

Model No. TR53A SUPER RANGE 2-WAY SECURITY WITH REMOTE ENGINE START

PRE-INSTALLATION CHECK

1. For safety sake, check first if your ignition key can activate engine start while the hand gear is engaged. If engine starting can be done if hand gear is engaged, set gear mode in “manual hand gear mode” during installation (Refer to the operation guide.)
2. Check if immobilization feature is present in your automobile. If so, another accessory (Item no: 444) is required to enable remote engine start. This accessory can be bought from the same dealer.
3. Check the circuits and their current first. Refer to [Installation diagram for input/ output current values]. If the output current is lower than the requirement, additional relays must be added.]

check the following after installation of alarm system

1. Installation is abnormal if the remote engine start can be done under these conditions (a) the gear is engaged 9b) ignition key is in “ Ignition ON Mode” (c) the engine hood is open (D) the hand brake is not engaged.
2. The remote control should control operation of function is the same way as the original key .If remote control can hardly remote engine start, the installation is abnormal. Check the related circuit connection of the ignition cylinder.
3. For servicing, repair and valet parking, “Valet mode” must be set to “ON”.

Remote control features 【】 【】 【】 【】 【】

1. Remote door lock/arm

To remote door lock, press and release  button after closing the door;; siren chirps once with one parking light flash.

- The remote transmitter sound 1 buzz and its LCD display locked icon. 【It remote transmitter sound 4 buzzes , the system is not working normally】 .

2. Remote door unlock/disarm

To remote the locked door, press and release  ; siren chirps twice with 2 parking light flashes .

- The remote transmitter sounds 2 buzzes and its LCD show unlock icon

Single Option (Choose One only) 2 stages door unlock /disarm 【Refer to #36, Program table 1】

Another accessory [1xxx] buyable from the same dealer is required .After setting the system at 2 stage door unlock, a press on button  can unlock driver’ s door and longer press on the same button can unlock all other others. Siren chirps 2 times with 2 parking light flashes.

- The remote transmitter sounds 2 buzzes and its LCD shows unlock icon

Activate channel # 3 【Refer to # 36, Features program table 1】

The system must be set at Channel # 3 mode. Press and hold  .The system responds according to its mode setting with 3 parking light flashes.

- The remote transmitter sounds 3 buzzes and its LCD shows unlock icon

3. Security diagnostic report

If there is \unlock/ disarm command received by the main system under lock/ arm mode; the main system will still remain in the arm mode. If any intrusion is attempted, the siren will chirps 4 times with 4 parking light flashes. The remote transmitter sounds 4 buzzes and its LCD will display the attempted zones.

4. Remote engine start

To remote engine start while the ignition “OFF”, press and release  ; siren chirps 3 times with 3 parking light flashes. During starting process, the remote transmitter sounds melody and its LCD show starting process, current status of the car.

- The remote transmitter sounds melody with its LCD showing engine runs status. For runtime setup, 【refer to Program table at #36】 . Engine run shuts off when the preset time expires. If the engine start fails, the remote transmitter’ s buzzer sounds 4 beeps twice.

5. Remote activate engine run time 【Refer to Remote transmitter’ s functions table】

Following the success of the engine start, each time press on  can automatically extend engine runtime with 5 min step-up time. Maximum 20 min runtime can be attained. Engine shuts off

automatically when the runtime expires.

6. Remote engine shut off

To remote stop engine running, press and hold **【🔑】**, can engine will shut off with 2 confirming siren chirps and 2 parking light flashes.

- The remote transmitter sounds melody with its LCD showing engine shutoff icon and current status.

7. Remote temperature-controlled start “ON/OFF” 【Refer to Features Program table at #36, 37 or Remote transmitter’s functions table】

To turn “ON” this remote temperature-controlled start feature, press and hold both **【🔑】【🌡️】** simultaneously. Siren chirps 3 times with 3 parking light flashes. [Refer to #36 for temperature setting]. When the pre-set temperature is reached, the engine start automatically

- The remote transmitter sounds melody with LCD showing temp-start icon. To turn this feature “OFF” To turn this feature “OFF”, press both **【🔑】【🌡️】** simultaneously. The remote transmitter sounds melody but its LCD does not show tem-start icon.

8. Programmed daily start-time “ON/OFF” 【Refer to Features program table at # 37】

Press and hold both **【🔑】【🕒】** simultaneously at the desired time of the day to make the engine automatically start at the same time beginning the next day. Siren chirps 6 times with 6 parking light flashes. Press and release both **【🔑】【🕒】** to deactivate this function.

- The remote transmitter sounds melody with its LCD showing daily start-time icon “ON” and this features standby mode. Engine begins running immediately in this mode. For runtime setup, refer to Program table at # 36. Engine run shuts off when preset time expires.

When the Engine start is done, the remote transmitter sounds melody with its LCD showing current status modes.

9. Status Check

Press button **【🔑】** to monitor the latest vehicle status. The parking light flashes 3 times.

- The remote transmitter sounds melody and its LCD showing vehicle’s status.

10. Activate channel # 1 release trunk

Press and hold **【🔑】** to release trunk regardless of either lock/arm or unlock/disarm mode. Trunk is released with 3 parking light flashes and siren chirps 3 times.

- The remote transmitter sounds melody showing the trunk release icon and the car’s status.

11. Remote siren /horn ON/OFF 【Refer to Features program table at # 36 or Remote transmitter’s features table】

Press and release **【🔑】** to select between siren “ON” and “OFF”.

- The remote transmitter’s LCD shows siren and music note if the siren setting is “ON”. The LCD will not show the siren and music note if siren is set “OFF”.

12. Activate channel 2 headlight delay 【Refer to Features program table at #36】

To activate head light delay, press and hold **【🔑】** [Channel # 2 activated features can be programmed as required, as in this section for 30 sec head light delay] either in arm or disarm modes. Following 2 parking light flashes, headlight stays on 30 sec before it automatically turns off. Another press on the same button can shut off this feature.

- Remote transmitter sounds melody and its LCD showing the car’s status.

13. Car locator/search

To locate the car, press and release both **【🔑】【🔑】** simultaneously, siren chirps 6 times with 6 parking light flashes.

- Remote transmitter sounds melody with its LCD showing car’s status.

14. Lock/arm shock sensor by pass This features is used to avoid nuisances in case of alarm from shock sensor caused by heavy truck or train passing by or thunder' s sound. Press and release both   simultaneously (either the system is Lock/arm or unlock/ disarm modes) to make shock sensor inoperative but all alarm features still are in standby mode. 【 Refer to lock/arm features 】 . ● The remote transmitter sounds 1 buzz with its LCD showing shock sensor and lock icons
15. Defective zoon by pass When remote arming is activated; if there is a defective zone like the trunk being released or handbrake not engaged, siren chirps 4 times with 2 parking light flashes. The defective zones is ignored and bypassed. [If the defective zone is re-closed, the system enters full arm mode.] ● The remote transmitter sounds 4 buzzes with its LCD showing the defective zone
16. Alarm mode & warn away While in arm mode, if the alarm is triggered by 1st stage shock sensor; the siren chirps twice with 2 parking light flashes (except the system is in MUTE ARM mode). ● The remote transmitter sounds 2 long beeps with its LCD showing impact icon While in arm mode, if the alarm is triggered by 2nd stage shock sensor; the siren chirps for 15 sec along parking light flashes (except the system is in MUTE ARM mode). ● The remote transmitter sounds long beeps for 15 sec with 2 vibrations. Its LCD shows impact icon While in arm mode, if the door' s car is opened, trunk/hood is opened or the ACC is turned "ON"; the siren blurts 30 sec with 60 sec parking light flashing. The start-kill takes effect. ● The remote transmitter sounds long beep with vibration for 60 sec. Its LCD shows icon of triggered zones. In all above trigger modes, one press on  to deactivate the alert mode. A second press on  to get system into Unlock/Disarm mode.
17. Alarm trigger zone by pass with safety For any abnormal situations like hijack mode, zone defects caused by hood/trunk open while arming ,impact trigger or prolonged ACC "ON" while in arm mode; the engine-start is immediately killed but siren blurts for 2 min. (regardless of ARM or MUTE ARM),parking light flashes 2 min. Both siren and parking light alert will stop after 2 min but the start-kill is still in effect. If the triggered zone is re-closed, the whole alarm system restores to normal arm mode. ● The remote transmitter sounds long beeps and vibrates for 60 sec.; its LCD shows "trigger icon"
18. Panic When the ignition is "OFF", press and hold both   ; siren chirps 3 times with 3 parking light flashes. ● The remote transmitter sounds melody and its LCD showing car' s status..
19. Remote anti-carjack on While the engine is running, press and hold both   to activate remote hi-jack mode. The alarm system undergoes 3 alert stages. In the 1st stage, the parking light flashes for 20 sec. In the 2nd stage, siren starts to chirp for 20 ~ 30 sec with the parking light still flashing. In the 3rd stage, the siren blurts for 30~ 60 sec with parking light flashing and the start kill takes effect. ● The remote transmitter sounds alert with its LCD showing hijack mode icon. To deactivate on-going carjack mode in any stage , press and release 
20. Anti-carjack switch While the engine is running, press and release the anti-carjack switch (concealed near the alarm board), The alarm system undergoes 3 alert stages. In the 1st stage, the parking light flashes for 20 sec. In the 2nd stage, siren starts to chirp for 20 ~ 30 sec with the parking light still flashing. In the 3rd stage, the siren blurts for 30~ 60 sec with parking light flashing and the start kill takes effect. To deactivate on-going carjack mode in any stage, press the anti-hijack switch for 5 sec. ● The remote transmitter sounds alert with its LCD showing hijack mode icon.
21. Valet mode by remote ON/OFF 【 Remote transmitter' s Features program table 】 or 【 Valet mode by over-ride switch, refer to #37 Features program table 】 Press and hold both   to turn the remote valet "ON" .Siren chirps 3 times with 3 parking light flashes. The system loses all features except for lock、 unlock, trunk release. While the valet "ON" mode., press and release   simultaneously to turn the valet "OFF" where all features become normal.

- The remote transmitter sounds melody with its LCD showing valet mode icon while system in valet “ON” mode. In valet “OFF” mode, the remote transmitter sounds melody but with its LCD not showing the valet mode icon
- 22. Feedback function message for L C D & buzzer or vibrator 【Refer to remote transmitter’s features table】**
Status feedback & confirmation signal having received transmitter’s command and successfully processed its command, the main system will send feedback signal to the transmitter .The remote transmitter sounds confirmation signal with its LCD showing car’s latest status.

FEATURES OF MAIN UNIT

- 23. Memory Learning from 4 different remotes 【Refer to # 35】**
The main unit can learn coding from 4 remote transmitters.
- 24. Power failure memory**
The main unit retains the memory of last settings if its power source is disrupted.
- 25. Low voltage auto engine-rest**
The main unit retains the memory of last settings if its power source is disrupted.
- 26. Safety remote engine start/stop engine circuit**
For each time of remote engine start, the main unit will perform check on related circuit. Only in perfect condition of all switches, will the engine start.
- 27. Smart of engine crank circuit**
Having received remote engine start signal by remote transmitter, the system will try engine starting. Cranking will automatically terminate immediately after engine-start success.
- 28. Success of engine start diagnosed RPM/voltage 【Refer to the Installation Diagram, note (9)】**
The main unit will diagnose the engine-start success be means of RPM or voltage sensing.
- 29. Valet mode by override switch 【Refer to Features Program Table, at # 37】**
While valet mode ”ON”, all other functions are still operative except for the engine-start, which will not be operable unless valet mode is switched “OFF”.
- 30. Auto relock [Refer to Features program table, at # 36]**
After car central door unlocked, it will automatically relock it self if nobody opens the door within 15 sec.
- The remote transmitter sounds melody with its LCD showing the car’s status.
- 31. Safety door lock/unlock upon ignition on/off 【Refer to Features Program Table, at # 36】**
The central door locking system will be activated and all doors are automatically locked if the ignition is turned on. All doors will be unlocked immediately the ignition is turned off.
- 32. Remote start kill origin alarm 【Refer to Installation guide, note (5)】**
In case of inability to remote start your car with original immobilizer, this system feature can overcome this problem by means of by-passing the immobilizer feature..
- 33. Remote start with automatic and manual gear 【Refer to Installation diagram note (10)】**
【1】 Auto transmission gear: The remote transmitter is compatible with this type. The automobile must be in free gear mode otherwise the auto remote start is not operative.
【2】 Manual gear car : To enable remote engine start for this type, following steps must be done.
 (a) Engage the hand brake while the engine is running
 (b) Press the remote engine start button of the remote transmitter and try to complete steps (c) and (d) within 30 sec.
 (c) While the engine is still running, turn the ignition “OFF”
 (d) Open the car door and re-close it. Power door lock is activated. (The engine will automatically Stop running at the same time). All the features become operative now.
If there is any mistake in any of the above steps, the system can fail its remote engine start.

34. LED Status indicator

Mount the LED status indicator in the interior of the car at a visible place. Car owner can learn the current setting status of main unit. Refer to the table below.

LED indication while ignition is “OFF”

Setting modes in standby

Pattern of LED blinking

Upon success of remote engine start

LED solid on

Normal mode

* * * * *

Programmed daily start-time in standby mode

** ** ** ** **

Temperature-controlled start in standby mode

*** **

Temperature-controlled & daily start-time in standby mode

Valet mode “ON”

35. Code learning of remote transmitters

Follow the steps as below.

- (1) Turn the ignition “ON” (Engine must not be running)

Press and hold override switch for about 6 sec and release after the siren chirps 4 times when the main system has entered learning mode.

- (2) Press and hold remote transmitter’s button  and *Trunk* simultaneously till the siren chirps 1 time. Do the same step (2) with other remote transmitters one after another, to let the main system learn codes of each transmitter. (Maximum 4 remotes can be learned)

Note: The previously-memorized coding will be erased each time learning mode is activated.

36. Features Programmed Table (1)

Follow the steps as below.

- (1) Turn the ignition “ON” (Engine must not be running)
- (2) Press and release the override switch 6 times.
- (3) Turn the ignition “OFF ” , siren chirps 6 times to confirm it has entered programming mode.
- (4) During programming mode, each press on override switch is followed by 1 siren chirp .The number of siren chirps reflect default “ ON “ and “OFF” as shown in the chart below. The shaded value is the factory default setting.

Features Program Table [1]

Operation of buttons

Pressing on

Over-ride switch

Program Options

K1

K2

K3

K4

1 time

Engine runtime upon each remote start for 5/10/15/20 min

☐ 5

☒ 10

☐ 15

☐ 20

2 times

Temp-controlled engine start at -5° /-10° /-20° /-30°

☐ -5°

☒ -10°

☐ -20°

☐ -30°

3 times

Crank time for each remote start (with longer stepup time for next attempted remote start)

☒ 800ms

☐ 1000ms

☐ 1600ms

☐ 2000ms

4 times

CH # 2 output time 0.8s/10s/30s/on.off

☒ 0.8s

☐ 10s

☐ 30s

☐ On/off

5 times

CH # 3 output time 0.8s/10s/30s/on.off

☒ 0.8s

☐ 10s

☐ 30s

☐ On/off

6 times

Horn or siren chirp duration for 100ms/10ms/15ms/20m

- ☐ 100ms
- ☐ 10ms
- ☐ 15ms
- ☐ 20m

7 times

Choice of ignition # 2 wire output circuits during cranking

- ☐ ON
- ☐ OFF
- ☐ OFF
- ☐ OFF

8 times

Engine run delay upon ignition at 2s / 10s

- ☐ 2s
- ☐ 10s
- ☐ 10s
- ☐ 10s

9 times

Output power delay upon lock/unlock at 0.8s / 3.6s

- ☐ 0.8s
- ☐ 3.6s
- ☐ 3.6s
- ☐ 3.6s

10 times

Unlock 2 step or channel # 3

- ☐ Ch #3
- ☐ 2 step
- ☐ 2 step
- ☐ 2 step

11 times

Ignition on/off control door lock/unlock

- ☐ OFF
- ☐ ON
- ☐ ON
- ☐ ON

12 times

Auto rearm on/off

- ☐ ON
- ☐ OFF
- ☐ OFF
- ☐ OFF

13 times

Arm mode delay upon lock at 6s/30s

- ☐ 6s
- ☐ 30s
- ☐ 30s
- ☐ 30s

14 times

Dome light output delay time settings

- ☐ 6s

☐ 0.8s

☐ 0.8s

☐ 0.8s

15 times

Car' s inner temp mode indicated on remote' s LCD (Celsius / Fahrenheit)

☐ C

☐ F

☐ F

☐ F

Be sure to mark the boxes ☐ after any function is chosen for future reference.

37. Features Programming Table (2)

Features programming

Follow the steps as below.

- (1) Turn the ignition 'Off' ^{Over ride}
- (2) **【Total 3 times press of override switch for valet mode】**
【Total 4 times press of override for programmed daily start-time】
【Total 5 times press on override for temp-controlled auto start.】
Number of presses on override switch is followed by equal siren chirps.
- (3) Turn the ignition "ON" to decide in each features mode.
- (4) Press again override switch once /twice to decide each feature "ON" or "OFF"

The shaded indication like OFF is the factory default modes.

Features Program Table (2)

	Once	Twice
3 times, valet	ON	OFF
4 times, programmed daily start time on/off	ON {Refer below note}	OFF
5 times, time-controlled auto start on/off	ON	OFF
Siren and L E D indicator	1	2

Note: NOTE: Having set the programmed daily start time mode "ON", when the ignition is turned "OFF", the engine will immediately be running to indicate this feature in at standby mode. (Use remote control to engine stop engine running in this case.)

38. How to restore setting to factory default.

Follow the steps as below.

- (5) Turn the ignition "ON" (Engine must not be running)
- (6) Press and release the override switch 10 times.
- (7) Turn the ignition " OFF" (Siren chirps 10 sounds. This confirms system has entered features programming mode.)
- (8) Press over-ride switch.1 more time. Siren chirps 1 time to confirm the # 30, #31 are ready for change of default
- (9) Press remote' s button **【】** Its buzzer makes 1 sound to confirm # 30, # 31 are restored to factory default.

39. Manual ARM / DISARM Modes **【in case that the remote transmitter is lost】**

Manual Arming

- (a) Turn the ignition "ON" (The engine must not be running)
- (b) Press and release the over-ride switch 8 times.
- (c) Turn the ignition "OFF" (siren chirps 1 time with 1 parking light flash), the system enter ARM mode 20 sec afterwards. [During Manual Arm mode; if there is any incidence to security, siren chirps3 times With 3 parking light flashes); 20 sec afterwards, the system enter Alarm mode & Warn Away [Refer to # 16]

Manual Disarming

- (a) Turn the ignition "ON" (The engine must not be running)
- (b) Press and release the over-ride switch 4 times.

The 2-way pager is a low-powered transmitter device used in monitoring the automobile security status as well as in remotely arming/disarming car security system and other optional features like vibration or audible beeping warning sound during alert mode. Its features and functions are described in the separate attached sheet.

The transmission is powered by a 1.5v AAA-sized battery and works on 433.92Mhz single fixed frequency. Details of circuit diagram and its block diagram are shown on the attached sheets.

There are total 5 buttons which, if pressed, will produce the digital control signals and modulate the carrier signal. The carrier signal is generated by a crystal oscillator/amplifier circuit composed of a 433.92 MHz crystal and a npn transmitter. The modulated output of the RF amplifier stage is coupled to the coil.

All the tuning and verification are done by manufacturer during the production process and no adjustment is allowed by any consumer. No external ground is needed in such device.

Fundamental Frequency	433.92MHz
Power Source	1.5v
Transmitting Time	Periodic $\leq$ 5 seconds
Associated Transceiver	FCC ID : NJQTR53A

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference: and
- (2) This device must accept any interference received: including interference that may cause undesired operation.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. Such modification could void the user's authority to operate the equipment.

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference. (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning:

Note: This equipment has been tested and found to comply with the limits for digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference: and
- (2) This device must accept any interference received: including interference that may cause undesired operation.

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. Such modification could void the user's authority to operate the equipment.