

# HOME AUTOMATION PLANNING GUIDE FOR INDIVIDUALS WITH AUTISM



WRITTEN BY A.J. PARON-WILDES

Control4®

## WHY HOME AUTOMATION?

When caring for an individual with autism, many needs must be addressed, and even the best caregiver can miss something or not see an incident coming. Home automation can offer protective solutions that support and elevate human care.

The most important thing to remember when designing for individuals with autism is that they do not experience the designed environment in the same way others do. They can have increased sensitivities that evoke strong reactions to environmental stimuli. Color, lighting, sounds, and smells all can trigger extreme responses. Having an understanding that many people with autism have either hypo or hyper sensory issues will help you design an environment that can foster increased independence and confidence.

Below I outline four main areas of consideration when starting a new design project or retrofitting a home to aid a person with autism.

### SAFETY

The number-one priority for families with an autistic child is safety. Many of us do not understand the inherent dangers of our built environment and the impact it can have on those with autism. Daily challenges can range from possible elopement—kids walking out the front door—to an inadequate understanding of systems and appliances—how does the stove turn on and off?

Then, as children get older, safety concerns shift. Instead of preventing the child from leaving the house, you monitor if and when they get in: Did they get off the bus and make it in the house independently? Can you see if a stranger is at the front door? Many children with autism have a hard time with speech, or have no speech, so communicating on the phone is not effective. This is where home automation can help. Control4 has many solutions to add safety elements to a home such as using covert cameras as well as easy monitoring and alerts through smart phones, touch pads, or sensors. Technology can be the extra set of eyes for parents to help ensure their child is safe.

#### CONTROL4/PARTNER PRODUCTS THAT CAN HELP:



AUTOMATED DOOR LOCKS



TOUCH SCREENS



SECURITY CAMERAS

Mastering everyday life skills—and increasing independence and assuring personal safety—is a goal as children with autism get older. The main focus is to help them become independent in their home setting. Cooking, cleaning, and doing chores to encourage self-reliance is important, but many of the kids need reminders and prompts to be successful at this.

A home automation system can help add audible and visual reminders to potentially dangerous appliances—stoves, air conditioning, heating, etc.—thereby improving the child's chance of success at these important tasks.

#### CONTROL4 PRODUCTS THAT CAN HELP:



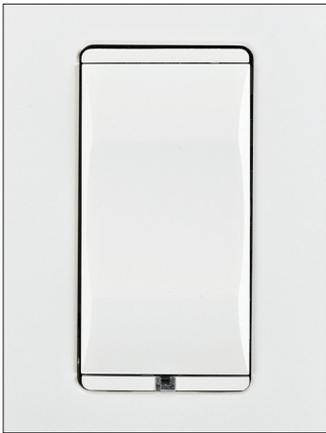
CONTACT AND MOTION SENSORS

## LIGHTING

Because children with autism have such strong visual skills, good lighting can be quite essential for them. In fact, many individuals with autism are known for “savant” skills, which include a visual acuity that will notice details, vibrancy, color hues, and changes in lighting at a much higher level than most individuals. For this reason, many individuals with autism do not do well with fluorescent lighting. They can see the flicker, hear the noise, or notice the vibrancy change when it dims. In fact, for some with autism, fluorescent lighting that has a high perception of flicker has been known to cause seizures in prone individuals. It is important to design a great lighting plan that takes into account these sensitivities. There are ways to mitigate these issues by incorporating the correct type of lighting with LEDs into your design. Again, you want the lighting system not to be a barrier for the child to function well in the space.

Control of the lighting system is just as important as its selection. Glare on technology from lighting can increase stress levels or make the individual more tired. Having the ability to turn certain lights on/off or lower the lumens can be extremely helpful. Also lighting can be a helpful prompt or reminder when programmed according to a schedule. Cue the lighting to turn on in the bedroom and off in the family room as a prompt that it's time to go to bed. Or, set the shades to open and let the light in as a gentle wake-up reminder.

#### CONTROL4 PRODUCTS THAT CAN HELP:



WIRELESS DIMMERS



KEYPADS

## ENTERTAINMENT

Movies and videos can be a strong motivator for individuals with autism. In fact, the largest issue in many families is the amount of time their autistic child spends watching TV, YouTube, Netflix, or playing their favorite video games. With a Control4 product such as an outlet switch, you can set perimeters of when the child can be on the entertainment systems and for how long. Prompts and timers can create a more successful transition from stopping the entertainment and moving on to a new activity. Schedules and routines are also inherently important for individuals with autism. When routines or environments are disrupted, such as an entertainment system not working or being left on randomly, an individual with autism can have a very difficult time adapting, which may be the impetus that starts a downward spiral.

Many older children with autism have had success in using a tablet and/or a smart phone to help them organize, communicate, and learn—so incorporating a centralized control system for entertainment can help create a stable home environment.

#### CONTROL4/PARTNER PRODUCTS THAT CAN HELP:



REMOTE



TOUCH SCREENS

## MONITORING

As children with autism get older, monitoring can be used in a variety of ways to help track progress for learning life skills. For example, in a controlled setting tell the child to go and complete two or three tasks for the therapist or caregiver to watch on the installed monitor and confirm if the child was successful or if they were having difficulty. As their independence grows, monitoring and surveillance can help increase their independence—the ultimate goal.

CONTROL4/PARTNER PRODUCTS THAT CAN HELP:



CAMERAS



TOUCH SCREENS



SECURITY PACKAGES

## SUMMARY

Individuals with autism and their families can face many roadblocks and challenges in their life, but Control4 can offer some unique solutions to enhance routine and increase stability and peace of mind.

The following questionnaire can act as a starting point to identify which Control4 products can help you with your next design project.

## ABOUT YOUR PROJECT

**1. What type of project are you planning?**

- a. New home construction
- b. Remodel of an existing home
- c. Retrofit of an existing home
- d. Business
- e. Other

**2. What is the square footage of your property?**

**3. What is the approximate value of your property?**

**4. What is your timeframe to begin your automation project?**

- a. Within 30 days
- b. Within 31–90 days
- c. Within 4–6 months
- d. Within 7–12 months
- e. More than 12 months

**5. What is your estimated budget for your automation project?**

- a. Less than \$5,000
- b. \$5,000–\$20,000
- c. More than \$20,000

**6. What spaces are involved in your automation project?**

- a. Whole home
- b. Kitchen
- c. Bedroom
- d. Family room
- e. Home theater/media room
- f. Outdoor area
- g. Garage
- h. Business
- i. Other

**7. Are there areas outside the home you would like monitored, such as driveways or backyard play areas?**



### 14. What do you want to control?

#### Home theater/entertainment

- a. I would like to control all of my devices with a single remote
- b. I would like the remote to also control other functions in the home (lights, temperature, shades, security)
- c. I would like to be able to control my TV from my smart phone or tablet device
- d. I would like the TV show/movie to pause automatically if the doorbell rings
- e. I would like to be able to access media from the cloud to stream movies or TV shows

#### Whole house audio

- a. I would like to be able to listen to music from anywhere in my home or business
- b. I would like for multiple people to be able to listen to music in different rooms at the same time
- c. I would like to be able to control my music from a touch-screen interface
- d. I would like to be able to stream music directly from my phone throughout my Control4 system
- e. I would like to be able to access music from the cloud (Rhapsody, TuneIn, Pandora, etc.)

#### Lighting

- a. I would like to have all of my lights turn off with the press of a button
- b. I would like to have my lights dim automatically when a movie is started
- c. I would like to have my shades or blinds controlled with my same lighting controls
- d. I would like certain lights to be controlled automatically based on the time of day
- e. I would like to control my lights from my smart phone or tablet device

#### Comfort (heating and cooling)

- a. I would like to be able to control my thermostat from any device with my Control4 system
- b. I would like the thermostat to adjust automatically when someone comes home
- c. I would like to control my gas fireplace and tie it into my HVAC system
- d. I would like to put my house into "vacation" mode with one button, saving me energy while I'm away
- e. I would like my shades to raise and lower automatically, based on time of day, to conserve energy
- f. I would like my thermostat to set my house to the perfect temperature when I wake up every morning

#### Security and monitoring

- a. I would like to control my alarm system through my Control4 system
- b. I would like automated door locks that automatically lock and unlock with my security code
- c. I would like cameras tied into my Control4 system for secure monitoring and control
- d. I would like to receive a text when my child comes home from school
- e. I would like to receive an alert on my phone if my garage door stays open for too long
- f. I would like to be able to check on and control my home from anywhere

#### Communication

- a. I would like to communicate with people in different rooms through an intercom
- b. I would like to be able to see who is at the front door and speak with them over the intercom
- c. I would like to receive an alert if my house detects a water leak
- d. I would like to receive an alert when my front door/garage door is opened
- e. I would like to receive an alert if my smoke detector battery is low