QUICK START GUIDE

T SERIES

N SERIES

DIRECT SmartTouch

EN



YOUR WORKING MACHINE

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DIRECT - LEAVE NO EXCUSES

This guide has been assembled to help Valtra operators to quickly become familiar with their tractor. Please note that this is NOT an operator's manual. Before operating the tractor, it is important that you read the operator's manual with all safety points.

It provides information on some of the basic features and functions and pointers on how to operate the tractor. For more detailed information, please consult the user manual or contact your local dealer.

With a state-of-the-art tractor there has to be also a reliable transmission in pure Finnish design. Direct has Continuously Variable Transmission that is capable of every task for every customer. You can operate Direct simply by drive pedal or lever.

Features Models CVT transmission Valtra N135 Load-sensing hydraulics with electronical control Valtra N155eco SmartTouch user interface Valtra N175 Industry benchmark in easy operation Intelligent drive lever Technology all integrated Very easy to operate Turbine clutch simulation Valtra T145 - Valtra T155 Valtra T175eco - Valtra T195 - Valtra T215 Made in Finland by Valtra - Valtra T235

YOUR

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SMART A-PILLAR DISPLAY

The brand new Valtra smart A-pillar display brings all the information you need to exactly where you need it. With the essential information always displayed up top in a clear and easy way you'll never be left searching for what you need to know. The lower drive displays can be configured to show exactly what you want to see.

3.



THE DISPLAY CONSISTS OF SEVERAL DISPLAY TECHNOLOGIES FOR SHOWING TRACTOR'S STATE AND CONTROLLING ITS BEHAVIOR.

The uppermost area is a LCD Screen showing: Outside temperature, clock time, Engine RPM, Ground Speed, Fuel & AdBlue level and Engine temperature.

Then there are two LED Icon Matrix Contents, upper one showing information marking lights and another one in the bottom of the instrument, showing warning lights.

Between them is a large TFT (thin-film-transistor) screen, which can be configured in many ways as well as used for tractor settings.

SMART A-PILLAR DISPLAY

1.	Use the wheel encoder and two buttons to navigate screen
2.	Via the settings menu select "Drive Display Mode" and select whether you want two, one or zero displays
3.	Using the encoder select the desired Drive Display and configure it to display the information you want
4.	The brightness of the A-pillar display can be adjusted via the left stalk.
5.	Via the settings menu you can activate Auto Dim and set the speed you want the display to automatically darken.











SMARTTOUCH ARMREST

Driving / transmission Hydraulics 3-point linkage Power Take-Off Electrics / programmable

1. Drive lever

- 2. Hydraulic joystick
- **3.** Programmable hydraulic function e.g. live 3rd valve in loader
- 4 Selecto 3rd and 4th valve (for front loader)
- 5. Hand throttle control
- 6. Automatic/ Manual mode
- 7. Memory button 3
- 8. Engine RPM memory 1
- 9. Engine RPM memory 2
- 10. Four-wheel drive (4WD)
- 11. Four-wheel drive (4WD) automatics
- 12. Differential lock
- 13. Differential lock automatics
- 14. Rear linkage lifting, when attaching an implement
- 15. Rear linkage lowering, when attaching an implement
- 16. ON/OFF Valve A (via quick couplers)
- 17. Blue control lever for auxiliary hydraulics
- 18. Brown control lever for auxiliary hydraulics
- 19. Green control lever for auxiliary hydraulics
- 20. White control lever for auxiliary hydraulics
- 21. Rear linkage depth control with latching settings

- 22. Radio volume
- 23. Radio channel
- 24. Radio mute
- 25. Rotary beacon
- 26. Valtra Guide engage
- 27. QuickSteer engage
- 28. Master activation (hydraulics, programmable buttons, Valtra Guide)

25

(23)

22

29. Working lights main switch

R

- 30. ON/OFF Valve B (e.g. pick-up hitch push back function)
- 31. Switch for front PTO (when front PTO is not included: switch for rear PTO)
- 32. Switch for rear PTO (when front PTO is not included: no switch)

DRIVE LEVER

Memory button 1

Memory button 2

Speed range (ABCD) up

Speed range (ABCD) down

Hydraulics fingertip lever 1

Hydraulics fingertip lever 2

Max. speed / cruise adjustment

Power shuttle switch

1.

2.

3.

4.

6.

7.

8.

9.

OTHER CONTROLS





2. Emergency brake 3. 3-pin current socket 4. 3-pin current socket (optional) 5. SmartTouch Extend connector (optional) 6. ISOBUS terminal connector (optional) 7. Implement signal connector Rear lift (AutoControl): Lift / Stop / Lower / Float switch 8. Button for fuel-operated heater (optional) 9. Double USB port (quick charge) (optional) 10. 2-pin current socket 11. Power switch for 2-pin current socket 12. 2-pin current socket (controlled with power switch) 13. Power outlet Trailer hitch release lever (optional) 14.

1.

7

Phone holder

SMARTTOUCH Terminal

The user interface has two sections: settings and drive displays. You can move between these sections with the Home (4) and Drive display (5) buttons.

The settings have three levels: Home screen, setting screen and pop-ups.

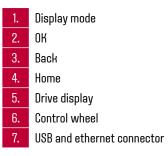
The frequently used settings are in the setting screens and less frequently used in the pop-ups.

Drive displays show information related to the tractor, implements and work tasks. You can view the drive displays full-sized or in quadrant mode. You can also quickly move from the drive display screen to the related settings and back.

- **NOTE**: You can activate and deactivate pop-ups from the terminal settings.
- **TIP:** In the dark you can turn the display off to get better visibility to your work.



Display functions



T/N Series Quick Guide / Direct

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SETTINGS SCREEN SYMBOLS

Access to all tractor functions with less than three taps or swipes in the touch screen.





(\bigcirc)	Engine
	Lights
N SOBUS	Armrest and Isobus AUX
	Transmission

AUTO

Front loader

TaskDoc

Valtra Guide

Audio & Phone control

Co to rear screen



VALTRA

DRIVE DISPLAY

	1.	You can access the drive displays from the 🖪 button in the terminal.
_	2.	This shows 1 or 4 different displays according to your settings. Swipe one of the screens left or right to view different drive displays. Tap the screen you want to modify to open the settings panel.
	3.	You can widen one of the four drive displays by double tapping it or tapping it once and then tap from the icon E . You can change one display to another.
	4.	 Tap the screen you want to modify to open the settings panel. 1. Change between full/quadrant modes 2. Open drive display selection pop-up 3. Go to settings screen 4. Active drive display 5. Visible drive displays

Possible drive displays

Transmission Front & rear hydraulics Front & rear PTO Rear lift Tractor health Memory button functions Safety camera Map (Valtra Guide) Counters ISOBUS implement terminal









DRIVING MODES

AUTOMATIC MODE

When you start the tractor the automatic driving mode is automatically selected. There are two main ways of driving:

- Pedal driving (no symbol on displays)
- Lever driving (symbol 🖙 on displays)

You can control the driving speed with the drive pedal or the drive lever. The transmission ratio is controlled automatically. Speed range changes (ABCD) can be done with the +/- buttons on the lever.

DRIVING WITH DRIVE LEVER

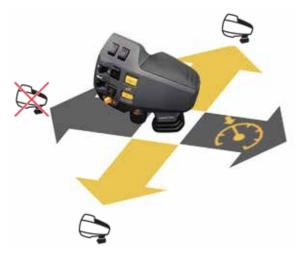
When controlling speed with the lever, the symbol shows on the A-pillar display. Start driving: When direction has been selected, the tractor doesn't move. To move push lever forward. Whenever you use the lever, you are in lever driving. To go back to pedal control, tap the drive lever left. Small movement of the lever changes the speed precisely. Longer movement changes the speed faster. Drive lever speed is visible in the driving display.

MANUAL MODE

Manual mode can be selected with push button armrest. When the manual mode is engaged, the symbol M for the manual driving mode shows on the A-pillar display and the SmartTouch display. (Manual can be engaged on work areas A and B only).

Start driving: When the direction has been selected, the tractor doesn't move. To move choose transmission ratio with the lever.

Control the engine speed with the drive pedal or the hand throttle. If you changed to Manual while tractor is moving, the transmission ratio used will be maintained until you change it. You can also store a certain transmission ratio into memory by keeping the drive lever right 1 second. So instead of speed cruise, there is a transmission ratio memory. Tapping driver lever left recalls ratio zero.





TRANSMISSION Settings



1. Pre-programmed forward speed for drive lever mode. Set value 0-max speed.

2.

3.

Maximum speed. Set value 0-set speed. Tractor will not go faster.

Pre-programmed reverse speed for drive lever mode. Set value 0-max speed.



5.

6.

Automatic shifting between speed ranges C and D.

Transmission droop adjustment. Priority for engine or transmission. Automatic slip regulation.
OFF
1 = small influence
5 = large influence

Addtional transmission settings, like turbine clutch simulation (needed for extra smooth starts or front loader use)









HOW TO ADJUST TRANSMISSION TO WORK BEST WAY POSSIBLE ON YOUR TASK

Your Valtra tractor has features which allows the transmission to work the best way possible on every task. When you adjust transmission settings correctly, you will get lower fuel consumption and you will get power just to place where it is needed.

TRANSMISSION DROOP - Controls how engine reacts on load.



Moving slider bar to the left gives priority to the engine rpm: Under load, the transmission ratio will automatically adjust to maintain engine rpm. +Power delivery e.g. in PTO tasks

Moving slider bar to the right, then priority is given to the transmission ratio: The engine reduces rpm, whilst still maintaining the most economical transmission ratio. This increases fuel economy e.g. in transport tasks.

Knob can be adjusted on the move, or when stationary. For usual tasks setting in the middle works best.

ASR (Acceleration Slip Regulator) TRACTION CONTROL

In Direct tractors there is a traction control system which limits your wheel slip when driving / working. You can set desired max wheel slip from transmission setting menu in the armrest screen. Then tractor takes care that your working is as efficient as possible in all driving situations without unnecessary wheel slip.

This way you get your work done easier, faster and with lower fuel consumption. Also you get less soil compaction, when using it on the field. You can set the required slip from transmission settings.

A-B-C-D = FOUR WORK AREAS

Valtra continuously variable transmission (CVT) is truly a working machine. There are 4 working areas with 2 sweet spots per area, where transmission efficiency is over 90%. A total of 8 sweet spots is the highest amount in any CVT tractor in this segment!

+ Best efficiency for all tasks (save fuel and transmission)

+ Optimal transmission efficiency for every task and every driving speed

+ Best pulling ability

+ 92% of speeds with excellent transmission efficiency

It is easy to find the sweet spot of each range by calculating 25 % and 75 % of the area's top speed.

	40 km/h	Sweet spots	50 km/h	Sweet spots	
А	0-6.5 km/h	1,6 km/h 4,9 km/h	0-8 km/h	2 km/h 6 km/h	High power & torque requirement, low speed. E.g. subsoiling and de-stoning.
В	0-13.5 km/h	3,4 km/h 10,1 km/h	0-17 km/h	4,3 km/h 12,8 km/h	Medium/high torque requirement, medium speed. E.g. ploughing, bed forming, power-harrowing, drilling, hedge cutting.
С	0-21 km/h	5,3 km/h 15,8 km/h	0-26 km/h	6,5 km/h 19,5 km/h	Medium torque, variable forward speed. E.g. Field transport, light ploughing, mowing, hedge-cutting, drilling, starting with heavy loads.
D	0-40 km/h	10 km/h 30 km/h	0-50 km/h (57 km/h)	12,5 km/h 37,5 km/h	Low torque, high forward speed, not PTO. Road transport range.

HOW TO Change speed range



1

TO CHANGE RANGE ABCD MANUALLY



Simply push + or - button located on drive lever.



TO CHANGE RANGE BETWEEN C AND D AUTOMATICALLY

- Select the transmission screen by pushing the transmission button.
- 3. A

2.

Activate the automatic shifting between speed ranges C and D.

Work Area changes

- $C \rightarrow D$ automatic
- D→C automatic

ECOPOWER-MODE (ONLY ON MODELS N155ECO AND T175ECO)

EcoPower is a Valtra innovation for more than 15 years. EcoPower-mode is designed especially for work that requires high torque, but not constant engine revs e.g. pulling work on the field. With EcoPower you get the maximum power and torque at approximately 200 RPM lower than in the normal mode. This allows lower noise levels and lower fuel consumption.

ENGAGE THE ECOPOWER-MODE THROUGH THE SMARTTOUCH DISPLAY

- Go to the engine screen with the engine button
- Select the EcoPower-mode to engage the EcoPower mode

When using Eco-mode, the engine revs will not exceed 1900 r/min. Both the highest power and the highest torque will be reached by much lower engine speed.

TIP: Pulling work: The low revs can be best tested in heavy pulling work. Most of the competitors' tractors cannot pull effectively with such low engine revs like 1000 rpm. Transport (uphill): With Eco-mode, the tractor can be driven with higher powershift "gear"-lower revs PTO work: With 540E & 1000E PTO's also PTO work is an easier task





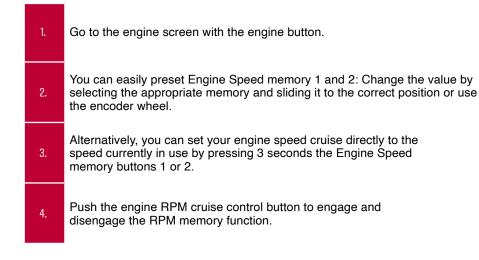
CRUISE Control

Speed cruise control is controlled by the drive lever. It offers the possibility to maintain a steady speed.

- Push the drive lever to the right to engage cruise, hold for 2 seconds to store new speed.
 When cruise control is active you can easily adjust your cruise speed with the thumb wheel located on the drive lever.
 Reactive cruise speed by quickly pushing the drive lever to the right.
 Cruise deactivates by pressing brake pedals or push the drive lever left. After deactivating you control the speed by speed pedal (or lever).
 Together with the memory buttons M1, M2 and M3 you have the possibility to save in total four different speed cruise speeds to be used at the same time.
- **NOTE**: When driving in Manual mode, there works, instead of speed cruise, a Transmission Ratio memory.

ENGINE SPEED Memory

Valtra DIRECT has an Engine Speed memory that will keep engine RPM constant regardless of ground speed.



In Direct tractor you can, while using RPM cruise, use ground speed cruise at the same time. Then the tractor maintains also the ground speed automatically.







MASTER ACTIVATION

Hydraulics, steering valve, memory buttons and isobus aux can all be actived via the master activate button on the smarttouch armrest. When starting up the tractor simply press the button on the armrest and then select from the screen which functions you want to activate. You can easily deactive all functions by pressing the button again, bringing extra saftey on the road.



Press button on armest

Select from pop-up which functions you want to be actived. (If nothing pressed, previously selected functions activate)

Press button again to deactivate









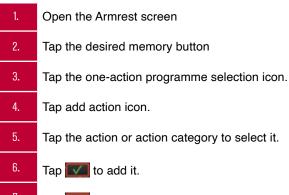






PROGRAMMABLE FUNCTIONS MEMORY BUTTONS

You can add one-action programmes or sequence (U-Pilot) action programmes to the memory buttons. You can program almost any function in the SmartTouch to the memory buttons.



Tap **Tap** to accept the one-action programme.

To change the one-action programme:

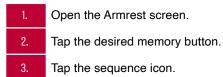
- Delete the current one-action programme.
- · Add new one-action programme.

Programmable function examples: PTO start/stop

Speed cruises (up to 4 speed cruise memories), Valtra Guide activation

TIP: With different profiles you can easily change usage of Memory buttons according to your settings per profile.

U-PILOT HEADLAND AUTOMATICS



RECORD A U-PILOT PROGRAMME

- 4. Tap the record icon.
- 5. Perform the operations in the required order.
- 6. Tap the record icon to end the recording.

PROGRAM A U-PILOT PROGRAMME

- 7. Tap add action icon.
- 8. Tap the action or action category and select it.
- 9. Add the rest of the actions alike.
- 10. Change order of the actions by sliding with your finger (if needed).
- 11. Edit the time and distance between actions.
- **TIP**: U-Pilot sequence is saved to the profile in use (e.g. ploughing). When changing the task, change the profile and all the settings and sequences are there ready when you do programming once!

You can easily fine-adjust your U-Pilot via touchscreen, also while driving.







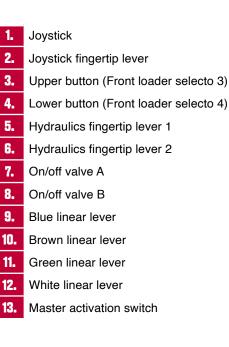




PROCRAMMABLE FUNCTIONS HYDRAULICS

There are totally 9 different programmable hydraulic controls in the SmartTouch armrest. The auxiliary hydraulic controls are positioned on the armrest. The joystick, fingertip levers and linear levers are programmable, thus you can select which lever controls which valve.

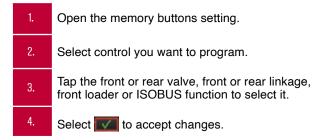




PROGRAMMABLE Hydraulics

You have two ways to configurate your hydraulics and hydraulic controls with the SmartTouch armrest:

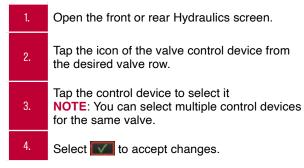
1. FROM MEMORY BUTTONS SETTING YOU CAN PROGRAM A VALVE TO ANY CONTROL







2. FROM THE HYDRAULIC SETTING YOU CAN Set a control to any valve









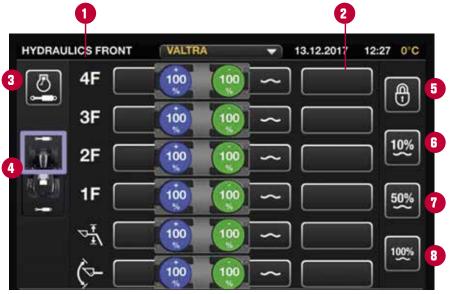


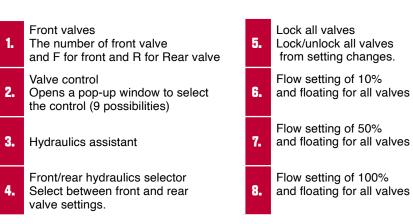
You can easily change between front and rear hydraulic setting view with just one swipe in the touch screen.



Easy access to hydraulic settings

HYDRAULIC SETTINGS





HYDRAULIC PROGRAMMING VIA HYDRAULIC SETTINGS

All settings per valve done via single pop-up. Swipe or tap functionality available.



1.	Valve settings locked			
2.	Valve settings open			
3.	Priority setting - Sets priority to ensure sufficient oil flow to the valve			
4.	Flow rate of the + port			
5.	Function selection of the + port x = no function active ∞ = position lock continuously on 0s = timed duration of the position lock			
6.	Flow rate adjustment - Separately or both at the same time			
7.	Function selection of the – port 0s = timed duration of the position lock $\infty = position lock continuously on$ $\sim = floating position$ x = no function active			
8.	Flow rate of the – port			
	Ludraulia actions are sound to the profile in use			

TIP: Hydraulic settings are saved to the profile in use. When changing the task, change the profile and all the settings are there ready when you do programming once!



PICK-UP HITCH AND LINKAGE

TO UNLOCK THE PICK-UP HITCH

1.	Push the lifting button to fully raise the linkage.
2.	Pull the hitch latch lever to unlatch the hitch. Keep the lever pulled.
3.	Push the lowering button to lower the linkage. Release the hitch latch lever when the hitch has passed the locking latch.

TO LOCK THE PICK-UP HITCH



Push the lifting button until the hitch latches. You can hear a click and the trailer hitch release lever jumps a little.

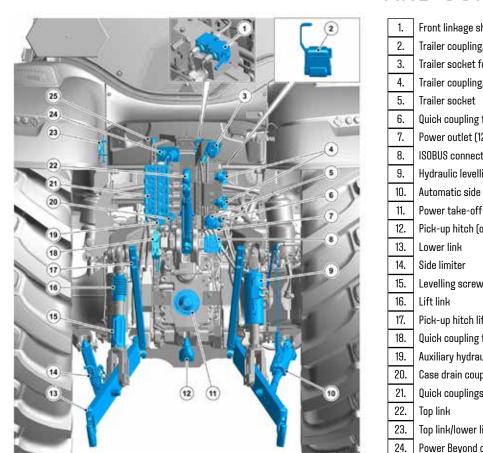
Push the lowering button to lower the linkage slightly.

If the tractor is fitted with hydraulic push-back hitch, you can move the hitch forward and back with the button next right. Make sure that the hitch is locked safely. The push-back hitch will be locked only when in most up and forward position.









REAR CONTROLS AND CONNECTIONS

Front linkage shut-off valve (optional) Trailer coupling, Duo-Matic (optional) Trailer socket for trailer with ABS brakes Trailer coupling, 2-line system (optional) Quick coupling for air pressure devices (optional) Power outlet (12 V) ISOBUS connector (optional) Hydraulic levelling link (optional) Automatic side limiter (optional) Power take-off (PTO) shaft Pick-up hitch (optional) Levelling screw Pick-up hitch lift links (optional together with the pick-up hitch) Quick coupling for hydraulic trailer brakes (optional) Auxiliary hydraulics system return coupling Case drain coupling for Power Beyond (optional) Quick couplings, auxiliary hydraulics Top link/lower link ball storage bracket

The pick-up hitch is optional with many alternatives.

- Power Beyond couplings
- Auxiliary control device for parking brake 25.

PTO

You can use the power take-off (PTO) to transmit power from the tractor to an implement.



Start the engine and tap the PTO symbol on the SmartTouch screen to open the PTO settings.

Select the PTO speed. The value stays even in memory when you turn the ignition off.

Adjust the setting for the PTO start aggressiveness if needed. Higher value gives you a shorter engagement time.

You can control the start and stop of the PTO with the switches on the armrest.

Push the switch down and pull it back to start the PTO. To stop the PTO, push the PTO switch down and forward.

TIP: You can program PTO start and stop to M1, M2 or M3 buttons as single operation or as a part of headland management (U-Pilot) sequence.

PTO Cruise: when activated you can get correct PTO speed automatically with press of engine speed memory button, see next page.

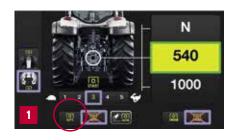


AUTO PTO

With the automatic power take-off (auto PTO), you can set the limits for the automatic start and stop of the PTO. You can give a different limit for when you lift the rear linkage or lower the rear linkage. The auto PTO controls the start and stop of the PTO in these conditions:

- auto PTO is engaged
- rear PTO is in operation
- ground speed PTO (GSPTO) is not engaged
- rear hitch is in the working mode or the floating mode
- driving speed is at least 1 kmh
- headland management is not used.

1.	Open the PTO rear screen.
2.	Engage the auto PTO with the auto PTO switch on the SmartTouch display.
3.	Set the limit when the PTO starts when you lower the linkage.
4.	Set the limit when the PTO stops when you lift the linkage.











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MARTTOUCH







PROFILE

All settings of the SmartTouch display are stored in profiles. Every setting you change (except terminal settings) is automatically saved to the active profile.

You can create different profiles according to:

- User
- Specific work
- Implement
- User + implement combinations
- (when multiple operators per tractor)

CREATE A PROFILE

- You can enter the profile settings from every terminal menu by tapping on the top bar.
 VALTRA is your default profile you cannot delete or change. Copy the default profile.
 Rename the new profile and modify the settings.
 Tick the box in front of the new profile's name and activate the profile.
 Modify the settings, which are saved to the profile in use.
- TIP: There is no limit of profiles you can create.

QUICKSTEER OPTIONAL

QuickSteer is a steering system controlled by an electrohydraulic steering valve. The adjustable steering ratio gives you the possibility to alter the reaction speed between moving the steering wheel and the tractor turning which is helpful whenever the driver needs to steer a lot, for example when driving in a small yard or when doing front loader work.

Engage QuickSteer with the Sea button in the rear key pad of the armrest. The light on the button goes on.
 Go to the steering setting screen by tapping the button.
 Adjust the QuickSteer sensitivity slider for your drive direction (forward or reverse). The influence on the steering ratio can range from small (1) to big (5).
 Disengage QuickSteer by pushing the Sea button on the armrest. The light on the button goes off.





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YOUR WORKING MACHINE

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