

Rangemaster X2 PRO Sequencer

User manual



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1. DESCRIPTION OF THE UNIT

1.1 APPLICATION

Rangemaster X2 PRO PRO sequencer is a control unit used for clay target shooting for releasing clay targets from traps with voice release via microphones or manually via remote control in free or pay mode (with RFID cards) in accordance to ISSF or FITASC rules.

1.2 FEATURES

- Instant release voice recognition (phono pull unit built in)
- Adjustable microphone sensitivity and additional advanced settings
- Timer for skeet built in
- Random sequences for Trap FO/FU
- Contactless RFID chip card reader & payment option built in
- Activity lights on microphones
- 4X40 LCD display
- 15-18V DC external power supply with 100-240V AC input or car battery
- Built in RS232 data interface
- 8+5 micros directly connectable
- Resettable counter of thrown targets
- Auto-continue of rounds aborted due to power loss
- No-Bird detector built in
- ISSF & FITASC compliance

1.3 DISCIPLINES

- Olympic Trap round, finals, shoot offs, training mode
- Trap FU, Trap FA, Trap JFO-DE, Trap JFA-DE
- DTL
- ATA
- DT 2017 round, shoot off
- Skeet round, shoot offs, finals, training mode
- Skeet J-AT, SKEET J-DE
- Sporting manual
- Compak sporting 40 FITASC schemes + optional inline mode
- Double Sporting, Compak Free Training, Sport-Trap

1.4 TECHNICAL DATA

Power Input:	With external power supply: 100-240VAC or any other 15V/2A DC power source like car battery etc.
Power consumption:	< 10W
Operation temperature:	- 20°C up to +50°C
Dimensions:	Height: 20cm, width: 29cm, depth:7.5cm
Weight:	1,50 kg
Output:	+12V with ground switched
Fuse	3 fuses built in
Display:	LCD, 4x40 digits/letters
Counter:	1 Total counter, non resettable, 32bit 1 Counter, resettable, 32bit
Driving external trap-logic:	Via optional release boxes

1.5 SCOPE OF SUPPLY

- X2 PRO PRO Phono Pull Unit
- 100-240VAC external power supply with connector
- 1 x 37 pin female connector to connect traps
- 1 x 37 pin male connector to connect microphones
- User manual downloadable from www.rangemaster.at

1.6 OPTIONAL ACCESSORIES

Relay boxes:

Relay box Skeet only (2 Traps, 2 Lights) – dry contact	X2 PRO-4R
Relay box Trap FA/FU only (5 Traps) – dry contact	X2 PRO-5R
Relay box Compak Sporting/Skeet (6+2 Skeet Traps, 2 Lights) – dry contact	X2 PRO-10R
Relay box 15 Relays for Trap – dry contact	X2 PRO-15R
Relay box Trap/Skeet (15 +2 Traps, 2 lights) – 15xTrap,2xSkeet – dry contact	X2 PRO-19R
Relay box Trap/Skeet/Compak (15 + 6 + 2 Traps, 2 lights) – 15xTrap, 2xSkeet, 6x Compak – dry contact	X2 PRO-25R

Remote controls:

8 Channel digital remote control (transmitter) "IQ-SERIES"	TXIQ8
8 Channel digital remote control (transmitter) "ULTIMATE-SERIES"	TXULT8

Internal options:

Wireless 8 Channel receiver module, 433MHZ

[X2 PRO-R433](#)

VGA Monitor module

[X2 PRO-VGA](#)**External options:**

8 Channel wireless transmitter module "Buran"

[BURAN](#)

Simpleconnect breakout PCB with connector and terminal blocks for connecting microphones and lamps – unboxed

[X2 PRO-SCM](#)**Microphones & microphone accessories:**

16 Ohm highly sensitive microphone

[MIC02](#)

Lamp box for microphone

[MIC07](#)

Pedestal

[MIC03](#)

Microphone plug&socket set

[MIC04](#)

Microphone socket mounting kit (incl. 4 x hexnuts, 4 x screws, 4 washer)

[MIC05](#)**Payment options:**

RFID chip card

[CCSEC](#)

Chip card loader, handheld

[CCC](#)

Chip card loading software and chip card reader

[CCS](#)

1.7 LEGEND



LEGEND

TOP/FRONT:

1	40x4 DIGITS LCD DISPLAY
2	ON/OFF BUTTON
3	TIMER ON/OFF BUTTON (FOR SKEET TRAINING, ATA AND NORDIC TRAP)
4	TIMEOUT - MAXIMUM FLIGHT TIME OF TARGET FOR COMPAK SPORTING +INLINE
5	MENU BUTTON: LEFT, CENTRAL, RIGHT
6	BUTTONS FOR SELECTING NUMBER OF SHOOTERS IN FREE MODE
7	RESET BUTTON
8	ALL MICROPHONES ON (FOR ATA AND NORDIC TRAP)
9	MICROPHONE SENSITIVITY LEVEL
10	CONTACTLESS RFID CHIP CARD READER

BACK:

11	3 PINS 12-15V DC POWER IN CONNECTOR
12	37 PINS MALE MICROPHONES & LAMPS CONNECTOR
13	37 PINS FEMALE CONNECTOR FOR TRAPS OR BURAN
14	9 PINS X2 PRO-RS232 DATA INTERFACE BOX CONNECTOR
15	SMA SOCKET FOR ANTENNA (FOR REMOTE CONTROL)

1.8 BASIC SAFETY RULES

Please read the instructions carefully before operating this equipment and keep this manual for future reference!



WARNING:

When using electric equipment, basic safety precautions including the following should always be followed to reduce the risk of electric shock, fire and personal injury.

For safe operations:

- Do not expose this sequencer to rain
- Do not use electronic equipment where there is risk to cause fire or explosion
- Avoid body contact with opened sequencer
- Always unplug power cords before opening the sequencer or the junction box
- Follow safety regulations of your country when switching voltages are exceeding 30V
- Have your system repaired by qualified person in case of damage
- Use only tools and equipment with non-conducting handles when working on electrical devices and be sure hands are dry and, when possible, wear non-conductive gloves, protective clothes and shoes with insulated soles
- If water or a chemical is spilled onto equipment, shut off power at the main switch or circuit breaker and unplug the equipment
- Keep children away
- Always ensure that launching area of traps is clear and trajectory of targets is safe
- Keep the equipment in proper conditions; repair damaged cords & cables immediately
- When the unit is not in use, always disconnect from the power line!
- During thunderstorms and lightening, turn off and always disconnect microphone connectors and trap connectors from the power line
- Do not use any accessory or attachment other than those recommended or supplied by us. There may be risk of personal injury in addition to invalidating the warranty
- This manual does not include safety instructions for shooting. Local shooting regulations have to be followed!

2. INSTALLATION

2.1 PRE-INSTALLATION WORKS

Pre-installation work includes piping and cabling for traps, microphones and skeet lamps (if it is a skeet or combined layout) and installing microphone connectors. These are very crucial part of installation work, because it needs accuracy to avoid problems, additional work and expenses.

2.1.1 PIPING & CABLING FOR MICROPHONES AND TRAPS

WARNING! CABLES FOR MICROPHONES:

- **MUST NOT** exceed the length of **45m each!**
- The shortest cable should not be longer than **50%** of the length of the longest cable!
- **MUST NOT** be placed near electrical cables closer than **0.5 meters!**

As microphone cables we **strongly recommend to use shielded CAT7 S/FTP cable.**

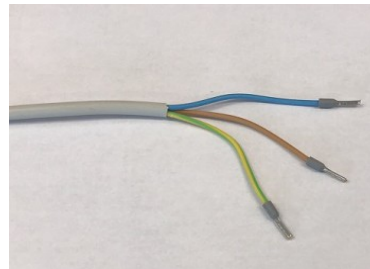
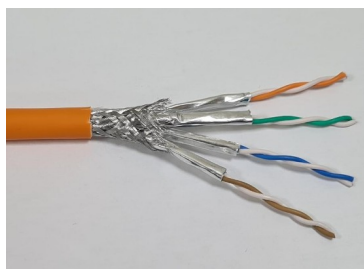
For microphone and trap cables use corrugated, UV-resistant pipes.

For countries with low temperatures during winter we recommend to use polyethylene, UV-resistant pipes.

Also consider the risks of damage of cables by rodents – close both sides of each pipe e.g. with steel wool.

Don' t forget to **number** the cables from both sides when pulling them into the pipes!

(better use clips or permanent marker and take care to mark also the part which will not be dismantled or cut later)



2.1.2 MICROPHONE CONNECTORS

1. For microphone installation it is necessary to do piping and cabling according to the Microphone cabling scheme ([please refer to para 2.3](#))

NOTE:

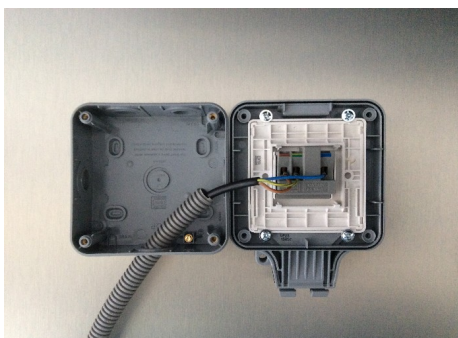
- Don't forget to number the cables from both sides
- Don't forget about other cables besides for microphones while doing piping!

2. On each position where the microphone is installed, mounting fasteners for outdoor outlets must be installed.

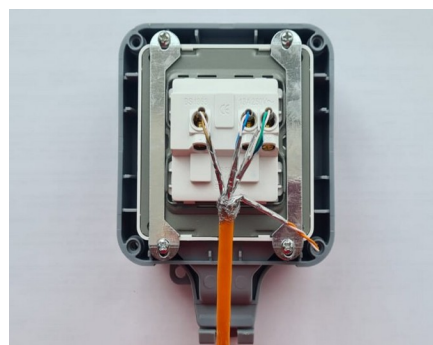
Example installation:



3. Connect the cables as shown on the pictures below:



**Triple core cable with 0.75mm²
cable diameter**



S/FTP cable

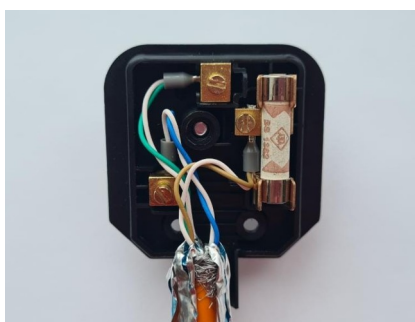


L - brown wire (brown/white wire if you use S/FTP cable)
E - yellow/green wire (green/white wire if you use S/FTP cable)
N - blue wire (blue/white wire if you use S/FTP cable)

4. Connect the cables of microphones to the attachment cap as shown on the pictures below .



**Triple core cable with 0.75mm²
cable diameter**



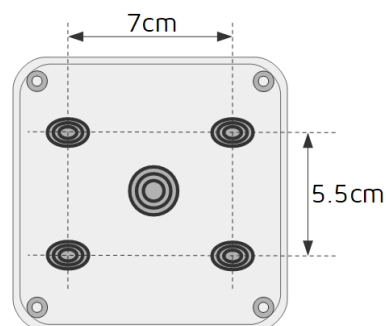
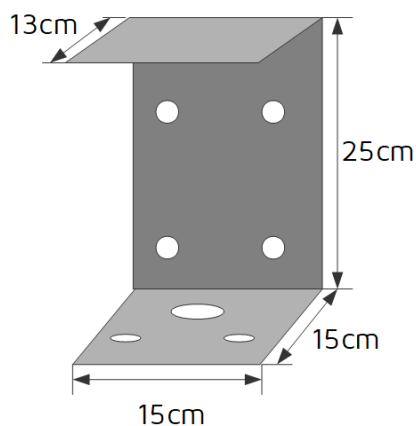
S/FTP cable



L - brown wire (brown/white wire if you use S/FTP cable)
E - yellow/green wire (green/white wire if you use S/FTP cable)
N - blue wire (blue/white wire if you use S/FTP cable)

Example for socket mounting for outdoor outlets
([can be provided by Rangemaster Systems](#)):

Dimension of back side boxes of outdoor outlets
([if you buy them from Rangemaster Systems](#)):



5. When pulling pipes make sure that they are long enough to pull one side of the gray pipe inside the connector box to provide better protection of the cable and better look.

2.2 CONNECTING TRAPS

First of all figure out, how your traps are controlled.

Usually, there are 3 ways of releasing traps:

- with dry contact – e.g. Laporte
- with 12V supplied: +12V permanently connected and ground/minus switched
- with 12V supplied: +12V switched and ground/minus permanently connected
- with 24V supplied: +24V permanently connected and ground/minus switched
- with 24V supplied: +24V switched and ground/minus permanently connected

by default, the X2 PRO supplies +12V permanently connected and protected by 1A fuse with ground switched – via the 37 pins female trap connector.

Anyway, we recommend you to use one of our choice of [release boxes](#) for fast and convenient installation ([please refer to para 2.2.2](#)).

2.2.1 PINOUT 37-PINS SUB-D FEMALE CONNECTOR FOR RELEASING TRAPS



Pin:	Connects to:	FO:	FU:	FA:	Skeet:	Double trap:	Compak Sportng:	Sporting:
Pin 1-4	+12V	X	X	X	X	X	X	X
Pin 5	Trap 15	X						
Pin 6	Trap 14	X						
Pin 7	Trap 13	X						
Pin 8	Trap 12	X						
Pin 9	Trap 11	X						
Pin 10	Trap 10	X	X					
Pin 11	Trap 9	X	X			X		
Pin 12	Trap 8	X	X	X		X		
Pin 13	Trap 7	X	X			X		
Pin 14	Trap 6	X	X					
Pin 15	Trap 5	X						
Pin 16	Trap 4	X						
Pin 17	Trap 3	X						
Pin 18	Trap 2	X						
Pin 19	Trap 1	X						
Pin 20-26	GND FOR X2 PRO-R-BOX	X	X	X	X	X	X	X

Pin:	Connects to:	FO:	FU:	FA:	Skeet:	Double trap:	Compak Sportng:	Sporting:
Pin 27	Buzzer	X	X	X	X	X	X	X
Pin 28	Lamp skeet low				X			
Pin 29	Lamp skeet high				X			
Pin 30	Skeet low				X			X
Pin 31	Skeet hight				X			X
Pin 32	Compak 6						X	X
Pin 33	Compak 5						X	X
Pin 34	Compak 4						X	X
Pin 35	Compak 3						X	X
Pin 36	Compak 2						X	X
Pin 37	Compak 1						X	X

WARNING:

Never connect solenoids or voltage supplying trap electronics directly to the X2 PRO sequencer!

Always use +12V Relays or your choice of our X2 PRO relay boxes!

+12V is common, GND switched for releasing the corresponding traps/relays!

2.2.2 RELAY BOXES FOR TRAPS

When connecting X2 PRO sequencer to the traps use the following 12V relay boxes in accordance to the disciplines on each layout.

Each relay box comes with 2m cable with male connector which connects to 37 pin female trap connector on X2 PRO ([please refer to para 1.7](#))

PICTURE OF THE RELAY BOX	MODEL OF THE RELAY BOX	DESCRIPTION
	X2 PRO-4R	Relay box Skeet only Has 4 relays: 2 Traps, 2 Lights. Good for: Skeet layout
	X2 PRO-5R	Relay box Trap FA/FU only Has 5 relays for 5 traps. Good for: - American trap - Universal trench - Double Trap - Wobble trap
	X2 PRO-10R	Relay box Compak Sporting/Skeet Has 6 relays for Compak traps +2 relays for Skeet Traps, 2 relays for skeet signal lamps Good for: Combined layout with Skeet&Compak Sporting
	X2 PRO-15R	Relay box for Trap Has 15 relays for 15 Traps Good for: - Olympic trench - American trap - Universal trench - Double Trap - Wobble trap

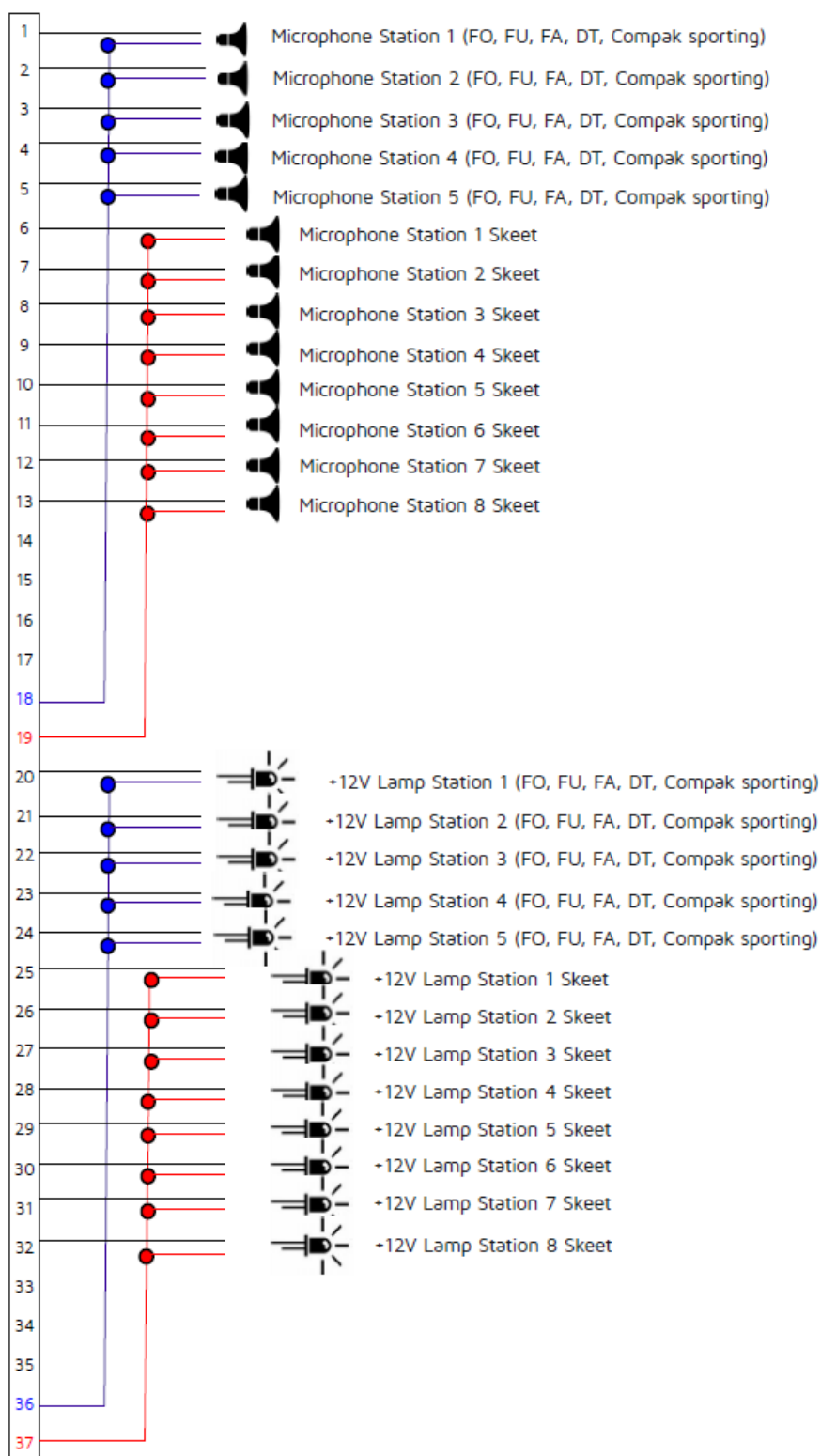
PICTURE OF THE RELAY BOX	MODEL OF THE RELAY BOX	DESCRIPTION
	X2 PRO-19R	Relay box for Trap&Skeet Has 15 relays for trap +2 relays for skeet traps, 2 skeet signal lamps Good for: combined Trap&Skeet
	X2 PRO-25R	Relay box for Trap, Skeet, Sporting Has 15 relays for Trap, 6 relays for Compak Sporting, 2 relays for Skeet trap and 2 relays for skeet signal lamps Good for: combined layout with Trap, Skeet and Compak Sporting

2.3. CONNECTING MICROPHONES

2.3.1 PINOUT 37-PINS SUB-D MALE CONNECTOR FOR MICROPHONES & LAMPS



Pin:	Connects to:	FO:	FU:	FA:	Skeet:	Double trap:	Compak Sporting:	Sporting:
Pin 1	MIC POS. 1	x	X	X		X	X	
Pin 2	MIC POS. 2	x	X	X		X	X	
Pin 3	MIC POS. 3	x	X	X		X	X	
Pin 4	MIC POS. 4	x	X	X		X	X	
Pin 5	MIC POS. 5	x	X	X		X	X	
Pin 6	MIC POS. 1				X			
Pin 7	MIC POS. 2				X			
Pin 8	MIC POS. 3				X			
Pin 9	MIC POS. 4				X			
Pin 10	MIC POS. 5				X			
Pin 11	MIC POS. 6				X			
Pin 12	MIC POS. 7				X			
Pin 13	MIC POS. 8				X			
Pin 14-17	N/C FUTURE USE							
Pin 18+36	-/COMMON MIC/LAMP	X	X	X		X	X	
Pin 19+37	-/COMMON MIC/LAMP				X			
Pin 20	+12V LAMP POS. 1	X	X	X		X	X	
Pin 21	+12V LAMP POS. 2	X	X	X		X	X	
Pin 22	+12V LAMP POS. 3	X	X	X		X	X	
Pin 23	+12V LAMP POS. 4	X	X	X		X	X	
Pin 24	+12V LAMP POS. 5	X	X	X		X	X	
Pin 25	+12V LAMP POS. 1				X			
Pin 26	+12V LAMP POS. 2				X			
Pin 27	+12V LAMP POS. 3				X			
Pin 28	+12V LAMP POS. 4				X			
Pin 29	+12V LAMP POS. 5				X			
Pin 30	+12V LAMP POS. 6				X			
Pin 31	+12V LAMP POS. 7				X			
Pin 32	+12V LAMP POS. 8				X			
Pin 33-35	N/C FUTURE USE							
Pin 36	-/COMMON MIC/LAMP	X	X	X		X	X	
Pin 37+19	-/COMMON MIC/LAMP				X			

PINOUT 37-PINS SUB-D MALE CONNECTOR FOR MICROPHONES & LAMPS:


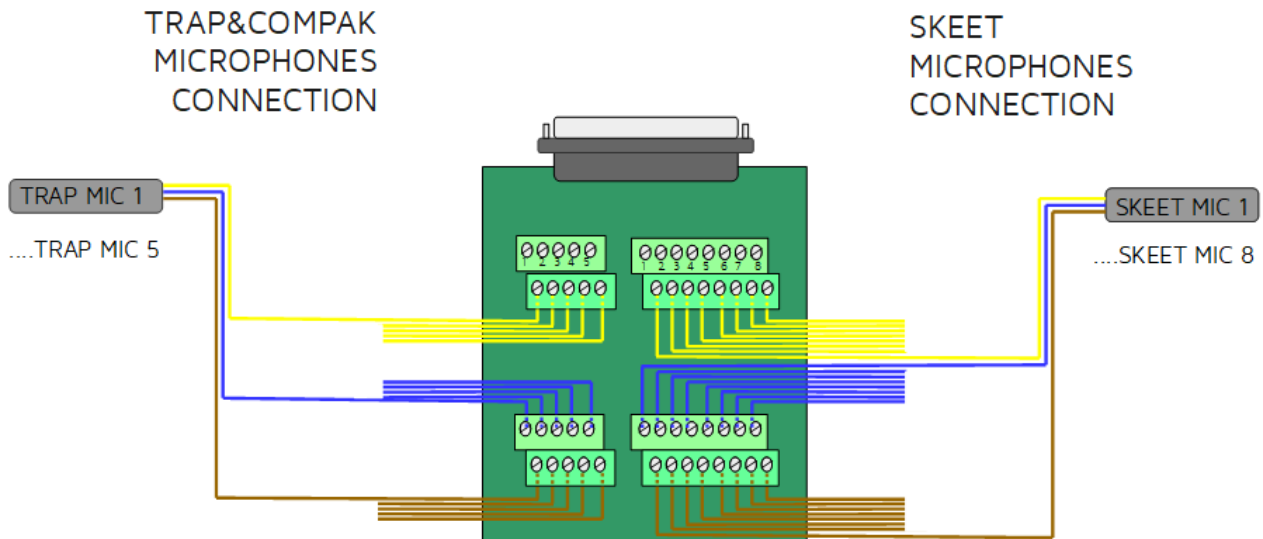
2.3.2 CONNECTION OF MICROPHONE CABLES WITH EASYCONNECT PCB

Microphone cables are connected to the socket, which connects to X2 PRO sequencer via cable supplied. EASY CONNECT breakout PCB is not included in the scope of supply!

For compatibility, customer can use CAT7 S/FTP microphone cable.

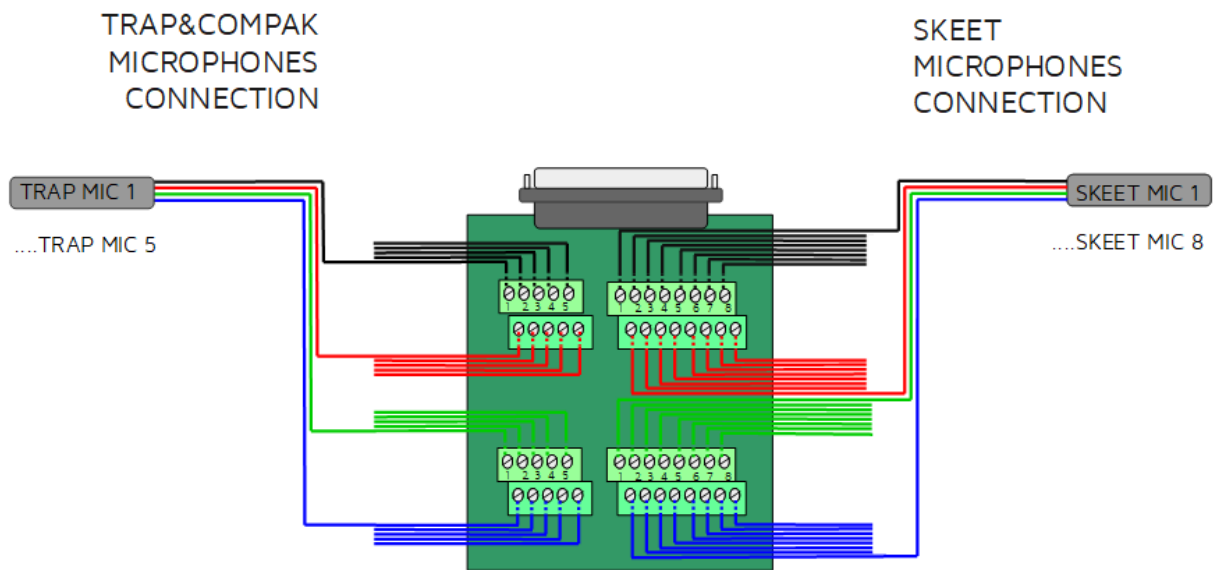
1. When using **Rangemaster Systems microphones** wires should be connected the following way from left to right starting with microphone #1 where:

- yellow wire (or green/white if you use S/FTP cable) No 1 connects to „LAMP +“ screw terminal
- blue wire (or blue/white if you use S/FTP cable) No 2 connects to „MICROPHONE -“ screw terminal
- brown (or brown/white if you use S/FTP cable) wire No 3 connects to „MICROPHONE +“ screw terminal



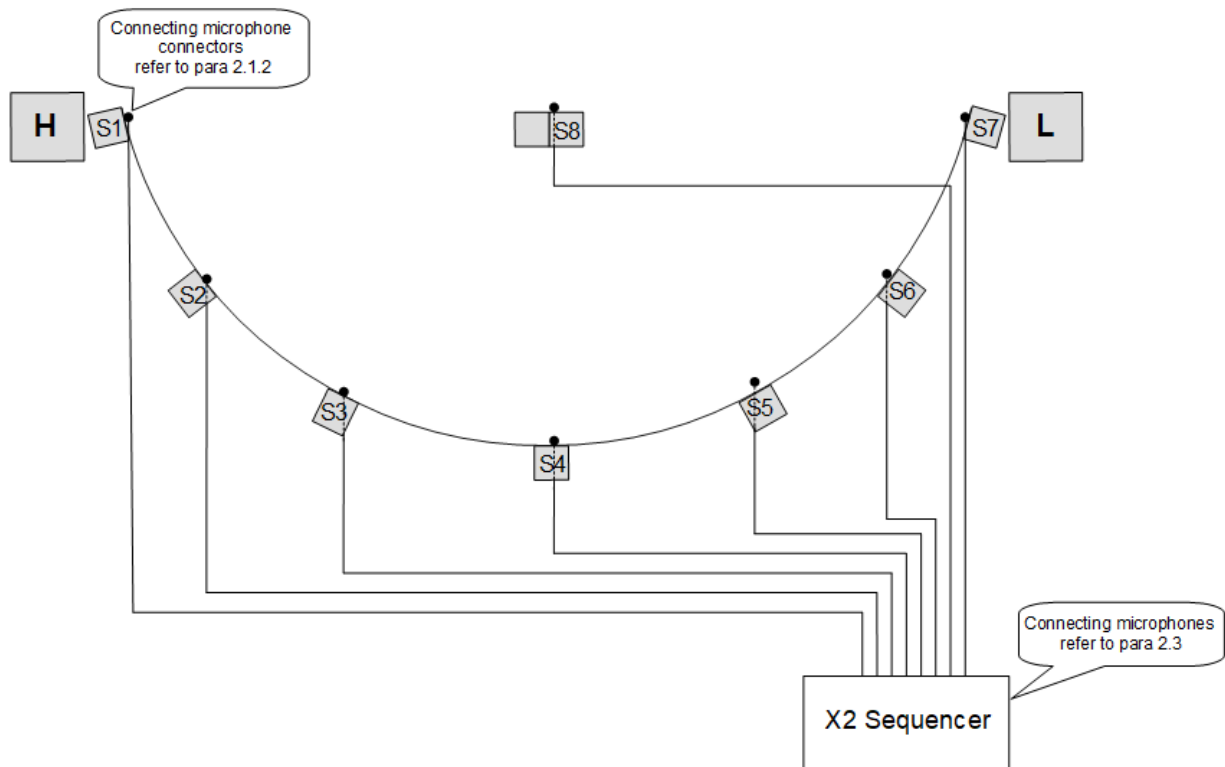
2. When using microphones with **4-wired microphone cable** (e.g. LAPORTE microphones) wires should be connected the following way:

- black (or orange/white if you use S/FTP cable) wire No 1 connects to „LAMP -“ screw terminal
- red wire (or green/white if you use S/FTP cable) No 2 connects to „LAMP +“ screw terminal
- blue wire (or blue/white if you use S/FTP cable) No 3 connects to „MICROPHONE -“ screw terminal
- brown wire (or brown/white if you use S/FTP cable) No 4 connects to „MICROPHONE +“ screw terminal



NOTE: Always connect microphones from left to right starting from #1 for all disciplines!

2.3.3 CONNECTING MICROPHONES FOR SKEET LAYOUT



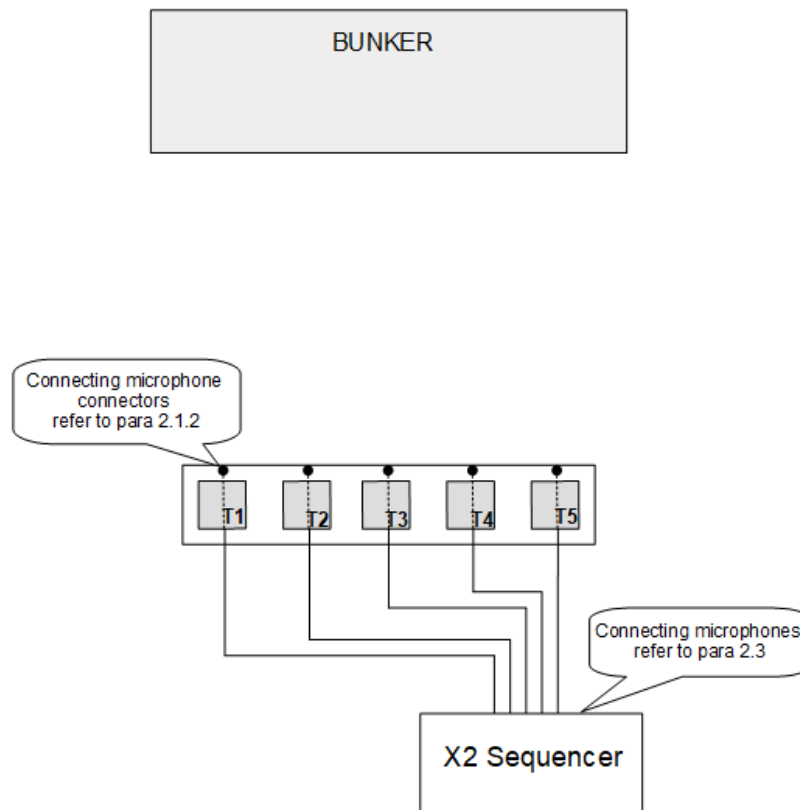
For microphone cables we recommend to use shielded CAT7 S/FTP cable

WARNING!

Microphone cables:

- Must not exceed the length of 45m each!
- The shortest cable should not be longer than 50% of the length of the longest cable!
- Must not be pulled near electrical cables closer than 0.5 meters!

2.3.4 CONNECTING MICROPHONES FOR TRAP/COMPAK



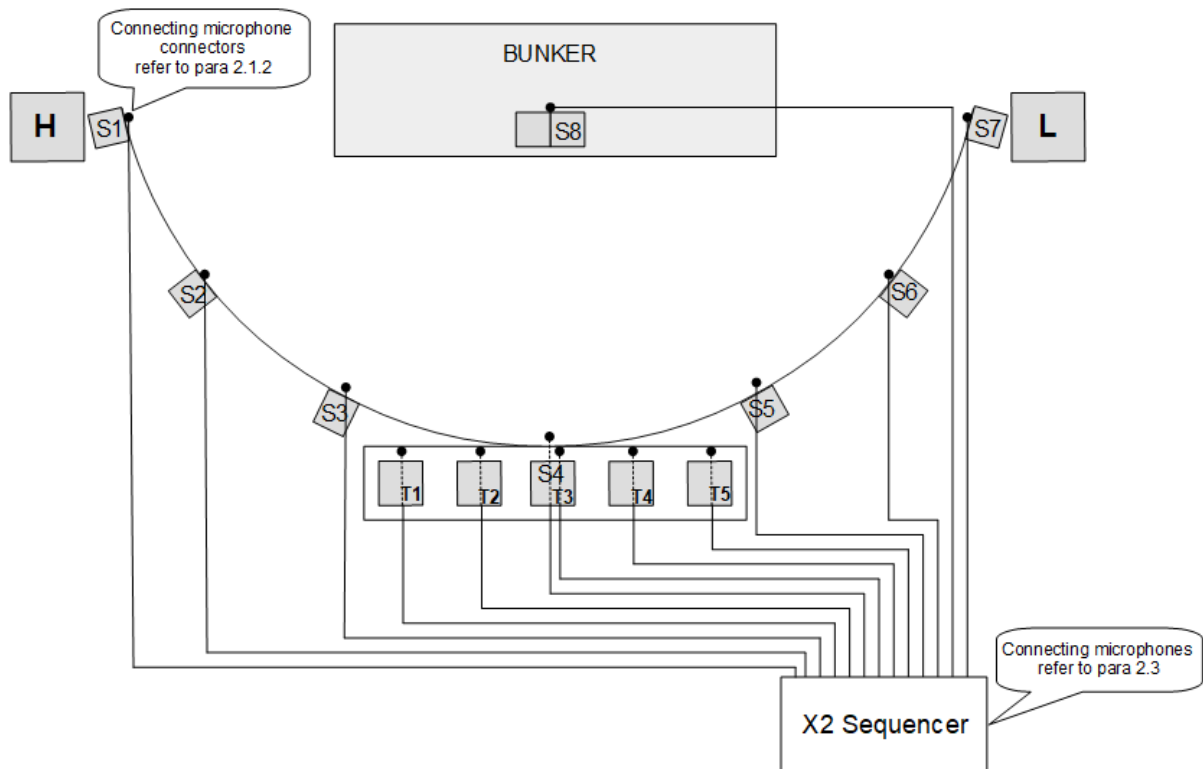
For microphone cables we recommend to use shielded CAT7 S/FTP cable

WARNING!

Microphone cables:

- Must not exceed the length of 45m each!
- The shortest cable should not be longer than 50% of the length of the longest cable!
- Must not be pulled near electrical cables closer than 0.5 meters!

2.3.5 CONNECTING MICROPHONES FOR COMBINED LAYOUT (TRAP/COMPAK&SKEET)



For microphone cables we recommend to use CAT7 S/FTP cable

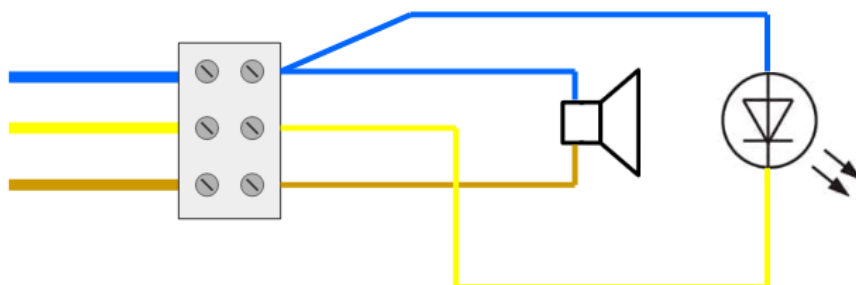
WARNING!

Microphone cables:

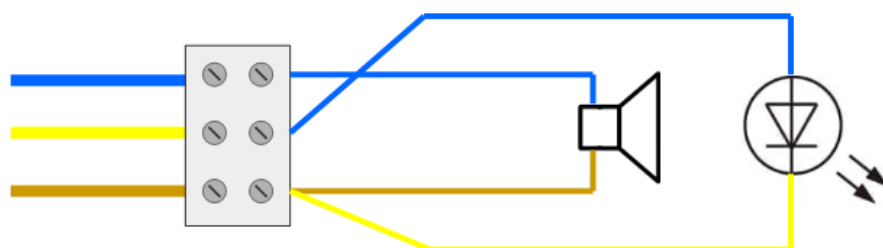
- Must not exceed the length of 45m each!
- The shortest cable should not be longer than 50% of the length of the longest cable!
- Must not be pulled near electrical cables closer than 0.5 meters!

2.3.6 CHANGING CABLING OF MICROPHONES

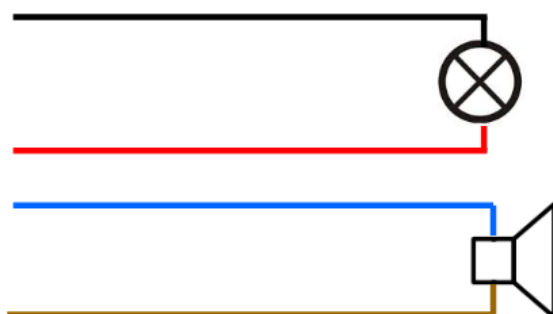
OLD VERSION OF CONNECTION



NEW VERSION OF CONNECTION



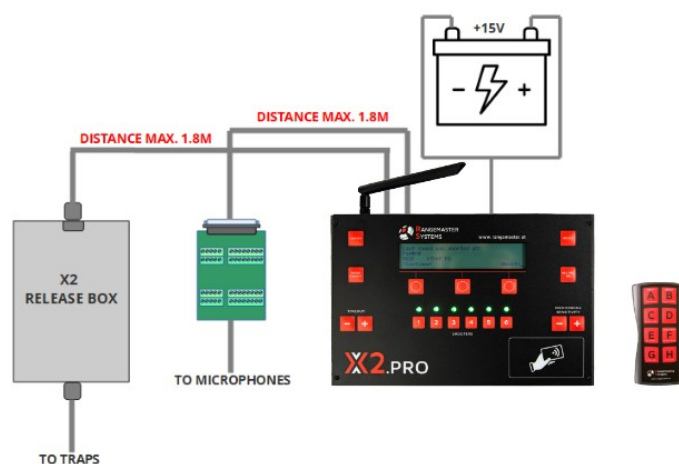
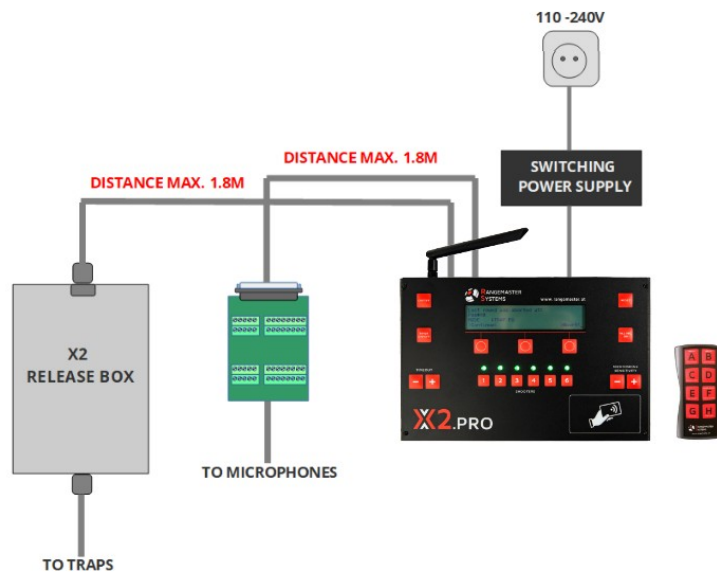
"LAPORTE" 12V VERSION OF CONNECTION WITH 4 CABLES



2.4 INSTALLATION OF COMPONENTS

Installation of the X2 PRO system looks the following:

1. Rangemaster X2 PRO sequencer
2. Microphones connector which connects to X2 PRO via 37 pins microphone connectors (we recommend to use our Simpleconnect breakout PCB which already comes with 2m cable and 37 pin connector)
3. Release box for connecting traps (we recommend to use our 12V relay boxes which already come with 2m cable and 37 pin connector – [please refer to para 2.2.2](#))



For wireless trap connection use wireless release module Buran.

The wireless release module is connected to the X2 PRO sequencer via 37 wire cable with socket to the 37 pins female traps connector on the back side of X2 PRO sequencer.



3. OPERATION

3.1 MODES

The Rangemaster X2 PRO sequencer can be used in two different modes of operation:

- shooting with chip card
- shooting without payment (for running competitions)

All disciplines are set in accordance to ISSF and FITASC rules (please refer to ISSF and FITASC rule books).

For training modes: please refer to [TFO Special](#), [Skeet Manual](#) and [Sporting manual](#) sections.

3.2 SHOOTING WITH CHIP CARD

- This mode is valid only with using a chip card with sufficient credit
- Limit of no birds applies ([please refer to para 3.2.4](#))

If you are using mode shooting with chip card you see the following window on the start screen:

```
Discipline: COMPAK 1S2DS  
Number of shooters: 0  
Insert your Chipcard now!
```

Registration of a shooter with a chip card please [refer to para 3.2.3](#)

3.2.1 SETTING NUMBER OF NO BIRDS PER SHOOTER

[Please refer to para 3.2.4](#)

If a "No bird" occurs, the buzzer will beep (if Buzzer is installed).

In case a shooter exceeds the set number of the no-birds per round he will hear a Buzzer beeping 3 times (if Buzzer is installed).

3.2.2 CHANGING DISCIPLINE WITH MODE CARD

Changing the discipline for the next round to shoot **in payment mode** can be done by using **Mode Cards – these are special cards which are set to certain discipline and by attaching it you can easily change the discipline.**

If you have a combined skeet and trap layout, you should have following mode cards available: Skeet round card, Skeet manual card, Trap Round card, Trap Special Training card. We recommend

you to attach all cards to a string and place it close to the sequencer.

*E.g. You have Trap FO mode set on your X2 PRO sequencer but shooter wants to shoot TFO Special (training mode). To change the mode **before** inserting his payment chip card he inserts the TFO Special mode chip card and the new mode is set automatically.*

To set a mode you should insert a mode card into the CCC-2 handheld chip card loader where you should enter a mode number in accordance to the table below or use CCLSW program which comes with CCS or CCS PLUS card reader.

NOTE: You can always rewrite already preset mode card

Discipline modes:	Description of the discipline:	Number of clays:	Mode number:
TRAP FO	Olympic Trench (Trap) Qualification round +first 25 targets of Final 2017	25	1
TRAP FIN 2023	Olympic Trench (Trap) Targets 26..50 in Final	25	2
TRAP FO S/O	Olympic Trench (Trap) Shoot off after Qualification and Finals	25	3
TFO SPECIAL	Olympic Trench (Trap) Station training with manual release or microphones (Phono Pull)	25	4
TRAP FU	Universal Trench Round – 5 traps	25	5
TRAP FA	Wobble Trap	25	6
TRAP 15-JFODE	German Hunting Trench – 15 traps	15	7
TRAP JFA-DE	German Hunting American Trench	15	8
DTL	Down the line	25	9
ATA	American trap	25	10
DT 2017R	Double Trap Qualification round and first 30 targets of Final	30	11
DT S/O	Double Trap Shoot off after Qualification and Finals	50	12
SKEET ROUND	Skeet Qualification round: Station 1..8	25	13
SKEET J-AT	Special Austrian Hunting Skeet	25	14
SKEET J-DE	Special German Hunting Skeet	15	15
SKEET MANUAL	Skeet Station training with manual release or microphones (Phono Pull)	25	16
SKEET S/O 4	Skeet Shoot off after Qualification - Station 4 only	24	17
SKEET FINAL	Skeet Final - Station 3-5 – Version 2023 (6 shooters, up to 60 targets)	40	18
SKEET S/O 3-5	Skeet Shoot off - Stations 3,4,5	24	19
SPORT MANUAL	8 channel manual release for sporting with remote control	25	20

Discipline modes:	Description of the discipline:	Number of clays:	Mode number:
NORDIC TRAP	Nordic trap	25	31
DOUBLESPO-RT	Double sporting with 25 doubles on report (up to 6 shooters)	50	171-178
DOUBLESPO-S	Double sporting with 25 simultaneous doubles (up to 6 shooters)	50	181-188
COMPAK-FT	Compact Sporting: training mode with manual release via remote control or voice release via microphone with target selection	25	34
SPORT-TRAP	Sport Trap	25	251-290
SKEET MIXED	Skeet Mixed, 4 shooters, max. 20 targets each	20	36
SKEET TEAMS	Skeet Teams, 6 Shooters, max 20 targets each – FOR FUTURE USE	20	37
TRAP MIXED	Trap Mixed, 4 shooters, max. 25 targets each – FOR FUTURE USE	25	38
TRAP TEAMS	Trap Teams, 6 Shooters, max 25 targets each – FOR FUTURE USE	25	39
IDOUBLESP.-R	Inline double sporting with double on report – FOR FUTURE USE	50	40
IDOUBLESP.-S	Inline double sporting with simultaneous doubles – FOR FUTURE USE	50	41
TRAP FU-FT	Free training for universal trench	25	42

COMPAK SPORTING - ROUND MODE:

COMPAK 5S	Compak sporting round 5 singles 0 doubles (8 FITASC schemes)	25	101-108
COMPAK 3S1DR	Compak sporting round 3 singles 1 double on report (8 FITASC schemes)	25	109-116
COMPAK 3S1DS	Compak sporting round 3 singles 1 simultaneous double (8 FITASC schemes)	25	117-124
COMPAK 1S2DR	Compak sporting round 1 single 2 doubles on report (8 FITASC schemes)	25	125-132
COMPAK 1S2DS	Compak sporting round 1 single 2 simultaneous doubles (8 FITASC schemes)	25	133-140

COMPAK SPORTING - IN-LINE MODE (OPTIONAL FEATURE):

iCOMPAK 5S	Compak sporting in-line 5 singles 0 doubles (8 FITASC schemes)	25	201-208
iCOMPAK 3S1DR	Compak sporting in-line 3 singles 1 double on report (8 FITASC schemes)	25	209-216
iCOMPAK 3S1DS	Compak sporting in-line 3 singles 1 simultaneous double (8 FITASC schemes)	25	217-224
iCOMPAK 1S2DR	Compak sporting in-line 1 single 2 doubles on report (8 FITASC schemes)	25	225-232
iCOMPAK 1S2DS	Compak sporting in-line 1 single 2 simultaneous doubles (8 FITASC schemes)	25	233-240

3.2.3 REGISTRATION WITH CHIP CARD

To register insert you payment chip card.

After inserting you see the following window:

```
Discipline: COMPAK 1S2DS
Number of shooters: 1
Decharged - new credit:      250
Insert your Chipcard now!
```

New credit – is the amount which left on your payment chip card.

```
Discipline: COMPAK 1S2DS
Number of shooters: 1
Insert your Chipcard now!
                >Start round<
```

 | | |
Menu button 1 Menu button 2 Menu button 3

Menu button 2 **>Start round<** will start the round with the number of shooters registered.

In case there are other shooters willing to join this round of shooting, they should insert their chip cards one by one before pressing **>Start round<** button.

To add additional shooters will not be possible after pressing **>Start round<** .

If you are shooting alone, press **>Start round<** after inserting your chip card.

In case of 6 shooters having registered, the round starts automatically.

NOTE: One chip card can be used for registration of all 6 shooters

NOTE: After the last target is released, the system will automatically reboot and will be ready for registration of new shooters.

You can configure the reboot timer in the administrative menu (see section 5.2.2). It applies for shooting with chip card (pay mode).

3.2.4 AUTOMATIC NO BIRD DETECTION

In case one target is launched the system expects at least 1 shot.

For disciplines offering doubles such as skeet, compak sporting, double trap, the Rangemaster X2 PRO expects two shots to be fired. In case there is only one shot fired, the Rangemaster X2 PRO will give No Bird automatically.

To activate No bird sensor: Please please [refer to para 5.2.2](#)

To set up number of No Birds in payment mode: Please please [refer to 5.2.3](#)

To set the flight time/No Bird timer adjustment: Please please [refer to para 3.7](#)

3.2.5 MANUAL NO BIRD

Using a wireless remote control by pressing the „E“ / „No Bird“, you can go back only one target.

If you have to go back to more that 1 target, use <NO BIRD> button on the Rangemaster X2 PRO control unit (Menu button 1).

Discipline: SKEET ROUND		
Station: 1	Next:	T1: T2: Thrown:
Shooter: 1	HIGH/PULL	4S. 5S.
<NO BIRD>	<HOLD>	<Manual>

Menu button 1	Menu button 2	Menu button 3

If the system does not allow you to go back any further, then the number of No Birds were exceeded by the shooter in pay mode (shooting with chip card) and shooting has to be continued without possibility to repeat.

To disable or enable manual no bird please [refer to para.5.5.3](#)

3.3 SHOOTING WITHOUT PAYMENT

- This mode is good for running competitions or non-commercial shooting
- There is no limitation of no birds
- Number of targets released can be checked in the Counter (please [refer to para 5.1](#))

If you are using shooting without chip card you see the following window on the start screen:

```
RANGEMASTER X2.PRO   V.2209   Ser:_  
  
Shooting without Payment  
Mode:                > TRAP FO <                > next <
```

3.3.1 MANUALLY SETTING THE DISCIPLINE

Use the two buttons Menu button 1 and Menu button 2 to scroll back or forth in order to set the wanted discipline and press >next< Menu button 3 to move on

```
RANGEMASTER X2.PRO       2017 Ser:2018-  
009  
  
                        Delay-Time:3000 ms  
Shooting without Payment  
Mode:                > TRAP FO <                > next <
```

| | |
Menu button 1 Menu button 2 Menu button 3

To hide or add disciplines - [refer to section 5.2.4](#)

To see the list of all disciplines with description please [refer to para 4](#)

3.3.2 SETTING NUMBER OF SHOOTERS

To set number of shooters use the „SHOOTERS“ button placed under the display of the control unit ([refer to para 1.7](#)).

All 6 buttons are pushed and all green LEDs are on means 6 shooters will be in the next squad to shoot.

```
Discipline: SKEET ROUND  
  
Shooters in round:123456        Total:6  
>START<                                >Change mode<
```

Here we remove shooter 6 by pressing the 6 button, so the LED is off and on the display we can see X instead of number 6, it means we removed a shooter 6 and there will be 5 shooters in the next round.

Discipline:SKEET ROUND

Shooters in round:12345X Total:5
>START< >Change mode<

For all trap disciplines, following setup is recommended (in accordance to their positioning on stations):

Shooter/station:	1	2	3	4	5	6
1 shooter	1	X	X	X	X	X
2 shooters	1	X	X	4	X	X
3 shooters	1	X	3	X	5	X
4 shooters	1	X	3	X	5	6
5 shooters	1	2	3	4	5	X
6 shooters	1	2	3	4	5	6

NOTE: Station 6 is referring to waiting position behind shooting station # 1.

For skeet & compak sporting, use following setup:

Shooter/station:	1	2	3	4	5	6
1 shooter	1	X	X	X	X	X
2 shooters	1	2	X	X	X	X
3 shooters	1	2	3	X	X	X
4 shooters	1	2	3	4	X	X
5 shooters	1	2	3	4	5	X
6 shooters	1	2	3	4	5	6

3.3.3 STARTING THE ROUND

1. Choose the discipline (please [refer to para 3.3.1](#))
2. Press >next< button
3. Set number of shooters (please [refer to para 3.3.2](#))
4. Press >START< button

```

MODE: SKEET ROUND
Station: 1 Next:      T1:  NB: Laun:
Shooter: 1 HIGH/PULL  5S.
<NO BIRD>          <HOLD>          <Manual>

```

| | |
Menu button 1 Menu button 2 Menu button 3

When all shooters have finished their shooting and round is over, following screen appears:

```

MODE: SKEET ROUND      Total:90
Station:   Next:      T1:  NB: Laun:
Shooter:           5S.          25
<NO BIRD>                      <EXIT>

```

| | |
Menu button 1 Menu button 2 Menu button 3

In shooting **without chip card mode there is no automatic reset** and the menu button 3 (<EXIT>) must be pressed.

3.3.4 AUTOMATIC NO BIRD DETECTION

Please [refer to para 3.2.4](#)

NOTE:

In the mode shooting without chip card number of no birds is **unlimited!**

3.3.5 MANUAL NO BIRD

NOTE:

In the mode shooting without chip card number of no birds is **unlimited!**

3.4 COMPETITIONS

NOTE: Competitions should be always run in the shooting without payment mode

When running competitions in accordance to new ISSF rules, to remove the shooter in the final, use the buttons „SHOOTERS“ to remove the shooter in accordance to his position in the round.

3.4.1 SHOWING TARGETS FOR TRAP FO AND TRAP FU

In competition mode / non-payment mode, targets can be launched for showing targets as following:

```
Discipline: TRAP FO

Shooters in round:1XXXXX   Total:1
>START<   >Test throw<   >Change Mode<
```

After starting the round, press the **>Test throw<** key on the X2 PRO sequencer panel to display all 15 targets for the Olympic Trap (or 5 targets for the Universal Trap).

All targets will be released automatically one after the other with an interval of 3 seconds.

During the transition between station (after the target 3,6,9,12), the intervals between releases are increased to show the target.

```
Discipline: TRAP FO   Total:147

Display/ test throw clays:
Launcher/Trap: 12
```

NOTE: Before pressing **Test throw** button, be sure that launching area and trajectory of target is clear!

3.5 FUNCTIONALITY OF KEYS

3.5.1 FUNCTIONALITY IN ROUND DISCIPLINES

Functionality of keys on the Rangemaster X2 PRO unit:

<NO BIRD> : Go back after a broken clay

<HOLD>: switches off microphones and switches on the pause mode (Press again to continue)

<Manual> will release the next target without calling for the target.

Functionality of keys on wireless remote control for rounds:

A: When using a display system: Zero/Lost 1st target

B: When using a display system: Zero/Lost 2nd target – only applicable if doubles were launched

C: -

D: -

E: No Bird

F: Pause on/Pause off = <HOLD> button on the X2 PRO unit

G: -

H: Manual Release = <Manual> button on the X2 PRO unit

3.5.2 SKEET MANUAL (TRAINING MODE)

Functionality of keys on the Rangemaster X2 PRO unit:

<EXIT>: Abort this shooting sequence and go back to registration process or main menu.

Functionality of keys on wireless remote control for Skeet Manual:

- A: Release manually or preset a single high/Pull for using microphone
- B: Release manually or preset a single low/Mark for using microphone
- C: Release manually or preset a double for using microphone
- D: -
- E: -
- F: Microphone on/off (switches off manual mode and switches on microphones and vice versa)
- G: 1 station to the right (when using microphones)
- H: 1 station to the left (when using microphones)

When using Manual release (with the remote control) the following window will be shown on the Rangemaster X2 PRO display:

```
MODE: SKEET MANUAL      Total:123
Station: Preset: Type: Timer: Laun:
      1              Manual              1
<EXIT>   USE REMOTE CONTROL
```

To release targets use the push buttons (High/Low/Double) on the wireless remote control in accordance to the functionality of keys table shown above.

To activate microphones press F push button on the remote control.

The following window will be shown on X2 PRO display:

```
MODE: SKEET MANUAL      Total:124
Station: Preset: Type: Timer: Laun:
      2      DOUBLE  Phono              2
<EXIT>   USE REMOTE CONTROL
```

Before calling for the next target, preset the target using A, B or C button and preset position of the shooting place using buttons G or H in accordance to the functionality of keys table shown above.

If you want to throw the same target on the same station, just call for a target once again. No need to preset the same target after shooting.

For the special skeet timer functionality, please [refer to para 3.6.1](#)

3.5.3 TFO SPECIAL (TRAINING MODE)

This mode is good if shooter wants to train certain targets. A shooter can preset a target and release it either by using the microphone or remote control (in this case he needs a puller).

```
MODE: TFO SPECIAL
Station: Preset: Type: Timer: Laun:
'1'      Center  Manu._      0
<EXIT>   USE REMOTE CONTROL
```

Functionality of keys on X2 PRO unit:

<EXIT>: Go back to the registration process

Functionality of keys on wireless remote control Trap FO SPECIAL:

- A: Release/preset right target for next release
- B: Release/preset center target for next release
- C: Release/preset left target for next release
- D: -
- E: -
- F: Microphone on/off (switches off manual mode and switches on microphones and vice versa)
- G: 1 station to the right (when using microphones)
- H: 1 station to the left (when using microphones)

3.5.4 SPORTING MANUAL

This mode is good for manual launching targets from maximum 8 traps (A-H).

```
MODE: SPORTING MAN.  
  
TRAGET: LAUNCHED:  
USE TX/REMOTE TO RELEASE      <EXIT>
```

Functionality of keys on wireless remote control for Sporting Manual:

A: release trap A
B: release trap B
C: release trap C
D: release trap D
E: release trap E
F: release trap F
G: release trap G
H: release trap H

Buttons can be pressed simultaneously to launch doubles or even more targets

3.5.5 COMPAK SPORTING ROUNDS

This mode is good if you do not want to shoot in accordance with the scheme or want to train certain targets.

```
MODE: COMPAK 3S1DS
```

```
Compak-Scheme:17
```

```
>Continue<    >Change<    >Change Mode<
```

>Change< button changes the scheme number.

E.g. for Compak 3S1DS there are 8 schemes (17-24), in accordance to FITASC rules.

>Change Mode<: go to the main menu

>Continue< leads to the next section where you set number of shooter for this round (please [refer to para 3.3.2](#)) and press >START<

Functionality of keys on sequencer:

>No-Bird< : Go back if there was a broken clay or you want to repeat

>Hold<: switches of microphone and stops the sequence (Press again to continue)

>Manual<: releases the next target (manually, without calling)

Functionality of keys on wireless remote control for Compak rounds:

A: When using a display system: Zero/Lost 1st target (buzzer sound if installed)

B: When using a display system: Zero/Lost 2nd target (used for second target in doubles only/ buzzer sound if installed)

C: -

D: -

E: No Bird

F: Hold/Continue = <HOLD> button on X2 PRO control unit

G:

H: Manual Release = <Manual> button on X2 PRO control unit

For automatic no-bird please [refer to para 3.3.4](#)

For no bird timeout and flight time adjustments please [refer to para 3.6.2](#) and [3.6.3](#)

To check schemes refer to the [FITASC "International Compak® Sporting Rules" book](#).

Link to the schemes for Double Sporting:

https://help.rangemaster.at/images/8/84/Double_sporting_schemes.pdf

Link to the schemes for the Sport Trap:

https://help.rangemaster.at/images/2/2d/Sport_Trap_Schemes.pdf

3.6 TIMER ADJUSTMENTS

3.6.1 SKEET TIMER

For the skeet discipline in training mode (SKEET MANUAL), using the TIMER OFF/ON button on the Rangemaster X2 PRO panel, you can turn on or off the target release delay timer. If you turn off the timer, the targets will be released immediately without delay, unlike the option when TIMER is ON, when the target is released in any time interval from 0-3 seconds, in accordance with the ISSF rules.

3.6.2 FLIGHT TIME/NO BIRD TIMER ADJUSTMENT

Flight time is the time from the moment the target is launched to the moment when it is inaccessible to the shooter, in accordance with the rules, or to the moment when it touches the ground, etc. This value will be used by the system to determine "No target" and automatically repeat the target if there was no shot.

For a Trap FO, Skeet and Double Trap, the flight time is 2500 ms. Therefore, if the shooter does not fire a shot after releasing the target within 2.5 seconds, the system will automatically repeat the target if the detector is activated ([refer to section 5.2.3](#)).

In the training trap (TO Special), training Skeet (Skeet manual) and manual sporting (Sporting manual), there is no need to adjust the flight time, because shot detector is not necessary for these disciplines.

3.6.3 FLIGHT TIME/NO BIRD TIMER ADJUSTMENT FOR COMPAK SPORTING

Flight time is a time from the moment the target was launched till it hits the ground or already unreachable for the shooter. With this value systems knows how long to wait for the shot before detecting "No Bird".

With TIMEOUT regulators on the Rangemaster X2 PRO panel you can adjust the flight time.

For that you should use the longest flight time for single target or the first target in the double (T1) and the longest flight time of the second target in the double (T2).

When adjusting regulators you can see that the values on the display change.

E.g. on the picture below you can see that T1 is set to 3 sec and T2 is set to 5 sec for the 1 single 2 doubles on report scheme. In this case the system will wait for 3 second maximum for each single or first target in doubles and 5 sec maximum for the second target in the double before it detects No-bird if during this time limit it doesn't detect a shot.

MODE: COMPAK 1S2DR		Total:53
Station: 1	Next: T1:	NB: Laun:
Shooter: 1	D	3S. 1
<NO BIRD>	<HOLD>	<Manual>

Menu button 1	Menu button 2	Menu button 3

For all other disciplines the flight time is preset. For Trap, Skeet and DT the flight time is max.2.5 sec.

3.7 POWER LOSS DATA PROTECTION

In case the round was aborted e.g. due to power loss, when the unit is connected to power again you can continue shooting from the place where you stopped without losing data.

In that case you will see the following window:

```
Last round was aborted at:  
Pos#:0  
Discipline:SKEET ROUND  
>Continue<                                >Abort<
```

| | |
Menu button 1 Menu button 2 Menu button 3

To continue the shooting, please press >Continue< Menu button 1.

To abort the round and start a new round press >Abort< Menu button 3.

The sequence will be deleted and cannot be restored after pressing >Abort<.

3.8 RESETTING THE SEQUENCER

Resetting can be used when you want to abort the round.

To reset the sequencer use the RESET button.

In round mode to reset the unit first please press pause (HOLD) button!

NOTE: resetting a round in pay mode deletes all credits/targets left!

4. DISCIPLINES

Discipline modes:	Description of the discipline:	Number of clays:
TRAP FO	Olympic Trench (Trap) Qualification round +first 25 targets of Final 2017	25
TRAP FIN 2023	Olympic Trench (Trap) Targets 26..50 in Final	25
TRAP FO S/O	Olympic Trench (Trap) Shoot off after Qualification and Finals	25
TFO SPECIAL	Olympic Trench (Trap) Station training with manual release or microphones (Phono Pull)	25
TRAP FU	Universal Trench Round – 5 traps	25
TRAP FA	Wobble Trap	25
TRAP 15-JFODE	German Hunting Trench – 15 traps	15
TRAP JFA-DE	German Hunting American Trench	15
DTL	Down the line	25
ATA	American trap	25
DT 2017R	Double Trap Qualification round and first 30 targets of Final	30
DT S/O	Double Trap Shoot off after Qualification and Finals	50
SKEET ROUND	Skeet Qualification round: Station 1..8	25
SKEET J-AT	Special Austrian Hunting Skeet	25
SKEET J-DE	Special German Hunting Skeet	15
SKEET MANUAL	Skeet Station training with manual release or microphones (Phono Pull)	25
SKEET S/O 4	Skeet Shoot off after Qualification - Station 4 only	24
SKEET FINAL	Skeet Final - Station 3-5 – Version 2023 (6 shooters, up to 60 targets)	40
SKEET S/O 3-5	Skeet Shoot off - Stations 3,4,5	24
SPORT MANUAL	8 channel manual release for sporting with remote control	25
NORDIC TRAP	Nordic trap	25
DOUBLESPO-RT	Double sporting with 25 doubles on report (up to 6 shooters)	50
DOUBLESPO-S	Double sporting with 25 simultaneous doubles (up to 6 shooters)	50
COMPAK-FT	Compact Sporting: training mode with manual release via remote control or voice release via microphone with target selection	25
SPORT-TRAP	Sport Trap	25
SKEET MIXED	Skeet Mixed, 4 shooters, max. 20 targets each	20
SKEET TEAMS	Skeet Teams, 6 Shooters, max 20 targets each – FOR FUTURE USE	20
TRAP MIXED	Trap Mixed, 4 shooters, max. 25 targets each – FOR FUTURE USE	25
TRAP TEAMS	Trap Teams, 6 Shooters, max 25 targets each – FOR FUTURE USE	25
IDOUBLESP.-R	Inline double sporting with double on report – FOR FUTURE USE	50
IDOUBLESP.-S	Inline double sporting with simultaneous doubles – FOR FUTURE USE	50
TRAP FU-FT	Free training for universal trench	25
NORDIC TRAP	Nordic trap	25

COMPAK SPORTING - ROUND MODE:		
COMPAK 5S	Compak sporting round 5 singles 0 doubles (8 FITASC schemes)	25
COMPAK 3S1DR	Compak sporting round 3 singles 1 double on report (8 FITASC schemes)	25
COMPAK 3S1DS	Compak sporting round 3 singles 1 simultaneous double (8 FITASC schemes)	25
COMPAK 1S2DR	Compak sporting round 1 single 2 doubles on report (8 FITASC schemes)	25
COMPAK 1S2DS	Compak sporting round 1 single 2 simultaneous doubles (8 FITASC schemes)	25
COMPAK SPORTING - IN-LINE MODE (OPTIONAL FEATURE):		
iCOMPAK 5S	Compak sporting in-line 5 singles 0 doubles (8 FITASC schemes)	25
iCOMPAK 3S1DR	Compak sporting in-line 3 singles 1 double on report (8 FITASC schemes)	25
iCOMPAK 3S1DS	Compak sporting in-line 3 singles 1 simultaneous double (8 FITASC schemes)	25
iCOMPAK 1S2DR	Compak sporting in-line 1 single 2 doubles on report (8 FITASC schemes)	25
iCOMPAK 1S2DS	Compak sporting in-line 1 single 2 simultaneous doubles (8 FITASC schemes)	25

5. ADMINISTRATION MENU

Access to the administration menu allows to make settings and access reporting information, so you need to limit access to administrative cards and store them in the safe place.

To access the administrative menu, attach an Administrative card (ADMIN CARD) to the card reader. After entering the menu, you can remove the card (you do not have to keep it there while you are in admin menu).

To exit the administrative menu, remove the card and press the RESET button or ON/OFF.

5.1 COUNTERS

Here you can: check and reset the amount of clays thrown

In this section you can check the amount of clays thrown:

1. Since last set to zero (Temp.Count)
2. Payed with the chip card (Paid)
3. In total since the X2 PRO was installed (Tot.)

```
Administration menu:

>Counters
>Change<                                > next <
```

To continue in this section press > next <

```
Administration menu:

Temp.Count:28 Paid:98 Tot.:28
>Set to zero<                            > next <
```

By pressing >Set to zero< button you reset the Temp. Count and Paid values and set them to zero. The Total value can't be reset.

5.2 MENU ADJUSTMENT AND NO BIRDS

Here you can:

- change the language
- set the Auto restart after round finished in paid mode
- activate/deactivate No bird sensor
- set the number of "No targets" in pay mode

```
Administration menu:

>Menu adjustments + No-Birds
```

```
>Change<                                > next <
```

5.2.1 CHANGE LANGUAGE

Here you can: change the interface language into English, German or French.

```
Administration menu:  
  
>Main menu language:English  
>Change<                                > next <
```

To change the language from English into German press >**Change**<

```
Administration menu:  
  
>Main menu language:Deutsch  
>Change<                                >Weiter<
```

To change the language back into English press >Change<

5.2.2 AUTO RESTART AFTER ROUND FINISHED

Here you can: set the time of automatic restart of the control unit after the end of the round in the paid mode (shooting with chip cards). You can usually exit the menu by pressing the EXIT button, or after the time has elapsed, the system will restart and be ready to register a new group of participants.

Min. time: 15 seconds, max. time: 300 seconds, incremental step: 15 seconds.

```
Administration menu:  
  
Auto-Reset after round finished:60Sec.  
>Change<                                > next <
```

To increase the time, use >**Change**< button

5.2.3 USE OF NO BIRD SENSOR

Here you can: Activate the automatic "No bird" sensor. This feature allows to repeat the target automatically if no shot was fired. If the target must be repeated, but the shot was fired, in the round mode, use the >NO BIRD< button on the control unit or the E button on the control panel.

```
Administration menu:  
  
Use No-Bird-Sensor: no  
>Change<                                > next <
```

To activate or deactivate the No bird sensor use >Change button<:

Use No-Bird-Sensor: no – sensor is deactivated

Use No-Bird-Sensor: yes – sensor is activated

5.2.4 SET NUMBER OF NO BIRDS FOR PAY MODE AND HIDE/SHOW DISCIPLINES

Here you can:

- set number of No birds per shooter for all disciplines in pay mode
- show/hide disciplines

To find the necessary discipline you should go through all disciplines by pressing >next< button.

Administration menu:

```
No-Bird-TRAP FO :4      Visible: No
>Incr.No Bird<  >Visib:Yes/No<  >next<
```

To increase number of No-Birds press the left button >**Incr.No Bird**<

Max. number of No birds is 10 per shooter.

By pressing > **next** < you can change the discipline to set the number of No Birds.

To hide or show disciplines use **Visible: Yes/No** button. This feature helps to hide all disciplines which are not offered on the layout or should be temporary hidden. Especially in *Shooting without chip card mode*, where [mode cards](#) are not used.

Administration menu:

```
No-Bird-TRAP FO :4      Visible: No
>Incr.No Bird<  >Visib:Yes/No<  >next<
```

To exit this section: go through all disciplines or toggle the reset button up and down.

NOTE:

- Number of No birds set in this section applies for the shooting with chip card paid modes only!
- Set the number of No-Birds in accordance to approximate number of broken targets to avoid complaining from the shooters

5.3 PAYMENT OPTIONS

Here you can: set up the shooting mode: paid (shooting with chip cards) or free mode: without chip card.

The free mode is used as a rule used during competitions.

```
Administration menu:  
  
> Payment options  
>Change<                                > next <
```

By pressing > next < you can change the payment option to:

SHOOTING WITH CHIP CARD (Chipcard/Targets)

This mode allows to shoot only with the chip card with enough credit on it.

```
Administration menu:  
  
Payment: Chipcard/Targets  
>Change<                                > next <
```

NOTE:

- To be able to use chip card payment option you should have a chip card loader and chip cards

SHOOTING WITHOUT PAYMENT

Used for running competitions or if you have an administrator/trainer on each layout to control the number of clays thrown.

```
Administration menu:  
  
Payment: Shooting without paym.  
>Change<                                > next <
```

NOTE:

- To be able to change modes without going to the administrative menu, use the FREE MODE CARD and PAY MODE CARD
When these cards are attached, the mode will change automatically

5.4 PAYMENT OPTIONS (MONEY) — NOT AVAILABLE

Here you can: set up the amount in cash mode, in which monetary values are deducted from the card (there are also modes in which targets or rounds are deducted).

```
Administration menu:  
  
>TRAP FO/FA/FU/DTL/ATA: 25T  
>Change< > next <
```

It is necessary to adjust the amount per round for each target released

```
Administration menu:  
  
>TRAP FO/FA/FU/DTL/ATA: 25T L:250  
>+< >-< > next <
```

5.5. CUSTOMER GROUPS - MULTICHARGE

Here you can: set up the possibility for the clients to use one card to pay for more than one shooter for different customer groups.

```
Administration menu:  
  
>Customer Groups-Multicharge  
>Change< > next <
```

Allow multicharge: "No" means shooter can register for a round only once.

If it is set to "Yes" – one card can be registered for payment more than once

```
Administration menu:  
  
Allow Grp 1A:Yes Allow Multicharge:No  
>Toggle group< >Toggle Multi< > next <
```

5.6. MISC. SETUPS

Here you can:

- Disable reset in payment mode
- Disable hold button
- Disable manual "No bird"
- Deactivation of the TIMEOUT controller in the paid mode (Payment mode)
- T1-Target 1 for Compak
- T2-Target 2 for Compak
- Set CardID or Name to be shown

Administration menu:

>Misc.Setups

>Change< > next <

5.6.1 IGNORE RESET IN PAYMODE (YES/NO)

Here you can: disable the reset button in payment mode (shooting with chip card)

If you set to yes, you no longer can use the **RESET** button in payment mode after round has been started. It means it will be ignored if user presses it.

Administration menu:

>Ignore Reset in Paymode :No

>Change< > next <

To change from **No** to **Yes**, press >**Change**< button

Administration menu:

>Ignore Reset in Paymode :Yes

>Change< > next <

We recommend you to keep it set to **No**

5.6.2 HOLD BUTTON IS DISABLED

Here you can:

disable or enable HOLD button, which is used as a PAUSE to disable microphones in paymode after round has been started

Administration menu:

>Hold button is disabled :No

>Change< > next <

To disable the hold button, use >**Change**< button and vice versa.

Administration menu:

>Hold button is disabled :Yes

>Change< > next <

5.6.3 MANUAL NO BIRD IS DISABLED

Here you can:

disable or enable manual No Bird/No target in paymode only.

To disable this feature, use **>Change<** button and vice versa to set it to **YES** or **NO**

Administration menu:

```
>Manual No Bird is disabled      :No
>Change<                        > next <
```

If user sets it to yes, no longer **NO TRAGET** can be pressed via menu button or remote control.

E.g.: broken target has been launched, shooter shoots on broken target.

If manual no bird disabled in paymode, shooter cannot repeat this target again.

We recommend you to keep it set to **No**

5.6.4 LOCK TIMEOUT IN PAYMODE

Here you can:

block the option to adjust the flight time using the TIMEOUT regulator buttons during the compact sporting round. It works in all modes (shooting with or without chip card).

To lock/unlock, use **>Change<** button to set to **YES** or **NO**

Administration menu:

```
>Lock Timeout in paymode        : Yes
>Change<                        > next <
```

By setting the status to **Yes**, the flight time set by the regulators before the start of the round and cannot be changed during the entire round;

By setting the status to **No** you can adjust the flight time of the targets during shooting.

We recommend you to set it to **No**

5.6.5 T1 - TARGET 1 FOR COMPAK

Here you can:

set the maximum flight time for the first target for a compak sporting using TIMEOUT - + buttons, when no bird will be automatically detected if no shot is made.

Administration menu:

```
T1 - Target 1 for Compak      :11 Sec  
>Change<                     > next <
```

To increase the flight time, use TIMEOUT - + button placed on the control panel.
Minimum flight time - 2 seconds, maximum - 12 seconds.

E.g.: you have 6 traps on the layout and the flight time of the trap C is 6 seconds. This is the longest flying target. In this case, the system will "wait" for a shot for 6 seconds. If the shot is not made within 6 seconds, automatic detector considers it as "No target" and will repeat the same target.

The same about the second target in the double, which is adjusted by the T2 regulator (see next section).

5.6.6 T2 - TARGET 2 FOR COMPAK

Here you can:

set the maximum flight time for the second target in a double for a compak sporting using TIMEOUT - + buttons, when no bird will be automatically detected if no shot is made.

Administration menu:

```
T2 - Target 2 for Compak      :10 Sec  
>Change<                     > next <
```

To increase the flight time, use TIMEOUT - + button placed on the control panel.
Minimum flight time - 2 seconds, maximum - 12 seconds.

E.g.: you have 6 traps on the layout and the flight time of the trap C is 6 seconds. This is the longest flying target. In this case, the system will "wait" for a shot for 6 seconds. If the shot is not made within 6 seconds, automatic detector considers it as "No target" and will repeat the same double.

5.6.7 USE NAME OR CARD ID

Choose between showing the name or the cardid/number of the shooter stored on his prepaid card when in paymode (with chip card).

Name can be set in the Card Manager loading software. Card ID is automatically set by Card Manager loading software or CCC-2 handheld loading terminal.

Administration menu:

```
Use Name or CardID      :CardID
>Change<                > next <
```

Administration menu:

```
Use Name or CardID      :Name
>Change<                > next <
```

To shift between CardID and Name use **>Change<** button.

NOTE: For official FITASC competitions with many participants we highly recommend to use CardID in order to save time!

Do not forget to write the card ID on the card itself!

5.7 SECURITY

Here you can:

set the Year Code protection option

Year Code is an additional feature used to make cardholders contact the front desk to update the code. When this feature is enabled, payment cards with the old Year Code cannot be used for payment until the Year Code is updated.

Administration menu:

Use Yearcode: No

>Change< > next <

To deactivate or activate the function, use the **>Change<** button to change the status from **Yes** to **No** and vice versa.

To set the Year Code value, use YearCode-1 and YearCode-2.

For example: if you want to set the number 56, then in Year Code-1 you specify the number 5, and in YearCode-2 you specify the number 6.

You can adjust the value from 0 to 9 using the button **>Change<**

Administration menu:

YearCode-1: 5

>Change< > next <

Administration menu:

YearCode-2: 6

>Change< > next <

5.8 RECEIVER CHANNEL

Here you can:

set the receiver address to configure the remote control.

For example: If channel 1 is installed on the remote control, then channel 1 should also be installed on the unit.

```
Administration menu:

Channel Receiver: 1
>Change<                > next <
```

You can set the channel from 0 to 31. To change the channel, use the **>Change<** button
To set up a channel on the remote control, refer to the manual where the channel setup addresses are shown.

IMPORTANT:

When using the TXIQ8 8-channel remote control, use it in ECO mode: the two-way switch
No. 8 must be set to ON position

5.9 VOICE AND SHOT DETECTION

Here you can:

set up a voice card for various disciplines, considering the specifics of the layout

To scroll through the subsections, use the **>Next<** button

```
Administration menu:

Voice and shot detection
>Change<                > next <
```

5.9.1 MIN. VOICE LEVEL TRAP/COMPAK

Setting the microphone sensitivity for Trap and Compak Sporting

The lower the number, the more sensitive the microphone is to the voice

To change the value, use the **>Change<** button

Min. value: 24, max. value: 76 , incremental step: 4

Recommended value: 28-32

```
Administration menu:

Min. Voice Level Trap/Compak: 32
>Change<                > next <
```

5.9.2 MIN. VOICE LEVEL SKEET

Setting the microphone sensitivity for the Skeet

The lower the number, the more sensitive the microphone is to the voice

To change the value, use the >Change< button

Min. value: 24, max. value: 79 , incremental step: 1

Recommended value: 40

```
Administration menu:

Min. Voice Level Skeet: 40
>Change<                  > next <
```

5.9.3 SHOT LEVEL-LOW MORE SENSITIVE

Setting the minimum level of reaction to the shot

The lower the number, the more sensitive the microphone is to the shot

To change the value, use the >Change< button

Min. value: 15, max. value: 30 , incremental step:1

Recommended value: 16

```
Administration menu:

Shot level-low more sensitive: 16
>Change<                  > next <
```

For example: if the system does not respond to a shot, because the shooter's muzzle is very far from the microphone, it is necessary to reduce the value.

5.9.4 ANALOG FRAME SIZE

Setting up the analog frame size

The higher the value, the easier it is for the system to recognize the voice

To change the value, use the >Change< button

Min. value: 1, max. value:10 , incremental step:1

Recommended value: 4

```
Administration menu:

Analog frame size:      4
>Change<                > next <
```

5.9.4 SIDE CHANNEL SUPPRESSOR

Setting up the side channel suppressor (necessary to adjust for windy weather)

To change the value, use the >**Change**< button

Min. value: 0, max. value:20 , incremental step: 1

0 - no blocking

1 - very strong blocking

20 - very weak blocking

Recommended value: 9

```
Administration menu:
```

```
Side channel suppressor :      9  
>Change<                    > next <
```

5.9.5 USE ALL MICS ACTIVE

Here you can:

Set the microphones and lamps for disciplines ATA and DTL.

```
Administration menu:
```

```
Use all Mics active 4 1 Trap :  No  
>Change<                    > next <
```

When all microphones active is set to **"Yes"** all microphones are active as well as microphone lamps.

6. LIMITED WARRANTY

Rangemaster Systems gives a limited warranty on this products against defects in material or workmanship for time of 12 months.

This period starts upon receipt of the product.

Rangemaster System will not be liable for loss of data or loss of profit or turnover due to a defect.

The warranty only includes repair or replacement of defect components, which failed during daily use. "Daily use" has to be read as: Use in accordance to specifications and in intended use.

General information & warranty exclusions: Damages due to water, moisture, vandalism, lightening, surges over power line or power supply, usage outside of specifications, excessive heat or cold (both for operation and storage) damages because of dropping the product, unnecessary force, damages because of empty or discharged batteries or accumulators are warranty exclusions and do not entitle you for a free of charge repair or replacement.

In case of chip card readers with contacts are built in the product. Items or dirt inside the reader are warranty exclusions.

In case of touch screens are built in the product: Damages due to improper use (using something else than your finger) causing scratches or punctures on the screen or on the touch surface will not be covered with warranty.

Please ask for a RMA number by sending an email to support@rangemaster.at

Add invoice number, date of invoice and serial number of product.

Also add a detailed description of errors.

Return unit for repair to:

Maxima WarenhandelsGmbH

© Rangemaster Systems – Ext. Storage

8082 Weissenbach 9

Austria/Europe

Show your RMA number of the box. Send us a tracking link after returning the product to us.

7. RMA FORM

To:

Maxima WarenhandelsGmbH

© Rangemaster Systems – Ext. Storage

8082 Weissenbach 9

Austria/Europe

RMA: _____

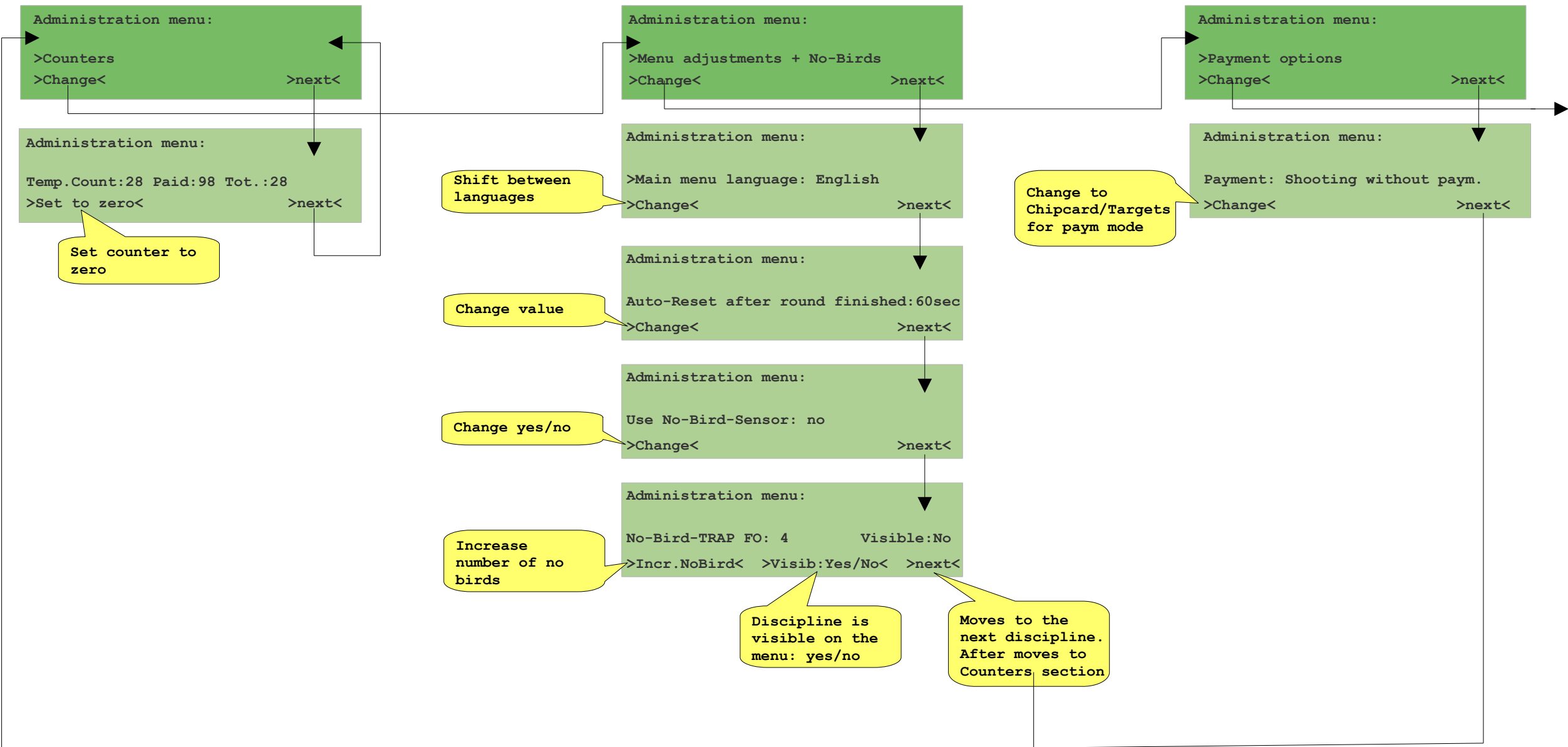
Date: ____/____/____

Date of purchase	
Supplied by	
Invoice number (Please attach copy of invoice)	
Product serial number	
Description of error	

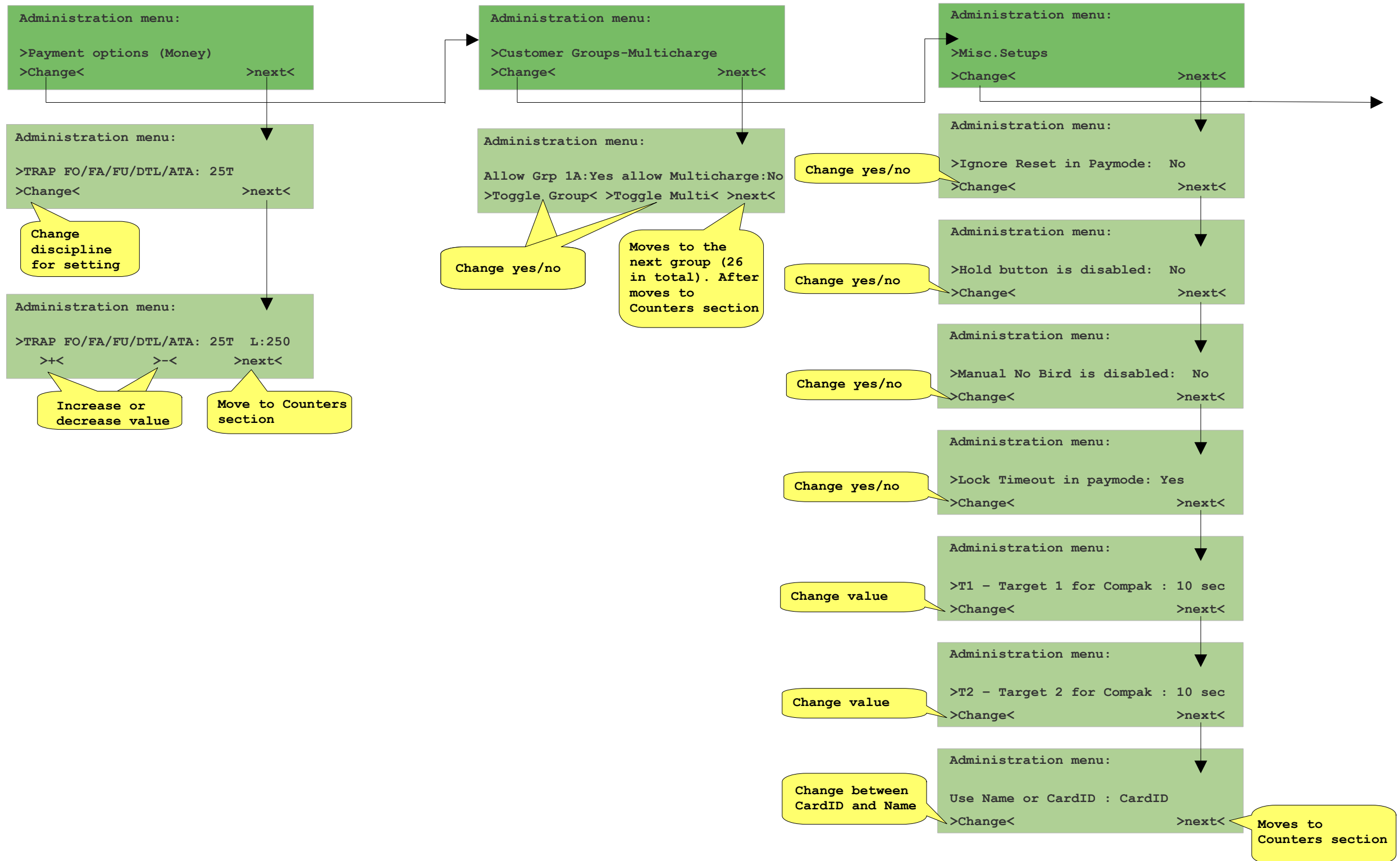
Please return to:

Name	
Club	
Address 1	
Address 2	
Zip code	
City/Town	
Country	
Phone	
E-Mail	

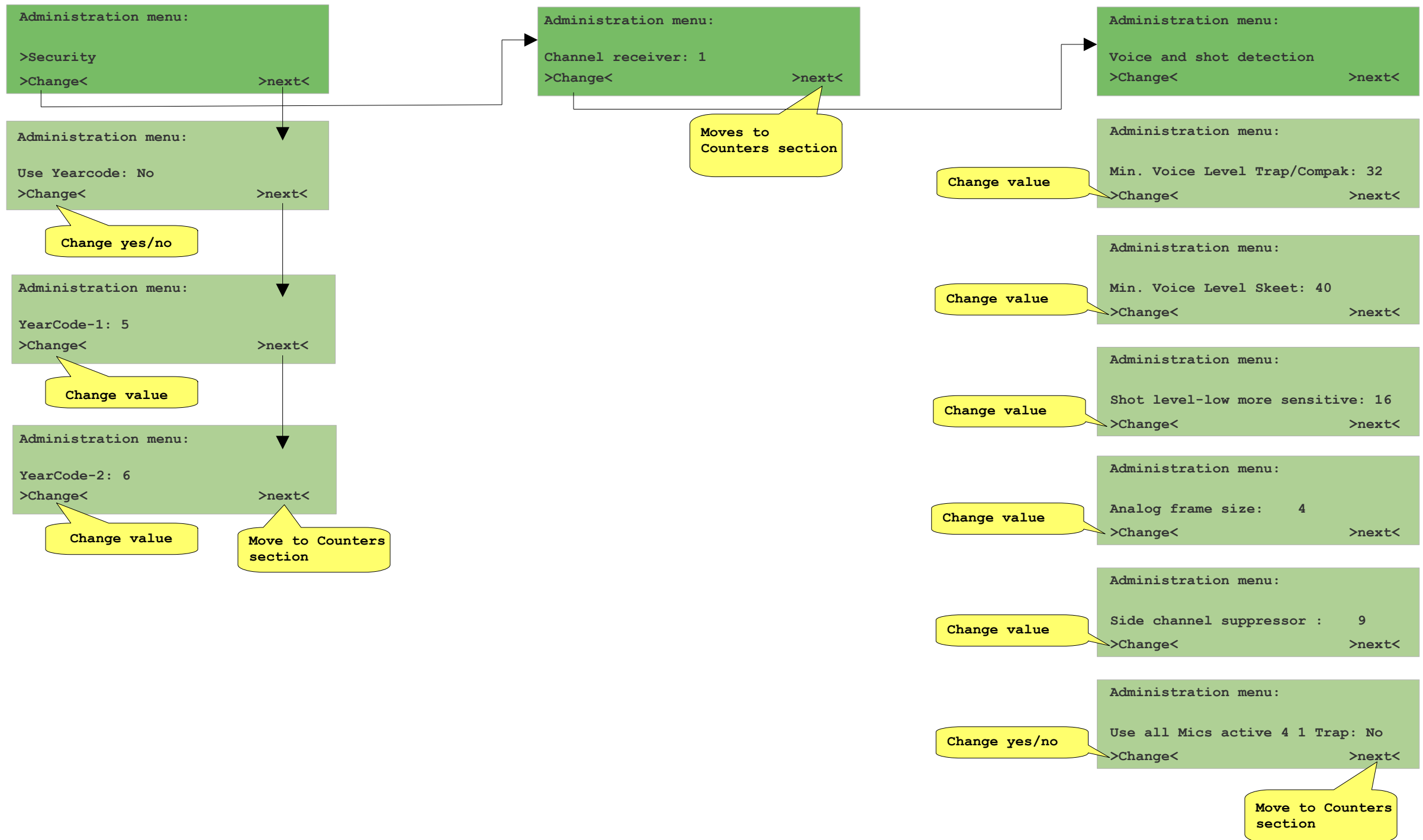
RANGEMASTER X2 PRO - ADMINISTRATION MENU STRUCTURE



RANGEMASTER X2 PRO - ADMINISTRATION MENU STRUCTURE



RANGEMASTER X2 PRO - ADMINISTRATION MENU STRUCTURE



OLYMPIC TRAP

COMPETITION STAGES	MODE USED
Shoot Qualification	Mode 01 -TRAP FO
Shoot Off after Qualification	Mode 3 – Trap FO S/O
Final: Targets 01..25	Mode 01 - TRAP FO
Final: Targets 26..50	Mode 02 - TRAP FIN 2023 - remove shooter with lowest score - after another 5 targets remove shooter on ranking Pos. 5 - after another 5 targets remove shooter on ranking Pos. 4 - after another 5 targets remove shooter on ranking Pos. 3 - 2 shooters will continue for another 10 targets
Shoot off after Final	Mode 3 – Trap FO S/O

SKEET

COMPETITION STAGES	MODE USED
Shoot Qualification	Mode 13 - Skeet Round
Shoot Off	Mode 17 - Skeet S/O 4
Final	Mode 18 - Skeet Final <u>6 Shooters</u> 2-1-2 doubles on Station 3-4-5 = 10 targets (targets 01..10) - repeat: 6 Shooters 2-1-2 doubles on Station 3-4-5 = 10 targets (targets 11..20) - remove shooter with lowest score (position 6) <u>5 Shooters</u> 2-1-2 doubles on Station 3-4-5 = 10 targets (targets 21..30) - restart Mode 18 - Skeet Final - remove shooter with lowest score (position 5) <u>4 Shooters</u> 2-1-2 doubles on Station 3-4-5 = 10 targets (targets 31..40) - remove shooter with lowest score (position 4) <u>3 Shooters</u> 2-1-2 doubles on Station 3-4-5 = 10 targets (targets 41..50) - remove shooter with lowest score (position 3) <u>2 Shooters</u> 2-1-2 doubles on Station 3-4-5 = 10 targets (targets 51..60)
Shoot Off after Final	Mode 19 - Skeet S/O 3-5

TRAP MIXED TEAM

COMPETITION STAGES	MODE USED
Qualification	Mode 1 - TRAP FO Round with 25 targets per shooter
Shoot Off after Qualification	Mode 3 - Trap S/O Possible shoot off
Final medal matches (BMM, GMM)*	Mode 1 - TRAP FO Final with 4 shooters (2 teams).
Shoot off after Final	Mode 3 - Trap S/O

*On the day of the updated of this manual, there is no information about the trap mixed finals, so we recommend to run finals as following.

SKEET MIXED TEAM

COMPETITION STAGES	MODE USED
Shoot Qualification	Mode 13 - Skeet Round with 25 targets per shooter Set number of shooters
Shoot Off	Mode 17 - Skeet S/O4 Possible shoot offs on station 4 only (sudden death)
Final medal matches (BMM, GMM)	Mode 36 - Skeet Mixed Final with 4 shooters (2 teams). Each shooter shoots 24 targets: 2 doubles on stations 3,4,5. On each station teams shift to shoot first. On the scoreboard shown total result for 2 shooters in a team.
Shoot Off after Final	Mode 19 - Skeet S/O 3-5 Possible shoot off after final (sudden death)