

MyVallox Modbus Configuration

Technical instructions

MyVallox ventilation units can be controlled with Modbus RTU-compatible building automation systems. Up to 32 MyVallox ventilation units can be connected in the same Modbus line. Through a building automation system it is possible to control the ventilation unit, it e.g. read different sensor values and change the status of the ventilation unit.



GENERAL INFORMATION

Everything that can be changed from user interfaces can also be changed over Modbus RTU.

MV control does not have Modbus TCP option.

Data format is always 16 bit unsigned word.

All the registers are of type "holding register".

Supported function codes:

- Read holding registers, 0x03
- Write single register, 0x06
- Write multiple registers, 0x10

Writing to undefined registers is forbidden and will return error code. This needs to be considered when writing multiple registers at once.

- Writing to registers 20504 - 20508 does NOT work. Register 20504 is undefined.
- Writing to registers 20505 - 20508 works. Registers are defined and writable.

Writing to read-only registers (R) is forbidden and will return error code.

Writing values outside given min - max range is forbidden and will return error code.

CHANGING BETWEEN PROFILES

MV -control has two basic profiles: Home profile and away profile. One of these is always selected.

- Basic profile can be read and set from register 4609, 0=home profile and 1=away profile.

MV-control also has three timed profiles: Boost profile, fireplace profile and programmable profile. Timed profiles override the chosen basic profile temporarily. Wanted profile is activated by writing the wanted running time in minutes to the profile's timer register. The profile activates and the timer register starts counting down. When all timer registers of all timed profiles are zero, the MV-control changes back to the chosen basic profile.

- 4612=boost profile timer register
- 4613=fireplace profile timer register
- 4614=programmable profile timer register

Timed profile can be set to run indefinitely by writing value 65535 to the profile's timer register. This disables the countdown of the timer until the timer register is reset manually or profile is changed from some other user interface.

Timers can also be deactivated from corresponding timer switch registers, 0=timer off and 1=timer on. This will also disable timers for all user interfaces. NOTE: Using MV digital input for changing profiles also changes the contents of the timer switch registers.

- 21766=boost profile timer enabled -register
- 21767=fireplace profile timer enabled -register
- 21772=programmable profile timer enabled -register

Example: Activating fireplace profile for 15 minutes

- Write 15 to register 4613.
- Write 1 to register 21767 (If not already written).

Example: Activating boost profile without timer (profile stays on)

- Method 1:
- Write 65535 to register 4612.
- Method 2:
- Write any value (non-zero) to register 4612.
- Write 0 to register 21766.

Example: Turning off boost profile, return to chosen basic (away/home) profile

- Write 0 to 4612.
- Optionally write 0 to registers 4613, 4614 to turn off all timed profiles.

Example: Switch from home profile to away profile

- Write 1 to 4609.
- Optionally write 0 to registers 4612, 4613, 4614 to turn off all timed profiles.

PROFILE PRIORITY

If more than one profiles are active at the same time, the higher-priority profile overrides any other profile. For example, if the Fireplace profile and the Boost profile are simultaneously active, the ventilation unit uses the Fireplace profile. The profile priority order is:

1. Programmable profile
2. Fireplace profile
3. Boost profile
4. Home/Away (basic) profile

SWITCHING UNIT OFF

Unit can be switched off by writing 5 to register 4610, and switched on by writing 0 to register 4610.

UNIT FAULT CONDITION

Unit fault condition can be read from register 4621. 0 = normal operation, 1 = fault. Type of fault can be only read from MV user interface.

DATA CONVERSION FORMULAS

Temperatures are given in centKelvins.

- Celsius temperature = (centKelvin - 27315) / 100
- centKelvin = (Celsius temperature * 100) + 27315

Register contents in general are given in the register description, inside square brackets, in numerical order starting from zero.

- [no sensor, low, med, high]:
- 0 = no sensor
- 1 = low
- 2 = med
- 3 = high

MODBUS SETTINGS

If the ventilation unit is connected to e.g. a building automation system through Modbus line, the following Modbus settings must be given:

- Ventilation unit Modbus address
- Modbus baud rate
- Modbus parity
- Modbus stop-bit

This document describes how to make those settings using either the MyVallox Control control panel or the Web interface. With these instructions you can also set individual settings, such as the Modbus address.

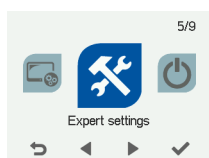
MODBUS SETTINGS USING MYVALLOX CONTROL -CONTROL PANEL

To set the Modbus settings, proceed as follows:

- 1 Select Settings



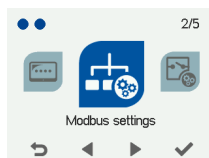
- 2 Use the arrow buttons and select Expert settings:



- 3 Press the OK button:



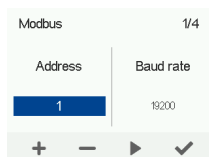
- 4 Use the arrow buttons and select Modbus settings:



- 5 Press the OK button:



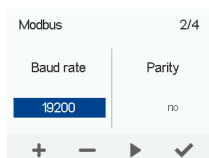
- 6 The Modbus 1/4 screen opens.



- 7 Set the Modbus address of the ventilation unit by using the Plus and Minus buttons. You can choose the address within the range 1 ... 247.

- 8 Press the Right arrow button.

- 9 The Modbus 2/4 screen opens.



- 10 Set the Modbus Baud rate by using the Plus and Minus buttons. The options are 9600, 19200, 38400, 57600 or 115200.

- 11 Press the Right arrow button.

- 12 The Modbus 3/4 screen opens.

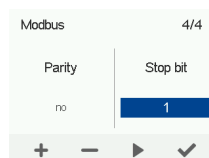


- 13 Set the Modbus Parity by using the Plus and Minus buttons. The options are:

- no — No parity
- even — Even parity
- odd — Odd parity

- 14 Press the Right arrow button.

- 15 The Modbus 4/4 screen opens.



- 16 Set the Modbus Stop bit by using the Plus and Minus buttons. The options are 1 or 2.

- 17 Press the OK button:



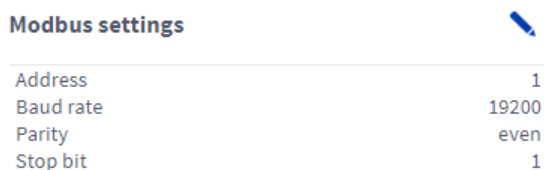
- 18 The Modbus settings are now complete.

MODBUS SETTINGS USING THE WEB INTERFACE

You can also set the Modbus settings for the MyVallox ventilation unit through the Web interface. There are two options:

- MyVallox Home local network connection
- MyVallox Cloud cloud service

- 1 Select Expert settings.
- 2 Scroll the screen until you see the Modbus settings.



- 3 Press the Edit button:



- 4 The Modbus settings screen opens in the edit mode:

- 5 Set the Modbus address of the ventilation unit in the Address field. You can set the address by sliding the blue slider. You can choose the address within the range 1 ... 247.
- 6 Select the Modbus connection speed in the Baud rate drop down menu. The options are 9600, 19200, 38400, 57600 or 115200.
- 7 Select the Modbus parity in the Parity drop down menu. The options are:
 - no — No parity
 - even — Even parity
 - odd — Odd parity
- 8 Set the Modbus stop bit in the Stop bit field. The options are 1 or 2.
- 9 Press the OK button.
- 10 The Modbus settings are now complete.



MODBUS OBJECTS

addr	Variable name	R/RW	min	max	Type	Description
4353	FAN_SPEED	R	0	100	%	Current fan speed
4354	TEMP_EXTRACT_AIR	R	21000	33224	cK	Temperature, extract, cell input
4355	TEMP_EXHAUST_AIR	R	21000	33224	cK	Temperature, extract, cell output
4356	TEMP_OUTDOOR_AIR	R	21000	33224	cK	Temperature, supply, cell input
4357	TEMP_SUPPLY_CELL_AIR	R	21000	33224	cK	Temperature, supply, cell output
4358	TEMP_SUPPLY_AIR	R	21000	33224	cK	Temperature, supply, heater output
4359	RH_LEVEL	R	0	3		RH level [no sensor, low, med, high]
4360	CO2_LEVEL	R	0	3		CO2 level [no sensor, low, med, high]
4361	EXTR_FAN_SPEED	R	0	10000	RPM	Extract fan speed
4362	SUPP_FAN_SPEED	R	0	10000	RPM	Supply fan speed
4363	RH_VALUE	R	0	100	RH%	RH value, highest measurement read, 0 = No sensor
4364	CO2_VALUE	R	0	10000	PPM	CO2 value, highest measurement read, 0 = No sensor
4365	FIREPLACE_SWITCH	R	0	1		Digital input 0 state [off, on]
4366	DIGITAL_INPUT	R	0	1		Digital input 1 state [off, on]
4367	ANALOG_CTRL_INPUT	R	0	100	%	Analog control input state
4368	MULTISENSOR_CO2	R	0	65535	12bit	CO2 concentration from multisensor
4369	MULTISENSOR_TEMP	R	0	65535	12bit	Temperature from multisensor
4370	MULTISENSOR_RH	R	0	65535	12bit	Humidity from multisensor
4372	ANALOG_SENSOR_INPUT	R	0	65535	%RH	Internal %RH sensor, 65535 = No sensor [(value * 100 - 62039) / 2604]
4373	RH_SENSOR_0	R	0	65535	RH%	RH value from sensor 0, 65535 = No sensor
4374	RH_SENSOR_1	R	0	65535	RH%	RH value from sensor 1, 65535 = No sensor
4375	RH_SENSOR_2	R	0	65535	RH%	RH value from sensor 2, 65535 = No sensor
4376	RH_SENSOR_3	R	0	65535	RH%	RH value from sensor 3, 65535 = No sensor
4377	RH_SENSOR_4	R	0	65535	RH%	RH value from sensor 4, 65535 = No sensor
4378	RH_SENSOR_5	R	0	65535	RH%	RH value from sensor 5, 65535 = No sensor
4379	CO2_SENSOR_0	R	0	65535	PPM	CO2 value from sensor 0, 65535 = No sensor
4380	CO2_SENSOR_1	R	0	65535	PPM	CO2 value from sensor 1, 65535 = No sensor
4381	CO2_SENSOR_2	R	0	65535	PPM	CO2 value from sensor 2, 65535 = No sensor
4382	CO2_SENSOR_3	R	0	65535	PPM	CO2 value from sensor 3, 65535 = No sensor
4383	CO2_SENSOR_4	R	0	65535	PPM	CO2 value from sensor 4, 65535 = No sensor
4384	CO2_SENSOR_5	R	0	65535	PPM	CO2 value from sensor 5, 65535 = No sensor
4389	TEMP_OPTIONAL	R	20000	33224	cK	Optional external temperature sensor
4390	VOC_LEVEL	R	0	65535	PPM	VOC sensor highest value (Not used, locked to 1000)
4391	VOC_SENSOR_0	R	0	65535	PPM	VOC value from sensor 0, 65535 = No sensor
4392	VOC_SENSOR_1	R	0	65535	PPM	VOC value from sensor 1, 65535 = No sensor
4393	VOC_SENSOR_2	R	0	65535	PPM	VOC value from sensor 2, 65535 = No sensor
4394	VOC_SENSOR_3	R	0	65535	PPM	VOC value from sensor 3, 65535 = No sensor
4609	STATE	R/W	0	1		General state [Home, Away]
4610	MODE	R/W	0	7		Override state [0=Normal, 5 = Off]
4611	DEFROSTING	R/W	0	1		defrosting [off, on]
4612	BOOST_TIMER	R/W	0	65535	min	Boost timer. Timer is enabled from 21766
4613	FIREPLACE_TIMER	R/W	0	65535	min	Fire-place timer. Timer is enabled from 21767
4614	EXTRA_TIMER	R/W	0	65535	min	Extra input timer. Timer is enabled from 21772
4615	WEEKLY_TIMER_ENABLED	R/W	0	1		Weekly timer state [off, on]
4616	CELL_STATE	R	0	3		Cell state [heat recovery, cool recovery, bypass, defrosting]
4617	TOTAL_UP_TIME_YEARS	R	0	65535	a	Total up time
4618	TOTAL_UP_TIME_HOURS	R	0	8760	h	Total up time
4619	CURRENT_UP_TIME_HOURS	R	0	65535	h	Current up time

addr	Variable name	R/RW	min	max	Type	Description
4620	REMAINING_TIME_FOR_FILTER	R	0	365	days	Remaining time to filter change indication
4621	LIMP_MODE	R	0	1		Device fault active, device in limp mode [off, on]
4627	COMMAND	R/W	0	65535		Command variable
4628	MLV_STATE	R	0	1		“Earth heat” radiator state flag [off, on]
4849	MINUTE	R/W	0	59	minutes	Minutes of the current time
4850	HOUR	R/W	0	23	hours	Hours of the current time
4851	DAY	R/W	1	31	days	Days of the current date
4852	MONTH	R/W	1	12	months	Months of the current date
4853	YEAR	R/W	0	99	years	Years of the current date
4854	WEEKDAY	R	1	7	weekday	Weekday [Mon, Tue, Wed, ...]
8194	GW_ADDRESS_1	R	0	65535		Gateway address (0xAABB)
8195	GW_ADDRESS_2	R	0	65535		Gateway address (0xCCDD)
8196	MASK_ADDRESS_1	R	0	65535		Mask (0xAABB)
8197	MASK_ADDRESS_2	R	0	65535		Mask (0xCCDD)
8211	ETH_CLOUD_ENABLED	R/W	0	1		Outgoing connection to cloud [disabled, enabled]
8212	IP_ADDRESS_1	R	0	65535		IP address first two bytes (0xAABB)
8213	IP_ADDRESS_2	R	0	65535		IP address last two bytes (0xCCDD)
20482	MODBUS_ADDRESS	R/W	1	247	8bit addr.	Modbus address on remote bus 1 ... 247 (0xF7)
20483	MODBUS_BAUD_X100	R/W	96	1152		Baud * 100 Modbus speed on remote bus [96, 192, 384, 576, 1152]
20484	MODBUS_FRAME	R/W	0	514	8bit pair	Modbus data frame, MSB: parity 0...2 [no, even, odd]; LSB: stop bits 1...2
20485	EXTR_FAN_BALANCE_BASE	R/W	0	100	%	Extract fan speed balance ground value
20486	SUPP_FAN_BALANCE_BASE	R/W	0	100	%	Supply fan speed balance ground value
20487	FIREPLACE_EXTR_FAN	R/W	0	100	%	Extract fan speed at fire place mode
20488	FIREPLACE_SUPP_FAN	R/W	0	100	%	Supply fan speed at fire place mode
20490	RH_BASIC_LEVEL	R/W	0	65535	%	RH basic level, 65535 = not calculated
20491	CO2_THRESHOLD	R/W	500	2000	PPM	CO2 threshold
20493	EXTRA_AIR_TEMP_TARGET	R/W	27815	29815	cK	Supply air target temp at extra state
20494	EXTRA_EXTR_FAN	R/W	0	100	%	Extract fan speed at extra input
20495	EXTRA_SUPP_FAN	R/W	0	100	%	Supply fan speed at extra input
20496	EXTRA_TIME	R/W	1	65535	min	extra input time
20499	AWAY_RH_CTRL_ENABLED	R/W	0	1		RH control in use, away [False, True]
20500	AWAY_CO2_CTRL_ENABLED	R/W	0	1		CO2 control in use, away [False, True]
20501	AWAY_SPEED_SETTING	R/W	0	100	%	Fan speed at away state
20502	AWAY_AIR_TEMP_TARGET	R/W	27815	29815	cK	Supply air target temp at away state
20505	HOME_RH_CTRL_ENABLED	R/W	0	1		RH control in use, home [False, True]
20506	HOME_CO2_CTRL_ENABLED	R/W	0	1		CO2 control in use, home [False, True]
20507	HOME_SPEED_SETTING	R/W	0	100	%	Fan speed at home state
20508	HOME_AIR_TEMP_TARGET	R/W	27815	29815	cK	Supply air target temp at home state
20511	BOOST_RH_CTRL_ENABLED	R/W	0	1		RH control in use, boost [False, True]
20512	BOOST_CO2_CTRL_ENABLED	R/W	0	1		CO2 control in use, boost [False, True]
20513	BOOST_SPEED_SETTING	R/W	0	100	%	Fan speed at boost state
20514	BOOST_AIR_TEMP_TARGET	R/W	27815	29815	cK	Supply air target temp at boost state
20517	RELAY_MODE	R/W	0	8	16bit value	Error relay mode [maintenance reminder, error, error and maintenance, emergency stop, bypass state, external radiator, none, airheater radiator, runstatus]
20518	DIGITAL_INPUT_1_MODE	R/W	0	8	16bit value	Digital input 1 mode [None, fire place, home/away, kitchen hood, fire alarm (emergency stop), boost, bypass, weekly scheduler, programmable input]

addr	Variable name	R/RW	min	max	Type	Description
20519	DIGITAL_INPUT_2_MODE	R/W	0	8	16bit value	Digital input 2 mode [None, fire place, home/away, kitchen hood, fire alarm (emergency stop), boost, bypass, weekly scheduler, programmable input]
20520	ANALOG_INPUT_MODE	R/W	0	3	16bit value	Analog input mode [None, Situation control, Temperature control, None]
20521	MLV_SUPPLY_LOWER_LIMIT	R/W	27815	29815	cK	MLV cooling lower limit for supply air [12C ... 25C]
20523	MLV_AUTO_MANUAL	R/W	0	1	16bit value	MLV control type [automatic, manual]
20529	MLV_SUMMER_SETPOINT	R/W	28315	29815	cK	MLV summer setpoint
20530	MLV_MODES	R/W	0	2	16bit value	MLV modes [heating and cooling, heating, cooling]
20531	MLV_WINTER_SETPOINT	R/W	26315	27815	cK	MLV winter setpoint
20537	FILTER_CHANGE_INTERVAL	R/W	30	365	days	Interval for filter change indicator (reload value)
20538	CELL_TYPE	R/W	0	2	16bit value	HRC type [aluminium, plastic, enthalpy]
20539	EXTRA_HEATER_TYPE	R/W	0	2	16bit value	Extra heater type [None, Electric, Water]
20540	POST_HEATER_TYPE	R/W	0	2	16bit value	Post heater type [None, Electric, Water]
20543	RH_LEVEL_MODE	R/W	0	1		[Automatic level update, Manual]
20544	BOOST_TIME	R/W	1	65535	min	Boost timer load value
20545	FIREPLACE_TIME	R/W	1	65535	min	Fireplace timer load value
20546	FILTER_CHANGED_DAY	R/W	1	31	days	Last filter change date
20547	FILTER_CHANGED_MONTH	R/W	1	12	months	Last filter change date
20548	FILTER_CHANGED_YEAR	R/W	0	99	years	Last filter change date
20549	SUPPLY_HEATING_ADJUST_MODE	R/W	0	3		Supply air heating method [supply heating, indoor constant control, indoor summer cooling, airheater]
20551	PARTIAL_BYPASS	R/W	0	2	16bit value	Partial bypass state [None, summer, always]
20552	BYPASS_LOCKED	R/W	0	1	16bit value	Bypass locked to winter position [open, locked]
20553	OPT_TEMP_SENSOR_MODE	R/W	0	3	16bit value	Opt. Sensor mode [None, MLV out, Airheater, MLV supply]
20554	POST_HEATER_WINTER_SETPOINT	R/W	25315	30315	cK	Post heater winter limit temperature
20555	DEWPOINT_LIMIT_IN_USE	R/W	0	1	16bit value	Use dew point limit in supply air setting [not in use, in use]
21764	ACCESS_LEVEL	R/W	0	2		Access level [free, limited, very limited]
21765	PARENTAL_CTRL_ENABLED	R/W	0	1		Parental control state [off, on]
21766	BOOST_TIMER_ENABLED	R/W	0	1		boost timer enabled [off, on]
21767	FIREPLACE_TIMER_ENABLED	R/W	0	1		fire place timer enabled [off, on]
21768	SUMMER_TIME_AUTO_ENAB	R/W	0	1		Automatic summer time [off, on]
21769	12_HOUR_CLOCK_ENABLED	R/W	0	1		12 hour clock [off, on]
21772	EXTRA_TIMER_ENABLED	R/W	0	1		extra profile timer enabled [off, on]
40961	SCHEDULE_MONDAY_00	R/W	0	3		State at 00:00 on Monday [None, home, away, boost]
40962	SCHEDULE_MONDAY_01	R/W	0	3		State at 01:00 on Monday [None, home, away, boost]
40963	SCHEDULE_MONDAY_02	R/W	0	3		State at 02:00 on Monday [None, home, away, boost]
40964	SCHEDULE_MONDAY_03	R/W	0	3		State at 03:00 on Monday [None, home, away, boost]
40965	SCHEDULE_MONDAY_04	R/W	0	3		State at 04:00 on Monday [None, home, away, boost]
40966	SCHEDULE_MONDAY_05	R/W	0	3		State at 05:00 on Monday [None, home, away, boost]
40967	SCHEDULE_MONDAY_06	R/W	0	3		State at 06:00 on Monday [None, home, away, boost]
40968	SCHEDULE_MONDAY_07	R/W	0	3		State at 07:00 on Monday [None, home, away, boost]
40969	SCHEDULE_MONDAY_08	R/W	0	3		State at 08:00 on Monday [None, home, away, boost]
40970	SCHEDULE_MONDAY_09	R/W	0	3		State at 09:00 on Monday [None, home, away, boost]
40971	SCHEDULE_MONDAY_10	R/W	0	3		State at 10:00 on Monday [None, home, away, boost]
40972	SCHEDULE_MONDAY_11	R/W	0	3		State at 11:00 on Monday [None, home, away, boost]
40973	SCHEDULE_MONDAY_12	R/W	0	3		State at 12:00 on Monday [None, home, away, boost]
40974	SCHEDULE_MONDAY_13	R/W	0	3		State at 13:00 on Monday [None, home, away, boost]
40975	SCHEDULE_MONDAY_14	R/W	0	3		State at 14:00 on Monday [None, home, away, boost]
40976	SCHEDULE_MONDAY_15	R/W	0	3		State at 15:00 on Monday [None, home, away, boost]
40977	SCHEDULE_MONDAY_16	R/W	0	3		State at 16:00 on Monday [None, home, away, boost]
40978	SCHEDULE_MONDAY_17	R/W	0	3		State at 17:00 on Monday [None, home, away, boost]

addr	Variable name	R/RW	min	max	Type	Description
40979	SCHEDULE_MONDAY_18	R/W	0	3		State at 18:00 on Monday [None, home, away, boost]
40980	SCHEDULE_MONDAY_19	R/W	0	3		State at 19:00 on Monday [None, home, away, boost]
40981	SCHEDULE_MONDAY_20	R/W	0	3		State at 20:00 on Monday [None, home, away, boost]
40982	SCHEDULE_MONDAY_21	R/W	0	3		State at 21:00 on Monday [None, home, away, boost]
40983	SCHEDULE_MONDAY_22	R/W	0	3		State at 22:00 on Monday [None, home, away, boost]
40984	SCHEDULE_MONDAY_23	R/W	0	3		State at 23:00 on Monday [None, home, away, boost]
40985	SCHEDULE_TUESDAY_00	R/W	0	3		State at 00:00 on Tuesday [None, home, away, boost]
40986	SCHEDULE_TUESDAY_01	R/W	0	3		State at 01:00 on Tuesday [None, home, away, boost]
40987	SCHEDULE_TUESDAY_02	R/W	0	3		State at 02:00 on Tuesday [None, home, away, boost]
40988	SCHEDULE_TUESDAY_03	R/W	0	3		State at 03:00 on Tuesday [None, home, away, boost]
40989	SCHEDULE_TUESDAY_04	R/W	0	3		State at 04:00 on Tuesday [None, home, away, boost]
40990	SCHEDULE_TUESDAY_05	R/W	0	3		State at 05:00 on Tuesday [None, home, away, boost]
40991	SCHEDULE_TUESDAY_06	R/W	0	3		State at 06:00 on Tuesday [None, home, away, boost]
40992	SCHEDULE_TUESDAY_07	R/W	0	3		State at 07:00 on Tuesday [None, home, away, boost]
40993	SCHEDULE_TUESDAY_08	R/W	0	3		State at 08:00 on Tuesday [None, home, away, boost]
40994	SCHEDULE_TUESDAY_09	R/W	0	3		State at 09:00 on Tuesday [None, home, away, boost]
40995	SCHEDULE_TUESDAY_10	R/W	0	3		State at 10:00 on Tuesday [None, home, away, boost]
40996	SCHEDULE_TUESDAY_11	R/W	0	3		State at 11:00 on Tuesday [None, home, away, boost]
40997	SCHEDULE_TUESDAY_12	R/W	0	3		State at 12:00 on Tuesday [None, home, away, boost]
40998	SCHEDULE_TUESDAY_13	R/W	0	3		State at 13:00 on Tuesday [None, home, away, boost]
40999	SCHEDULE_TUESDAY_14	R/W	0	3		State at 14:00 on Tuesday [None, home, away, boost]
41000	SCHEDULE_TUESDAY_15	R/W	0	3		State at 15:00 on Tuesday [None, home, away, boost]
41001	SCHEDULE_TUESDAY_16	R/W	0	3		State at 16:00 on Tuesday [None, home, away, boost]
41002	SCHEDULE_TUESDAY_17	R/W	0	3		State at 17:00 on Tuesday [None, home, away, boost]
41003	SCHEDULE_TUESDAY_18	R/W	0	3		State at 18:00 on Tuesday [None, home, away, boost]
41004	SCHEDULE_TUESDAY_19	R/W	0	3		State at 19:00 on Tuesday [None, home, away, boost]
41005	SCHEDULE_TUESDAY_20	R/W	0	3		State at 20:00 on Tuesday [None, home, away, boost]
41006	SCHEDULE_TUESDAY_21	R/W	0	3		State at 21:00 on Tuesday [None, home, away, boost]
41007	SCHEDULE_TUESDAY_22	R/W	0	3		State at 22:00 on Tuesday [None, home, away, boost]
41008	SCHEDULE_TUESDAY_23	R/W	0	3		State at 23:00 on Tuesday [None, home, away, boost]
41009	SCHEDULE_WEDNESDAY_00	R/W	0	3		State at 00:00 on Wednesday [None, home, away, boost]
41010	SCHEDULE_WEDNESDAY_01	R/W	0	3		State at 01:00 on Wednesday [None, home, away, boost]
41011	SCHEDULE_WEDNESDAY_02	R/W	0	3		State at 02:00 on Wednesday [None, home, away, boost]
41012	SCHEDULE_WEDNESDAY_03	R/W	0	3		State at 03:00 on Wednesday [None, home, away, boost]
41013	SCHEDULE_WEDNESDAY_04	R/W	0	3		State at 04:00 on Wednesday [None, home, away, boost]
41014	SCHEDULE_WEDNESDAY_05	R/W	0	3		State at 05:00 on Wednesday [None, home, away, boost]
41015	SCHEDULE_WEDNESDAY_06	R/W	0	3		State at 06:00 on Wednesday [None, home, away, boost]
41016	SCHEDULE_WEDNESDAY_07	R/W	0	3		State at 07:00 on Wednesday [None, home, away, boost]
41017	SCHEDULE_WEDNESDAY_08	R/W	0	3		State at 08:00 on Wednesday [None, home, away, boost]
41018	SCHEDULE_WEDNESDAY_09	R/W	0	3		State at 09:00 on Wednesday [None, home, away, boost]
41019	SCHEDULE_WEDNESDAY_10	R/W	0	3		State at 10:00 on Wednesday [None, home, away, boost]
41020	SCHEDULE_WEDNESDAY_11	R/W	0	3		State at 11:00 on Wednesday [None, home, away, boost]
41021	SCHEDULE_WEDNESDAY_12	R/W	0	3		State at 12:00 on Wednesday [None, home, away, boost]
41022	SCHEDULE_WEDNESDAY_13	R/W	0	3		State at 13:00 on Wednesday [None, home, away, boost]
41023	SCHEDULE_WEDNESDAY_14	R/W	0	3		State at 14:00 on Wednesday [None, home, away, boost]
41024	SCHEDULE_WEDNESDAY_15	R/W	0	3		State at 15:00 on Wednesday [None, home, away, boost]
41025	SCHEDULE_WEDNESDAY_16	R/W	0	3		State at 16:00 on Wednesday [None, home, away, boost]
41026	SCHEDULE_WEDNESDAY_17	R/W	0	3		State at 17:00 on Wednesday [None, home, away, boost]
41027	SCHEDULE_WEDNESDAY_18	R/W	0	3		State at 18:00 on Wednesday [None, home, away, boost]
41028	SCHEDULE_WEDNESDAY_19	R/W	0	3		State at 19:00 on Wednesday [None, home, away, boost]

addr	Variable name	R/RW	min	max	Type	Description
41029	SCHEDULE_WEDNESDAY_20	R/W	0	3		State at 20:00 on Wednesday [None, home, away, boost]
41030	SCHEDULE_WEDNESDAY_21	R/W	0	3		State at 21:00 on Wednesday [None, home, away, boost]
41031	SCHEDULE_WEDNESDAY_22	R/W	0	3		State at 22:00 on Wednesday [None, home, away, boost]
41032	SCHEDULE_WEDNESDAY_23	R/W	0	3		State at 23:00 on Wednesday [None, home, away, boost]
41033	SCHEDULE_THURSDAY_00	R/W	0	3		State at 00:00 on Thursday [None, home, away, boost]
41034	SCHEDULE_THURSDAY_01	R/W	0	3		State at 01:00 on Thursday [None, home, away, boost]
41035	SCHEDULE_THURSDAY_02	R/W	0	3		State at 02:00 on Thursday [None, home, away, boost]
41036	SCHEDULE_THURSDAY_03	R/W	0	3		State at 03:00 on Thursday [None, home, away, boost]
41037	SCHEDULE_THURSDAY_04	R/W	0	3		State at 04:00 on Thursday [None, home, away, boost]
41038	SCHEDULE_THURSDAY_05	R/W	0	3		State at 05:00 on Thursday [None, home, away, boost]
41039	SCHEDULE_THURSDAY_06	R/W	0	3		State at 06:00 on Thursday [None, home, away, boost]
41040	SCHEDULE_THURSDAY_07	R/W	0	3		State at 07:00 on Thursday [None, home, away, boost]
41041	SCHEDULE_THURSDAY_08	R/W	0	3		State at 08:00 on Thursday [None, home, away, boost]
41042	SCHEDULE_THURSDAY_09	R/W	0	3		State at 09:00 on Thursday [None, home, away, boost]
41043	SCHEDULE_THURSDAY_10	R/W	0	3		State at 10:00 on Thursday [None, home, away, boost]
41044	SCHEDULE_THURSDAY_11	R/W	0	3		State at 11:00 on Thursday [None, home, away, boost]
41045	SCHEDULE_THURSDAY_12	R/W	0	3		State at 12:00 on Thursday [None, home, away, boost]
41046	SCHEDULE_THURSDAY_13	R/W	0	3		State at 13:00 on Thursday [None, home, away, boost]
41047	SCHEDULE_THURSDAY_14	R/W	0	3		State at 14:00 on Thursday [None, home, away, boost]
41048	SCHEDULE_THURSDAY_15	R/W	0	3		State at 15:00 on Thursday [None, home, away, boost]
41049	SCHEDULE_THURSDAY_16	R/W	0	3		State at 16:00 on Thursday [None, home, away, boost]
41050	SCHEDULE_THURSDAY_17	R/W	0	3		State at 17:00 on Thursday [None, home, away, boost]
41051	SCHEDULE_THURSDAY_18	R/W	0	3		State at 18:00 on Thursday [None, home, away, boost]
41052	SCHEDULE_THURSDAY_19	R/W	0	3		State at 19:00 on Thursday [None, home, away, boost]
41053	SCHEDULE_THURSDAY_20	R/W	0	3		State at 20:00 on Thursday [None, home, away, boost]
41054	SCHEDULE_THURSDAY_21	R/W	0	3		State at 21:00 on Thursday [None, home, away, boost]
41055	SCHEDULE_THURSDAY_22	R/W	0	3		State at 22:00 on Thursday [None, home, away, boost]
41056	SCHEDULE_THURSDAY_23	R/W	0	3		State at 23:00 on Thursday [None, home, away, boost]
41057	SCHEDULE_FRIDAY_00	R/W	0	3		State at 00:00 on Friday [None, home, away, boost]
41058	SCHEDULE_FRIDAY_01	R/W	0	3		State at 01:00 on Friday [None, home, away, boost]
41059	SCHEDULE_FRIDAY_02	R/W	0	3		State at 02:00 on Friday [None, home, away, boost]
41060	SCHEDULE_FRIDAY_03	R/W	0	3		State at 03:00 on Friday [None, home, away, boost]
41061	SCHEDULE_FRIDAY_04	R/W	0	3		State at 04:00 on Friday [None, home, away, boost]
41062	SCHEDULE_FRIDAY_05	R/W	0	3		State at 05:00 on Friday [None, home, away, boost]
41063	SCHEDULE_FRIDAY_06	R/W	0	3		State at 06:00 on Friday [None, home, away, boost]
41064	SCHEDULE_FRIDAY_07	R/W	0	3		State at 07:00 on Friday [None, home, away, boost]
41065	SCHEDULE_FRIDAY_08	R/W	0	3		State at 08:00 on Friday [None, home, away, boost]
41066	SCHEDULE_FRIDAY_09	R/W	0	3		State at 09:00 on Friday [None, home, away, boost]
41067	SCHEDULE_FRIDAY_10	R/W	0	3		State at 10:00 on Friday [None, home, away, boost]
41068	SCHEDULE_FRIDAY_11	R/W	0	3		State at 11:00 on Friday [None, home, away, boost]
41069	SCHEDULE_FRIDAY_12	R/W	0	3		State at 12:00 on Friday [None, home, away, boost]
41070	SCHEDULE_FRIDAY_13	R/W	0	3		State at 13:00 on Friday [None, home, away, boost]
41071	SCHEDULE_FRIDAY_14	R/W	0	3		State at 14:00 on Friday [None, home, away, boost]
41072	SCHEDULE_FRIDAY_15	R/W	0	3		State at 15:00 on Friday [None, home, away, boost]
41073	SCHEDULE_FRIDAY_16	R/W	0	3		State at 16:00 on Friday [None, home, away, boost]
41074	SCHEDULE_FRIDAY_17	R/W	0	3		State at 17:00 on Friday [None, home, away, boost]
41075	SCHEDULE_FRIDAY_18	R/W	0	3		State at 18:00 on Friday [None, home, away, boost]
41076	SCHEDULE_FRIDAY_19	R/W	0	3		State at 19:00 on Friday [None, home, away, boost]
41077	SCHEDULE_FRIDAY_20	R/W	0	3		State at 20:00 on Friday [None, home, away, boost]
41078	SCHEDULE_FRIDAY_21	R/W	0	3		State at 21:00 on Friday [None, home, away, boost]

addr	Variable name	R/RW	min	max	Type	Description
41079	SCHEDULE_FRIDAY_22	R/W	0	3		State at 22:00 on Friday [None, home, away, boost]
41080	SCHEDULE_FRIDAY_23	R/W	0	3		State at 23:00 on Friday [None, home, away, boost]
41081	SCHEDULE_SATURDAY_00	R/W	0	3		State at 00:00 on Saturday [None, home, away, boost]
41082	SCHEDULE_SATURDAY_01	R/W	0	3		State at 01:00 on Saturday [None, home, away, boost]
41083	SCHEDULE_SATURDAY_02	R/W	0	3		State at 02:00 on Saturday [None, home, away, boost]
41084	SCHEDULE_SATURDAY_03	R/W	0	3		State at 03:00 on Saturday [None, home, away, boost]
41085	SCHEDULE_SATURDAY_04	R/W	0	3		State at 04:00 on Saturday [None, home, away, boost]
41086	SCHEDULE_SATURDAY_05	R/W	0	3		State at 05:00 on Saturday [None, home, away, boost]
41087	SCHEDULE_SATURDAY_06	R/W	0	3		State at 06:00 on Saturday [None, home, away, boost]
41088	SCHEDULE_SATURDAY_07	R/W	0	3		State at 07:00 on Saturday [None, home, away, boost]
41089	SCHEDULE_SATURDAY_08	R/W	0	3		State at 08:00 on Saturday [None, home, away, boost]
41090	SCHEDULE_SATURDAY_09	R/W	0	3		State at 09:00 on Saturday [None, home, away, boost]
41091	SCHEDULE_SATURDAY_10	R/W	0	3		State at 10:00 on Saturday [None, home, away, boost]
41092	SCHEDULE_SATURDAY_11	R/W	0	3		State at 11:00 on Saturday [None, home, away, boost]
41093	SCHEDULE_SATURDAY_12	R/W	0	3		State at 12:00 on Saturday [None, home, away, boost]
41094	SCHEDULE_SATURDAY_13	R/W	0	3		State at 13:00 on Saturday [None, home, away, boost]
41095	SCHEDULE_SATURDAY_14	R/W	0	3		State at 14:00 on Saturday [None, home, away, boost]
41096	SCHEDULE_SATURDAY_15	R/RW	0	3		State at 15:00 on Saturday [None, home, away, boost]
41097	SCHEDULE_SATURDAY_16	R/W	0	3		State at 16:00 on Saturday [None, home, away, boost]
41098	SCHEDULE_SATURDAY_17	R/W	0	3		State at 17:00 on Saturday [None, home, away, boost]
41099	SCHEDULE_SATURDAY_18	R/W	0	3		State at 18:00 on Saturday [None, home, away, boost]
41100	SCHEDULE_SATURDAY_19	R/W	0	3		State at 19:00 on Saturday [None, home, away, boost]
41101	SCHEDULE_SATURDAY_20	R/W	0	3		State at 20:00 on Saturday [None, home, away, boost]
41102	SCHEDULE_SATURDAY_21	R/W	0	3		State at 21:00 on Saturday [None, home, away, boost]
41103	SCHEDULE_SATURDAY_22	R/W	0	3		State at 22:00 on Saturday [None, home, away, boost]
41104	SCHEDULE_SATURDAY_23	R/W	0	3		State at 23:00 on Saturday [None, home, away, boost]
41105	SCHEDULE_SUNDAY_00	R/W	0	3		State at 00:00 on Sunday [None, home, away, boost]
41106	SCHEDULE_SUNDAY_01	R/W	0	3		State at 01:00 on Sunday [None, home, away, boost]
41107	SCHEDULE_SUNDAY_02	R/W	0	3		State at 02:00 on Sunday [None, home, away, boost]
41108	SCHEDULE_SUNDAY_03	R/W	0	3		State at 03:00 on Sunday [None, home, away, boost]
41109	SCHEDULE_SUNDAY_04	R/W	0	3		State at 04:00 on Sunday [None, home, away, boost]
41110	SCHEDULE_SUNDAY_05	R/W	0	3		State at 05:00 on Sunday [None, home, away, boost]
41111	SCHEDULE_SUNDAY_06	R/W	0	3		State at 06:00 on Sunday [None, home, away, boost]
41112	SCHEDULE_SUNDAY_07	R/W	0	3		State at 07:00 on Sunday [None, home, away, boost]
41113	SCHEDULE_SUNDAY_08	R/W	0	3		State at 08:00 on Sunday [None, home, away, boost]
41114	SCHEDULE_SUNDAY_09	R/W	0	3		State at 09:00 on Sunday [None, home, away, boost]
41115	SCHEDULE_SUNDAY_10	R/W	0	3		State at 10:00 on Sunday [None, home, away, boost]
41116	SCHEDULE_SUNDAY_11	R/W	0	3		State at 11:00 on Sunday [None, home, away, boost]
41117	SCHEDULE_SUNDAY_12	R/W	0	3		State at 12:00 on Sunday [None, home, away, boost]
41118	SCHEDULE_SUNDAY_13	R/W	0	3		State at 13:00 on Sunday [None, home, away, boost]
41119	SCHEDULE_SUNDAY_14	R/W	0	3		State at 14:00 on Sunday [None, home, away, boost]
41120	SCHEDULE_SUNDAY_15	R/W	0	3		State at 15:00 on Sunday [None, home, away, boost]
41121	SCHEDULE_SUNDAY_16	R/W	0	3		State at 16:00 on Sunday [None, home, away, boost]
41122	SCHEDULE_SUNDAY_17	R/W	0	3		State at 17:00 on Sunday [None, home, away, boost]
41123	SCHEDULE_SUNDAY_18	R/W	0	3		State at 18:00 on Sunday [None, home, away, boost]
41124	SCHEDULE_SUNDAY_19	R/W	0	3		State at 19:00 on Sunday [None, home, away, boost]
41125	SCHEDULE_SUNDAY_20	R/W	0	3		State at 20:00 on Sunday [None, home, away, boost]
41126	SCHEDULE_SUNDAY_21	R/W	0	3		State at 21:00 on Sunday [None, home, away, boost]
41127	SCHEDULE_SUNDAY_22	R/W	0	3		State at 22:00 on Sunday [None, home, away, boost]
41128	SCHEDULE_SUNDAY_23	R/W	0	3		State at 23:00 on Sunday [None, home, away, boost]

WIRING DIAGRAM

