

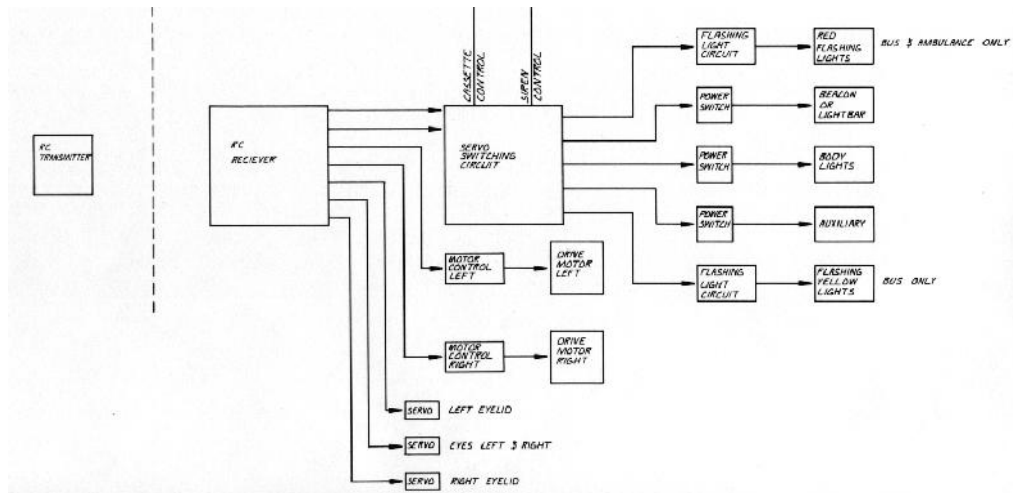
Radio Control System

The Radio Control System consists of the control transmitter unit held by the operator and the receiver with its associated components in the robot.

The Radio Control Transmitter converts movements of the control sticks and switches into a coded radio signal, which is transmitted by radio to the Radio Control Receiver within the robot. The signal is received and then decoded by the micro-controller, which is on the main circuit board in the vehicle. The micro-controller controls functions based on what was sent from the radio control transmitter.

RADIO CONTROL OPERATING INSTRUCTIONS

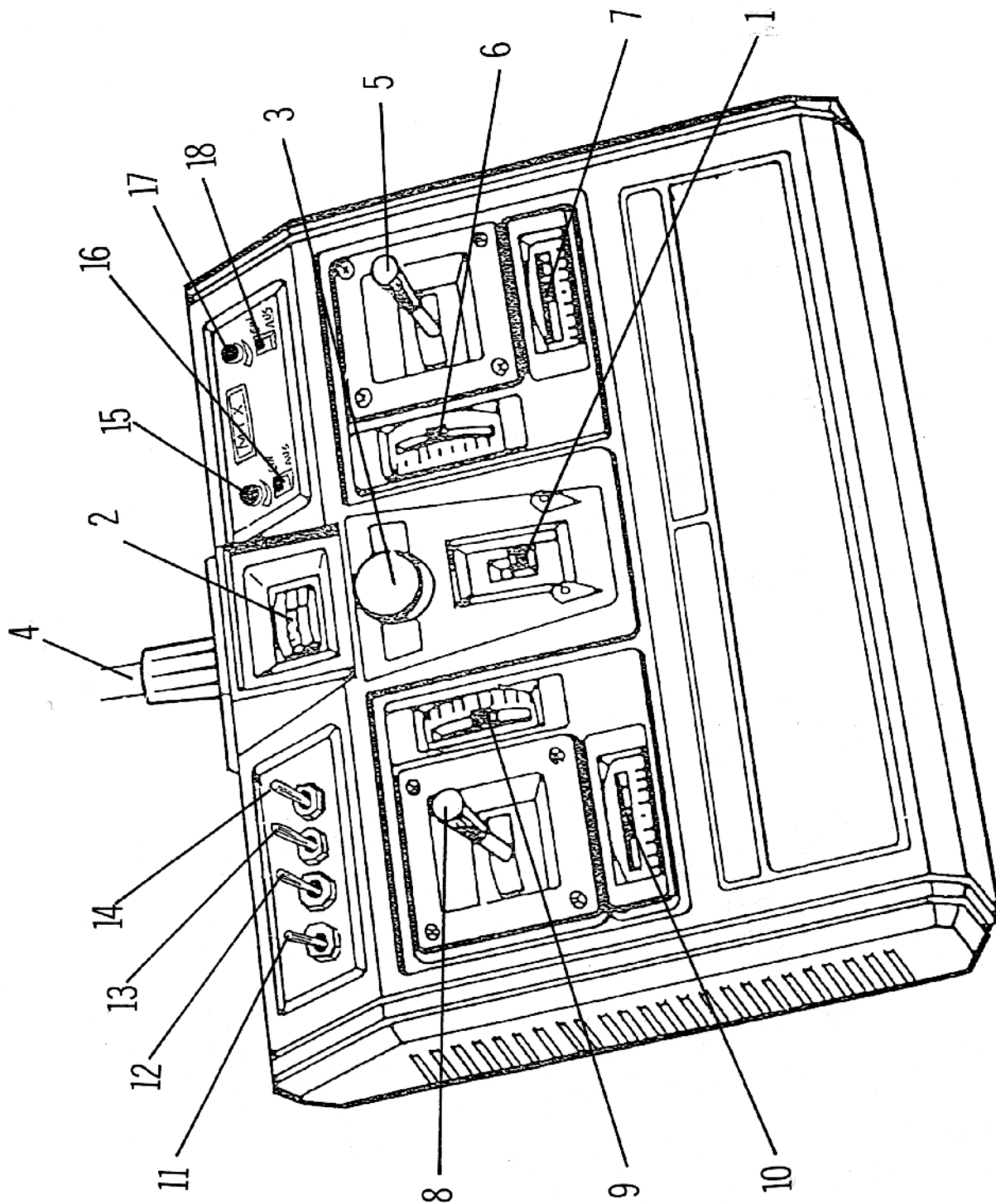
Refer to the diagram showing the radio control transmitter for the location of controls. Check all of the trim adjustments on the transmitter and make sure they are in their center position. Extend the Radio Control Transmitter Antenna 1/4 to 1/2 way. Turn the Radio Control Transmitter on first and then turn on the main robot power switch. It is necessary for the robot to always have an operating signal when it is on, if there is no signal you will not have full control of the robot.



The right hand joystick controls movement of the robot's drive wheels. Pushing the stick forward will cause the robot to move forward. Pulling the stick back will cause the robot to move backward. Moving the stick to the right or left will cause the robot to turn to the right or left respectively. Movement is fully proportional so any variation or combination of movement is possible. The horizontal and vertical trim tabs to the left and below the joystick are for centering and should be typically left in the center. The only time that you would need to move these trims is if the robot started moving slightly on its own. In this case move them slightly until the robot stops. For a detail of other functions, see the radio control diagram on the next page. All of these functions are labeled on the radio control itself.

A charge plug is provided on the transmitter for recharging its internal battery. The transmitter power switch must be in the off position before charging the batteries. A charge light on the charger will come on while charging.

RADIO CONTROL TRANSMITTER



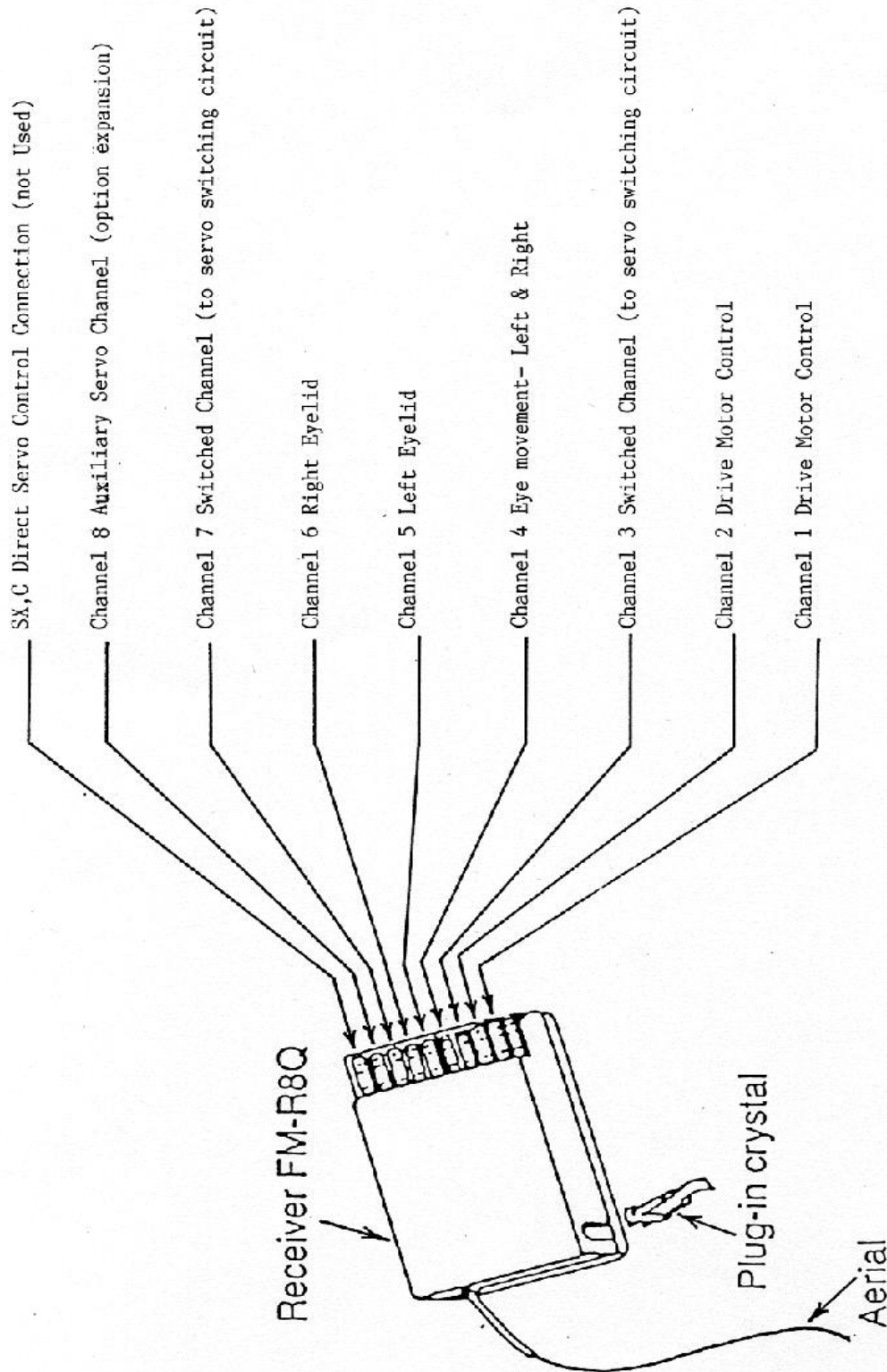
(Robbe Terra Top)

RC TRANSMITTER CONTROLS

Note: The following information on the transmitter controls includes information for a variety of similar robots.

1. Power Switch.
2. Transmitter Battery Voltage Meter (Expand Scale Voltmeter)
3. Transmitter Battery charge Socket.
4. Telescopic Transmitter Aerial.
5. Right control Stick-
Up and Down – Robot drive motors, forward and reverse.
Right and Left – Robot drive motors steering. Left and right turns.
6. Forward/Reverse Trim lever for right control stick. Normal = Center. Neutrals the drive motors. If the robot is moving slightly slide this a few clicks until robot stops moving.
7. Left and Right Turns Trim Tab.
8. Left Control Stick
Left and right movement - Turning of the eyes left and right.
Up- Tape and Down– Siren
9. Up/Down Trim Tab for left control stick.
10. Left and right Trim lever for right control stick. Normal = Center. Neutrals the drive motors. If the robot is moving slightly slide this a few clicks until robot stops moving.
11. Switch-Left eyelid open and close.
12. Switch- Right eyelid open and close.
13. Switch: Up- Light bar or flashing red light / Down- Yellow flashing on Bus and Body lights on other Vehicles
14. Switch: Up- aux. Option / Down- Water Squirter
15. Mixing adjustor (Fully clockwise)
16. Mix On-Off (ON)
17. Mixing adjustor (Fully clockwise)
18. Mix On-Off (ON)

RC Receiver Connection Detail



THE NICKEL METAL HYDRIDE (NI-MH) RC TRANSMITTER BATTERY

The NI-MH RC transmitter battery will last about 5-6 hours on a full charge. Charge the battery for **16 hours**. A charge jack is provided on the transmitter for recharging its internal batteries. This round jack is located on the right side of the radio control. (See the radio control diagram) The RC power switch must be in the off position when the charger is plugged into it and must remain in the off position while charging. A light on the charger will be on, when charging.



Caution: Do not overcharge the batteries as this could cause permanent damage to the transmitter batteries. (Doubling the normal charging time is the type of over charging that is meant here, and the battery getting hot.) When the battery level needle goes in the red, the robot should be turned off because the robot could act erratic without the transmitter signal.

To avoid a RC battery going dead during a presentation, start the program with a fully charged battery or be aware of how much charge there is left in the battery. If you have an extra battery or the optional 110 Volt RC Power Supply, you can connect one of these and keep going.

NI-MH RC Battery and Charger Specifications

NI-MH RC transmitter battery	9.6 Volts	1300mAH
NI-MH RC transmitter battery charger	11.6 Volts	130mA

Adapter for Charging an Extra NI-MH RC Transmitter Battery

If you have an extra NI-MH RC battery, you can charge this outside the RC. You may want to do this while you are using the robot or if you need to charge both batteries at the same time. The adapter needed to do this is in the control case or it is on your charger. It has a white connector on one side and a connection on the other end that will go directly to your battery. The charging time is still 16 hours.

