths	Transfer rate
Ethernet via twisted pair cable [see page 10] (UTP Category 3)	- 10BASE-T twisted pair (RJ 45) - Hub - Transceiver	- CMS-TC - M1 pattern workstation - SIRIX 110/210 - Assessment computer	100 meters per Segment	10 M-Bit/sec
Ethernet via twisted pair cable [see page 10] (UTP Category 5)	- 10BASE-T twisted pair (RJ 45) Category 5 - Hub - Transceiver	- CMS-TC - M1 pattern workstation - SIRIX 110/210 - Assessment computer	100 meters per Segment	10/100 M-Bit/sec TC machine 10 Mbit/sec
Ethernet via coaxial cable [see page 13]	- Transceiver - 10BASE2 coaxial cable (RG 58)	- SIRIX 100/200 additional types of units via UTP	185 meters per network segment 30 transceivers per segment	10 M-Bit/sec
Selan 3/serial power supply [see page 15]	- Selan 3 unit - Serial cable - Selan distributor 300 517	- all CMS - all SIRIX - M1 pattern workstation - Assessment computer	Max 250 meters per branch/total of 1000 meters for Selan 3 units	19,200 bits/sec., max.
Selan- Ethernet combination [see page 18]	also: COM server	CMS without TC		Selan: 19,200 bits/sec., max. Ethernet: 10/100 M-Bit/sec

- When installing new cables, use only UTP-type Category 5 cable (data up to 100 Mbits/s).
UTP-type Category 3 cables are also suitable for use with existing cables, providing that the resulting maximum data transfer rate is 10 M-bits/s.
- Use coaxial cable RG58 in exceptional cases (SIRIX 100 / 200) only. In such cases, the maximum segment length is 185 meters.
- Separation bars should be installed in any cable conduits containing both data and high-voltage power lines.

- In the event units in two separate buildings are connected to each other in a network, fiber optic cable must be used. This avoids disturbances induced by voltage potential differences between the buildings.
 - In any case, fiber optic cable should in be used for any segment measuring more than 100 meters in length. For multi-mode fiber cables, maximum segment length is 2,000 meters, and for single-mode fiber cables, 15 kilometers.
 - To keep the power supply flexible, install RJ-45 network jacks at the installation sites provided for them,
- ➔ Refer to the chapters that follow for an overview in this regard, and then implement the relevant procedures step by step.

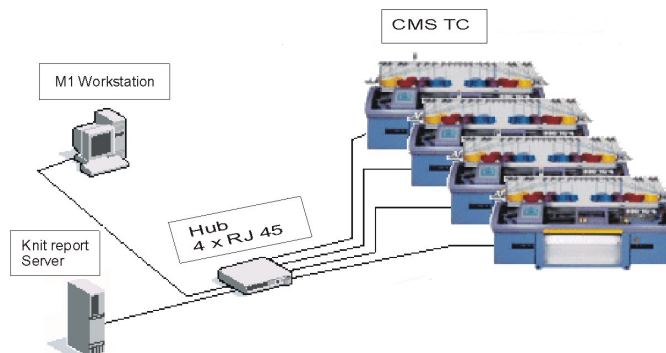


Stoll strongly recommends that a network service provider be used for planning and installation of the network.

2.1 Several examples of cable installations

Option 1: max. 16 units

- Smaller operations with up to 15 machines and one M1 pattern unit.
- The M1 pattern workstation and the knitting machines are located in the same building.



Components needed:

- 1 x HUB AT3016SL 16X RJ45



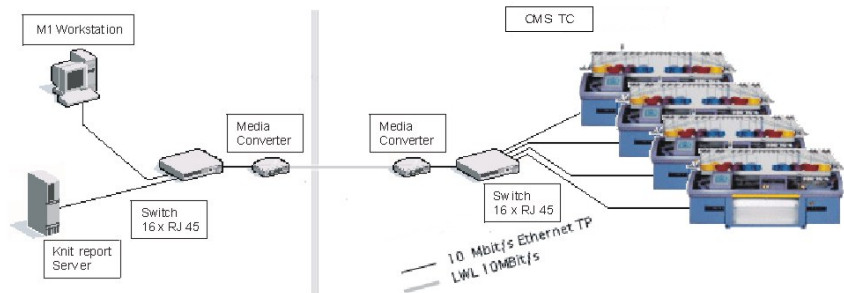
- up to 15 x TRANSCEIVER 210TS - RJ45, according to the type of computer of the CMS TC



- 16 x UTP-KABEL 10-BASE T

Option 2: max. 16 units; separate buildings

- Smaller operations with up to 15 machines and one M1 pattern unit.
- The M1 pattern workstation and the knitting machines are located in separate buildings.



Components needed:

- 1 x HUB AT3016SL 16X RJ45
- up to 15 x TRANSCEIVER 210TS - RJ45, according to the type of computer of the CMS TC
- UTP-KABEL 10-BASE T RJ45
- 2 x media converter
- 1 x LWL fiber optic cable of the appropriate length

Special features:

A media converter is used to switch from UTP cable as transmission medium to LWL (fiber optic cable). In the "factory" building, which is linked to the "pattern preparation" building with a fiber optic cable (LWL), a second media converter reconverts the LWS transmission medium to UTP. This avoids any problems with compensation of potential.

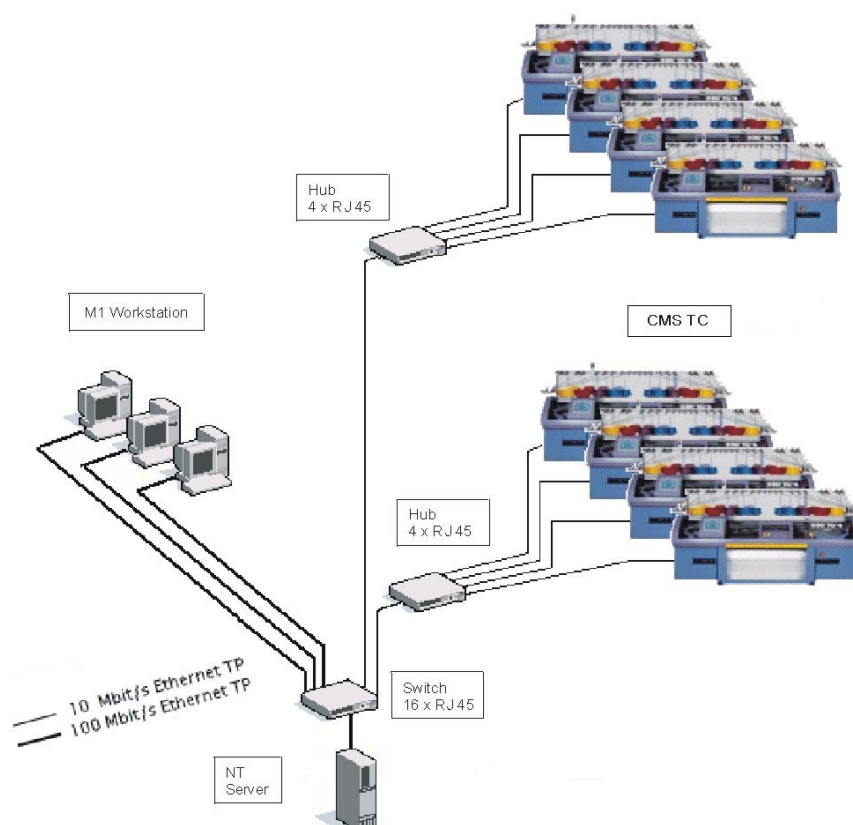


Cascading (sequential switching) of multiple hubs can be used to network more than 16 units.

Example: 2 hubs = 31 units

Option 3: more than 16 units; more than one workgroup

- More than 15 machines and more than one M1 pattern workstation.
- The M1 pattern workstation and the knitting machines are located in the same building.
- The knitting machines are allocated to various workgroups.



Components needed:

- Multiple x HUBS AT3016SL 16X RJ45 (each workgroup via one hub)
- TRANSCEIVER 210TS - RJ45, according to the type of computer of the CMS TC
- UTP-KABEL 10-BASE T RJ45
- Switch AT-FS716 (16x RJ45)



Special features:

With this switch, for example, it is possible to connect 1 assessment computer (Stoll knit report), 3 pattern workstations and 64 knitting machines.

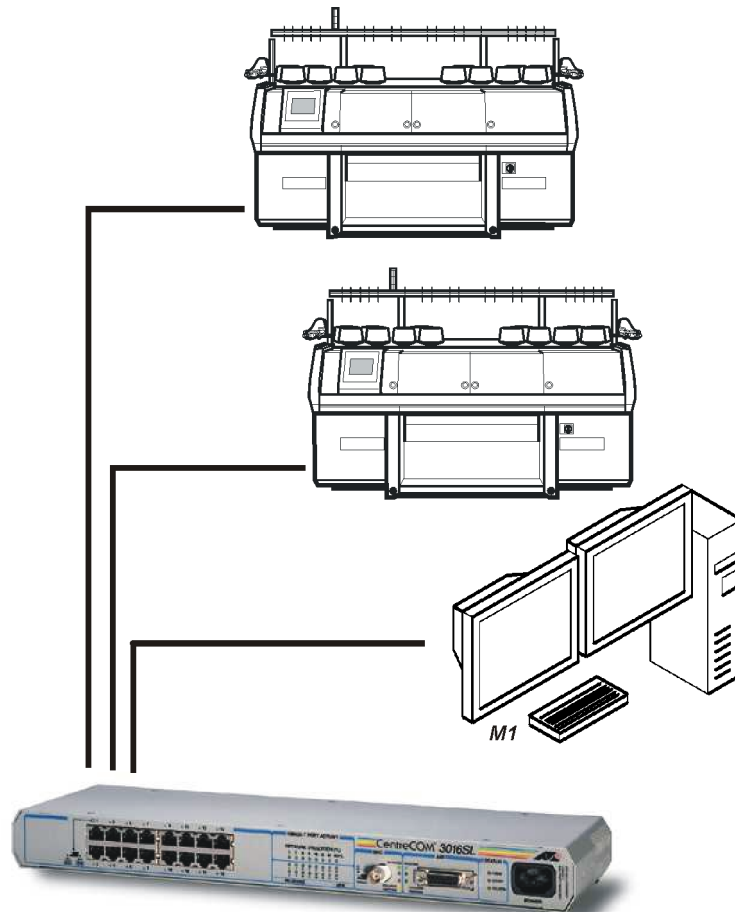


To avoid problems with differences in potential (in separate buildings), individual network segments can be interconnected with LWL and media converters.

We recommend that you have a network service provider assist you with planning and installation.

2.2 Ethernet cabling via twisted pair cable (UTP)



A permanent connection to these installations is needed in order to create an Ethernet network comprising one or more pattern units and knitting machines or multiple interconnected pattern units.



Cable installation via twisted pair cable (10BASE T) and a hub:

Components needed:

- 10BASE-T twisted pair (RJ 45)
- Hub (4 times)
or
Hub (16 times)
- A network card with a MAU unit (transceiver) for each installation
Depending on the type of the control unit of the CMS you need the external "TRANSCEIVER 210TS - RJ45".

Control unit	no IPC board	IPC - P5S	IPC P6S
You can look up the version in the component diagram in the left-hand control circuitry cabinet	Attach "TRANSCEIVER 210TS - RJ45" to output "S205" at the back of the left-hand control circuitry cabinet.		Use the RJ45 socket at the front of the IPC P6S board
	"TRANSCEIVER 210TS - RJ45" necessary		"TRANSCEIVER 210TS - RJ45" not necessary
			



Cable installations via twisted pair cables and a hub are suitable for smaller distances (up to 100 meters) between the installations that are to be interconnected.

1. Shut down the unit and switch it off
2. In the event no RJ 45 port is available on the unit, plug the transceiver into the AUI port.
Example CMS-TC without "IPC board":
Attach "TRANSCEIVER 210TS - RJ45" to output "S205" at the back of the left-hand control circuitry cabinet.
3. Plug the cable with a western connector (RJ 45) into the corresponding port on the unit or transceiver.
4. Plug other cable ends into the hub.

5. Adjust the hub settings at the back of the switch.
Set "MDI" switch to "MDI-X"
if all ports are allocated to CMS-TC or other terminals
or
on "MDI"
if an additional hub is connected to the allocated port .
Set "AUI" switch to "OFF"
6. Install hub power supply



Do not exceed the maximum cable length limit.

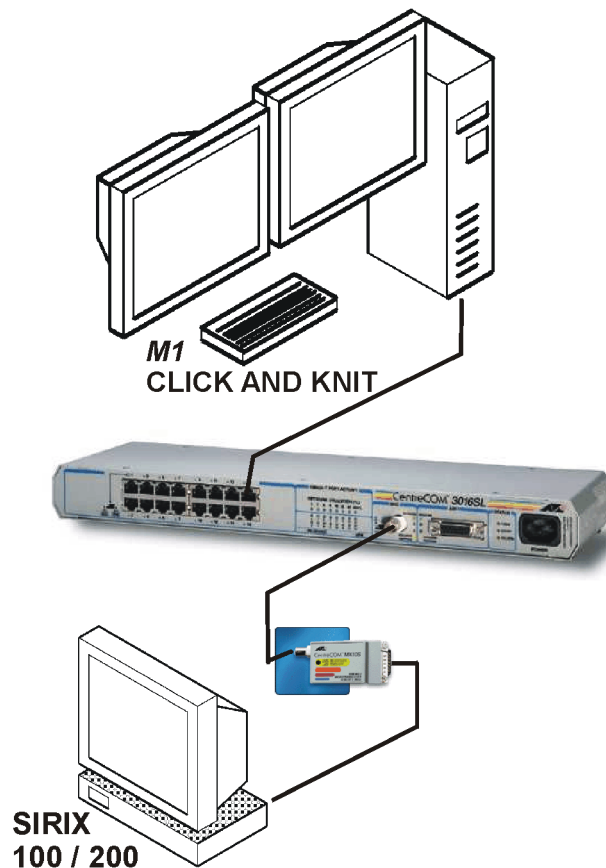
Since a non-shielded cable is being used, it is of particular importance to allow for any possible sources of interference (strong electromagnetic fields). When installing cable, keep the latter away from electric supply lines, transformers and electric motors.

When installing new cable, use only Category 5 UTP cable (100Mbits/s).

As many as four (16) devices can be interconnected in a network with a single hub unit.

2.3 Ethernet coaxial cable installation

When a SIRIX 100/200 pattern station is interconnected with other pattern stations in a network, a shielded coaxial cable (10BASE2) and the compatible transceiver must be used.



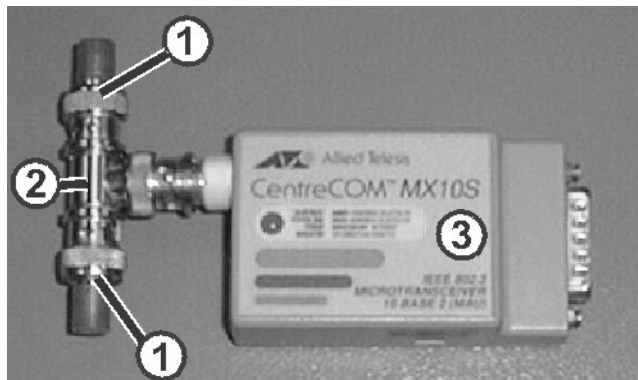
SIRIX 100/200-cable installation with coaxial cable (10BASE2) and transceiver:

Components needed:

- Transceiver with T-connector and terminal resistance; ID no. 320 655
- 10BASE2 coaxial cable (RG 58)
- Hub (4 times)
or
Hub (16 times)

1. Shut down the unit and switch it off

2. Interconnect cable or terminal resistance (1), T-connector (2) and transceiver (3)



3. Screw 50 ohms of terminal resistance onto the end of the coaxial cable.
4. Plug the transceiver into the Ethernet port (AUI/15-pin) of the Sirix 100/200.
5. Plug the other end of the cable into the coaxial port.
6. Adjust the hub setting at the back of the switch.
Set "Terminator" (terminal resistance) to "OFF".
Set "AUI" switch to "OFF"
Set "MDI" switch to "MDI-X"
7. Install hub power supply



Bear in mind that the maximum line length per network segment (coaxial cable) is 185 meters.

Watch out for possible sources of disturbance (strong electromagnetic fields). When installing cable, keep the latter away from electric supply lines, transformers and electric motors.

Coaxial cables (RG58) should be used in exceptional cases only.

2.4 How to configure a Selan network

Selan 3 allows a network to be set up between pattern units and knitting machines. This achieves the following:

- Transfer of knitting programs
- Production monitoring
- Collection of machine data

The Baud rate is 19,200 and under rare (and undesirable) circumstances, 9,600.



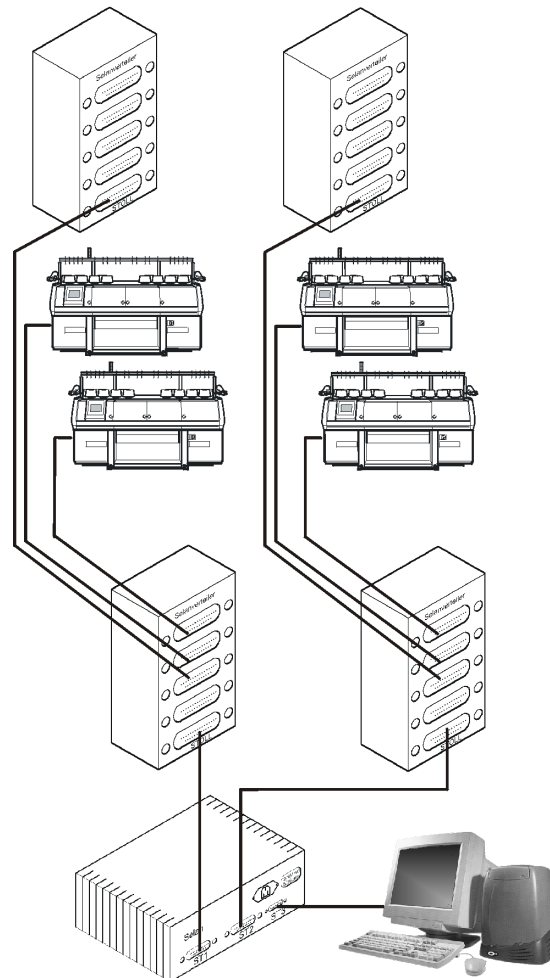
Stoll knitting machines with Touch Control can be directly connected to the Ethernet [\[see page 10\]](#).

(Refer to chapter [CMS and the Ethernet](#) [\[see page 25\]](#))

It is possible to utilize the M1 pattern workstation or a separate Com server to combine a Selan network with an Ethernet for mixed machine outfits.

(Please refer to the chapter entitled [Selan and the Ethernet](#) [\[see page 18\]](#))

Example of how a Selan network can be configured:



Starting with	Selan 3 unit	Selan distributor	Machines
Pattern unit	1	-	-
Selan 3 unit		max. 2	max. 2
Selan distributor		1 or 2	max. 4

How to configure a Selan network:

-
- Selan 3 unit - ID no. 223 205
incl. cable SIRIX(O2) - Selan 3 (for RS232 interface)
 - Selan distributor - ID no. 300.517
 - Serial cable - e.g. ID no. 206 957
1. Connect the Selan unit and SIRIX pattern design system with the "SIRIX (OS2) Selan 3" cable.
RS 232 interface on the SIRIX and ST3 ports on the Selan unit
 2. Interconnect Selan cable and Selan distributor with a serial cable (e.g. ID no. 206 957)
ST1 or ST2 port on the Selan unit
Lower serial input port on the Selan distributor.
Prepare power supply for the Selan unit.
 3. Interconnect Selan distributor and CMS knitting machines with a serial cable (e.g. ID no. 206 957)
Serial port S206 on the CMS
Serial output port on the Selan unit
 4. Configure Selan network connection on the Sirix pattern unit and on the CMS in the network.



It is advisable to create a ramified network configuration in order to keep line lengths to a minimum.

- Install multiple Selan distributors in parallel
- Avoid successive switching of Selan distributors

You can take the Stoll Pattern-Workstation M1 like a SIRIX via Selan (seriell) into a network as well.

Interconnect the RS 232 interface on the M1 and the ST3 ports on the Selan unit with a seriell cabel (e.g.. Ident-Nr. 206 957).

Set the network parameters in the [M1 Programm](#) [see page 63].



Note:

The line length for the Selan 3 unit may not exceed 1000 meters (250 meters per branch).

A total of 64 machines can be connected.

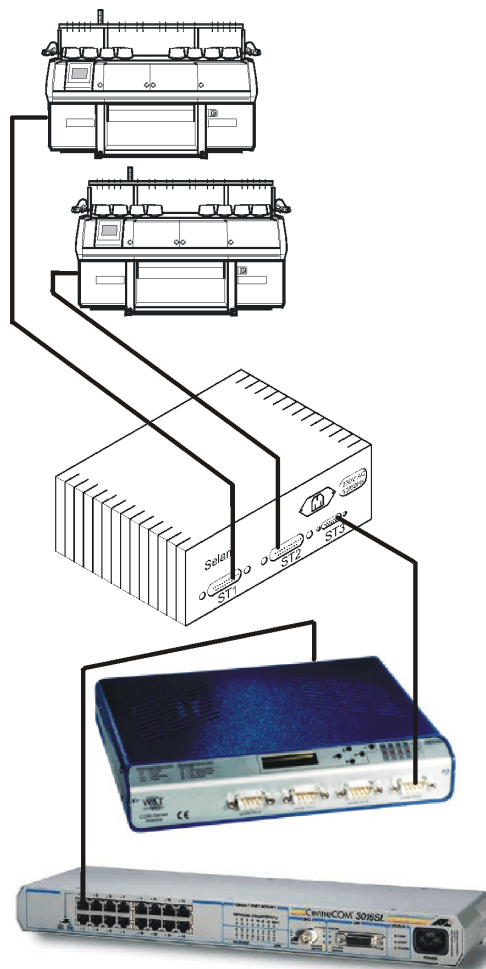
A network consisting of more than 64 machines require an additional Selan unit.

2.5 Selan and Ethernet

Mixed machine outfits can be networked with an integrated Selan network in an Ethernet.

In such cases, all CMS machines that do not have a Touch Screen are located in a single Selan network, which is connected to a Com server via an Ethernet LAN.

Example of the configuration of a Selan subnet with an Ethernet connection



How to connect a Selan subnet to an Ethernet network:

Components needed:

-
- Selan 3 unit - ID no. 223 205
incl. cable SIRIX(O2) - Selan 3 (for RS232 interface)
 - Selan distributor - ID no. 300.517
 - Serial cable - e.g. ID no. 206 957
 - Com server with interface 4 x RS 232 (serial) and 1 x 10-BaseT RJ45



- CABLE 10-BASE T RJ45

1. Interconnect Com server and Selan unit with a UTP cable (CABLE 10-BASE T RJ45).
Connect to power supply with the Com server power plug.
2. Interconnect the Selan unit and Com server with the "SIRIX (OS2) Selan 3" cable.
RS 232 interface on the Com server and ST3 ports on the Selan unit
3. Interconnect Selan cable and Selan distributor with a serial cable (e.g. ID no. 206 957)
ST1 or ST2 port on the Selan unit
Lower serial input port on the Selan distributor.
Connect power supply to the Selan unit.
4. Interconnect Selan distributor and CMS knitting machines with a serial cable (e.g. ID no. 206 957)
Serial port S206 on the CMS
Serial output port on the Selan unit
5. Configure Selan network connection on the pattern unit and on the CMS in the network.



It is advisable to create a ramified network configuration in order to keep line lengths to a minimum.

- Install multiple Selan distributors in parallel
 - Avoid successive switching of Selan distributors
-



Note:

The line length for the Selan 3 unit may not exceed 1000 meters (250 meters per branch).

A total of 64 machines can be connected.

A network consisting of more than 64 machines require an additional Selan unit.

2.6 Stoll delivery program for networks

You will find the material needed to configure a network here.

Ident No.	Designation	Type of network/ Norm	Remarks
026 567	RG 58 THIN-WIRE ETHERNET CABLE WITH BNC CONNECTOR	10-BASE 2	2-3 meter
026 775	RG 58 THIN-WIRE ETHERNET CABLE WITH BNC CONNECTOR	10-BASE 2	10 meters
026 778	RG 58 THIN-WIRE ETHERNET CABLE WITH BNC CONNECTOR	10-BASE 2	20 meters
320 655	TRANSCEIVER MX 10 S - BNC	10-BASE 2	with T-connector and terminal resistance
026 568	T-COUPLING FOR TRANSCEIVER	10-BASE 2	
229 180	CABLE 10-BASE T RJ45	Twisted pair UTP Category 5	50 meters
229 179	TRANSCEIVER 210TS - RJ45	Twisted pair	
223 205	Selan 3 unit	Selan	SIRIX cable - order with Selan
223 146	Cable SIRIX (OS2) - Selan 3	Selan	for type 007 onwards
223 001	Cable SIRIX - Selan 3	Selan/serial	for type 006 onwards
206 116	Cable SIRIX - Selan I + II (serial)	Selan/serial	for type 006 onwards
207 045	Adapter Selan - serial peripheral	Selan/serial	
300 517	Selan distributor	Selan/serial	
223 000	Selan cable, by the meter	Selan/serial	available in 50 or 100 meter rolls only Set of two connectors required
082 838	Connector set - Selan (serial)	Selan/serial	
206 955	Selan cable	Selan/serial	5 meters
206 956	Selan cable	Selan/serial	10 meters
206 957	Selan cable	Selan/serial	15 meters
206 958	Selan cable	Selan/serial	20 meters
206 959	Selan cable	Selan/serial	25 meters

2.7 Hardware requirements

The requirements regarding cables and active components are determined by the number of units, i.e. the knitting machines, patterning units and analysis computers. Site-specific conditions play a role as well, of course. The following list will help you to define requirements. The more information you have about the location of the individual units and the distance between them, the easier it is to define requirements.

I. Define requirements for an Ethernet network [see page 10]:

Hardware	Ident No.	Your Requirement	2 units in the network	4 units in the network	16 units in the network	64 units in the network
HUB AT3016SL 16 x RJ45					1	3
HUB - AT MR 420 TR 4 x RJ45			1	1		1
CABLE 10-BASE T RJ45			2	4	16	68
TRANSCEIVER 210TS - RJ45	229 179		1 per knitting machine	1 per knitting machine	1 per knitting machine	1 per knitting machine
Switch 16 x RJ45						1

II. Define additional requirements for a Selan Ethernet network [see page 18]:

Hardware	Ident No.	Your Requirement	1 CMS (without TC)	4 CMS (without TC)	16 CMS (without TC)	more than 64 CMS (without TC)
COM server			1	1	2	8
Selan 3 unit	223 205		1	1	2	8
Cable SIRIX (OS2) - Selan 3	223 146		1	1	2	8
Selan distributor	300 517		0	1	4	16
Selan cable Length 5 meters	206 955		1	4	20	72

Only a 5-meter-long-cable (ID no. 206 955) is dealt with here, for reasons of clarity.

Other cable lengths available for the Selan:

Ident No.	Your Requirement	Designation	Type of network/ Norm	Remarks
223 000		Selan cable, by the meter	Selan/serial	available in 50 or 100 meter rolls only Set of two connectors required
082 838		Connector set - Selan (serial)	Selan/serial	
206 955		Selan cable	Selan/serial	5 meters
206 956		Selan cable	Selan/serial	10 meters
206 957		Selan cable	Selan/serial	15 meters
206 958		Selan cable	Selan/serial	20 meters
206 959		Selan cable	Selan/serial	25 meters

2.8 Find and rectify cable connection error

Cable connection error			
1. Selan network			
Symptom	Diagnosis	Cause	Action
Machine cannot be accessed via Selan	Signal path incorrect (remeasure with oscilloscope)	Long lines	Too many machines in the network: - subdivide into a number of branches - fewer machines per branch In most cases, the machine's I/O card does not need to be changed.
Malfunction in Selan connection	Crosstalk in switching operation on the Selan cable	Electromagnetic disturbance from the network cables, transformers or electrical motors	Move Selan cable away from the network cable (e.g. feed line to neon tubes or gas discharge lamps)
Transfer rate poor		Long lines	Too many machines in individual network branches. Subdivide into a number of branches with fewer machines per branch.
2. Ethernet in general			
Symptom	Diagnosis	Cause	Action
Network output too low	Induced interference voltage	Electromagnetic interference fields in the vicinity of a cable or signal irradiation originating in a faulty connector that acts as an antenna.	Check cable installation. Be sure to keep the latter away from electric supply lines, electric motors and transformers
		Loose or faulty connections	Check plug-in connections
	Increased number of collisions (> 60%)	Excessively long cable, too many consecutive hubs (max. nesting depth 4), faulty transceiver, missing or faulty terminal resistance, different cable impedances	Check network configuration and reconfigure if necessary; reduce number of emergency segments by half and localize damaged spot by analyzing partial segments; use standardized cable only

3. Ethernet via twisted pair cable			
Symptom	Diagnosis	Cause	Action
Total failure of a segment	Short circuit; Activity LED at hub fails to light up Interference measurement reveals low resistance	Mechanical damage: cable crushed or cracked	Localize damaged spot and replace cable
	no connection Activity LED at hub fails to light up Resistance measurement reading shows infinite value	Mechanical damage; loose connector	Localize damaged spot and replace cable
Anomalous collisions and data fragments	Induced interference voltage	Electromagnetic interference fields in the vicinity of the cable Unshielded cables are prone to this	Check cable installation. Keep cables away from electric supply lines, electric motors and transformers
Sporadic network failure	High attenuation; activity LED at hub fails to light up	Cable with high loss rate, different impedances, lines that are unsuitable for high-frequency signals	Use localizing and standardized Category 5 lines

3 How to configure network connections on the unit

A network connection must be configured on all units, whether they are PCs or knitting machines. The type of unit and the components that have been pre-installed on it in this regard determines the procedure.

→ Refer to the chapters that follow for an overview in this regard, and then implement the relevant procedures step by step.

3.1 CMS and Ethernet The McNet2/XP program

The STOLL CMS flatbed knitting machine is controlled with Touch Control, which is based on the Windows 95 or Windows XP operating system. The requisite network components are pre-configured.

With the "McNet2" program for the network functionality the networking of CMS-TC machines can be carried out.



The network functionality (McNetXP) is already installed on machines made from October 2003 on.

If an operating system is installed before

"V_ST168.0_16_02.021.000_STOLL", it must be checked whether the update with the "HD Analyst" program is necessary.

I. Here is a summary of the display and changes for the network parameters:

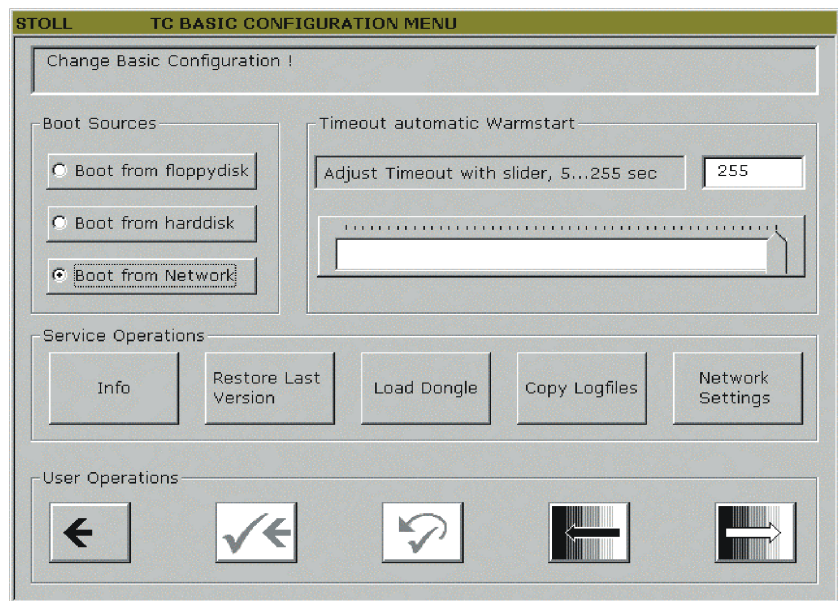
1. Check whether the installation of the "McNet2" program is necessary
[Windows operating systems of the CMS](#) [\[see page 27\]](#)
2. Check whether an [Update](#) [\[see page 29\]](#) of the IPC-Software TC-STARTUP boot software is required.
3. Start the [McNet2](#) [\[see page 30\]](#) program by insert the program disk (Floppy Disk 1) starten.
4. [Enable/disable](#) [\[see page 34\]](#) of networking.
5. Entries in the [Network Settings](#) [\[see page 36\]](#) section.
6. Entries in the [Advanced Network Settings](#) [\[see page 44\]](#) section.
7. Finish the "McNet2" installation and [Restart](#) [\[see page 32\]](#) of the machine.
8. Enter [Selan Id](#) [\[see page 50\]](#) with the "Machine configuration" window.

The steps are described in detail below.



After the initial installation of the "McNet2" program or with machines from October 2003 on (with Windows XP) the corresponding functions can be run with the "Network Settings" button in the "TC BASIC CONFIGURATION MENU" dialog box ([Change of the ethernet settings of the machine \[see page 47\]](#)).

The installation floppy disks are then no longer required.



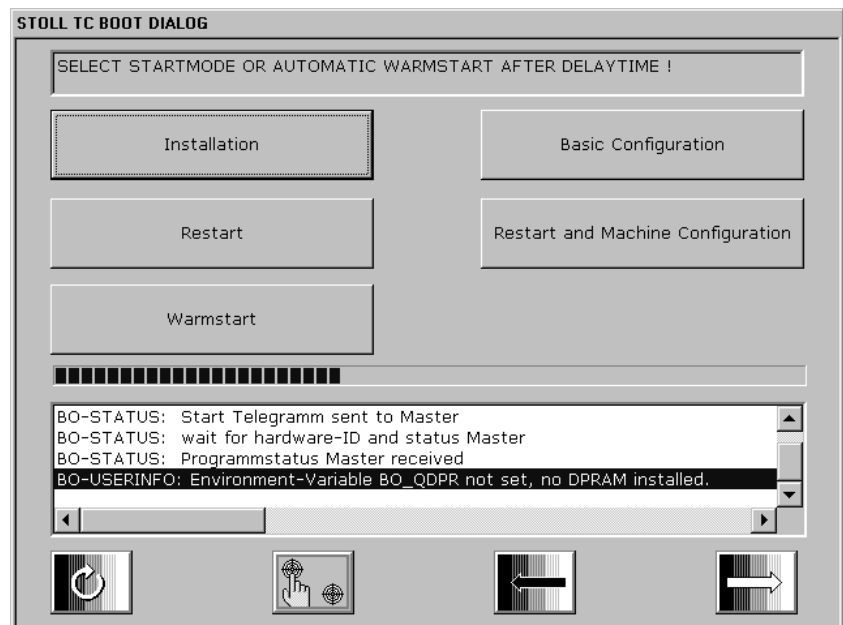
3.1.1 Windows operating system of the CMS

The McNet program differs according to the Windows operating system of the CMS.

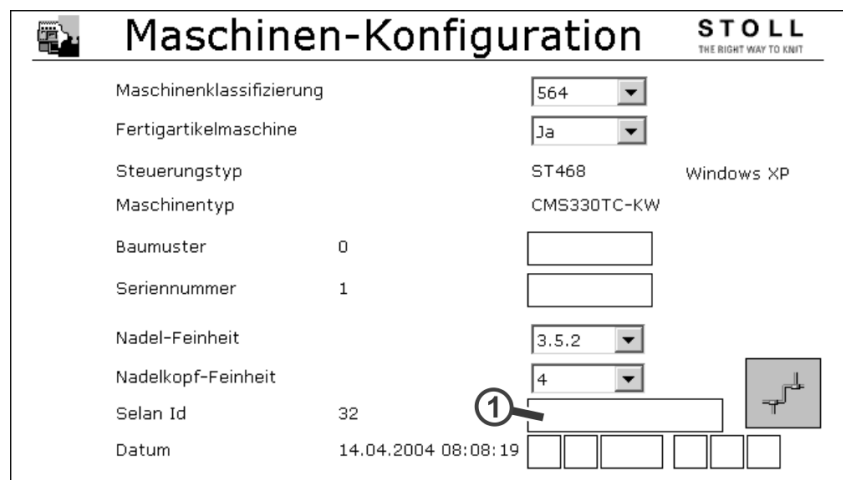
Depending on the version of the operating system, the network functionality can be installed already.

I. Determine the Windows operating system of the CMS:

1. Set machine main switch to "0". Set machine main switch to "1".
-> The menu "Boot Dialog" appears on the touch screen.



2. Touch key "Restart and Machine Configuration".
-> After restart the window "Machine configuration" appears.



The type and the underlying Windows operating system are shown in the "Control unit type" line.

Thereby you can see the version of the McNet program.

Windows operating system of the CMS	McNet program	Status
Windows XP	McNetXP	McNetXP installed ex works
Windows 95	MCNet2	You have to install McNet2 additionally

With the Windows XP operating system the McNetXP program is already installed and you can use the network functionality without an additional installation.

I. Check whether the network functionality is already installed:

The CMS-TC machine is in the boot mode.

1. Press the "Basic Configuration" button.
2. Press the "Network Settings" button.
3. "Change Network Settings?" prompt Confirm (Change Network Settings?) with "OK".
Changes may cause a windows restart.

The network functionality is already installed if the "McNet" dialog box appears.

You can change the settings of the "Network Settings" and "Advanced Network Settings" section.

3.1.2 Update of the IPC software TC-STARTUP CMS TC



The network functionality (McNetXP) is already installed on machines made from October 2003 on.

You do not need to update in such cases.

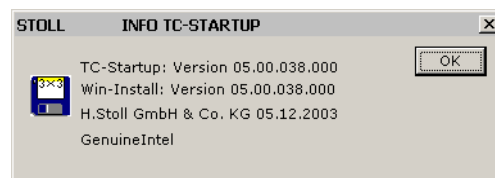
I. Carry out the update with the "HD Analyst" program if:

- TC-STARTUP "PROJ_IPC_32B_05.00.015.000" or former is installed.
- The "McNet2" program is to be installed.
- An operating system version from "V_ST168.0_16_02.021.000_STOLL" is to be installed.

II. Determine installed version of operating system (TC-STARTUP):

1. Switch on machine without inserting update floppy disk.
2. Open the "STOLL INFO TC-STARTUP" dialog box on the "TC START MENÜ" mask (boot mask) with the "Basic Configuration" / "Info" buttons.
3. If an update is required, switch off the machine again and continue as described in the chapter "Automatic Installation".
- or -
If an update is not required, produce or set up machine.

A dialog window with the software information appears.



III. Carry out the update with the "HD Analyst" program:

The update is done with the the "HD Analyst" program in its up-to-date version.

You can carry out the "HD Analyst" program independently of installing a new operating system.

Download via "<http://ftp.stoll.com/customer/bootfiles/st168/Tools/>".



Updates with the "HD Analyst" program are downward-compatible. This means previous operating systems can also be installed.



CAUTION:

If the update is not carried out, operating system version from "V_ST168.0_16_02.021.000_STOLL" and the "McNet2" program cannot be installed. To use the full range of network functions, always install the latest operating system version.

Download via "<http://ftp.stoll.com/customer/bootfiles/st168/Tools/>".

3.1.3 Installation of the McNet2 program



The network functionality (McNetXP) is already installed on machines made from October 2003 on.

Start installation of the McNet2 program:

The knitting machine is switched off.

1. Insert the installation floppy disk 1 with the "McNet2 automatic network installation" label in the machine's floppy disk drive.
2. Switch on the machine.
-> The Windows 95 operating system starts. The installation program for the Ethernet network on Stoll TC machines will then start automatically.



3. "STOLL TC BOOT" prompt with the message "BO-STATUS: Install new WIN-components from the floppy disk. Please follow instructions!" confirm with "OK".

4. Insert **Floppy disk 2** [see page 32] of the "McNet2" program after being asked to do so and follow the instructions.

The "McNet2" program floppy disks 1 and 2 are copied to the hard disk of the IPC.

The installation procedure on the machine starts automatically.



Warning:

Do not switch off the machine after starting the program.

Make entries in accordance with the prompts from the program.

The machine's operating system (BO) then starts automatically. The main menu is displayed.

After you start the application, the "McNet2" dialogue box appears with the default network settings:

McNet Network Settings v. 2.00

Enable Network **Use Touch Screen Keyboard**

Computer: CMS59082 Description: Stoll CMS 59082

User Name: User Use Network File System: ☐

Password: **** ☐ Bootfiles:

Workgroup: m1workgroup ☐ Patternfiles:

Advanced Network Settings

Change Advanced Network Settings

IP Address: 172 . 29 . 230 . 202 ☐ Use DNS:

Subnet Mask: 255 . 255 . 0 . 0 ☐ Use WINS:

☐ Use Gateway:

System Network Reset Default OK Cancel

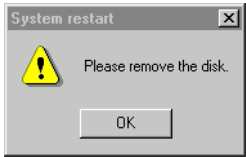
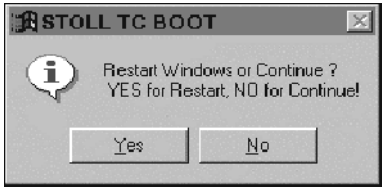
3.1.4 Installation procedure for McNet2 and restart of the machine



The network functionality (McNetXP) is already installed on machines made from October 2003 on.

After the installation floppy disks 1 + 2 have been copied to the hard disk of the IPC, the installation procedure starts automatically.

During the installation the "TCP/IP" network protocol and the Winsocket 2 software extension module ("WinSock2") are installed.

Message:	Meaning
Insert McNet2 Disk 2 !	Insert floppy disk 2 for installation
WinSock2 is not installed ! --> Installing WinSock 2 !	The "WinSock2" installation program will be loaded from the floppy disk and installed
Reboot neccessary Do not remove McNet2 disk!	A reboot is necessary to finish the "WinSock2" installation
MS COMCTL 5.0 is not installed -->Installing COMCTL 5.0 !	The "MS COMCTL 5.0" installation program will be loaded from the floppy disk and installed
Reboot neccessary Do not remove McNet2 disk!	A reboot is necessary to finish the "MS COMCTL 5.0" installation
MS TCP/IP is not complete installed --> (re) installing TCP/IP !	TCP/IP protocol will be loaded from the floppy disk and installed
	Remove the installation disk from disk drive "A". Confirm with "OK".
	Press "Yes" for a restart.

Reboot of the machine after the installation:

The installation floppy disk is removed from the floppy drive.

→ Press the "Yes" button to restart the machine.

After you start the application, the "McNet2" dialogue box appears with the default network settings:

McNet Network Settings v. 2.00

Computer: CMS59082 Description: Stall CMS 59082

User Name: User Use Network File System: ☐

Password: **** ☐ Bootfiles:

Workgroup: m1workgroup ☐ Patternfiles:

Advanced Network Settings

IP Address: 172 . 29 . 230 . 202 ☐ Use DNS:

Subnet Mask: 255 . 255 . 0 . 0 ☐ Use WINS:

☐ Use Gateway:

3.1.5 Enable or disable network functionality - display of network parameters

Enable or disable network functionality on TC knitting machines

I. Start the McNet2 program for the Ethernet network:

- Switch off the knitting machine.
- The "McNet2 automatic network installation (disk 1)" installation disk is on hand.



After the initial installation of the "McNet2" program or with machines from October 2003 on (with Windows XP) the corresponding functions can be run with the "Network Settings" button in the "TC BASIC CONFIGURATION MENU" dialog box.

The installation floppy disks are then no longer required.

1. Insert the "McNet2 automatic network installation" disk in the machine's disk drive.
2. Switch on the machine.
-> The Windows 95 operating system starts. The installation program for the Ethernet network on Stoll TC machines will then start automatically.



3. "STOLL TC BOOT" prompt with the message "BO-STATUS: Install new WIN-components from the floppy disk. Please follow instructions!" confirm with "OK".



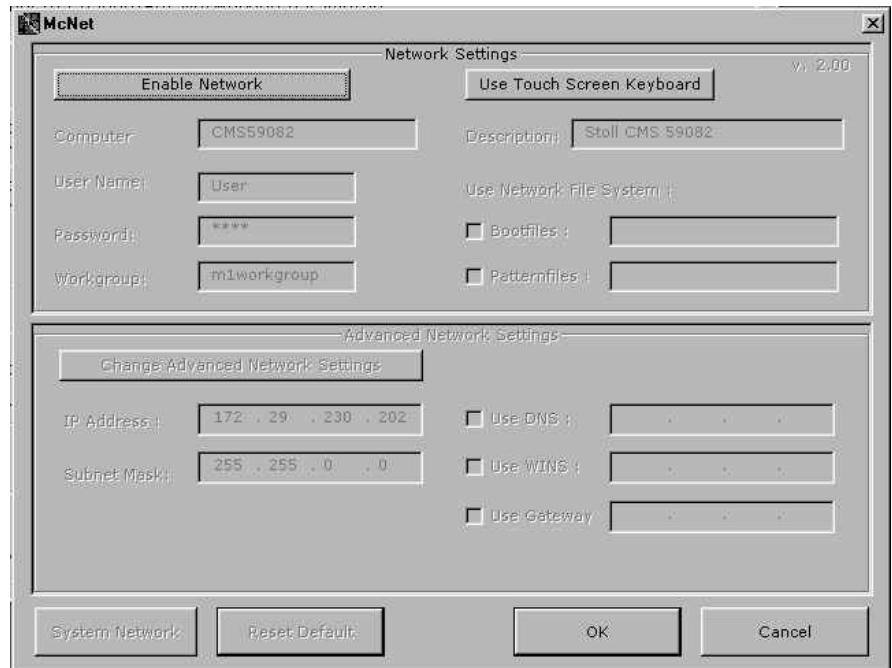
Warning:

Do not switch off the machine after starting the program.

Make entries in accordance with the prompts from the program.

The machine's operating system (BO) then starts automatically. The main menu is displayed.

After you start the application, the "McNet2" dialogue box appears with the default network settings:



After a succesful installation of the "McNet2" program you can view or change the Ethernet settings without the "McNet2" floppy disks.

II. Enable or disable network functionality:

- If the network functions are activated, you can deactivate them by clicking on the "Enable Network" checkbox.
- If the network functions are deactivated, you can activate them by clicking on the "Enable Network" checkbox.
- Confirm with OK.

The changes will be applied and the machine will reboot.
The main menu is displayed.

[Change of the Ethernet settings at the machine](#) *[see page 47]*

3.1.6 Entries in the Network Settings section of the McNet-Program

Call up the "McNet2" program to display the settings of the "Network Settings" section or to make new entries.



After the initial installation of the "McNet2" program or with machines from October 2003 on (with Windows XP) the corresponding functions can be run with the "Network Settings" button in the "TC BASIC CONFIGURATION MENU" dialog box ([Change of the ethernet settings of the machine \[see page 47\]](#)). The installation floppy disks are then no longer required.

Start the "McNet2" program for the first time:

Switch off the knitting machine.

1. Insert the installation disk with the "McNet2 automatic network installation (disk 1) " label in the machine's disk drive.
2. Switch on the machine.
-> The Windows 95 operating system starts. The installation program for the Ethernet network on Stoll TC machines will then start automatically.



3. "STOLL TC BOOT" prompt with the message "BO-STATUS: Install new WIN-components from the floppy disk. Please follow instructions!" confirm with "OK".



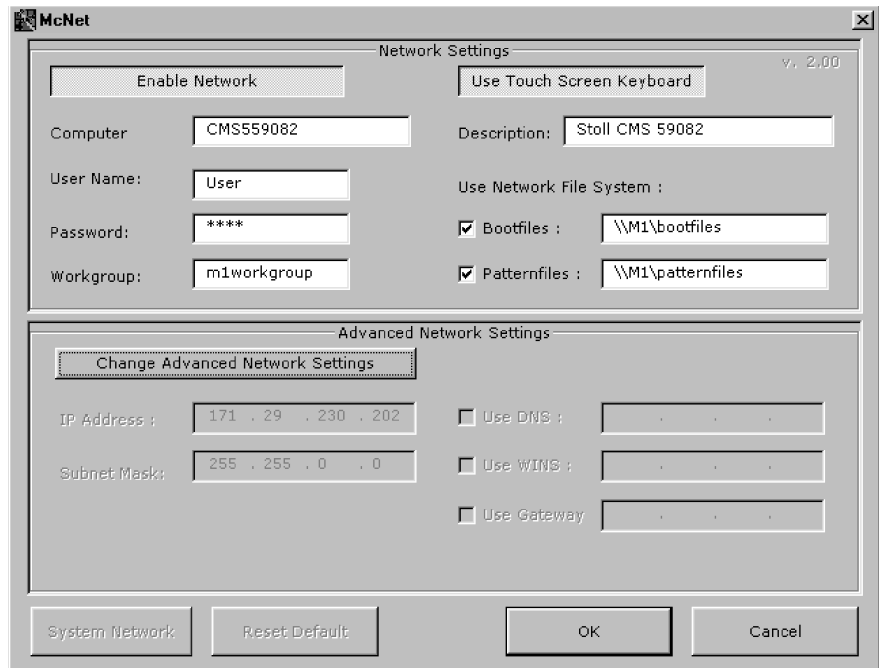
Warning:

Do not switch off the machine after starting the program.

Follow the instructions described below in the correct order.

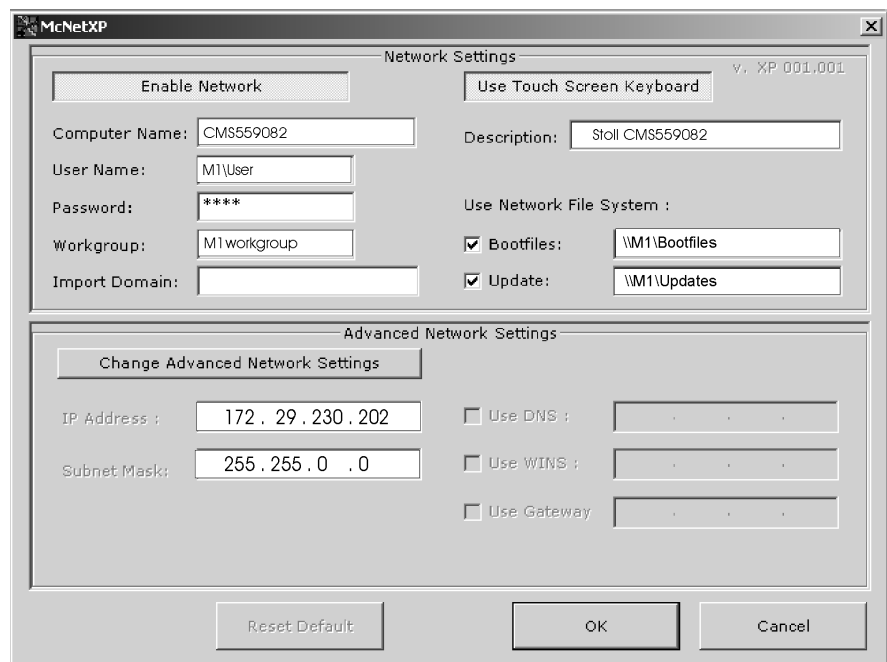
The machine's operating system then starts automatically. The main menu is displayed.

The "McNet2/XP" program opens with the input fields of the "Network Settings" section.



The McNet Network Settings dialog box is divided into two main sections: Network Settings and Advanced Network Settings. The Network Settings section includes a version number 'v. 2.00' and a 'Use Touch Screen Keyboard' button. It contains fields for 'Computer' (CMS559082), 'User Name' (User), 'Password' (****), 'Workgroup' (m1workgroup), 'Description' (Stoll CMS 59082), and 'Use Network File System' with checkboxes for 'Bootfiles' (checked, pointing to \\M1\bootfiles) and 'Patternfiles' (checked, pointing to \\M1\patternfiles). The Advanced Network Settings section has a 'Change Advanced Network Settings' button and fields for 'IP Address' (171 . 29 . 230 . 202) and 'Subnet Mask' (255 . 255 . 0 . 0). It also includes checkboxes for 'Use DNS', 'Use WINS', and 'Use Gateway', each with an empty text field. At the bottom are buttons for 'System Network', 'Reset Default', 'OK', and 'Cancel'.

Example: McNet2



The McNetXP Network Settings dialog box is similar to the McNet2 version but includes an 'Import Domain' field. The version number is 'v. XP 001,001'. The 'Computer Name' field is CMS559082, 'User Name' is M1\User, 'Password' is ****, and 'Workgroup' is M1workgroup. The 'Description' is Stoll CMS559082. The 'Use Network File System' section has checkboxes for 'Bootfiles' (checked, pointing to \\M1\Bootfiles) and 'Update' (checked, pointing to \\M1\Updates). The 'Advanced Network Settings' section is identical to the McNet2 version, with 'IP Address' (172 . 29 . 230 . 202) and 'Subnet Mask' (255 . 255 . 0 . 0). The bottom buttons are 'Reset Default', 'OK', and 'Cancel'.

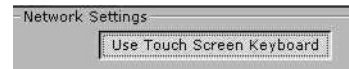
Example: McNetXP

Designation	Meaning	Description
Computer Name	Machine Name	You must enter a name in order for other network users to access this machine. This name identifies the machine in the network. You can enter a description of this machine in the "Description"field.
User Name	User name	In order to use released system resources, this user must identify himself in the network with his password. Before you can access network resources, your network administrator must enter into the system a user name and the password linked to it. With McNetXP enter the computer and user name in the "User Name" field like this: "computer\user"
Password	Password	
Workgroup	Workgroup	So that the machines can communicate each other, all knitting machines must be in the same working group [see page 85] . This entry field must be filled. If you work in a company-wide network, ask your network administrator for the proper workgroup name. Default setting: "M1Workgroup"
Import Domain	(with McNetXP only)	You can import computer of an other workgroup (domain) into the workgroup of TC machines with Windows XP.
Description	Description	Although entering a description is optional, it does help to identify machines more efficiently in larger networks.. Z.B. Type of the machine, gauge und other special features of the machine. This entry appears as a comment in the Windows Explorer
Use Network File System	Use Network File System	
Boot files	Derictory for bootfiles	The network drive "Bootfiles" is installed for updating the operating system of the Stoll TC knitting machines via a network. This network drive is permanently connected to a released directory of all knitting machines in the network. This directory contains all the current versions of machine control software. The "D:\Stoll\M1\Bootfiles" of the M1 pattern workstation is also intended as a standard directory. (Release a directory [see page 86]). If the network drive "Bootfiles" has to be constantly connected when starting the machine, activate the check box "Bootfiles".
Patternfiles	Directory for pattern (with McNet2 only)	The directory "D:\Stoll\M1\MC" of the M1 pattern workstation is planned as default directory for a centralized management of your knitting programs (Sintral programs etc.). (Releasing directories [see page 86]) If the network drive "Patternfiles" has to be constantly connected when starting the machine, activate the check box "Patternfiles".
Updates	Directory for updates of the operating system (with McNetXP only)	Link to a shared directory on the net in order to install operating systems or harddisk images from there. Call up the installation in the "Software Updating" dialog box of the user interface. If the network drive "Updates" has to be constantly connected when starting the machine, activate the check box "Updates".

I. Use the virtual keyboard of McNet2/XP:

- Press the "Use Touch Screen Keyboard" button to use the McNet2/XP virtual keyboard.

The button appearance becomes light (active).



When input fields are clocked on, the McNet2/XP virtual keyboard opens.

- Press the "Use Touch Screen Keyboard" button to use the McNet2/XP virtual keyboard.
When input fields are clocked on, the McNet2/XP virtual keyboard opens.

The button appearance becomes dark (inactive).



Use connected keyboard for entry.

II. Enter the machine name (computer name):

1. Touch the "Computer Name" entry field.
→ The virtual keyboard of McNet2/XP appears with the "Computer Name" entry field.
2. Enter any name desired (maximum 15 characters) for the knitting machine in the "Computer name" entry field.

- or -

- Keep default settings.

III. Enter your user name and password:

To use released resources in the network, this user must be logged on with his/her password in the network and in the respective system with the directories (M1).



Before you can access network resources, your network administrator must enter into the system a user name and the password linked to it. Change the default setting "User" and add a password.

1. Touch the "User Name" entry field.
→ The virtual keyboard of McNet2/XP appears with the "User Name" entry field.
2. Enter the user name in the "User Name" entry field (maximum 15 characters).



With "McNetXP" enter the computer and user name in the "User Name" field like this: "computer\user".

3. Touch the "Password" entry field.
-> The virtual keyboard of McNet2/XP appears with the "Password" entry field.
4. Enter the password for this user in the "Password" entry fields (maximum 15 characters).
-> A "*" (asterisk) appears for each character you enter.

IV. Enter a workgroup name:

1. Touch the "Workgroup" entry field.
-> The virtual keyboard of McNet2/XP appears with the "Workgroup" entry field.
2. Enter the password for the workgroup or machine group in the "Password" entry field (maximum 15 characters).

- or -

→ Keep default settings.

V. Enter a description of the machine (Description)

→ You can enter an additional description of this machine in the "Description" entry field (maximum 50 characters).

VI. Connect network drive "Bootfiles" permanently to a computer:

The network drive "Bootfiles" is installed for updating the operating system of the Stoll TC knitting machines via network. This network drive is permanently connected to a released index of all knitting machines in the network. This directory contains all the current versions of machine control software.

The "D:\Stoll\M1\Bootfiles\" of the M1 pattern workstation is also intended as a standard directory. ([Release a directory](#) *[see page 86]*).

If the network drive "Bootfiles" has to be constantly connected when starting the machine, activate the check box "Bootfiles".

1. Click on the "Bootfiles" check box.
-> An "x" appears in the checkbox.
2. Touch the "Bootfiles" entry field.
-> The virtual keyboard of McNet2/XP appears with the "Bootfiles" entry field.
3. Enter a path in format "\\<Computer name>\<directory>" in the entry field "Bootfiles" to a central computer (e.g. M1) and a released directory.

Example:

	Entry field "Bootfiles" in the "McNet2/XP" program
M1 Computer name: M1	\\M1
Directory D:\Stoll\M1\Bootfiles Released name "MC"	\\Bootfiles
Complete entry	\\M1\Bootfiles

VII. Connect network drive "Pattern files" (with McNet2 only) permanently to a computer:

The directory "D:\Stoll\M1\MC" of the M1 pattern workstation is planned as default directory for a centralized management of your knitting programs (Sintral programs etc.). ([Releasing directories \[see page 86\]](#))

If the network drive "Pattern files" has to be constantly connected when starting the machine, activate the check box "Patternfiles":

1. Click on the "Pattern files" checkbox.
-> An "x" appears in the checkbox.
2. Touch the "Pattern files" entry field.
-> The virtual keyboard of McNet2/XP appears with the "Patternfiles" entry field.
3. Enter a released path in format "\\<Computer Name>\<directory>" in the entry field "Pattern files" to a released computer or directory path which is in this working group.

Example:

	Entry field "Patterfiles" in the "McNet2/XP" program
M1 Computer Name "M1"	\\M1
Directory D:\Stoll\M1\MC Released name "MC"	\\MC
Complete entry	\\M1\MC

VIII. Individual network settings for Windows (with McNet2 only):

- ➔ Press the "System Network Configuration" key from the system control (Control Panel) to start the "Network Configuration" dialogue box. You can carry out your settings specific to the network in the displayed register cards or install the TCP/IP protocol newly.
You will get an instruction of the "Network Configuration" dialogue box in the Windows Help.



Attention:

Only experienced network administrators should carry out settings with the help of this program.

IX. Transfer or delete system entries:

- ➔ The entered data of all register cards are rejected with the key "Cancel".
-> No change is made in the system, and all entries made are deleted.
- ➔ To transfer entries to the system, press the "OK" key.
-> This begins the installation process.
- ➔ Delete the data entered with the "Reset Default" button and restore the default settings.
-> All entries made are deleted.

Installation procedure for McNet2 and restart of the machine [\[see page 32\]](#)
Entries in the Advanced Network Settings section of the McNet2/XP program [\[see page 44\]](#)

3.1.6.1 The virtual keyboard of McNet2/XP

Use the McNet2/XP virtual keyboard to make the entries in the "McNet2/XP" program without an additional keyboard.

I. Call up the virtual keyboard of McNet2/XP:

- The "McNet2/XP" program is installed and active.
- The "Use Touch Screen Keyboard" button (use McNet2/XP virtual keyboard) is active.



1. Touch the desired entry field.
-> The virtual keyboard of McNet2/XP appears.



Key	Function	Description
"Clear"	Delete	Deletes the entire entry
"<- Back"	Backspace button	Stepwise back with deleting of single characters or of a selection.
"Enter"	Enter button	Apply entry and close the virtual keyboard
"Shift"	Shift button	Shift to enter caps
"Caps Lock"	Caps Lock button	Caps lock; press again to unlock
"Space"	Space button	Enter spaces
"Cancel"	Cancel	Cancel an entry and close the virtual keyboard without changes

2. Make entry.
3. Confirm with "Enter".
- or, if necessary -
make corrections and confirm then.

Entry is applied and displayed in the "McNet2/XP" dialog box.

3.1.7 Entries in the Advanced Network Settings section of the McNet2/XP program

To display settings in the "Advanced Network Settings" tab or to define new settings, start the "McNet2/XP" program.

The entry of an IP address and of a sub network mask is only necessary if you do not want to keep the default settings.



After the initial installation of the "McNet2" program or with machines from October 2003 on the corresponding functions can be run with the "Network Settings" button in the "TC BASIC CONFIGURATION MENU" dialog box.

Designation	Meaning	Description
IP adress	IP address	Each machine (computer) in a given network must have a unique IP address. The TCP/IP network protocol uses this address to communicate with the machines. The network is divided into what are termed network classes. The "McNet2/XP" attributes automatically an individual IP address <i>[see page 71]</i> to each machine and displays it here.
Sub-Net Mask	Sub-Net Mask	The "McNet2/XP" automatically enters a value for subnet mask "Class B" in this field.
Use DNS	Use DNS	Domain Name Services via DNS server Enter the IP address of the server if necessary.
Use WINS	Use WINS	Windows Internet Name Services. Enter the IP address of the server if necessary.
Use Gateway	Use Gateway	The Gateway enables the connection between sub nets. Enter the IP address of the active component if necessary.

I. Check and transfer of the IP-address (IP-Address und Sub-Net Mask) :

The "McNet2/XP" attributes automatically an individual IP address [\[see page 71\]](#) to each machine and displays it here.

1. Check the IP address.
Check the IP address according to the [Summary table \[see page 73\]](#) or enter the actual address into the table.
2. Check the Sub-Net Mask.
Check the Sub-Net Mask according to the summary table or enter the actual address into the table.

Background:

Each machine (computer) in a given network must have a unique IP address. The TCP/IP network protocol uses this address to communicate with the machines.

The "McNet2/XP" program automatically enters the relevant values as per this convention for each machine for the "IP-Address" and the "Sub-Net Mask".

Network classe	IP addresses from	to	Subnet mask	Number of units in the subnet
Class B" "Default specification of the McNet2/XP	172.29.1.1	172.29.254.254	255.255.0.0	max. 64,516

II. Change the "IP-Address":

1. Click on the "Change Advanced Network Settings" check box.
2. Touch the "IP-Address" entry field.
-> The virtual keyboard of McNet2/XP appears with the "IP-Address" entry field.
3. Adapt the IP address in the 4th or 3rd + 4th value in the "IP address" entry field.

IP-Address:



However, you may also enter company-specific values in the "IP-Address" field. Ask your network administrator for a free IP address.

III. Change the "Sub-Net Mask":

The "McNet2/XP" automatically enters a value for subnet mask "Class B" in this field.



However, you may also enter company-specific values in the "IP-Address" field.

Ask your network administrator for the "Sub-Net Mask".

1. Touch the "Sub-Net Mask" entry field.
-> The virtual keyboard of McNet appears with the "Sub-Net Mask" entry field.
2. Change the [address \[see page 71\]](#) in the "Sub-Net Mask" entry field.

IV. Individual network settings for Windows (with McNet2 only):

- ➔ Press the "System Network Configuration" key from the system control (Control Panel) to start the "Network Configuration" dialogue box. You can carry out your settings specific to the network in the displayed register cards or install the TCP/IP protocol newly.
You will get an instruction of the "Network Configuration" dialogue box in the Windows Help.



Attention:

Only experienced network administrators should carry out settings with the help of this program.

V. Apply or delete entries:

- ➔ The entered data of all register cards are rejected with the key "Cancel".
-> No change is made in the system, and all entries made are deleted.
- ➔ To transfer entries to the system, press the "OK" key.
-> This begins the installation process.
- ➔ Delete the data entered with the "Reset Default" button and restore the default settings.
-> All entries made are deleted.

Further information

[Installation procedure for McNet2 and restart of the machine \[see page 32\]](#)
[The virtual keyboard of McNet2/XP \[see page 43\]](#)

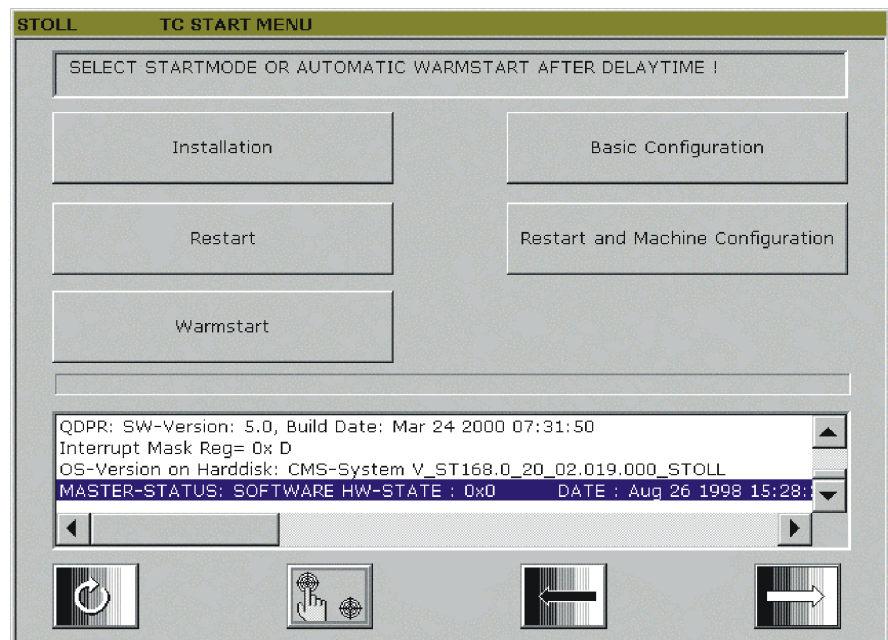
3.1.8 Change of the Ethernet settings at the machine



After the initial installation of the "McNet2" program or with machines from October 2003 on you can change the Ethernet settings via the "Network Settings" button in the "TC BASIC CONFIGURATION MENU" dialog box. The installation floppy disks are then no longer required.

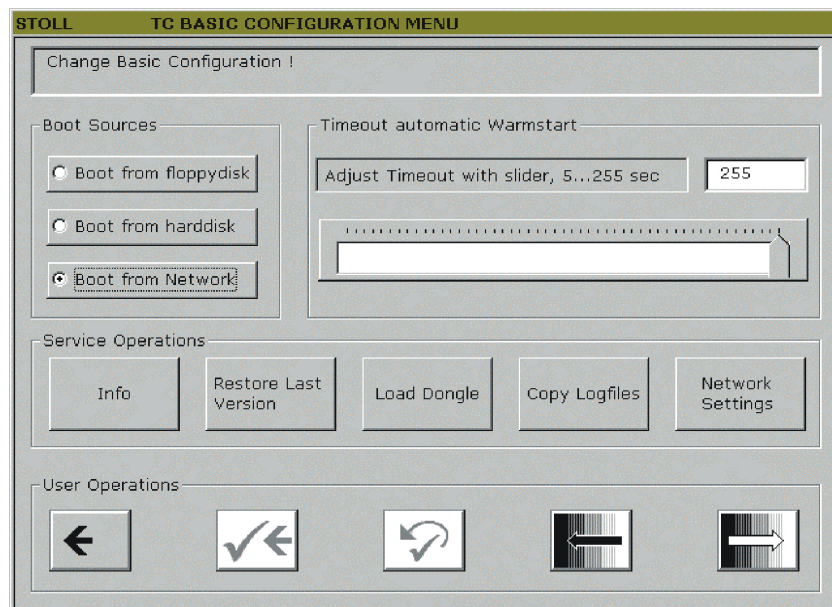
Change the Ethernet settings at the machine:

- The "McNet2/XP" program is installed.
- Networking is enabled.
- The CMS-TC machine is in the boot mode.



"STOLL TC START MENU" dialogue box

1. Press the "Basic Configuration" button.



2. Press the "Network Settings" button.
3. "Change Network Settings?" prompt Confirm (Change Network Settings?) with "OK".
Changes may cause a windows restart.

The "McNet" dialog box appears.

You can change the settings of the "Network Settings" and "Advanced Network Settings" section.



Further information

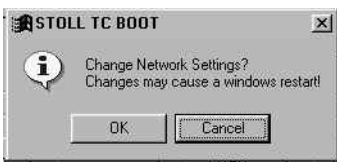
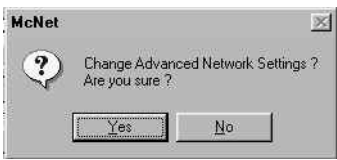
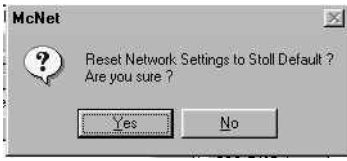
[Network Settings](#) *[see page 36]*

[Advanced Network Settings](#) *[see page 44]*

3.1.9 Troubleshooting and messages in McNet2/XP

Here a list of messages in the "McNet2/XP" program with their causes and the required remedies.

Error message	Cause	Rectification
	IP address conflict A unique IP address must be attributed to every machine.	Verify the uniqueness of all IP addresses in your network.
	User name and workgroup unknown in network.	Verify user name and workgroup in the network. If necessary, change them or enter new ones.
	Unable to connect to this index.	Verify the release so that the respective drive can access the relevant directory. Confirm (with "Yes") the query that the connection should be established the next time you logon.
"Network Enable Error! Please check network connection and network cable!" or "Network Disable Error! Please check network connection and network cable!"	Network can not be activated or deactivated	Check the network connection and the network cabling





Inquiry	Rectification
	Respond with "OK"
	Respond with "OK"
	Reply with "Yes" to use the Stoll default settings.
Reset Network Configuration to Stoll default! Try to keep current Network Settings?	Respond with "Yes". Then check all settings.

3.1.10 Set the Online connection (CMS TC)

TC knitting machines and Stoll patterning units can be connected to Ethernet or Selan. The selected connection mode and a Selan id. for recognizing must be set on each connected knitting machine.

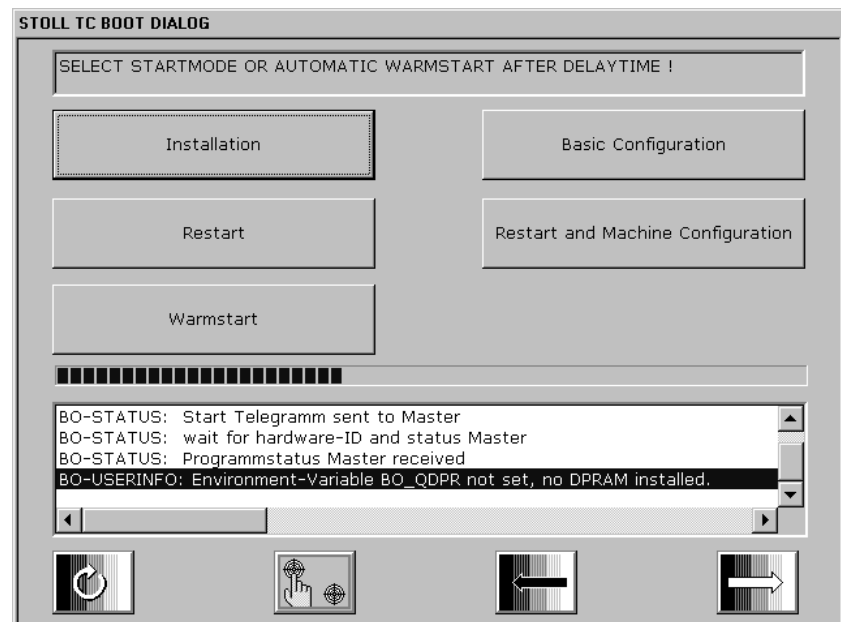
These settings are carried out in the window "Machine Configuration" on TC knitting machines with the operating system version 2.16 or higher.

Keys for setting the Online connection:

Key	Function
	Set the Online connection
	Confirm the entry
	Switch to next window
	Confirm selection

Set the Online connection:

1. Set machine main switch to "0". Set machine main switch to "1".
-> The menu "Boot Dialog" appears on the touch screen.



2. Touch key "Restart and Machine Configuration".
-> After restart the window "Machine configuration" appears.

3. Touch the field "Selan Id" (1). With the help of the virtual keyboard enter the Selan number (max. 9999) of the knitting machine and confirm it. ([How to allocate network addresses](#) *[see page 71]*)
-> The key "Setting Online connection" is available.



The key "Setting Online connection" is only available if the window Machine configuration has been called up via "Boot Dialog" and "Restart and Machine Configuration" or "Installation" and a Selan Id has been entered.

4. Touch key "Setting Online connection".
-> The window "Selecting connection type" appears.

5. Touch the corresponding switch for setting the Online connection.
If the Online connection "Selan" is selected, the "Baudrate" "19200" or "9600" must additionally be set.
6. Confirm selection.
-> The window "Machine configuration" appears.
7. Switching over until main menu appears.

The restart with machine configuration is complete.



If network problems arise and these reduce the production, the Selan number can be set to "0" (switched off). With it call up the window "Machine configuration" in the menu "Service / basic settings" and change "Selan Id".

Further information

[How to enter the IP address of a machine or machines in the M1 program](#)

[\[see page 63\]](#)

[CMS and Selan \[see page 53\]](#)

3.2 CMS and Selan

CMS knitting machines from the generation preceding the introduction of the Touch Screen (up to St 811) are serially networked via Selan. A Selan network connection must be configured on every CMS machine that is networked in this fashion.

I. To configure a Selan network connection:

A unique machine number is attributed to each CMS machine in the Selan network, using the online program.

1. Press the "Ctrl + A" buttons.
-> Prompt for entering shortcuts is displayed.
2. Enter "MC!#n" and confirm.
Here, "n" stands for the unique number that you have attributed to each CMS machine in your Selan network.



You can also enter machine numbers in the Configuration menu after rebooting with configuration

3.3 How to configure an M1 pattern workstation/Windows 2000/XP

Generally, computers that use Windows 2000/XP as their operating system are connected with a LAN (local area network). When Windows 2000/XP is installed, the operating system determines which network adapters are available and automatically creates the relevant local connection. Like other types of connections, this connection runs in the Network and telecommunication connections directory. A local connection is always enabled by default. The local connection is the only type of connection that is automatically created and enabled.

If your computer has more than one network adapter, an icon is displayed in the Network and telecommunication connection directory for each local adapter connection.

When making changes in your network, you can adapt the settings of the existing local connections accordingly. For further information about making changes to a connection, refer to [How to configure a connection \[see page 60\]](#). The Status menu option under Network and telecommunication connections allows you to view information regarding connections, e.g. with respect to the duration and speed of the connection, the amount of data that has been received and transmitted, as well as diagnostic programs that are available for particular connections. For further information about Menu option status, refer to [How to view the status of a local connection \[see page 61\]](#).

You can configure multiple LAN adapters with the Extended setting menu option. You can determine the order in which the adapters will be used for a connection, as well as the clients, services and protocols for the adapter. You can also change the sequence of providers that with the connection allow you to access information in the network (e.g. networks or printers).





You can use the Properties menu option to configure the device that is used for a connection, as well as all clients, services and protocols for the relevant connection.

You can use Clients to define access, via this connection, to computers and data files in the network.

These services include data file, printer release etc.

Such protocols as TCP/IP define the language the computers use to communicate with each other.

The TCP/IP icon is displayed in the Network and telecommunication connections directory. Its appearance varies according to the status of the local connection. Under certain circumstances, a separate icon is displayed in the task bar. If the computer does not detect a LAN adapter, no icon for a local connection is displayed in the Network and telecommunication connection directory. The next table describes the various icons for local connections.

Icon	Description	Path
	The local connection is enabled.	"Network and telecommunication transfer connections" directory.
	The media are separated.	"Network and telecommunication transfer connections" directory.
	The media are separated.	"Task bar"
	The driver is disabled.	"Network and telecommunication transfer connections" directory.

How to establish a local connection:

The M1 pattern workstation is integrated into a local network.

- When the computer is started, Windows 2000/XP detects the network adapter and automatically defines the local connection. You do not need to start the local connection with a mouse click.

Further information

[How to load the operating system for the knitting machine from the M1](#)
[\[see page 77\]](#)

3.3.1 Using M1 as a server

If a M1 unit is to be of use as a central file server for pattern files and machine software, pay attention to:

The operating system of M1 (Windows 2000/XP professional) does not allow more than 10 network connections simultaneously.

- That is why use an additional computer with the operating system WINNT as a server in the net if more than 10 units (CMS) should access a common file deposit.



Stoll recommends to engage a network service provider for planning and installing networking.

3.3.2 Setting up a LAN connection

A "LAN" (local area network) is a group of computers and local units (CMS, pattern units) that are as a rule located at the same site (local). These units are physically connected to each other with a cable in such a way that each device in the network can interface with the other units in the network.

If you wish to set up a LAN connection to another unit, the following components must have been pre-installed on your computer:



The requisite network components for the "M1 pattern workstation".

- "Client software" which allows you to connect your computer to a server. For example, use "Client for Microsoft networks" software to set up a connection to the Microsoft network.
- "Service programs" that provide you with additional functions such as "Data file and printer authorization for Microsoft networks".
- A "Network protocol", which is the language the computer uses to communicate within the network. Two computers must utilize the same protocol in order to be able to communicate with each other. The "TCP/IP protocol" is used here.



When your computer is physically connected to a network during the installation process, Setup installs the software components that are needed to connect to the network. For example, Windows 2000/XP automatically detects the network adapter and installs the correct drivers.

To connect your computer with a LAN, proceed as follows:

- The network adapter has already been installed.
- The computer is physically connected to the network with, for example, a network cable.



The following description applies for Windows 2000.

The procedure in Windows XP may be different. Refer to the Windows XP Help in this case.

1. Logon as a user with administrator's rights.
2. Click on "Start" and point your mouse to "Settings". Then click on "Control Panel".
3. In Control Panel, double-click on "Network and telecommunication transfer connections".
4. Right-click on "LAN connection". Then click on "Properties".
5. Select the following under "Activated components will be used by these connections":
 - client software,
 - the Network protocol "TCP/IP" and
 - the service as per your network administrator's instructions.Components are pre-installed and activated on the M1 pattern workstation (Windows 2000).
If the requisite options are not listed, click on "Install" in order to add them. Click on "OK".



If you are unsure which network components you should select, consult your network administrator.

Further information

Logon as administrator *[see page 80]*

3.3.3 Set up a network in Windows 2000/XP (M1):

I. View or enter IP addresses:

You must be logged on either as an administrator or as a member of the "Administrator" group.



The following description applies for Windows 2000.

The procedure in Windows XP may be deferent. Refer to the Windows XP Help in this case.

1. To open "network and telecommunication transfer connections" click on "Start" and point your mouse to "Settings". Then click on "Network and telecommunication transfer connections".
2. Double-click on "Local area connection".
- The "Local area connection status" dialog appears.
3. Click on "Properties" to display the "Local area connection properties".
4. "Components activated" in the selection window... To select or activate "Internet protocol (TCP/IP)":
5. Click on "Properties" key.
The "Internet protocol (TCP/IP) properties" dialog is displayed.
6. Enter addresses, as per their [Listing \[see page 71\]](#), in the IP address entry field in the "General" tab.

Each unit (computer) within a given network must have a unique IP address. The TCP/IP network protocol uses this address to communicate with individual computers.

The network is divided into what are termed network classes.

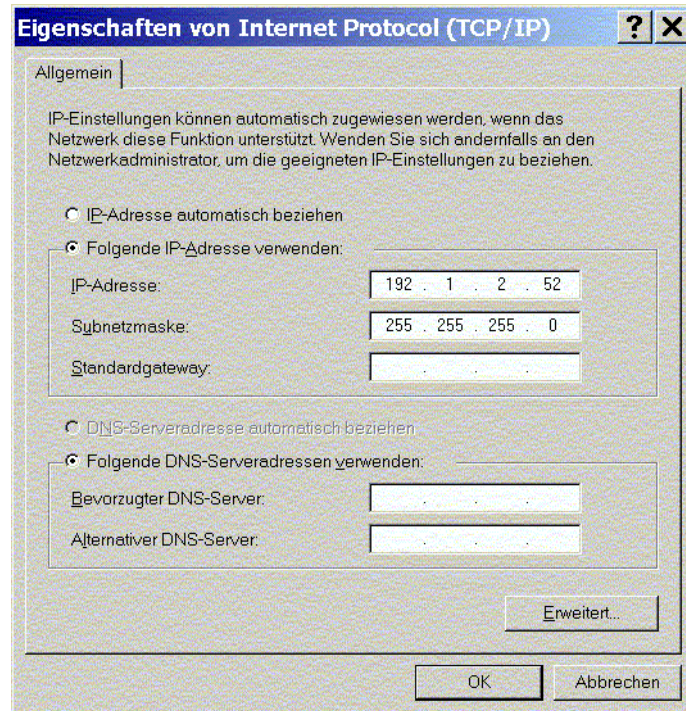
Class B is for medium-sized and larger networks (more than 254 machines).

Class C (described here) is for smaller networks (up to 254 machines).

Certain address areas are set aside in each of these classes for use in the Intranet:

Network class	IP addresses from	to
"Class C"	192.168.0.1	192.168.255.254

Enter the relevant values as per TCP/IP conventions in the "Subnet mask" field in such a way that only the IP addresses need to be entered.



7. Confirm with "OK".
8. Confirm the "Properties of local area connection" dialog with "OK" as well.



However, you may also enter company-specific values in the "IP address" field. Ask your network administrator for an available IP address.

II. Enter the name of the computer and workgroup:

You must enter a name in order for other network users to access this unit. This name identifies the unit in the network.


Upon delivery of the M1 pattern workstation, the name and a consecutive machine number (e.g. "STOLL 1711") are pre-set on STOLL. This pre-set value remains unchanged, thereby making this name absolutely unique.

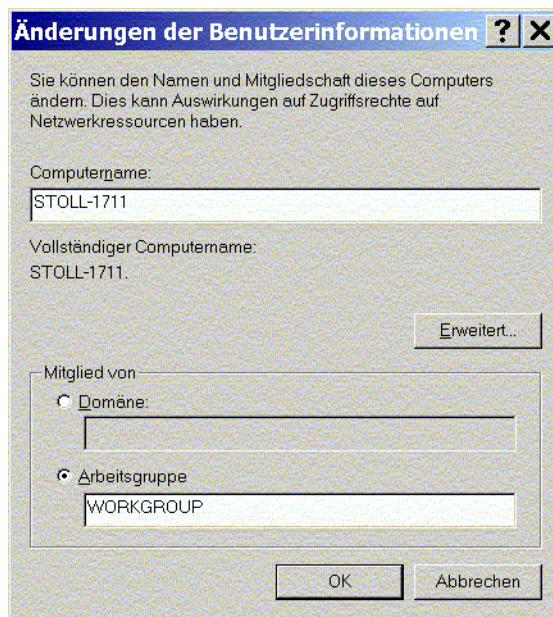
All knitting machines, analysis computers and patterning units must be in the same workgroup so that all units can communicate with each other. If you work in a company-wide network, ask your network administrator for a suitable workgroup name. It is unnecessary to set up different workgroups. Preset values upon delivery: "WORKGROUP". This setting can remain unchanged.



The following description applies for Windows 2000.

The procedure in Windows XP may be different. Refer to the Windows XP Help in this case.

1. Click on "Start" and point your mouse to "Settings." Then double-click on "System management".
2. Double-click on the "System"  icon.
The "System properties" dialog is displayed.
3. Open the "Network ID" tab.
-> The computer name and workgroup are displayed.
4. Open the "Changes in user information" dialog with the "Properties" key.



5. The preset "Computer name" is displayed in the entry field.
You can enter another computer name (maximum 20 characters) that is unique for your network.
6. The preset name of the workgroup is displayed under "Member of".
You may enter another workgroup. All units that are in communication with each other must be part of the same workgroup.
7. Confirm entries with "OK".
-> The entries take effect only after you restart the computer.

3.3.4 To configure a connection, proceed as follows



To open "Network and telecommunication transfer connections" click on "Start" and point your mouse to "Settings". Then double-click on "Network and telecommunication transfer connections".



A number of options are available, depending upon the type of connection you are defining.

Only the "General" tab is displayed for local connections.

To define a network connection:



The following description applies for Windows 2000.

The procedure in Windows XP may be deferent. Refer to the Windows XP Help in this case.

1. Open "Network and telecommunication transfer connections".
-> A number of options are available depending upon the type of connection you are defining. For example, for a local connection, only the "General" tab is displayed.
2. Right-click on the connection that you would like to configure. Then click on "Properties".
3. Proceed as follows:
 - Use the "General" tab to configure the device for dialing, telephone numbers, host address, country code and dial settings.
 - Use the "Options " tab to configure dial and redial options, multiple connections and X.25 parameters.
 - Use the "Security " tab to configure authorization, data encoding as well as terminal windows and script options.
 - Use the "Network" tab to configure the RAS server and the connection protocol.
 - You can use the "Shared use" tab to enable Internet connections or if you need to enable or disable Dialing.



For further information regarding the various tab elements, right-click on the element and then on "Quick help".

3.3.5 View the status of a local connection

You can use the Properties tab in the "Network and telecommunications network connections" dialog to view the network components of a local connection, e.g. network protocol settings.

The status monitoring is "disabled."



To open the "Network and telecommunication transfer connections" dialog, click on "Start" and point your mouse to "Settings". Then double-click on "Network and telecommunication transfer connections".

To view the status of a local connection, proceed as follows:



The following description applies for Windows 2000.

The procedure in Windows XP may be different. Refer to the Windows XP Help in this case.

1. Open the "Network and Dial-up Connections" dialog box.
2. Carry out one of the following steps:
 - ➔ If you would like to monitor activities during the current session, right-click on the local connection. Then click on "Status".
 - ➔ To enable status monitoring automatically while the connection is activated, right-click on the local connection. Click on "Properties". Then activate the "Display icon in task bar after connecting" checkbox.

3.3.6 To install TCP/IP



If a network adapter is detected while Windows2000Setup is running, it means that TCP/IP has already been installed as the default network protocol. Carry out the following steps only if the default setting TCP/IP was written over by setup.

To open "Network and telecommunication transfer connections" click on "Start" and point your mouse to "Settings". Then double-click on "Network and telecommunication transfer connections".

To install the Internet protocol TCP/IP (if it is not included on the list of installed components):

You must be logged on either as an administrator or as a member of the "Administrator" group.



The following description applies for Windows 2000.

The procedure in Windows XP may be different. Refer to the Windows XP Help in this case.

1. Open "Network and telecommunication transfer connections".
2. Right-click on the network connection for which you would like to install and enable TCP/IP. Then click on "Properties".
3. If "Internet protocol (TCP/IP)" is not on the list of installed components, proceed (for a LAN connection) on the "General" tab and (for all other connections) on the "Network" tab as follows:
4. Click on "Install".
5. Click on "Protocol". Then click on "Add".
6. In the "Select network protocol" dialog field, click on "Internet protocol (TCP/IP)". Then click on "OK".
7. Make certain that the "Internet protocol (TCP/IP)" checkbox is activated. Then click on "OK".

3.3.7 How to enter the IP address of a machine or machines in the M1 program

When you incorporate your machines into a network with the M1 pattern workstation, various settings for online connection to each of the machines must be entered in the "Online Parameter tab" of the "Machine Designation Properties " dialog.

Element	Meaning	Relevance
"SELAN machine no."	The number entered here must be exactly the same as the machine's Selan ID number. Address form [see page 73]	For Selan and Ethernet
"Type of connection"		
	"Serial" or "Ethernet serial" connection. A COM server is interposed in Ethernet serial connections. There is an Ethernet from the pattern workstation to the COM server, and a serial connection from the COM server to the machines.	Non-TC machines
	"Ethernet", "serial", "or Ethernet serial" connections.	TC machines
"Data communications parameters"		
	How to select interfaces and data transfer rates for serial connections	Non-TC machines
	IP addresses for Ethernet connections must be exactly the same as the machine's IP address.	TC machines

I. Open the Online Parameters tab in the "Machine Designation Property " dialog:

- This starts the M1 program in the M1 pattern workstation.
 - The machine explorer opens.
 - The My machine tab is enabled.
1. Right-click in the right window of the machine whose properties you would like to view or change.
-> The machine is selected and is displayed in the context menu.
 2. Left-click on the "Properties" function.
-> The "Machine Designation Property " dialog is displayed.
 3. Open the "Online Parameters tab".
 4. Make entries in accordance with your network configuration and address list.

Further information

[Set the Online connection \(CMS TC\)](#) [\[see page 50\]](#)

3.3.8 Virus scanner



The danger in conjunction with computer viruses is increasing year by year.

We advise you with emphasis to the fact that the company Fa. H. Stoll GmbH & Co. KG will take no responsibility for damages in this conjunction. Take care of this problem!

Well known companies are specialized in this field of computing. For example the following tool manufacturers present their tools and strategies, among others such as online scanners which you can activate via the home pages of the manufacturers:

www.mcafee.com <http://www.mcafee.com/>

www.symantec.com <http://www.symantec.com/>

www.kaspersky.com <http://www.kaspersky.com/>

www.ravantivirus.com <http://www.ravantivirus.com/>

Microsoft provides service packs and hotfixes for security reasons for the MS Windows 2000 and MS Windows XP operating systems.

If you have internet access on your pattern workstation you should use the automatic Microsoft update service.

How to setup the automatic update:

	Windows 2000	Windows XP
Setup automatic updates	"Start/Settings/System/Automatic Updates"	"Start/Settings/System/Automatic Updates" tab "Automatic Updates"
Windows help for Automatic Updates	Via the "Help" button in the "Automatic Updates" tab or "C:\WINNT\Help\wuauhelp.chm"	Via the "Help" button in the "Automatic Updates" tab or "C:\WINDOWS\Help\wuauhelp.chm"



You can start the updates individually in the "Microsoft Internet Explorer". Call up the "Tools/Windows Updates" menu.



If the "Automatic Updates" function is not yet available install the updates via the "Microsoft Internet Explorer" at first.

3.4 How to network SIRIX units

It is recommended that companies running more than one SIRIX unit integrate them into a network. This can be realized with either the "Public_Lan" connecting folder or with a complete network.

	"Public_Lan" connecting folder.	Complete network
Description	Each SIRIX has a registry. To enable co-workers to work with your data files, file the latter (registries, pattern folders) in the "Public_Lan" registry.	The SIRIX units are linked to the server on whom the main data storage unit is installed. Any user can work with their data files from any unit.
Advantage	If a SIRIX fails, work can continue on other units. Each user is responsible for their backup.	No data can be "occupied" by fellow users, since users can work with their data files on any unit. The backup is only necessary on a SIRIX.
Drawback	The data files of a given user are available only on "his" unit. If another person is using the data files, the user cannot work with his data on any other unit. Backup must be realized on all units.	If the server goes down, all units stand idle. It is of paramount importance to back up data, since a system failure could result in the loss of all users' data files.

For example, three SIRIX units could be connected to each other in one network.

To do this, proceed as follows:

1. Interconnect the units.
2. Each of the units identifies itself.
3. Each of the units states which other units are in the network.

3.4.1 To set up a network on SIRIX:

Every unit in the network, whether a patterning unit or knitting machine, must identify itself to you and must indicate which partners are still active (i.e., accessible) in the network. This is done via an IP address. The "mk_Network" program is used to set up the network connection for the SIRIX pattern units. You can enter the requisite settings in the "mk_Network" dialog.

Each of the steps described below, from Logon to Shutdown and Reboot system, must be carried out on each SIRIX in the network. In the example, the following names are to be entered.

	Own name	IP address	Server	Partner
SIRIX01	SIRIX01	192.1.2.55	-	SIRIX02/03
SIRIX01	SIRIX01	192.1.2.56	SIRIX01	SIRIX03
SIRIX03	SIRIX03	192.1.2.57	SIRIX01	SIRIX01



It is imperative that a unique name and unique IP address be attributed to each SIRIX. Unique means: a name that is given only once.

I. To start the "mk_network" program:

1. Open the "Tools" registry.
2. Open the "SIRIX" registry.
3. Double-click on the "mk_Network" program.

The "mk_Network" dialog is displayed.

This window is used to enter the steps for establishing a network, one by one.

II. Make entries in the "mk_Network" dialog.

1. You will be prompted to indicate which kind of network you wish to configure.

Enter the relevant letter:

"P" for "Public_Lan" or "D" for "Data_Link"
and confirm with "<Enter>".

2. You will be prompted to indicate whether this SIRIX is a Server or a Client unit.

For "Client" units: Press "<Enter>".

For "Server" units: Enter "S"
and confirm with "<Enter>".

3. You will be prompted to enter the name of the SIRIX.
SIRIX01 will be recommended.

Since that is the name of the Server unit in this example, confirm this name with "<Enter>".

-> An IP address for this unit will be displayed automatically.

4. Enter the relevant IP address from your address list (e.g. 192.1.2.55) and confirm with "<Enter>".
5. You will be prompted to enter the name of the client computer.
"SIRIX02" will be recommended.

Since this is also the unit's correct name, simply confirm with "<Enter>".

(If an incorrect name is displayed, enter the correct one and confirm with "<Enter>".)

6. You will be prompted to enter the IP address of the SIRIX02.
An example of an IP address for the SIRIX02 is: "192.1.2.56"

Enter this address and confirm with "<Enter>".

7. You will be prompted to indicate whether you wish to define additional SIRIX units for the network.
In this example, the SIRIX03 is a partner in the network.

You must therefore enter "SIRIX03" and confirm with "<Enter>".

-> The last prompt asks you to enter the IP address.

Enter "192.1.2.57" (for example) and confirm with "<Enter>".

-> You will be prompted to indicate whether you wish to define additional users.

Since this is not the case here, answer the question with "<Enter>", i.e. exit.

8. A list of tasks completed thus far is displayed.

Check your entries.

If any entries are incorrect, close the "mk_Network" dialog and start the entire procedure from the beginning.

9. The following message is then displayed:
Please shutdown and reboot System (SIRIX).

Confirm this with a mouse click.

You must run "Shut down system" so that SIRIX can properly process and allocate the data needed to configure a network. Then logon again.

Here is a summary of all the entries:

1. SIRIX02:

- Indicate whether this SIRIX is set-up as a [S]erver or [C]lient unit. [C]
- Enter name of local computer: SIRIX01
- ... IP address of SIRIX02: 192.1.2.56 confirm with Enter
- Enter the computer name of the server: SIRIX01
- ... IP address of SIRIX01: 192.1.2.55
- Enter the name of the client computer (or <Enter>)
- ... IP address of SIRIX03: 192.1.2.57
- >>> Local host: SIRIX02, IP=192.1.2.56
- >>> Server : SIRIX02, IP=192.1.2.55
- >>> Client : SIRIX02, IP=192.1.2.57
- Please shutdown and reboot system (SIRIX).

2. SIRIX03:

- Indicate whether this SIRIX is set-up as a [S]erver or [C]lient unit. [C]
- Enter name of local computer: SIRIX03
- ... IP address of SIRIX03: 192.1.2.57 Confirm with Enter
- Enter the computer name of the server: SIRIX01
- ... IP address of SIRIX01: 192.1.2.55
- Enter the name of the client computer (or <Enter>)
- ... IP address of SIRIX02: 192.1.2.56
- >>> Local host: SIRIX02, IP=192.1.2.57
- >>> Server : SIRIX02, IP=192.1.2.55
- >>> Client : SIRIX02, IP=192.1.2.56
- Please shutdown and reboot system (SIRIX).

Setup of this SIRIX unit has been successfully completed.
You only have to create a "Public_Lan" directory on the background of the screen when setting up a "Public_Lan" network.

III. To create a Public_Lan directory in the background:

Select "Public_Lan" in the "mk-Network" dialog.

1. Put the cursor on the background of the screen. Right-click and hold.
2. Select "File QuickFind".
-> A frame is displayed.
3. Place this frame on the screen and left-click once.
The "Find an icon" window is displayed.
4. Move the cursor to this "Find an icon" window and enter the following:
- For Client units: /lan/people/Public_Lan
- For Server units: /usr/people/Public_Lan
5. A "Public_Lan" directory icon is displayed in this window.
Drag this icon into the background of the screen.

You create the connecting directory for the other SIRIX units on the desktop of the current SIRIX pattern unit.

How to allocate network addresses [\[see page 71\]](#)

3.4.2 How to incorporate CMS machines into the Selan network (SIRIX)

You can use the online program of the SIRIX pattern unit to configure a network connection with a Selan unit via a serial network. In order for the pattern units and knitting machines to communicate with each other, all machines in the SIRIX online program must be incorporated into the network.

How to incorporate a CMS into the SIRIX in a Selan network:

The machine must be connected to a SIRIX pattern unit via a Selan unit and a serial cable.

The SIRIX must be running.

1. Open the "Tools" registry.
2. Open the "SIRIX" registry.
3. Double-click on the "mk_Network" program.
4. Move the cursor to the Stoll color bar.
5. Right-click on the mouse button and hold it down.
-> The Machine type menu is displayed.
6. Move the mouse to the desired machine type and release the mouse button.
-> The gauge menu is displayed.
7. Select gauge, right-click on the mouse button and hold it down.
-> The machine selected appears next to the color bar.
8. How to allocate a machine number
 - Enter a number and accept with the "Enter"key.
 - or
 - Left-click The next available number is selected.
9. Drag the machine to the machine field. To do this, move the cursor to the machine. Then left-click and hold.
A border appears around the machine. With the mouse button held down, place the machine in the desired location. Then release the mouse button.



A machine can also be moved to its appropriate location at a later stage by repeating steps 6 and 7.

3.5 How to enter IP address for the Com server




There are several different ways to enter IP addresses for the Com server. For more information, refer to the instructions supplied by the manufacturer.

To make IP address entries via the display of Com server #58004:

1. Connect the Com server to the power supply (110-230V; 47/63Hz).
2. Select the "MENU TYP" menu with key and press 2 x.
3. Select the "TCPIP protocol" menu key and accept with the "OK" key.
-> The message "Saving..." is displayed



Save the changes in non-volatile memory with the "OK" key. Repeat if "Saving..." does not appear.

4. Select the "SET TCPIP" menu key press 4x.
5. Select the "Box IP No." menu option with the button.
Here, you enter the IP address as it appears in the [Address list](#) *[see page 71]* (e.g. 192.168.2.60).
Select the position of the number with the   keys.
Increment or decrement the digit for each position with the  keys.
6. Accept with the "OK" key.
-> The message "Saving..." is displayed
7. Enter the subnet mask (e.g. 255.255.255.0) in the same fashion at the "Subnet mask" menu option in the "SET TCPIP / "menu. Accept with "OK".
Erroneous entries are automatically corrected when the entries are saved.

This implements the required settings on the Com server.

[Selan and Ethernet](#) *[see page 18]*

3.6 How to allocate network addresses

The following applies to units in networks operating with the TCP/IP standard: All units must have a unique name and a unique IP address. Here is an example of addresses in network Class C.

System	Computer name <i>[see page 36]</i>	Description <i>[see page 36]</i>	IP address <i>[see page 44]</i>	Subnet <i>[see page 36]</i> Class B	Server	Selan-Id <i>[see page 50]</i>
M1 pattern Workstation	STOLL-1711	New pattern unit	172.29.1.51	255.255.0.0	For patterns, MC operating systems and knit reports	None
CMS3300TC	CMS3300TC 002	Room 1, left	172.29.1.52	255.255.0.0	Client	0002
CMS3300TC	CMS3300TC 003	Room 1, right	172.29.1.53	255.255.0.0	Client	0003
Knit report Assessment unit	PC-BDE-255	PC for analysis of operational and machine data	172.29.1.54	255.255.0.0	If an M1 does not have the knit report program installed on it	None
SIRIX	SIRIX01	Pattern unit	172.29.1.55	255.255.0.0		None
COM server		Bridge from Ethernet to Selan network	172.29.1.60	255.255.0.0		None

How to create a list of names and IP addresses:

1. Before entering addresses in the units that are to be networked, create a [Summary table](#) *[see page 73]* as per the example above.
2. List all machines, pattern units and PCs that are to be networked.
3. Enter a unique name for each unit, e.g. machine type and a consecutive number: "CMS330TC001".
4. Enter a short description, e.g. special features of a machine, installation site, other characteristics.
5. How to enter IP addresses
Ex: 172.29.1.51



The address area for IP addresses for Intranets is governed by the RFC 1597 standard, which is summarized below:

Network classe	IP addresses from	to	Subnet mask	Number of units in the subnet
Class B" "Default setting of machine network	172.16.0.1	172.31.255.254	255.255.0.0	max. 64,516
Class C	192.168.0.1	192.168.255.254	255.255.255.0	max. 254



Use IP addresses of Class B.

The first figures of the IP address up to the second dot have to be the same for all units within the network.

Ex: 172.29.xxx.xxx

6. Configuring a unit as a server The machines and pattern units have access to the data on this unit. It is recommended that the pattern unit or analysis computer (Stoll knit report) used as a server have the equivalent amount of memory capacity.



It is imperative that a unique name and unique IP address be attributed to each unit. Unique means: a name that is given only once.

3.7 Form for your IP addresses

[illegible]

3.8 Stoll networking software

You will find the software needed to set up a network here.

Designation	Type of network	Remarks
McNet2	Ethernet	Automatic networking installation for Ethernet networks of TC machines.
Stoll knitting report	All	analysis software for machines and operating data
HD Analyst	Ethernet	Update of the IPC software TC STARTUP




To use the full range of network functions, always install the latest version of the operating system and of the HD Analyst.



Download via "<http://ftp.stoll.com/customer/bootfiles/...>".



4. Select the M1 pattern workstation in the "Entire Network" selection field

at the left and transfer it into the right selection field with the  (Insert at the Bottom button).

Transfer all M1 Pattern-Workstations to the right selection field, for which you want to install a Selan connection.

5. Select the desired M1 in the left selection window.
-> The name of this unit appears bold and in a frame.
6. Confirm with .
-> The machine will be connected to the M1.
7. Press to get back to the "Selan Terminal" .
-> The "Selan Terminal" dialog box appears with a selection of menus.
8. Enter the digit "15" ("Info on M1") via keyboard and confirm with "ENTER".
-> The prompt "INFO-TEXT: >" appears.
9. Enter any desired text after the prompt. Example: Test connection to M1.
10. Confirm the text entry with .

This text will be sent to the selected M1 pattern workstation and displayed within the "Selan Online" dialog box.

11. Press to terminate the connection.
-> The "Main Menu" appears again.

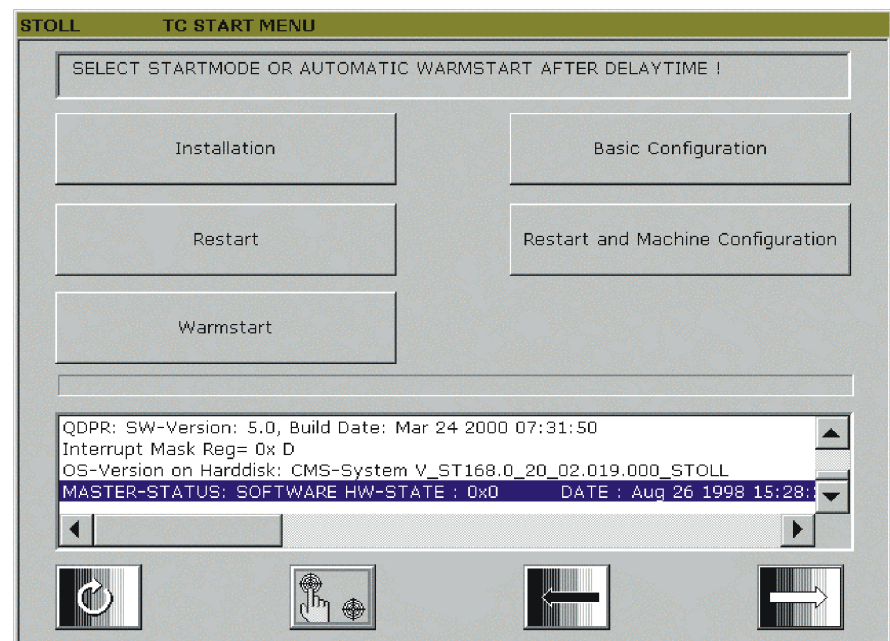
4.1.2 How to load the operating system for the knitting machine from the M1

The operating systems of CMS TC machines can be run by the M1 and can be accessed from the individual machines. This allows the current operating system to be loaded in the machines when a machine outfit is used.

In addition, a directory for operating system files is created upon installation of the M1 software in the pattern workstation. The index path is: "D:\Stoll\M1\Bootfiles\".

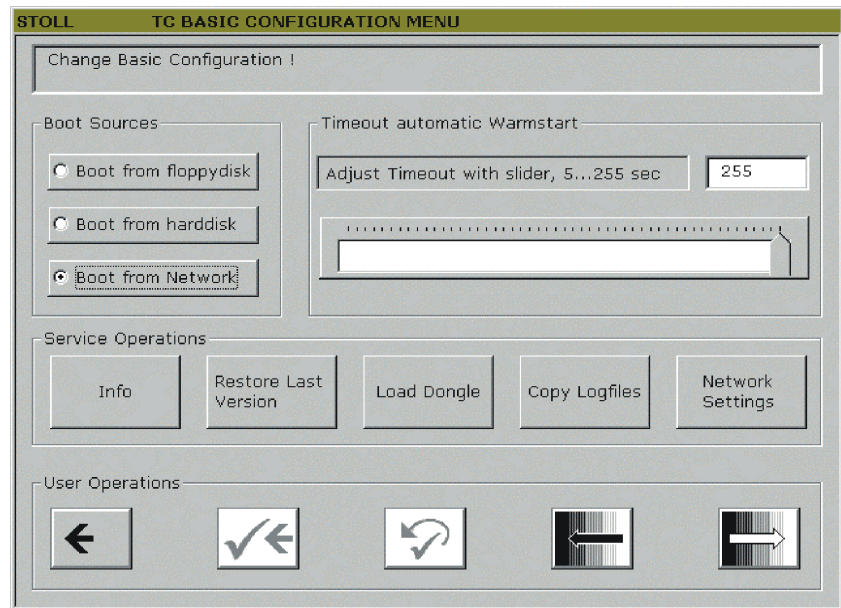
Load the new operating system from the directory of the M1 in a CMS-TC machine:

- The CMS TC machines must be in a local network with the M1 pattern workstation. Networking of the machine is enabled.
- The "D:\Stoll\M1\Bootfiles\" directory from the M1 must be configured as boot directory on each of the machines. In other words, it must be permanently connected to the M1 pattern workstation as network drive "Q".
- The "D:\Stoll\M1\Bootfiles\" directory from the M1 must be released for the CMS TC machine workgroups.
- The CMS-TC machine is in the boot mode.




"STOLL TC START MENU" dialogue box

1. Press the "Basic Configuration" button.



2. Select the "Boot from Network" button.

3. Confirm with  .
-> The "STOLL TC START MENU" dialogue box appears again.
4. Press the "Installation" button.

The installation starts and proceeds like the installation from floppy or hard disk.

Further information

Connect a network drive permanently [\[see page 36\]](#)

The index must be released for access via the network. [\[see page 86\]](#)

5 User accounts and user rights

In most instances, administrator rights are needed in order to configure network connections for the various units.

→ Consult the chapters that follow for an overview in this regard, and then implement the relevant procedures step by step.

5.1 Configuring a new user (SIRIX)

Each user should work on SIRIX under their own name. This simplifies work for all users. Authorization to install a workstation may only be granted if SIRIX is its system manager or "root" or "administrator". Each user has a name and in some cases a password. Letters (lower case only) and numbers can be used for the user name. Maximum length: 8 characters. As a rule, the first or last name is used for this purpose. The password can be comprised of letters, numbers or signs (#, *, /, .). After creating your password, you will be prompted to enter it.

I. Configure a new user:

1. Double-click on the "Tools" directory.
2. Double-click on the "SIRIX" directory.
3. Double-click on the "User tool" program point to activate it.
→ The "User tool" window is displayed with the following options:
 - 1 - Add new user
 - 2 - Define or modify password
 - 3 - Check user directory
4. Click on "1" and enter the "root" password when you are prompted to do so.
The "Add user" entry window is displayed.
5. In the "User name" entry field, enter the name of the new user (use lower case letters only), e.g. "joe".
6. Click on "Accept" to confirm the entry.
→ The "Add user" entry window appears with the user ID number display.
SIRIX assigns an ID number to every user for internal processing purposes. The next available number will be proposed to you.
7. To accept this number, click on "Accept", or enter another number.

Now the user known as "joe" can work with SIRIX.

5.2 How to use administrator accounts (Windows 2000/XP)

When Windows 2000/XP is installed, Set-up creates the administrator account and prompts you to enter a password. When you update a former Windows operating system (NT or 2000), the set-up retains the previous account data, i.e. information regarding the existing administrator account. The administrator account has full access rights for all programs, contents and settings on the computer. Therefore, you should logon as an administrator if, for example, you are creating user accounts, installing software or when making other changes that need to be available to all users. Only the administrator can define rights for other users.

To logon as an administrator, proceed as follows:

The computer should be shut down; or if it is running, no user should be logged on.

1. Begin logging on with the following key combination: "Ctrl" + "Alt" + "Del".
 2. Enter the user name "Administrator" and the relevant password in the "Logon information" dialog.
 3. Confirm entries with "OK".
-

Windows 2000/XP now starts. You are logged on as an administrator.

Further information

[How to create and change user accounts](#) *[see page 81]*

[How to utilize user groups](#) *[see page 85]*

[How to allocate access rights](#) *[see page 86]*

5.3 How to create and modify user accounts (Windows 2000/XP)

The administrator allocates "authorizations" to each user. This is a setting that determines whether the user is allowed to install software, view other users' documents or use network resources (e.g. printer and server).

It often happens that the administrator grants authorization to a particular group of user accounts, known as a "Group account". When the administrator adds a user to a group, he allocates to the user all rights that have been previously granted to the entire group. The following accounts and authorizations are pre-defined in Windows 2000:

- "Standard user" is a constituent of the group account known as "Main user". Standard users may modify computer settings and install programs, but they may not view any other users' documents.
- "Users with restricted access" are constituents of the group account known as "User". Users with restricted access may run programs and save documents. However, they may not change computer settings, install programs or view documents created by other users.
- "Other" contains a list of all predefined accounts: "Administrators", "security operators", "guests", "main users", "replication operators" and "users".

Users of the "Administrator" account have full access rights to all programs, content and settings on the computer. Therefore, you should logon as an administrator if, for example, you are creating user accounts, installing software or when making other changes that need to be available to all users. Only the administrator can define rights for other users.

Overview of authorizations needed at the M1 pattern workstation

Action	Authorization needed:
Load, create and save pattern	User
Use, create and save module	User
Format DVD	Administrator
Use DVD	User
Install M1	Administrator
Install M1 in user-defined mode	Administrator
Add new user	Administrator
Configure network	Administrator

I. Create a local user account:

1. Log on to Windows 2000 as an administrator or as a user with administrator's rights.
2. Click on "Start" and point your mouse to "Settings". Then click on "Control Panel".
3. Double click in System control on "User and Passwords". Click on the "Extended" tab.
4. Under "extended user administration" click on "Extended".
5. In the window "Local user and groups" double-click the directory "User".
6. Click on the menu Action/New User.
-> The window "New user" appears.
7. In the window "New user" fill in the fields "user name", "password" and "confirm password".
All the other fields can be filled in additionally.

Field	Meaning	Input
User name	Enter the logon name of the user here.	A 20-figure name, no special character
Password	Enter the password of the user here	a 14-figure password
Confirm the password	Enter here the password of the user once again for confirming	a 14-figure password

8. Deactivate "User must change password during next logon" checkbox if necessary and click on "Generate" button.
-> The new user is set, the window remains open for entering other user names.
9. Close the "New user" window with the "Close" button.
-> The new user appears in the list of users in the "Local users and groups" window.

II. Add an user account from a network domain to the local computer:

1. Log on to the computer as an administrator.
2. Click on "Start" and point your mouse to "Settings". Then click on "Control Panel".
3. Double click in System control on "User and password".
4. On the "User" tab click on "Add".
5. Enter the user name and, if the user account is part of a network domain, the domain's name. Then click on "Continue".
- or -
Select a user account of a network domain with "Browse" and click on "Continue".



Your network administrator will provide you with the information you need to set up a user account in a network domain.

6. Select the access rights that you would like to allocate to the user. Click on "Finish".

To change the password attributes or group membership of an existing user account, follow the procedure described below.

III. Change a user account:

1. Log on to Windows 2000/XP as an administrator or as a user with administrator's rights.
2. Click on "Start" and point your mouse to "Settings". Then click on "Control Panel".
3. Double click in System control on "User and Passwords". Click on the "Extended" tab.
4. Under "extended user administration" click on "Extended".
5. In the "Local user and group" window, click on the "User" file. Then click on the user account that is to be changed.
6. Make the required changes:

Use the "General" tab to deactivate the account or to modify password attributes. Here, you can (among other things) specify that the user must change their password the next time they log on; or that the password will never be deactivated.

You can add or delete groups to which the user belongs on the "Membership" tab.

To enter a logon script or basic directory for a user, use the "Profile" tab.



For further information, refer to Processing network information MS-ITS:C:\WINNT\Help\Getstart.chm::wgs_gs_02013.htm in Chapter 2 of Windows 2000/XP Help.

After creating a user account for yourself, you can use it to logon to Windows 2000/XP. It is assumed in the procedure below that you have logged on as an administrator and that you have already created your own user account.

IV. How to log on from your computer with your own user account:

1. Click on the "Start" button. Then click on Exit.
2. In the "Exit Windows" dialogue field, click on the Down arrow key to "select one of the following options". Click on "Administrator log off" and then on "OK".

3. When the prompt "Log on to Windows" is displayed, enter your user name (logon name) and password in the relevant fields. Click on "OK".

Windows 2000/XP now starts. If you have selected a domain, a connection with the network is established.

5.4 How to utilize User groups (Windows 2000/XP)

Groups are used to allocate specific authorizations to one or more users. In Windows 2000/XP, local groups are predefined that simplify for the administrator the task of strategically attributing authorizations to users according to their activities. Groups can also create new groups themselves.

How to add a user to a local group:

1. Log on to Windows 2000/XP as an administrator or as a user with administrator's rights.
2. Click on "Start" and point your mouse to "Settings". Then click on "Control Panel".
3. Double click in System control on "User and password".
4. Click on the user's name on the "User" tab. Then click on "Properties".
5. Select the authorization level you would like to attribute to the user.
6. To select from a list of predefined local groups, click on the down arrow key for "Others".
7. Click on "OK". Then click again on "OK".

5.5 How to release directories (Windows 2000/XP)

In order for a remote unit to access directories through a network, you have to release them.

When you define access rights for released data files, you control the extent to which other users have access to your data. The table below shows authorization options for released directories, as well as permissible actions within the framework of these access rights.

Release level	Authorizations
Full access	opening, reading and processing data files, running programs, modifying authorizations, taking over ownership of directories
Modify	opening, reading and processing data files, Running programs
Reading	Reading data files and running programs

How to release a directory:

1. Right-click on the directory that you would like to release. Then click on "Release".
2. Click on "Release this directory" on the "Release" tab.
3. Adopt the default name in the "Release name" field, or enter a new name.
The release name may not exceed eight characters or may it contain a line space.
4. To make a description available for a directory, enter the relevant text in the "Comment" field.
5. To limit the number of users that can access a file simultaneously, click on "Approve" in the "Limit users" field. Then enter a number.
6. To define authorizations for particular users or groups, click on "Authorizations" and "add". Then double-click on the relevant user or group and click on "OK".
Then select the user or group and activate or deactivate the relevant authorization checkboxes for "Release" or "Refuse". Click on "OK".
Click on "OK".



When you create a released directory, "Full access" is allocated to the "Everyone" group by default.

6 Glossar

Term	Explanation
"MC!#n"	SINTRAL command for Selan-Id "n" stands for the unique numbers which you have attributed to each CMS machine in your Selan network or ethernet.
"Selan-Id."	A definite number which you allocate for each CMS machine in your Selan network or Ethernet. Enables the machine recognition within the Stoll application programs (e.g. M1 pattern workstation; SIRIX).
Active components	Hub, transceiver, repeater, switch etc; devices in the network that transfer and amplify the data and segment a power system. In most cases, a supplementary power supply is required.
Cascade/cascading	Consecutive switching of cascade-enabled active components (e.g. hubs)
Client	Computer provides services (e.g. database) in a network.
Coaxial cable	Also known as thin Ethernet Data line comprising an inner (core) line and outer line (shielding); 10Base 2 standard, connector type RG 58
COM server	A device in a mixed Ethernet; serial network Allows for interconnection of a Selan network and an Ethernet LAN.
Domain	A group of interconnected computers and units that draw upon the same data files and resources.
Ethernet	A bus system used to interconnect computers in a local network (LAN).
Hardware profile	Describes hardware configuration and properties
Hub	Also called a multiport repeater. Used to expand Ethernet sub-networks with respect to line lengths and number of network users.
LAN (local area network)	Local network
MAU (media access unit)	Integrated unit or stand-alone device (transceiver) that provides access to an Ethernet LAN.
Network adapter (network card)	Networking hardware of a computer
Reverse Online	Reverse Online is the possibility to send information from the machine to a M1 pattern workstation via network.
Selan	Online communication system between Stoll knitting machines, pattern units and analysis computers.
Server	A computer that multiple users utilize for specific services (e.g. database, network server) in a network.
TCP/IP (transmission control protocol/Internet protocol)	A series of network protocols that allow for communication between various networked computers and control units. The basis for Internet communication.
Transceiver	A transceiver (a word derived from TRANSMitter and reCEIVER) is a device that allows for access to a Ethernet LAN
Twisted pair/UTP	A set of two twisted cables that are highly immune to interference from external sources. 10Base T standard, connector type RJ 45, Category 3 or 5 (100Mbits/sec)
Yellow cable	"Thick" Ethernet coaxial cable with relatively high range and immunity to interference Recommended for electrical environments that are not very clean. 10Base 5 standard, connector type RG 58